APPENDIX 1
Public Notice of Preparation (NOP)

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THE CITY OF SAN DIEGO

PLANNING DEPARTMENT
Date of Notice: February 18, 2015
PUBLIC NOTICE OF PREPARATION
OF A DRAFT ENVIRONMENTAL IMPACT REPORT
AND
PUBLIC NOTICE OF AN ENVIRONMENTAL IMPACT REPORT SCOPING MEETING
IO No.: 21002571

PUBLIC NOTICE: The CITY OF SAN DIEGO as the Lead Agency has determined that the project described below will require the preparation of a Program Environmental Impact Report (PEIR) in compliance with the California Environmental Quality Act (CEQA). This Notice of Preparation of a PEIR and Scoping Meeting was publicly noticed and distributed on February 18, 2015. This notice was published in the SAN DIEGO DAILY TRANSCRIPT and placed on the City of San Diego website at:

http://www.sandiego.gov/city-clerk/officialdocs/notices/index.shtml

SCOPING MEETING: A public scoping meeting will be held by the City of San Diego Planning Department on **Monday March 2, 2015**, from 5:00 PM to 7:00 PM at the Balboa Park Club**,** 2144 Pan American Road West, San Diego, CA 92101, (619) 235-1169. The scoping meeting will be held in the Santa Fe Room. **Please note that depending on the number of attendees, the meeting could end earlier than the time noted above.** Verbal and written comments regarding the scope and content of the proposed PEIR will be accepted at the meeting.

Written comments may also be sent to **Rebecca Malone, Associate Planner, City of San Diego Planning Department, 1222 First Avenue, MS 501, San Diego, CA 92101** or emailed to **DSDEAS@sandiego.gov** **referencing the Project Name and Number in the subject line**. Written comments must be received no later than 30 days after receipt of this notice. Responsible and Trustee agencies are requested to indicate their statutory responsibilities in connection with this project when responding. Upon completion of a draft PEIR, the City of San Diego will distribute the draft PEIR for public review and comment.

GENERAL PROJECT INFORMATION

PROJECT NAME: San Diego Climate Action Plan
SCH NO.: *Pending*
COMMUNITY AREA PLAN: All Community Plan Areas
COUNCIL DISTRICT: All Council Districts

SUBJECT: CITY COUNCIL APPROVAL for the adoption of the Climate Action Plan (CAP) and implementing regulations or policies, which may require amendments to the Municipal Code and/or Land Development Code. Former Governor Arnold Schwarzenegger's Executive Order S-3-05 established the 2050 statewide GHG reduction target of 80 percent below 1990 levels. The City of San Diego has prepared a draft CAP that identifies measures to effectively meet greenhouse gas (GHG) reduction targets for 2020 and 2035, as

"interim" targets for achieving the 2050 target. The CAP estimates the GHG emissions for the City of San Diego in the baseline year 2010 to be around 12.8 million metric tons of carbon dioxide equivalent (MMT CO2e). By 2020 the CAP estimates the City's emissions would increase to 13.9 MMT CO_2e, and to around 16.2 MMT CO2e by 2035. With implementation of the CAP, the City aims to reduce emissions 15 percent below the 2010 baseline by 2020 to around 10.9 MMT CO2e, and by a total of 49 percent by 2035 to 6.4 MMT CO2e. With implementation of the CAP, it is anticipated that the City would exceed its reduction target by 0.9 MMT CO2e in 2020 and 155,600 MT CO2e in 2035. The CAP relies on significant City and regional actions, continued implementation of federal and state mandates, and five local strategies with associated action steps for target attainment. The five strategy areas are:

- Water & Energy Efficient Buildings;
- Clean & Renewable Energy;
- Bicycling, Walking, Transit & Land Use;
- Zero Waste; and
- Climate Resiliency.

Implementation of the CAP is divided into:

- Early Actions (Adoption of the CAP-December 31, 2017),
- Mid-Term Actions (January 1, 2018-December 31, 2020), and
- Longer-Term Actions (2021-2035).

Through 2020, the CAP meets the requirements set forth in CEQA Guidelines Section 15183.5, whereby a lead agency (e.g. the City of San Diego) may analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce GHG emissions. Following adoption of the CAP, eligible individual projects preparing project-specific environmental documents may tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts in their cumulative impacts analysis. The proposed CAP can be found at the following website:

http://www.sandiego.gov/planning/genplan/cap/

Applicant: City of San Diego

RECOMMENDED FINDING: Pursuant to Section 15060(d) of the CEQA Guidelines, it appears that the proposed project could potentially result in significant environmental impacts to the following areas: **Land Use, Visual Effects/Neighborhood Character, Air Quality, Greenhouse Gas Emissions, Historical Resources, Traffic/Circulation, Utilities, and Water Supply.**

AVAILABILITY IN ALTERNATIVE FORMAT: To request this Notice or the City's letter to the applicant detailing the required scope of work (EIR Scoping Letter) in alternative format, call the Planning Department at (619) 235-5200 or (800) 735-2929 (TEXT TELEPHONE).

ADDITIONAL INFORMATION: For information on environmental review and/or information regarding this project, contact Rebecca Malone, Associate Planner, at (619) 446-5371. The Scoping Letter and supporting documents may be reviewed, or purchased for the cost of reproduction, at the Planning Department on the Fifth floor of the Development Services Center. For information regarding public meetings/hearings on this project, contact the Project Manager, Seth Litchney, Senior Planner, at (619) 446-6892. This notice was published in the SAN DIEGO DAILY TRANSCRIPT and distributed on February 18, 2015.

Tom Tomlinson, Interim Director
Planning Department

DISTRIBUTION: See Attached

DISTRIBUTION:

Federal Government
US Environmental Protection Agency (19)
US Fish and Wildlife Service (23)

State of California
Caltrans, District 11 (31)
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California Natural Resources Agency (43)
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Councilmember Gloria, District 3
Councilmember Cole, District 4
Councilmember Kersey, District 5
Councilmember Cate, District 6
Councilmember Sherman, District 7
Councilmember Alvarez, District 8
Council President Pro Tem Emerald, District 9
City Attorney's Office (MS 59)
Planning Department
- Tom Tomlinson, Interim Director
- Nancy Bragado, Deputy Director
- Brian Schoenfisch, Program Manager
- Rebecca Malone, Associate Environmental Planner
- Myra Herrmann, Senior Environmental Planner
- Seth Litchney, Senior Planner
- Cathy Winterrowd

Development Services Department
- Kerry Santoro, Deputy Director
- Martha Blake, Senior Planner
- Anna McPherson, Senior Planner
- Elizabeth Shearer-Nguyen, Senior Planner
- Jeff Szymanski, Senior Planner

Public Utilities Department
- Nicole McGinnis

Public Works Department
- Carrie Purcell

Environmental Services Department
- Lisa Wood

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- Beckwourth Branch (81C)
- Benjamin Branch (81D)
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- City Heights/Weingart Branch (81G)
- Clairemont Branch (81H)
- College-Rolando Branch (81I)
- Kensington-Normal Heights Branch (81K)
- La Jolla/Riford Branch (81L)
- Linda Vista Branch (81M)
- Logan Heights Branch (81N)
- Malcolm X Library and Performing Arts Center (81O)
- Mira Mesa Branch (81P)
- Mission Hills Branch (81Q)
- Mission Valley Branch (81R)
- North Clairemont Branch (81S)
- North Park Branch (81T)
- Oak Park Branch (81U)
- Ocean Beach Branch (81V)
- Otay Mesa-Nestor Branch (81W)
- Pacific Beach/Taylor Branch (81X)
- Paradise Hills Branch (81Y)
- Point Loma/Hervey Branch (81Z)
- Rancho Bernardo Branch (81AA)
- Rancho Penasquitos Branch (81BB)
- San Carlos Branch (81DD)
- San Ysidro Branch (81EE)
- Scripps Miramar Ranch Branch (81FF)
- Serra Mesa Branch (81GG)
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- San Pasqual-Lake Hodges Planning Group (426)
- San Ysidro Planning and Development Group (433)
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- Encanto Neighborhoods Community Planning Group (449A)
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San Diego Chamber of Commerce (157)
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- San Pasqual Band of Mission Indians (225K)
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La Jolla Band of Mission Indians (225M)
Pala Band of Mission Indians (225N)
Pauma Band of Mission Indians (225O)
Pechanga Band of Mission Indians (225P)
Rincon Band of Luiseno Indians (225Q)
San Luis Rey Band of Luiseno Indians (225R)
Los Coyotes Band of Mission Indians (225S)
San Diego Apartment Association
Building Owners and Managers Association
San Diego Association of Realtors
Industrial Environmental Association
NAIOP San Diego
Urban Land Institute
American Institute of Architects, San Diego Chapter
Coastal and Estuarine Research Federation
The Nature Conservancy
Walk San Diego
Bike San Diego
Community Forest Advisory Board
Green Edge Technology
San Diego 350
Diane Coombs
Landry Watson
Nicole Capretz
Nicola Hedge
Doug Smith
Bill Powers
Elyse Lowe
Angie Mei
Dr. D. Bart Chadwick
Joan Raphael
Masada Disenhouse
Angela Deegan
Grace Van Thillo
Janina Moretti
Philip Petrie
Lyla Fadali
Mike Bullock

APPENDIX 2
NOP Scoping Letter

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THE CITY OF SAN DIEGO

February 18, 2015

SUBJECT: Scope of Work for a Draft Program Environmental Impact Report for the City of San Diego Climate Action Plan ("Project"). SCH No. *Pending*

Pursuant to Section 15060(d) of the California Environmental Quality Act (CEQA), the Environmental and Resource Analysis (E&RA) Division of the City of San Diego Planning Department has determined that the proposed project, referenced above, may have significant effects on the environment, and the preparation of an Environmental Impact Report (EIR) is required. Staff has determined that a Program EIR (PEIR) is the appropriate environmental document for this project because the Climate Action Plan can be characterized as one large program that governs the interconnected and continued climate related planning of the entire City.

The purpose of this letter is to identify the specific issues to be addressed in the PEIR. The PEIR shall be consistent with CEQA Guidelines Section 15168 and will focus on key environmental issue areas, and will incorporate by reference the 2008 General Plan EIR, consistent with CEQA Guidelines Section 15150, as appropriate. The PEIR will demonstrate consistency of the CAP with CEQA Guidelines Section 15183.5 related to tiering and streamlining GHG emissions analysis at the subsequent project level, and adequacy of the use of the CAP as a "qualified GHG reduction plan."

The PEIR should be prepared in accordance with the *City of San Diego Technical Report and Environmental Impact Report Guidelines* (Updated May 2005). A Notice of Preparation (NOP) is being distributed concurrently to Trustee and Responsible Agencies and others who may have an interest in the project in accordance with CEQA Section 21083.9(a)(2) for projects of statewide, regional, or area-wide environmental impacts. A Scoping Meeting has been scheduled for March 2, 2015. Changes or additions to the scope of work may be required as a result of input received in response to the Scoping Meetings and NOP. Furthermore, should the project scope be modified during the scoping stage or PEIR review process and/or by the applicant, these changes shall be disclosed in the PEIR under the section "History of Project Changes" and be accounted for in the PEIR impacts analysis to the extent required by CEQA.

Each section and issue area of the PEIR shall provide a descriptive analysis of the project followed by a comprehensive evaluation. The PEIR shall also include sufficient graphics and tables, which in conjunction with the relevant narrative discussions, provide a complete and meaningful description of all major project features, the environmental impacts of the project, as well as cumulative impacts, mitigation of significant impacts, and alternatives to the project.

Project Location: The Climate Action Plan encompasses the entire City of San Diego.

SUBJECT: CITY COUNCIL APPROVAL for the adoption of the Climate Action Plan and implementing regulations or policies, which may require amendments to the Municipal Code and/or the Land Development Code. Former Governor Arnold Schwarzenegger's Executive Order S-3-05 established the 2050 statewide GHG reduction target of 80 percent below 1990 levels. The City of San Diego has prepared a draft Climate Action Plan (CAP) that identifies measures to effectively meet greenhouse gas (GHG) reduction targets for 2020 and 2035, as "interim" targets for achieving the 2050 target.

The CAP estimates the GHG emissions for the City of San Diego in the baseline year 2010 to be around 12.8 million metric tons of carbon dioxide equivalent[1] (MMT CO_2e). By 2020 the CAP estimates the City's emissions would increase to 13.9 MMT CO_2e, and to around 16.2 MMT CO_2e by 2035. With implementation of the CAP, the City aims to reduce emissions 15 percent below the 2010 baseline by 2020 to around 10.9 MMT CO_2e, and by a total of 49 percent by 2035 to 6.4 MMT CO_2e. With implementation of the CAP, it is anticipated that the City would exceed its reduction target by 0.9 MMT CO_2e in 2020 and 155,600 MT CO_2e in 2035. Additional analysis may be conducted to determine projected emissions level reductions, and the PEIR will reflect the updated information.

The CAP relies on significant City and regional actions, continued implementation of federal and state mandates, and local actions for target attainment. The CAP is focused around five primary strategies, implemented by 20 action steps that include new ordinances, City Council policies, resolutions, programs, incentives, and outreach and education activities. The five CAP strategies and associated action items are as follows:

- **Strategy 1: Water & Energy Efficient Buildings**
    - 1.1 Nonresidential Energy Conservation, Disclosure and Benchmarking Ordinance
    - 1.2 Residential Energy Conservation, Disclosure and Benchmarking Ordinance
    - 1.3 City of San Diego's Municipal Energy Strategy and Implementation Plan
    - 1.4 New Water Rate and Billing Structure
    - 1.5 Water Conservation, Disclosure and Benchmarking Ordinance
    - 1.6 Outdoor Landscaping Ordinance
- **Strategy 2: Clean & Renewable Energy**
    - 2.1 Community Choice Aggregation Program or Similar Program
    - 2.2 Conduit for solar photovoltaic systems (PV) and electric vehicles (EV), and Plumbing for Solar Water Heating
- **Strategy 3: Bicycling, Walking, Transit & Land Use**
    - 3.1 Mass Transit
    - 3.2 Commuter Walking

[1] Carbon dioxide equivalent is a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP).

    - 3.3 Commuter Bicycling
    - 3.4 Retiming Traffic Signals
    - 3.5 Install Roundabouts
    - 3.6 Municipal Zero Emissions Vehicles
    - 3.7 Convert Municipal Waste Collection Trucks to Low Emission Fuel
    - 3.8 Electric Vehicle Charging Infrastructure
    - 3.9 Reduction in Average Commute
- **Strategy 4: Zero Waste**
    - 4.1 Divert Solid Waste and Capture Landfill Emissions
    - 4.2 Capture Methane from Wastewater Treatment
- **Strategy 5: Climate Resiliency**
    - 5.1 Urban Tree Planting Program

Additional supporting actions include regional efforts undertaken by the San Diego Association of Governments (SANDAG), pursuant to Senate Bill 375, the Renewable Portfolio Standard, California Solar Programs, Vehicle Efficiency Standards (Pavley 1 and CAFE), Low Carbon Fuel Standard, California Air Resources Board (CARB) Tire Pressure Program, and the CARB Heavy Duty Vehicle Aerodynamics Program.

Implementation of the CAP is divided into three separate phases.

- **Phase 1: Early Actions** (Adoption of the CAP-December 31, 2017) – High Priority with large emissions reductions that lay the foundation for longer-term actions.
- **Phase 2: Mid-Term Actions** (January 1, 2018-December 31, 2020) – Actions specifically focused on helping the City reach its 2020 GHG Emissions Reduction Target.
- **Phase 3: Longer-Term Actions** (2021-2035) – Actions focused on helping the City reach its 2035 GHG Emissions Reduction Target.

The CAP also discusses the social equity benefits and potential for job creation that would be associated with CAP implementation and reducing greenhouse gas emissions, and the need for the City to plan for climate change adaptation in the near future.

Through 2020, the CAP meets the requirements set forth in CEQA Guidelines section 15183.5, whereby a lead agency (e.g. the City of San Diego) may analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce GHG emissions. Following adoption of the CAP, eligible individual projects preparing project-specific environmental documents may tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts in their cumulative impacts analysis.

The proposed CAP can be found at the following website:

http://www.sandiego.gov/planning/genplan/cap/

PROJECTS WITHIN THE SCOPE OF THE PEIR

Another purpose of this or any other PEIR is to streamline future environmental review of projects found to fall within the scope of the PEIR. The PEIR for this Project will address and evaluate the Climate Action Plan at a general programmatic level. The PEIR is not intended or structured to evaluate project level impacts although the PEIR may provide information and analyses that could be used in conjunction with future project-level environmental reviews. Project level impacts of subsequent activities are subject to additional environmental review in accordance with CEQA.

Pursuant to the CEQA Guidelines (Section 15168), a PEIR allows the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and allow reduction in paperwork. In addition, it may be used with the intent of streamlining and limiting the later environmental review required for projects that implement the components of the Program.

PEIR FORMAT AND CONTENT

The PEIR serves to inform governmental agencies and the public of a project's environmental impacts. Emphasis on the PEIR must be on identifying feasible solutions to environmental problems. The objective is not simply to describe and document an impact, but to actively create and suggest mitigation measures or project alternatives that would avoid or substantially reduce the significant adverse environmental impacts. The adequacy of the PEIR will depend greatly on the thoroughness of this effort. The PEIR must be written in an objective, clear and concise manner, and must meet the requirements of CEQA. Wherever possible, use graphics to replace extensive word descriptions and to assist in clarification. Conclusions must be supported by substantial evidence presented in the PEIR or otherwise contained in the administrative record, with quantitative, as well as qualitative information to the extent practicable.

Prior to distribution of the Draft PEIR (DPEIR), Conclusions will be attached to the front of the DPEIR. The Conclusions cannot be prepared until a DPEIR has been submitted and accepted for release by the City. The DPEIR shall include a Title Page which includes the Project Number, State Clearinghouse Number (SCH No.) and the date of publication and an Executive Summary, reflecting the DPEIR outline for each issue area identified below in Section V, but need not contain every element of the DPEIR. Additional information regarding specific content and formatting of the DPEIR can be found in the City's *Environmental Impact Report Guidelines (updated December 2005)* as outlined below.

I. PEIR REQUIREMENTS

Each section and discussion area of the PEIR must provide a descriptive analysis of the project followed by an objective and comprehensive evaluation. The Draft PEIR must also include sufficient graphics and tables to provide a complete description. Please refer to the Environmental Impact Report Guidelines, updated May 2005, for additional details regarding the required information.

A. Introduction

Introduce the project with a detailed discussion of the intended use and purpose of the PEIR. Briefly describe the project and the necessity for any subsequent discretionary actions anticipated by the City and any other local, state, and/or federal approvals. Discuss how the PEIR may be used as the basis for environmental review of subsequent development approvals and/or environmental documents. Describe the parameters for the future use of the PEIR.

B. Environmental Setting

The PEIR should (i) describe the general location of the CAP planning area and present it on a topographic map and regional map; (ii) provide a local and regional description of the environmental setting of the project, as well as the zoning and land use designations of the affected areas, plan area topography, drainage characteristics and vegetation in the plan area; and (iii) include any applicable land use plans/overlay zones that would be affected by the CAP, such as the City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan and associated Multi-Habitat Planning Area (MHPA).

C. Project Description

The PEIR should include a detailed discussion of the goals and objectives of the CAP. Project objectives will be critical in determining the appropriate alternatives for the project, which would avoid or substantially reduce potentially significant impacts. This section of the document should include a discussion of all discretionary actions required for project approval and implementation, including but not limited to a description of all permits and approvals required by local, state, and federal regulatory agencies.

II. HISTORY OF PROJECT CHANGES

This section of the PEIR shall outline the history of the project and any material changes that have been made to the proposed project in response to environmental concerns raised during public and agency review of the project (i.e., in response to NOP or public scoping meetings or during the public review period for the Draft PEIR).

III. ENVIRONMENTAL ISSUES

The potential for significant environmental impacts must be thoroughly analyzed and mitigation measures identified that would avoid or substantially lessen any such significant impacts. Below are key environmental issue areas that have been identified for this project, within which the issue statements must be addressed individually. Discussion of each issue statement should include an explanation of the existing conditions, impact analysis, significance determination, and appropriate mitigation. The impact analysis should address potential direct, indirect, and cumulative impacts that could be created through implementation of the proposed project and its alternatives. The environmental issues analysis will tier off the General Plan EIR, where appropriate, and will incorporate the General Plan EIR by reference.

LAND USE

Issue 1: Would the proposed project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project? Applicable plans and policies may include the City of San Diego General Plan, Community Plans, the 2030 SANDAG Regional Transportation Plan, Local Coastal Program (LCP) plans, and the Airport Land Use Compatibility Plan (ALUCP).

Issue 2: Would the proposed project result in a conflict with the environmental goals, objectives, or recommendations of the General Plan or affected community plans?

Issue 3: Would the proposed project result in a conflict with adopted environmental plans, including the City of San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan or other approved local, regional or state habitat conservation plan adopted for the purpose of avoiding or mitigating an environmental effect for the area?

The CAP planning area encompasses all land within the City General Plan planning area, which includes all of the City's Community Plan areas. The CAP does not propose any land use changes for any parcels within the planning area; rather, the CAP proposes energy efficiency improvements to existing buildings, utility systems, and roadway infrastructure to support existing land uses. The PEIR shall identify the relevant goals, objectives, and recommendations within the General Plan and various Community Plans and analyze whether implementation of all five strategies would be consistent with them.

The PEIR shall also evaluate conformance with the City of San Diego's MSCP Subarea Plan and Biological Resources Guidelines (2012). The PEIR should address land use compatibility issues identified in the ALUCP, including such issues as aircraft safety, noise, vibration, and the potential for aircraft operations interference.

VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

Issue 1: Would the project affect the visual quality of the area, particularly with respect to views from public viewing areas, vistas, or open spaces?

Issue 2: Would the proposed project be compatible with surrounding development in terms of bulk, scale, materials, or style? Would adverse aesthetic impacts result from the project?

Issue 3: Would the proposed project create substantial light or glare which would adversely affect daytime or nighttime views in the area?

This section of the PEIR should include a discussion of the potential for changes to the visual character of existing development due to retrofit activities, solar panel installation, increased urban forest canopy, and the potential for changes to scenic resources from utility enhancements that could result from the implementation of Strategy 1: Energy and Water Efficient Buildings and Strategy 5: Climate Resiliency. The PEIR also should analyze the potential for proposed building material and solar arrays to emit or reflect a significant amount of light or glare and any potential effect on aviation.

AIR QUALITY/ODOR

Issue 1: Would the proposed project result in air emissions that would substantially deteriorate ambient air quality, including the exposure of sensitive receptors to substantial pollutant concentrations, (e.g., exposure to new residential areas resulting from truck route emissions; MHPA buffers)?

Issue 2: Would the proposed project affect the ability of the Regional Air Quality Strategy (RAQS) to meet the federal and state clean air standards? Would the proposed project conflict with implementation of other regional air quality plans?

The PEIR should describe the City of San Diego's climatological setting within the San Diego Air Basin and the basin's current attainment levels for state and federal Ambient Air Quality Standards. It should discuss both the potential stationary and non-stationary air emission sources related to construction activities associated with building retrofits, energy generation system installations, transportation-related improvements, and utility system enhancements. Should the project result in a significant decrease in the levels-of-service of roadways or intersections near transit-priority areas, the PEIR should address the potential degradation of air quality which may result, including the possibility of "hotspots" within the area, as analyzed in the General Plan EIR.

The PEIR should discuss any short, long-term, and cumulative impacts the project may have on regional air quality, including construction and transportation-related sources of air pollutants, and any proposed mitigation measures.

GREENHOUSE GAS EMISSIONS

Issue 1: Would the proposed project generate Greenhouse Gas (GHG) emissions, either directly or indirectly, that may have a cumulatively significant impact on the environment?

Issue 2: Would the proposed project conflict with the reduction measures identified in CARB's AB 32 Scoping Plan?

The GHG analysis should discuss the City of San Diego's the GHG emissions in the City through the CAP horizon year 2035, the GHG emissions reduction goals established in the CAP, and the potential for GHG emissions sources resulting from CAP reduction measure implementation. It should discuss any short-term, long-term, and cumulative impacts from General Plan development with and without CAP implementation may have on the region's ability to meet GHG emissions reduction goals and any proposed mitigation measures.

HISTORICAL RESOURCES

Issue 1: Would the proposed project result in any adverse physical or aesthetic effects to a prehistoric or historic building or structure?

The PEIR should discuss the potential for building retrofits to alter an existing historic building per Strategy 1: Energy and Water Efficient Buildings, and how projects being retrofitted would not be altered substantially in character as a result of such retrofits. The PEIR should discuss how building retrofits facilitated by the project would adhere to

applicable laws are regulations intended to protect historic resources, including the National Historic Preservation Act, the City of San Diego *Historical Resources Regulations of the Land Development Code* (Chapter14, Division 3, and Article 2), and the Historic Preservation Element of the General Plan.

TRAFFIC/CIRCULATION

Issue 1: Would the proposed project result in a substantial impact upon existing or planned transportation systems.

Issue 2: Would the proposed project create substantial alterations to present circulation movements including effects on existing public access points and/or resulting from anticipated changes in transportation modes?

Issue 3: Would the proposed project conflict with the adopted policies, plans or programs supporting alternative transportation modes (e.g., bus turnouts, trolley extensions, bicycle lanes, bicycle racks, etc.)?

The PEIR would discuss any envisioned modification and/or improvements to the existing circulation system per Strategy 3: Bicycling, Walking, Transit & Land Use, including City streets, intersections, freeways and interchanges from the implementation of the CAP. The PEIR would discuss anticipated transportation mode alterations resulting from CAP implementation, relating to the improvements and expansion of the mass transit system, pedestrian and bicycle infrastructure, vehicle roundabouts, and other improvements.

UTILITIES

Issue 1: Would the proposed project result in a need for new systems, or require substantial alterations to existing infrastructure in order to meet the goals identified in the CAP?

The PEIR would address the need of future construction or expansion of infrastructure necessary to meet the goals described in Strategy 1: Energy and Water Efficient Buildings, Strategy 2: Clean and Renewable Energy, and Strategy 4: Zero Waste, including physical changes to the City's infrastructure, such as, but not limited to, solid waste facilities and renewable energy facilities.

WATER SUPPLY

Issue 1: Would the proposed project affect the ability of the water serving agencies (City of San Diego, County Water Authority) to provide water? Specifically, would the project comply with provisions contained in Senate Bills 610 and 221?

Senate Bill 610 amended state law, effective January 1, 2002, to improve the link between information on water availability and certain land use decisions made by cities and counties. The statute requires detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. The statute also requires this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such

projects. The PEIR would include a discussion on the applicability of this law as it pertains to CAP implementation.

The PEIR would also address public water supply services to ensure compliance with SB 610, and it should also discuss the intention of CAP reduction strategies to reduce water demand through building retrofits and use of water efficient landscaping, as described in Strategy 1: Energy and Water Efficient Buildings.

IV. SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

This section shall describe the significant unavoidable impacts of the Program, including those significant impacts that can be mitigated but not reduced to below a level of significance.

V. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

In accordance with CEQA Section 15126.2(c), the PEIR must include a discussion of any significant irreversible environmental changes which would be caused by the proposed action should it be implemented. The PEIR should also address the use of nonrenewable resources associated with Program implementation. See CEQA Section 15127 for limitations on the requirements for this discussion.

VI. GROWTH INDUCEMENT

The PEIR should address the potential for growth inducement through implementation of the project. The PEIR should discuss the ways in which the CAP could foster economic or population growth, or construction of additional housing either directly or indirectly. Accelerated growth could further strain existing community facilities or encourage activities that could significantly affect the environment. This section need not conclude that growth-inducing impacts, if any, are significant unless the project would induce substantial growth or concentration of population.

V. CUMULATIVE IMPACTS

The evaluation of cumulative impacts is required by State CEQA Guidelines Section 15130 to be based on either: "(A) a list of past, present, and probably future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative effect. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency." The PEIR would use the projections contained in the General Plan to complete the cumulative impacts analysis for the CAP.

VII. EFFECTS FOUND NOT TO BE SIGNIFICANT

A separate section of the PEIR should include a brief discussion of issue areas that were not considered to be potentially significant. If these or other potentially significant issue areas arise during detailed environmental investigation of the project, however, consultation with this division is recommended to determine if these other issue areas need to be addressed in

the PEIR. Issues considered not to be potentially significant are Agricultural Resources, Biological Resources, Geologic Resources, Health and Safety/Hazardous Materials, Hydrology/Water Quality, Mineral Resources, Noise, Paleontological Resources, and Public Services and Facilities. Additionally, as supplementary information is submitted, the EIR may need to be expanded to include additional issue areas.

VI. ALTERNATIVES

The PEIR should analyze reasonable alternatives that avoid or mitigate the significant environmental impacts. These alternatives should be identified and discussed in detail, and should address all significant impacts. The alternative's analysis should be conducted in sufficient graphic and narrative detail to clearly assess the relative level of impacts and feasibility. Preceding the detailed alternatives analysis should be a section entitled "Alternatives Considered but Rejected." This section should include a discussion of preliminary alternatives that were considered but not analyzed in detail. The reason for rejection should be explained.

At a minimum, the following alternatives should be considered:

1. THE NO PROJECT ALTERNATIVE

The No Project Alternative should discuss the existing conditions of the planning area at the time the Notice of Preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the CAP were not approved. This alternative should compare the environmental effects of the planning area remaining in its existing state (or in what would reasonably be expected to occur on-site) against environmental effects that would occur if the CAP were approved. Should the No Project Alternative prove to be the environmentally preferred alternative, then according to CEQA, another environmentally preferred alternative must be identified.

2. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

This alternative would reflect modified CAP reduction strategies or an alternative plan which substantially avoids or lessens potentially significant impacts to the environment that were identified in the impact analysis portion of the PEIR.

VIII. MITIGATION FRAMEWORK - MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

A Mitigation Framework should be prepared to provide guidance for development projects that would tier off the PEIR to demonstrate compliance with the CAP Strategies, Goals, and Targets for reducing GHG emissions. Mitigation Framework should be clearly identified, discussed, and its effectiveness assessed in each issue section of the PEIR. The separate Mitigation Framework should also be contained (verbatim) as a separate section, which will be attached to the PEIR.

APPENDIX 3

State Clearinghouse Distribution Letter

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STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

February 18, 2015

To: Reviewing Agencies

Re: Climate Action Plan
SCH# 2015021053

Attached for your review and comment is the Notice of Preparation (NOP) for the Climate Action Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Rebecca Malone
City of San Diego
1222 First Avenue, MS-501
San Diego, CA 92101

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH#	2015021053
Project Title	Climate Action Plan
Lead Agency	San Diego, City of

Type NOP Notice of Preparation

Description City Council Approval for the adoption of the Climate Action Plan (CAP), implementing regulations or policies, which may require amendments to the Municipal Code and/or Land Development Code. Former Governor Arnold Schwarzenegger's Executive Order S-3-05 established the 2050 statewide GHG reduction target of 80 percent below 1990 levels. The City of San Diego has prepared a draft CAP that identifies measures to effectively meet greenhouse gas (GHG) reduction targets for 2020 and 2035, as "interim" targets for achieving the 2050 target. The CAP estimates the GHG emissions for the City of San Diego in the baseline year 2010 to be around 12.8 million metric tons of carbon dioxide equivalent (MMT CO2e). By 2020 the CAP estimates the City's emissions would increase to 13.9 MMT CO2e, and to around 16.2 MMT CO2e by 2035. With implementation of the CAP, the City aims to reduce emissions 15 percent below the 2010 baseline by 2020 to around 10.9 MMT CO2e, and by a total of 49 percent by 2035 to 6.4 MMT CO2e. With implementation of the CAP, it is anticipated that the City would exceed its reduction target by 0.9 MMT CO2e in 2020 and 155,600 MT CO2e in 2035. The CAP relies on significantly City and regional actions, continued implementation of federal and state mandates, and five local strategies with associated action steps for target attainment. The five strategy areas are:
Water & Energy Efficient Buildings;
Clean & Renewable Energy;
Bicycling, Walking, Transit & Land Use;
Zero Waste; and
Climate Resiliency.
Implementation of the CAP is divided into:
Early Actions (Adoption of the CAP-December 31, 2017),
Mid-term Actions (Jan 1, 2018-Dec. 31, 2020), and
Longer-Term Actions (2021-2035).

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Lead Agency Contact

Name Rebecca Malone
Agency City of San Diego
Phone 61-446-5371 *Fax*
email
Address 1222 First Avenue, MS-501

City San Diego *State* CA *Zip* 92101

Project Location

County San Diego
City
Region
Cross Streets Citywide
Lat / Long
Parcel No.
Township *Range* *Section* *Base*

Proximity to:

Highways I-5,I-15,I-805,SR-52,SR-94,SR905
Airports Lindbergh Field, Miramar
Railways San Diego Trolley
Waterways Pacific Ocean, San Diego Bay, Mission Bay, San Diego River, Lake Murray, San Vicente Reservoir,
Schools Multiple
Land Use Various Land Uses, zoning and GP designations intersect with the program elements.

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Solid Waste; Traffic/Circulation; Water Supply; Growth Inducing; Landuse; Cumulative Effects; Other Issues

Reviewing Agencies Resources Agency; California Energy Commission; Department of Water Resources; Department of Parks and Recreation; Department of Fish and Wildlife, Region 5; Native American Heritage Commission; Public Utilities Commission; Caltrans, District 11; Air Resources Board, Major Industrial Projects

Date Received 02/18/2015 *Start of Review* 02/18/2015 *End of Review* 03/19/2015

Note: Blanks in data fields result from insufficient information provided by lead agency.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2015021053

Project Title: CLIMATE ACTION PLAN

Lead Agency: City of San Diego | Contact Person: Rebecca Malone

Mailing Address: 1222 First Avenue, MS501 | Phone: (619)446-5371

City: San Diego, CA | Zip: 92101 | County: San Diego

Project Location: County: San Diego | City/Nearest Community: Citywide

Cross Streets: Citywide | Zip Code:

Lat. / Long.: N/ W | Total Acres:

Assessor's Parcel No.: | Section: | Twp.: | Range: | Base:

Within 2 Miles: State Hwy #: I-5, I-15, I-805, SR-52, SR-94, SR-905 | Waterways: Pacific Ocean, San Diego Bay, Mission Bay, San Diego River, Lake Murray, San Vincente Reservoir, Otay Reservoir

Airports: Lindbergh Field, Miramar | Railways: San Diego Trolley | Schools: Multiple

RECEIVED
FEB 18 2015
STATE CLEARINGHOUSE

Document Type:

CEQA: ☒ NOP ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Other

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☒ Other: City

Council Approval of the Climate Action Plan

Development Type:

☐ Residential: Units Acres
☐ Office: Sq.ft. Acres Employees
☐ Commercial: Sq.ft. Acres Employees
☐ Industrial: Sq.ft. Acres Employees
☐ Educational
☐ Recreational

☐ Water Facilities: Type MGD
☐ Transportation: Type
☐ Mining: Mineral
☐ Power: Type MW
☐ Waste Treatment: Type MGD
☐ Hazardous Waste: Type
☒ Other: Climate Action Plan

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☐ Agricultural Land
☒ Air Quality
☒ Archeological/Historical
☐ Biological Resources
☐ Coastal Zone
☐ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal
☐ Flood Plain/Flooding
☐ Forest Land/Fire Hazard
☐ Geologic/Seismic
☐ Minerals
☐ Noise
☐ Population/Housing Balance
☐ Public Services/Facilities
☐ Recreation/Parks
☐ Schools/Universities
☐ Septic Systems
☐ Sewer Capacity
☐ Soil Erosion/Compaction/Grading
☒ Solid Waste
☐ Toxic/Hazardous
☒ Traffic/Circulation
☐ Vegetation
☐ Water Quality
☒ Water Supply/Groundwater
☐ Wetland/Riparian
☐ Wildlife
☒ Growth Inducing
☒ Land Use
☒ Cumulative Effects
☒ Other Public Utilities, Greenhouse Gas Emissions

Present Land Use/Zoning/General Plan Designation: Various Land Uses, zoning and GP designations intersect with the program elements.

Project Description: *(please use a separate page if necessary)*

SEE PROJECT DESCRIPTION BELOW:

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

___	Air Resources Board	___	Office of Emergency Services
___	Boating & Waterways, Department of	___	Office of Historic Preservation
___	California Highway Patrol	___	Office of Public School Construction
___	CalFire	___	Parks & Recreation
___	Caltrans District # 11	___	Pesticide Regulation, Department of
___	Caltrans Division of Aeronautics	___	Public Utilities Commission
___	Caltrans Planning (Headquarters)	___	Regional WQCB # 9
___	Central Valley Flood Protection Board	___	Resources Agency
___	Coachella Valley Mountains Conservancy	___	S.F. Bay Conservation & Development Commission
___	Coastal Commission	___	San Gabriel & Lower L.A. Rivers and Mtns Conservancy
___	Colorado River Board	___	San Joaquin River Conservancy
___	Conservation, Department of	___	Santa Monica Mountains Conservancy
___	Corrections, Department of	___	State Lands Commission
___	Delta Protection Commission	___	SWRCB: Clean Water Grants
___	Education, Department of	___	SWRCB: Water Quality
___	Energy Commission	___	SWRCB: Water Rights
___	Fish & Game Region # 5	___	Tahoe Regional Planning Agency
___	Food & Agriculture, Department of	___	Toxic Substances Control, Department of
___	General Services, Department of	___	Water Resources, Department of
___	Health Services, Department of	X	Other EPA,
___	Housing & Community Development	___	Other _____
___	Integrated Waste Management Board	___	Other _____
___	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date February 18, 2015 Ending Date March 20, 2015

Lead Agency (Complete if applicable):

Consulting Firm: _____
Address: _____
City/State/Zip: _____
Contact: _____
Phone: _____

Applicant: City of San Diego, Planning Department
Address: 1222 1st Avenue, MS 501
City/State/Zip: San Diego, CA 92101

Signature of Lead Agency Representative: Rebecca Malone **Date:** 2/13/15

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

NOP Distribution List

SJN

County: San Diego

SCH# 2015021053

Resources Agency

- [■] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Nicole Wong
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Lisa Johansen
- [ ] **Dept. of Conservation**
  Elizabeth Carpenter
- [■] **California Energy Commission**
  Eric Knight
- [ ] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
  James Herota
- [ ] **Office of Historic Preservation**
  Ron Parsons
- [■] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [■] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Donald Koch
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [ ] **Fish & Wildlife Region 3**
  Charles Armor
- [ ] **Fish & Wildlife Region 4**
  Julie Vance
- [■] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Sickler
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- [ ] **Delta Stewardship Council**
  Kevan Samsam
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Michael Machado
- [ ] **OES (Office of Emergency Services)**
  Dennis Castrillo
- [■] **Native American Heritage Comm.**
  Debbie Treadway
- [■] **Public Utilities Commission**
  Leo Wong
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [ ] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [ ] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Terri Pencovic
- [ ] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Eric Federicks – South
  Susan Zanchi - North
- [ ] **Caltrans, District 4**
  Erik Alm
- [ ] **Caltrans, District 5**
  Larry Newland
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Mark Roberts
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [■] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [■] All Other Projects
  Cathi Slaminski
  - [ ] Transportation Projects
    Nesamani Kalandiyur
  - [■] Industrial/Energy Projects
    Mike Tollstrup
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Jeffery Werth
  Division of Drinking Water
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [■] **RWQCB 9**
  San Diego Region (9)

- [ ] Other _____
- [ ] _____
  Conservancy

Last Updated 10/13/2014

APPENDIX 4
NOP Comment Letters

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AMERICAN LUNG ASSOCIATION | LUNG FORCE

AMERICAN LUNG ASSOCIATION IN CALIFORNIA
2750 FOURTH AVENUE, SAN DIEGO, CA 92103
1-800-LUNGUSA LUNGFORCE.ORG

March 17, 2015
City of San Diego
Planning Department, MS 501
ATTN: Rebecca Malone
1222 First Avenue
San Diego, CA 92101

RE: San Diego Climate Action Plan PEIR

Dear Rebecca:
Thank you for the opportunity to submit written comments on the scoping and content of the Climate Action Plan PEIR.

First, let us express our appreciation that the City's draft Climate Action Plan is an aggressive effort to conform to the mandates of AB-32 and S-3-05. We look forward to working with the City to refine and adopt the Plan. We look forward to the opportunity to review the Technical Appendices and determine what additional information is needed to ensure this maximizes improvements to air quality and public health today and for future generations.

1. There is a sense of urgency to adopt the City's Climate Action Plan, but the City must release the Technical Appendices before starting the EIR.

To ensure that the PEIR is a thoughtful and robust analysis of the Plan and fully discloses the benefits of the Plan and alternatives we offer the following suggestions:

2. Measure the public health impacts of the baseline as well as the public health benefits of the Plan and alternatives in terms of changes in active transportation modes (walk, bike), transit usage and improved air quality due to mode shift. Public health modeling tools are becoming available for use in urban planning processes, including the Integrated Transport and Health Impact Modelling Tool (ITHIM), Urban Footprint and others. The City should invest in using these tools to quantify the public health benefits of the proposed mobility mode shifts.

3. Prioritize those greenhouse gas reduction strategies that maximize co-benefits of reducing air pollutants and providing rapid public health improvement through increased access to safe, practical walking and biking infrastructure.

4. Use CAPCOA's CalEEMod, a statewide land use emissions computer model, or equivalent. The model can be used to identify mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from such measures. Additional effort should be placed on evaluating

the benefits and impacts from the perspective of social equity and reducing health disparities

5. Verify that the Plan is enforceable and has measurable performance metrics; if not, what are the impacts if the Plan's goals are not achieved?

6. Verify the Plan can realistically meet the long-term greenhouse gas reduction targets, including 2035 and 2050 reduction targets as required by AB-32 and S-3-05.

7. A significant portion of the greenhouse gas reductions comes from mode shifts from single-occupancy cars to transit, walking and biking. The resources needed to achieve those mode shifts rest primarily with a 3rd party, SANDAG. If the mode shifts don't or can't happen because of the lack of transportation investment, identify viable alternatives that can provide equivalent GHG reductions.

8. Include at least one alternative that is more aggressive in greenhouse gas reduction than the draft Climate Action Plan so that decision makers can understand the limits of available strategies as well as measure them against the socio-economic impacts and benefits.

We look forward to working with the City of San Diego through the PEIR process and the adoption of the Climate Action Plan.

Sincerely,

Jessie Bustamante

Jessie Bustamante, Executive Director
American Lung Association in California

Rancho Bernardo Community Planning Board

P.O. Box 270831, San Diego, CA 92198
www.rbplanningboard.com

March 19, 2015

Ms. Rebecca Malone
City of San Diego, Planning Department
1222 First Avenue, MS 501
San Diego, CA 92101

RE: Notice of Preparation of a Draft Program Environmental Impact Report for the City of San Diego Climate Action Plan

Dear Ms. Malone:

The Rancho Bernardo Community Planning Board appreciates the opportunity to provide input regarding the scope of the forthcoming draft Program Environmental Impact Report (PEIR) for the City's draft Climate Action Plan (CAP). Presented below are the comments approved (by a vote of 12 to 0) for submittal to the Planning Department at the Planning Board's meeting of March 19, 2015.

1. Introduction – As the intent of the PEIR is to streamline CEQA requirements for future projects, the Introduction section should describe the streamlining process. For instance, how will the determination be made that a project is consistent with projected GHG emissions presented in the PEIR?

2. Project Description – This section should clearly explain the basis for the estimate of GHG emissions in baseline year 2010, as presented in the CAP, as well as the basis for the estimates for 2020. The assumptions related to future development intensity along with assumptions related the implementation of actions that would be in place to reduce overall GHG emissions should be clearly stated, as the validity of these assumptions will need to be monitored over time. Should the assumptions prove to be invalid, future projects could no longer rely on the PEIR for streamlining under CEQA.

3. Greenhouse Gas Emissions – The PEIR should analyze the implementation proposals within the CAP to ensure that the goals presented are supported by specific actions intended to achieve the plan goals. This section should also analyze how the CAP proposes to monitor GHG emissions to ensure the goals of the plan are being achieved.

4. Mitigation Framework – To ensure the implementation of future projects will not result in GHG emissions that exceed current estimates for 2020, the mitigation framework should include a monitoring component that periodically evaluates how development within the City may differ from the assumptions made when the PEIR and CAP were approved. For example, General Plan amendments may be approved that exceed the development intensity assumptions; changes to the Land Development Ordinance result in increased development intensity; or the assumptions made in the CAP as they related to the Urban Forest Management Plan are invalid because budget decisions have limited the quantity of trees planted.

Thank you again for the opportunity to provide our comments. We look forward to reviewing and commenting on the draft PEIR when it is made available for public review and comment.

Sincerely,

Original signed letter in the mail

Lou Dell'Angela
Chair, Rancho Bernardo Community Planning Board

cc: Councilmember Mark Kersey, District 5

SAN DIEGO
HOUSING
FEDERATION

110 West C Street, Suite 1811
San Diego, CA 92101
Phone: (619) 239-6693
Fax: (619) 239-5523
www.housingsandiego.org

March 19, 2015

Ms. Rebecca Malone
Associate Planner
City of San Diego Planning Department
1222 First Avenue, MS 501
San Diego, CA 92101

Sent via email: dsdeas@sandiego.gov

RE: PEIR for City of San Diego Climate Action Plan

On behalf of the San Diego Housing Federation, please accept these comments to the Scoping Plan of the City of San Diego's Climate Action Plan. Founded in 1990, the San Diego Housing Federation serves as the collective voice of those who support, build and finance affordable homes in the San Diego region.

We fully support the legally binding greenhouse gas reduction targets of the draft Climate Action Plan – 15% below baseline for 2020 and 49% below baseline for 2035. California has committed to reducing GHG emissions while accommodating a growing population and encouraging economic growth. These targets are in line with the state's 2020 and 2050 targets, and will hopefully help ensure we are taking the minimum steps necessary to protect our quality of life for generations to come. We also support the draft Plan's key goals, including:

- Use 100% clean energy citywide by 2035;
- Use public transit, walking, and biking for 50% of commutes by 2035;
- Reduce average vehicle commute distance by 2 miles by 2035;
- Reduce waste by 90%; and
- Achieve 35% urban tree canopy average by 2035.

As an affordable housing organization, we are particularly interested with the nexus between land use and transportation to meet greenhouse reductions. We support opportunities for San Diegans to drive less by living in affordable homes near to transit, service and jobs. We believe that with the right transportation and land use planning and investment, the San Diego region

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can achieve these goals to create healthy, vibrant communities while reaching greenhouse gas reduction goals.

Finally, we join our allies such as Environmental Health Coalition in supporting the integration of social and environmental equity and middle-class job creation into all of the greenhouse gas reduction strategies.

We offer the following recommendations and comments for your consideration during the environmental review and alternatives analysis to further strengthen the plan:

Affordable Housing Must be Component of Reducing the Average Vehicle Commute

We support the City's goals of reducing the average vehicle commute distance by promoting effective land use (Goal 3.9) and increasing the use of commuter transit, walking and biking (Goals 3.1, 3.2, 3.3). We also support the Action items listed to meet those goals, such as implementing the General Plan's Mobility Element and the City of Villages Strategy in Transit Priority Areas, as well as implementing transit-oriented development within Transit Priority Areas.

However, there seems to be a gap between promoting effective land use and actually achieving better land use. The City's General Plan was passed in 2008 to promote a land use pattern that would reduce VMT and result in our region meeting or exceeding our climate goals. Unfortunately, the City of Villages strategy has not been meaningfully implemented or required of new developments, which has prevented the City from achieving the necessary reductions in VMTs. This begs the question of how the City can identify implementing the General Plan's City of Villages strategy as the action that has the necessary substantial evidence that will lead to the necessary VMT reductions. [1] We ask that the PEIR analyze what implementation strategies/actions would be needed to ensure the reduction of average vehicle miles. It is not enough to have mere policy goals without any enforceable targets, incentives, programs and policies to ensure this type of development occurs.

Even more critical to reducing VMTs than developing any type of housing near transit and jobs, is developing affordable housing near transit and jobs. The City must analyze the interrelationship between the construction of affordable housing in transit-oriented

[1] We note that some of the supporting strategies in the plan do seem to have a more direct correlation with achieving the VMT reductions, such as locating a majority of all new residential areas in Transit Priority Areas, but those are not required to be implemented.

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developments and a reduction in VMTs. Groundbreaking research has found that building affordable homes near transit leads to a significant reduction in VMT. In the May 2014 study by Transform and the California Housing Partnership Corporation (CHPC), *Why Creating and Preserving Affordable Homes Near Transit Is a Highly Effective Way Climate Protection Strategy,* they found:

- Lower Income households drive 25-30% fewer miles when living within 1/2 mile of transit than those living in non-TOD areas. When living within 1/4 mile of frequent transit they drove nearly 50% less.
- Higher Income households drive more than twice as many miles and own more than twice as many vehicles as Extremely Low-Income households living within 1/4 mile of frequent transit. This underscores why it is critical to ensure that low-income families can afford to live in these areas.

Other ancillary benefits identified in the Transform report to constructing affordable housing in transit-oriented developments include:

- Reducing car ownership by .63 vehicles per household, or more than one car for every two low income households, and freeing up land used for parking to create housing and public space.
- Lowering household transportation costs and providing improved access to jobs and services.

Furthermore, affordable housing developers have a proven track record of implementing transportation demand management strategies like: reduced parking, free or reduced-price transit passes for residents, and bike and car share on site.

While still in draft form, the California Housing Partnership Corporation (CHPC) and the Center for Neighborhood Technology (CNT) applied the statewide VMT model to San Diego County and found similar results. We hope to present the findings and discuss their implications during this environmental review process.

City's Housing Element Already Prioritizes Transit-Oriented Affordable Housing

According to the City of San Diego's Housing Element, the San Diego Housing Commission started its Three-Year Work Plan to Facilitate Transit-Oriented Affordable Housing

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Development. We support this effort and hope this plan can be integrated into the set of required actions in the Climate Plan achieve reductions in VMT.

Another approach listed in the Housing Element is the development of an Equitable Urban Reinvestment Program, centered around Transit Village Development Districts. The Housing Element says the City could prepare a Transit Village Plan for all land located within one-half mile of a transit station. These plans would support implementation of the City of Villages concept around transit stations, focusing on intensifying appropriate land uses, promoting connections between jobs and housing, and addressing infrastructure needs.

Affordable Housing Goes Hand in Hand with Quality of Life and Sustainability of Region

Creating housing opportunities for families of all incomes is critical to protecting the sustainability of our region for decades to come. According to a May 2014 California Housing Partnership study, there is a shortfall of 127,930 homes affordable to very low and low-income households in the San Diego region. At the same time, the region has experienced a 78 percent decrease in state and federal resources to build affordable homes that could help close the gap on the shortfall. A lack of affordable homes combined with rising rents are forcing more and more of San Diego's low-wage workforce to "drive to qualify" – enduring longer commutes further away from jobs in order to find an affordable place to live. This directly contradicts the explicit goals of the City's General Plan, "City of Villages" strategy. As already highlighted, the City must craft specific programs and policies that ensure development of affordable homes in these City of Villages.

Prioritize public and active transit investments over vehicle-reliant modes of transportation

The San Diego Housing Federation further supports a transportation planning scenario that prioritizes transit and active transit over freeway expansion and auto-centric investment. The City must include in its environmental review and alternatives analysis a way to include the need to choose one investment over the other in order to achieve its VMT reduction goals. An "all of the above" strategy will not be sufficient.

Further, by proactively choosing investments in transit and active transportation options in lieu of highway/freeway expansions/road widenings, the City will not only be making wise decisions for climate planning that will improve community health, but will also be taking steps to place our region in a leading role to attract additional investments that accompany this type of planning.

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Finally, we agree with Environmental Health Coalition that the neighborhoods who are most likely to use transit and are also the most vulnerable populations to climate change, as identified by CalEnviroScreen, should be the first recipients of new transit, biking and walking infrastructure.

The data makes clear the powerful way in which living close to transit and household income affect household travel behaviors. With these policies in place, the production and preservation of affordable TOD homes will significantly reduce VMT, offering an important tool in San Diego's efforts to reduce GHG emissions.

Recommendation for Action Items to Include in Goal 3.9:

- Housing Element policy of Transit-Oriented Affordable Housing as Action Item to achieve VMT target
- Housing Element policy of Equitable Urban Reinvestment Program centered around Transit Village Development Districts to achieve VMT target
- Using data from report cited above, set specific target for construction of sufficient affordable housing units near transit and jobs to achieve VMT target
- Require City to choose transit and active transportation above vehicle-reliant modes of transportation including freeway, roadway and highway expansions, including at SANDAG

<u>City Must Commit to Climate Adaptation and Resilience Planning</u>

While the plan clearly acknowledges the need for developing a stand alone climate adaptation document, there is not a deadline for adopting a plan. Given the critical need for the City to reduce its vulnerability to climate impacts and enhance its local capacity to respond—especially for sensitive populations and communities – the environmental review and alternatives analysis must commit the City to adopting an Adaptation plan.

Recommendation for Action:

- Commit the City to adopt an Adaption Plan by 2017.

<u>Ensuring Success During Implementation</u>

We support the Monitoring and Reporting chapter of the draft Climate Plan. We agree with the current list of actions, but we recommend an additional action item requiring the City to

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identify the proper staffing, financing, and funding needed to implement the plan and reach the identified goals and targets in the timelines outlined in the draft. Funding and budget allocation should be a part of the annual monitoring and reporting to ensure sufficient progress is made on all of the action items in the plan.

Recommendation for Action Item to Include in Monitoring & Reporting:

- Require the City to identify the proper staffing, financing, and funding needed to implement the plan and reach the identified goals and targets in the timelines outlined in the draft.

Thank you for the opportunity to make these comments and we look forward to working with you through the environmental review process to ensure San Diego remains a leader in tackling the biggest public health, environmental and economic crisis facing the City.

Sincerely,

Bruce Reznik
Executive Director

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March 19, 2015

Rebecca Malone
Associate Planner, City of San Diego Planning Department
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Sent Via E-mail to: DSDEAS@sandiego.gov; bschoenfisch@sandiego.gov

Subject: Comments Regarding the City of San Diego's Draft Climate Action Plan (CAP), the Notice of Preparation (NOP) of a Draft Program Environmental Impact Report (DPEIR) for that CAP, and Scope of Work for that DPEIR, dated February 18, 2015.

Dear Ms. Malone:

These comments are submitted on behalf of Sierra Club San Diego and our over 12,000 members in San Diego and Imperial Counties. We appreciate the effort the City of San Diego has put into preparing its first Climate Action Plan (CAP). Involving community stakeholders in the planning process has resulted in a better plan and we urge you to continue that community collaboration as this CAP moves through to final adoption and implementation.

The draft CAP includes a number of goals that we think set important precedents for our region. The final CAP needs to reaffirm the commitment to achieve these goals by 2035:

- Reduce GHG emissions 15% by 2020 and 49% by 2035
- 100% renewable energy on the city-wide electrical grid
- 50% of commute trips made by public transit, walking, and biking
- Reduce waste by 90 %
- Achieve 35% urban tree canopy average

However, under CEQA, CAP and CAP EIR decision makers will need to know what target set will be required to support climate stabilization and what set of strategies will achieve those targets. We include Reference 1 as an example of the kind of work that is required.

Establishing these targets will help encourage other cities to follow your lead. It should be noted that Community Choice Aggregation has a special place in the draft CAP, as it is the best policy tool available for moving the City toward its 100% renewable energy goal and, of all the potential actions listed in the draft CAP, it provides the greatest amount of greenhouse gas emission reductions.

The following are several additional specific comments on the Draft CAP and related DPEIR:

VMT Reduction Strategies Require Further State and Regional Action

SANDAG recently changed their method of allocating Vehicle Miles Traveled (VMT) between local jurisdictions and SANDAG as the regional MPO. This is an attempt to more

equitably allocate responsibility for the VMT to the agency that has the greatest ability to influence it. The CAP includes actions to impact local VMT through improved alternative transportation (bicycling, walking and transit) and support for cleaner fueled vehicles(electric vehicle charging infrastructure). But it does not include City support for several key regional and state actions that address the portion of VMT and associated GHG over which the city has less direct control but which will still have indirect impacts on the city. San Diego is a city of 1.3 million people, with 40 of 100 weighted votes at SANDAG. We recommend adding the following:

1. Support for improved state Light Duty Vehicle standards (LDV)

Reference 1 is an example of such a plan for revising standards for LDVs. Its mitigation measures are in the form of requirements for LDVs. The City can lobby at the state and regional level to get such requirements enacted. The Energy Policy Initiative Center (EPIC), which participated in the development of the draft CAP, has determined that LDVs are responsible for 41% of the GHG emitted in San Diego County. There needs to be a set of requirements (state and local enforceable measures) to ensure that LDVs, along with measures to reduce driving by the required amount, support stabilization.

2. Support for improved regional policy/action

Establishing formal policy would provide direction to the city's representatives on SANDAG and could result in improved regional GHG reduction programs. Such policies should include:

- Equitable funding for local government programs on alternative transportation
- Require each city to have an adopted CAP to be eligible for discretionary transportation funding (similar to requirements for affordable housing)
- Support for regional policies that fully address the GHG associated with pass through trips. (This GHG is outside the City's control- but the air pollution and other impacts affect city residents just the same.)
- Encourage SANDAG to reprioritize transit projects over highway projects to the maximum extent legally feasible, including reallocation of Transnet funds as needed and incorporating such policy into the next Regional Transportation Plan.

Greater Certainty is Needed- Particularly for Projected 2035 GHG Reductions

Both the Superior Court and the Appellate Court have ruled that the County CAP has no enforceable measures. This is one of the many reasons the County's approval of the EIR for the County CAP was set aside by the courts. The Superior Court ruling stated bluntly that, "enforceable measures are needed now". While the draft CAP includes a list of quantified measures that are, in some cases, enforceable, these do not have implementation dates (just end date) and there are numerous additional possible actions, many of which the city is already doing or considering, which have not been included as enforceable measures.

For example, the current draft CAP includes this in its list of supporting measures for bicycling, walking and transit:

- *Develop a Parking Plan to include measures such as "unbundled parking" for nonresidential and residential sectors in urban areas.*

However, there is nothing explaining the concept of “unbundled parking”, how to implement such a policy, or how much GHG reduction could be achieved. Stating that a plan will be developed is not the same as having enforceable measures. We refer you to our Reference 2 and to the description in this link: http://www.sandiego.gov/environmental-services/pdf/sustainable/parkingcosts.pdf. The Reference 2 mitigation measure was the topic of a brief discussion in the Appellate Court, where a Justice remarked with words to the effect that it was feasible and should not have been ignored.

Furthermore, the projected reductions from the identified measures provide essentially no room for error, particularly for actions by 2035. The projected GHG reductions for 2035 are barely .4% over the minimum reductions required. If any of the measures is adopted just a little late, or is slightly less successful than projected, the target will not be met. The first city in the region to adopt a CAP years ago (Chula Vista) was surprised at their first monitoring report to learn that GHG had gone up instead of down as their CAP program had projected. Similar results have been found in other places- the modeled reductions are hard to achieve in the real world. In order to assure the target reductions are met, additional actions are needed, funding commitments need to be in place, and there needs to be robust contingency planning. In addition, climate-stabilizing targets will likely require that the goals be achieved sooner. Given the nature of our climate crisis, measures need to be implemented as soon as possible.

GHG Reduction Analysis

The GHG reduction analysis and the environmental review in the DPEIR both need to consider how planned freeway expansions and recent gas power plant approvals impact the “Business As Usual” greenhouse gas projections. We believe these contribute to additional GHG emissions that have not been adequately considered in the inventory or analysis of impacts and therefore additional CAP action will be needed to offset these increases.

Alternatives to the Proposed CAP

The EIR process requires consideration of alternatives to the proposed project. We support the need for at an alternative that prioritizes transportation and energy actions in neighborhoods which are most impacted by climate change. CalEnviroScreen or some similar method should be used to identify such communities. This should include programs targeted on energy use reductions in new buildings and energy efficiency improvements in existing buildings that recognize the challenges of such efforts in disadvantaged communities. Transit, complete streets, Transit Oriented Development (TOD), enhanced PACE programs, roof-top solar, neighborhood-scale solar, energy storage, and micro grids should be targeted for such communities. City funds for bicycle, pedestrian and transit projects, as well as tree planting and parks, should also start in and focus on these neighborhoods.

Programs to promote renewable energy systems should also promote entry-level training jobs to expand the work force, giving priority to increasing work-place diversity and to low-income job applicants.

Strengthen Your Commitment to Climate Adaptation Planning

While the CAP includes a description of what the Adaptation Plan will include, there is no completion date specified, nor are there are any metrics provided that can be used to measure success or establish accountability. We would like to see the CAP include a

commitment to complete the Adaptation Plan by 2017 and include some basic metrics for what it is required to achieve.

Include a Clear Description of Climate Destabilization

Our research suggests that if too much GHG is emitted, the earth's climate system's positive feedbacks will begin to dominate and the climate will be transformed to one that will not support most current life forms, including our own species.

Potential Environmental Impacts Incorrectly Excluded from Analysis

Three areas with potential adverse impacts have been excluded from the environmental analysis. Two of these should be analyzed in the DPEIR in order to assure that all potential impacts have been fairly considered. These include the following:

- Biological Resources

Action items 1.4, 1.5 and 1.6 related to water use will further reduce the amount of run-off that has historically supported created wetlands. Reducing this water supply could potentially adversely impact the habitat supported by this run-off. This may conflict with provisions of the MSCP and the City of San Diego MHPA that require protection of such habitats. Action item 5.1, the Urban Tree Planting Program, will increase the need for water to support more trees that may conflict with other actions to reduce water use. Such tree planting programs can indirectly support increased wildfire spread and the resultant habitat loss. All such direct and indirect impacts to biological resources need to be considered.

- Health and Safety

Health and safety impacts are a key part of environmental analysis. This needs to address differential impacts on sensitive communities. A recent report by Climate Education Partners, *Facing the Future: How Science Can Help Prepare San Diego Regional Leaders for Climate Change,* includes the following statement, "With more extreme weather, we will see an increase in childhood asthma, infectious disease and heat-induced heart failure. Our children and grandparents, as well as the chronically ill and people with lower incomes, will be most vulnerable." These impacts are cumulative and increasing and will continue to increase unless all levels of government fully implement actions to reduce GHG to below threshold levels where there are serious health impacts. The environmental analysis needs to fully analyze these impacts, and the differential impacts on at-risk communities.

Improve Transparency and Access to Information

All of the background documents that support the analysis of the CAP and DPEIR need to be made easily available, including the technical appendices.

Final Comments

The San Diego Sierra Club is committed to working for climate stabilization. We look forward to working with you toward adoption and implementation of a Climate Action Plan that helps our region support climate stabilization.

Respectfully submitted,

Nick Ervin

Conservation Committee Chair, San Diego Sierra Club

References

1.) Bullock, M.; *The Development of California Light-Duty Vehicle (LDV) Requirements to Support Climate Stabilization: Fleet-Emission Rates & Per-Capita Driving*; Paper 2014-30793-AWMA, from the Air and Waste Management Association's 2014 Annual Conference and Exhibition; Long Beach, California, June 24-27, 2014.

2.) Bullock, M, *Equitable and Environmentally-Sound Car-Parking Policy at a Work Site*, Oct. 4, 2014 (unpublished report—see web link).

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The San Diego Chapter of the Sierra Club is San Diego's oldest and largest grassroots environmental organization, founded in 1948. Encompassing San Diego and Imperial Counties, the San Diego Chapter seeks to preserve the special nature of the San Diego and Imperial Valley area through education, activism, and advocacy. The Chapter has over 12,000 members. The National Sierra Club has over 700,000 members in 65 Chapters in all 50 states, and Puerto Rico.

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Rebecca Malone, Associate Planner
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San Diego, CA 92101
Via email: DSDEAS@sandiego.gov

March 19, 2015

Re: San Diego Climate Action Plan Scoping Comments

Dear Ms. Malone,

As a long-term resident of the city of San Diego and a professional environmental/conservation biologist, I have committed much of my time and efforts to protect the species and habitats of this region, its environmental health and quality of life. Climate change threatens our natural environments and San Diegans' right to live in healthy and resilient communities. The City should act now to reduce carbon pollution and consequent climate change, which poses disproportionate risks to sensitive natural resources and neighborhoods that already sustain heightened environmental health risks.

I urge the City to strengthen, adopt, and implement an effective, comprehensive, and enforceable Climate Action Plan (CAP) that reduces carbon pollution to comply with state climate laws, the City's General Plan, and City Council Resolution R-2015-68.

The City and region have committed to – and begun to implement - habitat conservation plans (including the city's Multiple Species Conservation Plan) that conserve substantial amounts of natural lands. These preserved natural lands both reduce the area's production of greenhouse gasses (GHGs) by directing development into more efficient, denser development zones as well as improve/maintain the environment's capacity to process carbon pollution.

As critically important as the "natural environment" component is to reducing carbon pollution, it is through the "developed environment" component that the City can most effectively address carbon pollution. I support the GHG reduction and top-line goals in the draft CAP. There are other aspects of the draft document that should be improved in the final CAP and analyzed in the CEQA document: (1) reduce energy use in new and existing buildings; (2) create an "urban green framework" linking (and increasing) urban park lands, street trees, and other city green spaces with the habitat conservation lands (where feasible); (3) increase the percentage of all travel by mass/public transit and active transportation (e.g., walking and bicycling), which reduces the need for more roads and freeway expansions; (4) prioritize neighborhoods that are most impacted by climate change for transportation and energy actions; and (5) further reduce City water rate (per capita) and overall consumption and greatly increase water reuse as has been recently initiated by the City.

The Climate Action Plan's environmental review should analyze and endorse an Alternate Scenario that strengthens the plan to achieve:

- **Transportation: Improve access, affordability, public health, safety, and equity**
  - Commit City support for a Regional Transportation Plan that funds transit *before* freeways

- Commit the City to prepare new planning and zoning approaches to speed-up its implementation of "transit-oriented-development" and "smart growth centers" throughout the City's jurisdiction
- Commit the City to promote a Regional Transportation Plan that produces an effective "smart growth" strategy and prioritizes and funds transit *before* freeways
- Commit City funds to improve bicycling and pedestrian infrastructure citywide and increase access to transit, starting in neighborhoods which would best implement those objectives and are most impacted by climate change, such as identified by CalEnviroScreen. The amount of funds should meet or exceed the CAP's mode-share goals, and be adjusted periodically to ensure achievement of goals.

- **Energy: Close the 'green divide,' increase renewable sources building efficiencies**
  - Facilitate solar installation in all neighborhoods
  - Require new buildings to have on-site clean energy such as solar meet their electricity needs, as the City's General Plan calls for
  - Require existing, inefficient buildings to conduct energy audits and efficiency improvements, while ensuring access to financing and funding, to implement the General Plan. Prioritize facilitating improvements in low-moderate income properties
  - Upgrade city properties with renewable energy sources and efficiency

- **Climate Adaptation and Resilience**
  - Commit to adopting an actionable climate adaptation plan by 2017 that protects natural resources, wildlife, our coastline, infrastructure, and public health and safety
  - Increase trees and parks, prioritized by carbon reduction effectiveness and local neighborhood need (open space per capita and/or environmental risk reduction)

- **Good Jobs:**
  - Ensure CAP programs and projects funded or subsidized with public dollars create good-paying jobs for local residents

Reaffirm Commitment to Achieving Top-Line Goals

The final plan should continue achieve or exceed the top-line targets in the draft plan:

- Reduce greenhouse gas pollution to meet state goals: by 15% by 2020 and 49% by 2035
- Use 100% clean energy citywide by 2035
- Use public transit, walking, and biking for 50% of commutes by 2035
- Reduce waste by 90%
- Achieve 35% urban tree canopy average by 2035

Additional Considerations for Environmental Review:

The environmental review for the Climate Action Plan and Alternate Scenarios should analyze:

- Impacts on conservation plan commitments
- Impacts on air quality and health, particularly in sensitive populations and areas high cumulative pollution burdens
- Compliance with the City General Plan and state laws AB32 and S-3-05
- Enforceability and achievability of the actions proposed

- How recent freeway expansions and gas power plant approvals impact the "Business As Usual" greenhouse gas projections and whether that creates need for stronger CAP actions

Process for Finalizing Plan: Improve Transparency, Public Outreach, and Information
Having the City address (or implement) the following items would assist the public to understand how the CAP (1) provide the full set of climate planning documents, including the appendices; (2) re-establish public engagement via the Energy and Environment Sustainability Task Force and other potential means; (3) hire the Sustainability Manager, Urban Forestry Manager, and Planning Department director.

Completion of the analyses and incorporation of the recommendations above would greatly increase the likelihood of public support for the adoption and implementation of the Climate Action Plan. The city of San Diego has demonstrated its willingness to lead the region's climate planning and is poised to play a key role in this region's contributions to combat climate change, reduce air pollution, conserve our natural resources, achieve social equity, and improve quality of life, health, economy and environment for all San Diegans.

Sincerely,

Bill Tippets
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La Jolla, CA 92037

Cc:
- Mayor Kevin Faulconer (kevinfaulconer@sandiego.gov)
- Council President Sherri Lightner and Councilmembers (sherrilightner@sandiego.gov; lorriezapf@sandiego.gov; toddgloria@sandiego.gov; myrtlecole@sandiego.gov; markkersey@sandiego.gov; chriscate@sandiego.gov; scottsherman@sandiego.gov; davidalvarez@sandiego.gov; martiemerald@sandiego.gov)
- Mike Hansen, Director of Land Use & Environmental Policy, Office of Mayor Faulconer (mhansen@sandiego.gov)
- Brian Schoenfisch, Senior Planner, Planning Department (bschoenfisch@sandiego.gov)

March 20, 2015

Ms. Rebecca Malone
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Sent via mail and email: dsdeas@sandiego.gov

RE: Scoping for PEIR -- City of San Diego Climate Action Plan

Please accept these comments to the Scoping Plan of the PEIR for the City of San Diego's Climate Action Plan from Climate Action Campaign (CAC). CAC is a new climate watchdog organization dedicated to stopping climate change and protecting our quality of life.

We commend the greenhouse gas reduction targets of the draft Climate Action Plan – 15% below baseline for 2020 and 49% below baseline for 2035. These legally-binding targets are in line with the state's 2020 and 2050 targets and set critical precedent for other climate plans locally, statewide and nationwide. While the best available science suggests these goals may not be sufficient to protect our quality of life, public health or our life support systems, we agree that these targets are the appropriate benchmarks for this first iteration of the City's climate planning efforts. We also support the draft Plan's landmark goals, including:

- Use 100% clean energy citywide by 2035;
- Use public transit, walking, and biking for 50% of commutes by 2035;
- Reduce average vehicle commute distance by 2 miles by 2035;
- Reduce waste by 90%; and
- Achieve 35% urban tree canopy average by 2035.

These goals will not only help protect and preserve our future, but will also prove what is possible by driving technical and economic innovation and entrepreneurship to find climate solutions. Then, with proof of concepts, we can scale and replicate these solutions for national and international implications. Finally, we can ensure that San Diego is prepared to meet the needs of a 21st century economy and emerging workforce that wants clean air, clean energy and local control over life-sustaining water, food and energy systems -- as well as communities that prioritize healthy living with biking, walking and transit as real transportation alternatives.

We also join our friends and allies including Environmental Health Coalition and the San Diego Housing Federation, as well as our brothers and sisters fighting for working families, in

supporting the integration of social and environmental equity, affordable housing and middle-class job creation into all greenhouse gas reduction strategies.

Please accept the following recommendations and comments for your consideration during environmental review and the alternatives analysis to further strengthen the plan, acknowledging that our comments are hindered by not having access to the Technical Appendix:

New Action Items to Meet Goal to Reduce Average Vehicle Commute

We support the goal to reduce the average vehicle commute 2 miles by 2035 by focusing on new urban land use and transportation strategies. Unfortunately, the proposed Action items to meet that reduction goal do not seem to have the substantial evidence necessary to assure the community we can meet this goal, as borne out by the lack of enforceability for the City to implement its 2008 General Plan "City of Villages" Strategy.

In order to provide substantial evidence that the City can meet the VMT goal, we join the San Diego Housing Federation in proposing new Action items (most already in the City's Housing Element in the City's General Plan) that will be required to be completed and implemented, including:

- Develop Transit-Oriented Affordable Housing Policy - Phase 1
- Develop Equitable Urban Reinvestment Program centered around Transit Village Development Districts - Phase 1
- Set specific target for construction of sufficient affordable housing units near transit and jobs to achieve VMT target - Phase 1
- Require City to choose transit and active transportation above vehicle-reliant modes of transportation including freeway, roadway and highway expansions, at the City and SANDAG - Phase 1

Incorporate Climate Action Plan Goals/Targets/Actions into All Current Community Plan Updates

Recently, it has been reported that there are a host of Community Plan Update's moving forward. It is possible that these Updates will not include the City of Villages Strategy, since the Strategy is only a planning strategy/guideline/vision in the General Plan, and not a requirement. In fact, some Community Plan Update's may include barriers to moving forward with transit-oriented development planning, such as limits to density, height restrictions (outside of existing restrictions), new parking requirements, etc) – or barriers to achieve success of other Climate Plan goals/targets/actions. The question is how the City will ensure the Community Plan Updates appropriately include the necessary land use and transportation plans and policies to assure success of the legally binding climate goals.

It would be a mistake – and likely a community relations catastrophe – if there is not sufficient education and outreach to the Community Planning Groups about the requirements of the draft Climate Plan and how they intersect into the Community Plan Updates. It would also not make sense to pass new Community Plans that don't incorporate the goals/targets/actions of the Climate Plan. Somehow, the City must synchronize the review process of the Updates with the Climate Plan so the City can create the appropriate synergy and coordination between them.

- Coordinate Final Reviews of Pending Community Plan Updates with Final Review of the Climate Plan to Assure Success of Both

Integrate Language on Social Equity into Goals, Targets and Action Items

The draft Plan has great language committing the City to integrate social, environmental and economic equity into the goals, targets and actions of the Climate Plan. It states, in part, on page. 51,

> "The identification, and therefore prioritization of CAP programs and actions for disadvantaged populations will be based on the socioeconomic characteristics of a community including the percentages of minority and low-income households. The CAP draws from SANDAG's 2050 RTP for identification of disadvantaged communities, uniquely labeled as "Low Income and Minority" (LIM) Communities of Concern (SANDAG 2011). Using the RTP, City staff will prioritize the implementation of CAP measures for City of San Diego communities that are LIM Communities of Concern. In addition to LIM Communities of Concern, the CAP will draw upon the OEHHA CalEnviroScreen's screening methodology to help identify San Diego communities that are disproportionately burdened by multiple sources of pollution."
>
> The missing link is actually integrating those identified priorities into the Action Items of the Implementation Plan, so the City can monitor and ensure success to achieve these outcomes.

- Integrate the commitment of the City in the draft CAP to prioritize communities identified in the OEHHA CalEnviroScreen and other relevant screening tools such as the SANDAG LIM Communities of Concern into all relevant Goals, Targets and Action Items (transportation, energy, energy efficiency, adaptation measures, etc.)

Evidence for Actions to Reach 100% Renewable Energy

We support and commend the City for the Goal to achieve 100% renewable energy on the citywide electrical grid by 2035, as well as the target to add additional renewable electricity supply to achieve 100% renewable electricity by 2035 (Strategy 2).

Our concern is the language for the Action item to meet this goal and target (Strategy 2, Action 2.1.) The language says "Present to City Council for consideration a Community Choice

Aggregation (CCA) *or another program* that increases the renewable energy supply on the electrical grid." The legal standard requires that every action item have substantial evidence to reach the target. We support and agree that there are multiple examples of existing Community Choice programs that have achieved 100% renewable electricity, including Marin, Sonoma and Cincinnati. Thus, the language related to CCA has met its legal standard. On the other hand, the language "or another program" needs to be removed, as there is no legal evidence to support "another program" to achieve the target.

Further, it is critical to note that the City can only consider policies and programs that are either under the control and jurisdiction of the City (and thus they can approve and implement themselves), or policies and programs that are already in existence. The City cannot identify future possible laws, programs or policies outside of the City's control and jurisdiction (for example, laws, programs or policies under the control of the state legislature or an outside administrative agency such as the Public Utilities Commission) as the mechanism to reach a target.

- Remove the language "or another program" from the Action 2.1 to ensure success in meeting the goal and target, and avoid a legal challenge.

Critical Need for Climate Adaptation and Resilience Planning

We support the language in the draft CAP narrative calling for the development of a stand alone climate adaptation document, but it is not included as a mandatory action item. Given the critical need for the City to reduce its vulnerability to climate impacts and enhance its local capacity to respond—especially for sensitive populations and communities – the environmental review and alternatives analysis must commit the City to adopting an Adaptation plan by 2017.

- Commit the City to adopt an Adaptation Plan by 2017

Ensuring Success During Implementation

We support the Monitoring and Reporting chapter of the draft Climate Plan. We agree with the current list of actions, but we recommend an additional action item requiring the City to identify the proper staffing, financing, and funding needed to implement the plan and reach the identified goals and targets in the timelines outlined in the draft.

The City of San Luis Obispo has had great success in reallocating resources to match the bike, walk and transit goals in their Climate Action Plan, in addition to modifying the appropriate city codes and standards. The City would be wise to study and mirror their approach for transportation budgeting and planning, as well as make the necessary shifts in all relevant City departments. The City will never come close to reaching any of these targets without a fundamental shift in resource allocation.

- Add an Action Item in the Monitoring and Reporting Chapter requiring City to identify proper staffing, financing and funding to implement the goals and targets of the plan – Phase 1.

Thank you for the opportunity to submit these comments. We are pleased to help the City move forward on adoption and implementation of this groundbreaking plan. We look forward to working with you through the environmental review process to ensure San Diego remains a leader in tackling the biggest public health, environmental and economic challenge facing the City.

Sincerely

Nicole Capretz
Executive Director

COMMUNITY FOREST ADVISORY BOARD
CITY OF SAN DIEGO

March 20, 2015

Ms. Rebecca Malone, Associate Planner
City of San Diego Planning Department
1222 First Avenue, MS 501
San Diego, CA 92101
DSDEAS@sandiego.gov

Re: Public Notice of Preparation of a Draft Program Environmental Impact Report (PEIR) San Diego Climate Action Plan (CAP).

Dear Ms. Malone:

Thank you for the opportunity to comment on the preparation of a PEIR for the City's Climate Action Plan (CAP). These comments follow from the Community Forest Advisory Board's responsibilities to provide recommendations on urban forestry-related policies and programs; reviewing the implementation and compliance with urban forestry policies and programs; and advocating for funding for the establishment and maintenance of an urban forestry program.[1]

The City's draft CAP includes Strategy 5 (Climate Resiliency), with targets for an Urban Tree Planting Program to achieve 15% urban tree cover by 2020 and 25% by 2035. This letter outlines considerations for the Environmental Setting, Project Description, and Impacts for these targets.

Environmental Setting

Estimates of San Diego's tree cover range from 4.2 to 7 percent, based on image type, resolution, timeframe, and type of study/author. American Forests[2] conducted a study of aerial imagery for San Diego comparing 30-meter (m) resolution data from 1986 and 2002, and estimated tree cover at 7 percent. In a national study by the U.S. Department of Agriculture Forest Service (USDA FS), tree canopy and impervious surface cover were estimated from maps at 30m resolution from 2001 Landsat satellite imagery and published in 2007 in conjunction with 1990 and 2000 census and geographic data (1:5,000,000 scale cartographic boundary files) to assess current urban and community forest attributes. This analysis showed that the City's tree cover is about 4.2 percent.[3]

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[1] Community Forest Advisory Board, http://www.sandiego.gov/economic-development/about/cfab.shtml
[2] American Forests. 2003. Urban ecosystems analysis, San Diego, CA. 20 p. Available at http://www.ufei.org/files/pubs/sandiegouea.pdf, accessed 3/19/15.
[3] Nowak, D. J.; Greenfield, E.J. 2010. Urban and community forests of the Pacific region: California, Oregon, Washington. General Technical Report NRS-65. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 38 pp. Available at http://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs65.pdf, accessed 3/19/15. Data tables that include the City of San Diego at http://nrs.fs.fed.us/data/urban/state/?state=CA.

A current tree canopy assessment is essential to accurately describe both the Environmental Setting and the areas that trees can be planted and managed. Most cities and regional governments are developing Urban Tree Canopy Assessments (UTCA) as the foundation for many decisions about how to mitigate urban development effects on public health, energy use, city temperatures, water quality, water conservation, stormwater run-off, habitat losses, and climate change.

The City submitted a concept application in November and was invited to submit a final application (by April 30) to California Department of Forestry and Fire Protection (CalFire) for a grant that includes an UTCA. This will use high-resolution remotely-sensed Light Detection and Ranging (LiDAR) data recently obtained by the City (to a 4-inch resolution). The methods for converting the billions of LiDAR data bits into geospatial data were established with a team led by the USDA FS and have been applied to more than 70 communities to confirm current urban forestry assets and identifying places where additional investments can be made. Urban parcels are ranked on their suitability for increased tree canopy, water quality improvement and watershed management, habitat conservation, and community livability (noise and pollution reduction, urban cooling).

Project Description

The technical report needs to include a **calculation of the actions and resources to double tree cover** (from current estimate of 4 to 7 percent, to target of 15 percent). The most recent tree inventory shows that there are about 200,000 street trees in San Diego.[4] As there is no recent inventory of trees on private land, the assumption (for this letter) is that street trees are 20% of the total trees, and therefore the rough estimate is that there are 1,000,000 trees in the City. To double the tree canopy, 1,000,000 more trees would need to be planted on public and private land.

Tree planting will require funding, education, incentives, compliance with regulations and permits, and other approaches. Larger trees need to be favored, as they provide larger canopies and sequester more carbon. Trees need to be managed, that is, watered, pruned, and protected in order to maximize their health and life span. **Tree planting opportunities** include:

- Streets and parkways, with City funding
- Parks, community centers, with City funding (few trees would be planted in canyons, as much of their acreage is committed to Multiple Species Habitat Areas for native vegetation)
- Schools, colleges, and other public properties
- State and Federal properties, including California Department of Transportation (CalTrans) rights of way and military installations
- Residential properties (front and back yards)
- Replacement of trees required in development permits (trees in parking lots, commercial properties, common areas in developments)

The City is now completing the **Urban Forest Management Plan**,[5] that outlines the objectives, actions and resources needed to implement the Urban Forestry elements in the 2008 General Plan and the draft CAP. It includes these objectives relating to the CAP:

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[4] Streets Division completed this inventory in 2002, for trees in public rights-of-way but not in assessment districts. Data available as the "Trees_SD" database at the San Diego Association of Governments. From Mike Klein, GIS Specialist, Planning Department, personal communication, October 8, 2014.

[5] City of San Diego, Urban Forest Management Plan, http://www.sandiego.gov/planning/programs/urbanforest/

CE-J.1.2 Increase canopy cover (land area covered by trees) to optimize public benefits.
CE-J.1.3 Develop a master tree-planting plan that encourages optimal age and species diversity.
CE-J.1.4 Improve tree planting success.
CE-J.1.3 Improve care and maintenance of street trees through a comprehensive management program addressing newly planted trees, mature, and large trees.
CE-J.2.2 Prioritize community areas for public tree planting programs.
CE-J.4.1 Develop policies that encourage and incentivize developers, homeowners associations, and other organizations to adopt trees as green infrastructure assets.
CE-J.4.1 Increase enforcement of the city's policies and regulations related to the urban forest and consider implementing fines.
CE-J.4.4 Use trees to shade paved areas, especially parking lots; and use trees and other landscaping to provide shade, screening, and filtering of storm water runoff.

Impacts and Benefits of Trees

The trees along streets, in parks and open space areas, and on residential and commercial properties provide many benefits to the City, its residents and visitors—they provide shade, save energy, improve air quality and public health, sequester carbon, reduce stormwater runoff, increase property values, create wildlife habitat, and enhance quality of life. Trees are one of the few infrastructure investments that grow in value over time.

Benefits of trees are well documented[6] and include these most directly related to climate mitigation and adaptation:

- Trees absorb carbon dioxide and store carbon in wood (carbon sequestration).
- Trees insulate homes and businesses from extreme temperatures, keep properties cool, and reduce air conditioning utility bills.
- Trees reduce the "urban heat island effect." They shade buildings, roads and sidewalks so they absorb less radiation during the day; absorb less radiation because of the color and material properties of leaves; and release moisture by evapotranspiration that cools the air.
- Shade trees return oxygen to the air, and reduce air pollution by absorbing ozone, nitrogen dioxide, sulfur dioxide, and some particulate matter.

The USDA FS and others have developed **functions to calculate the environmental benefits** provided by trees,[7] including tons of carbon dioxide removed from the atmosphere, pounds of air pollutants captured, kilowatt-hours of energy conserved, gallons of stormwater retained, and increased property values.

Water availability, cost, and the current drought have raised concerns about planting and watering trees when water is scarce. Yet trees provide important benefits and will shade and cool for the climate warming that is predicted. Small, low water trees need only about 15-20 gallons a month

[6] Alliance for Community Trees. 2011. Benefits of trees and urban forests: A research list. Unpublished white paper with citations of source documents, 19 pp. Available at http://www.actrees.org/files/Research/benefits_of_trees.pdf.
[7] Benefits and economic values computed with iTree software from the USDA Forest Service, www.itreetools.org

(about one shower) and large and mature, low water trees need about 30-40 gallons a month (one load of laundry), all with deep, infrequent watering. Policies and educational messages currently do not reflect the substantial multiple benefits that trees provide.

The Community Forestry Advisory Board and many local urban forestry professionals, landscape architects, and planners are committed to enhancing the urban tree canopy and its benefits, and can contribute information and strategies to the PEIR. We recognize trees as valued City assets that provide many services to residents, businesses, and visitors, and will contribute to climate change mitigation and adaptation.

Sincerely,

Anne Fege, Ph.D., M.B.A.
Chair, Community Forest Advisory Board
afege@aol.com, 858-472-1293

cc:
CFAB Board
L.Henegar and M.Garcia-City Planning Staff
Kayla Race, EDF and other community members
SD Regional Urban Forests Council
Environment-Design Council

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Rebecca Malone, Associate Planner
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March 20, 2015

Re: San Diego Climate Action Plan PEIR Scoping Comments- *Put Our Neighborhoods First*

Dear Ms. Malone,

Thank you for the opportunity to provide input on the Scope of Work for the City of San Diego's Climate Action Plan (CAP) Draft Programmatic Environmental Impact Report (PEIR). Since our founding in 1980, Environmental Health Coalition (EHC) has been committed to fighting toxic pollution and protecting San Diego's health, environment, and quality of life. Climate change threatens all San Diegans' right to live in healthy and resilient communities, but it impacts some neighborhoods more than others. The City should act now to reduce carbon pollution and address the disproportionate risks of climate change faced by certain neighborhoods.

We urge the City to strengthen, adopt, and implement an equitable, comprehensive, and enforceable Climate Action Plan that protects and invests first in neighborhoods that are most impacted by climate change, and cuts carbon pollution to comply with state climate laws, the City's General Plan, and City Council Resolution R-2015-68.

While we support the legally-binding greenhouse gas reduction targets and *most* top-line goals in the draft Climate Action Plan through 2035, the plan falls short in two critical areas:

1. It does not prioritize neighborhoods that are most impacted by climate change in the plan's transportation and energy actions, as called for in the CAP Social Equity chapter[1] and City General Plan[2] but not formalized in the CAP implementation actions; and
2. It does not do enough to reduce energy use in new and existing buildings, as called for in the City's General Plan[3] and state plans.[4]

These shortcomings should be resolved in the final plan, as they are essential to ensure the CAP's equity and energy goals are achieved, and that San Diego's working families can be resilient in a changing climate, manage their utility bills, improve home health, and safely get

[1] Draft CAP, Sept 2014, Chapter 4, p52: "Prioritize programs and actions to reduce emissions in disadvantaged communities that rank in the top 25 percent of CalEnviroScreen's ranking for San Diego region communities."
[2] City of San Diego General Plan, Land Use Element, Environmental Justice Section LU-I.4: "Prioritize and allocate citywide resources to provide public facilities and services to communities in need. Greater resources should be provided to communities where greater needs exist." See also LU-I.3, LU-I.10, LU-I.9, LU-I.13.
[3] General Plan Conservation Element and Housing Element Policies
[4] California's Existing Buildings Energy Efficiency Action Plan, CEC, March 2015 and California's Long-Term Energy Efficiency Strategic Plan, CPUC, Jan 2011

around the city to access jobs, health care, cooling centers, parks, and other vital resources. We further describe the need and ways to resolve these issues in our recommendations below.

I. LEGAL CONSIDERATIONS FOR REVIEW OF PROJECT AND ALTERNATIVES

The PEIR for the Climate Action Plan and Alternate Scenarios must analyze the proposals' enforceability and compliance with the General Plan and all applicable state and local laws. Enforceability is necessary because the CAP is CEQA mitigation to the General Plan and the CAP is proposed as a tiering document for future projects. Compliance with state, federal, and local laws is necessary, as the General Plan specifically commits the CAP to this.[5] We identify below where particular attention is needed in analysis and strengthening to ensure compliance.

A. GREENHOUSE GAS EMISSIONS TARGETS AND PROJECTIONS

a. Analysis of AB32 and S-3-05 Compliance through 2035

The PEIR should analyze the CAP's compliance with state laws AB32 and S-3-05 through 2035. Recent lawsuits and court rulings on the County of San Diego's Climate Action Plan and SANDAG's Regional Transportation Plan have further solidified the legal enforceability of AB32 and S-3-05 as state laws. We believe the draft CAP's targets of 15% below the baseline for 2020 and 49% below baseline for 2035 are in line with the state's 2020 and 2050 targets and we support continued to commitment to meeting these targets *at a minimum*.

b. Analysis of Business as Usual (BAU) Projections

The PEIR should analyze how recent freeway expansions (e.g. SR-94, I-5) and gas power plant approvals (e.g. Pio Pico Energy Center in Otay Mesa) impact the CAP's "Business As Usual" greenhouse gas projections and whether that creates need for stronger CAP actions to meet the 2020 and 2035 GHG targets.

B. AIR QUALITY

a. Analysis of sensitive receptors and areas of high cumulative pollution burden

The PEIR should analyze impacts from all CAP strategies and alternatives on air quality and health, particularly in sensitive populations and areas high cumulative pollution burdens, as identified by a CalEnviroScreen in the top 25% in the County. Our proposed Project Alternative (Attachment A) approach to prioritize actions in these disadvantaged areas with high cumulative pollution burden will result in improved air quality for these sensitive areas.

b. Analysis of compliance with state and federal air quality standards

The entire air basin already has a status of basic non-attainment for the federal (NAAQS) ozone standard and non-attainment for the state (CAAQS) standards for ozone, PM10 and PM2.5.[6] New, stricter federal ozone standards will likely lead to *increased* non-compliance in San

[5] General Plan CE-A.13 "Regularly monitor, update and implement the City's Climate Protection Action Plan to ensure, at a minimum compliance with all applicable federal, state, and local laws"

[6] http://www.sdapcd.org/info/facts/attain.pdf

Diego.[7] The PEIR should take into account the current noncompliance and potential increased noncompliance, and take action to ensure the CAP maximizes improvement in air quality-- particularly for sensitive populations in areas of high cumulative pollution burden-- by committing to enforceable transit, energy, and resilience actions first in disadvantaged areas.

C. ACTIONS & TARGETS 1.1 & 1.2 – EXISTING RESIDENTIAL AND COMMERCIAL BUILDINGS

a.1. Analysis of Actions 1.1 & 1.2- Energy Conservation & Disclosure Ordinances

The CAP and PEIR must clarify what the "Energy Conservation and Disclosure Ordinances" would entail for both nonresidential and residential existing buildings, including if, how, and when the ordinances would require actions such as:

- Disclosure of a buildings' operational energy use alone
- Performance and disclosure of detailed audits or asset ratings (audits of the physical building efficiency such as HERS and ASHRAE versus purely operational use)
- Actual efficiency upgrades for underperforming buildings

The above questions are critical to the PEIR's analysis of the ordinances' impacts, effectiveness, and compliance with CEQA, state policies, and the General Plan, which commits to:

- *Maximize* energy efficiency and coordinate energy planning with *state agencies*,[8]
- Conduct *sustained* public awareness and energy conservation education,[9] and
- Pursue *sustained* efforts towards *eliminating inefficient energy use*.[10]
- Implement development policies to protect public health, safety and welfare equitably among all segments of the population and address the needs of the disenfranchised.[11]

Disclosure of energy use alone, without requiring *actual building efficiency improvements*, would be insufficient under CEQA due to the unenforceability (lack of requirements for upgrades). It would also fall <u>far below</u> the General Plans' commitment to *maximize* savings, to coordinate with state targets to reduce energy use in existing homes by 40% by 2020 and reach net zero energy in 50% of commercial buildings by 2035,[12] and would likely also fall short of achieving the CAP's energy reduction targets, of which we discuss the inadequacy in the next section. Studies on benchmarking disclosure policies in other cities show energy savings of only

[7] http://www.utsandiego.com/news/2015/mar/16/tp-ozone-limits-remain-tall-order/?#article-copy

[8] General Plan Conservation Element: CE-I.2 Coordinate City energy planning programs with federal, state, and regional agencies. Maximize energy efficiency, use of clean renewable resources, and demand response.

[9] CE-I.13 "Promote and conduct energy conservation education."
CE-N.2. "Maintain educational programs to sustain public awareness of the importance of resource conservation (e.g., energy, water, open space), the continued existence of long-term resource demand challenges, and specific conservation tactics that are recommended."
CE-N.4. "Publicize voluntary water and energy conservation measures that focus on reducing waste and decreasing the possibility of rationing and other undesirable restrictions."

[10] General Plan Conservation Element: CE-I.7 Pursue investments in energy efficiency and direct sustained efforts towards eliminating inefficient energy use.

[11] San Diego General Plan measure LU-I.3

[12] California's Long-Term Energy Efficiency Strategic Plan, CPUC, Jan 2011

2.4% to 3% per year; however these are short term studies, so the longevity of effects is yet unknown.[13]

Additionally, disclosure alone would fail to meet the General Plan's commitment to development policies that protect health and welfare of disenfranchised populations.[14] Low-income households are disproportionately vulnerable to a higher-energy cost burden and to living in older, inefficient, and unhealthy homes:

- *Higher energy cost burden***:** California households with an income that is less than half of the federal poverty guidelines (about 40% of low-income households) spend 29% of their income on utilities. The average Californian, on the other hand, spends less than 5% of household income on utilities.[15]
- *Higher per square foot energy cost:* Average monthly energy cost is 6.6 cents/sq. ft. in low-income multifamily homes versus 5.7 cents/sq. ft. adequate-income households.[16] About half of low-income families in SDG&E territory live in multifamily buildings.
- *Older housing stock:* 58% of low-income multifamily buildings in SDG&E territory were built before 1980, which means they're more likely to be inefficient and include unhealthy materials.
- *Lack of ownership:* Low-income households in SDG&E territory are much more likely to be renters than owners (69% versus 31%). Roughly 1/3 of households in SDG&E territory are low-income.

Although there are several existing programs funded by ratepayers,[17] state government,[18] and federal government[19] that provide free and subsidized upgrades to low-income and moderate-income households, as well middle- and upper-income households, participation is not as high as it could be for a number of reasons, including lack of awareness of the programs and of financing, lack of awareness of the benefits, lack of ownership, and lack of motivation:

- *Renters need permission of sometimes hard-to-reach or uncooperative owners:* The need for renters to obtain a signed property owner waiver forms in existing low-income programs can be a barrier to participation, since some building owners can be difficult to reach or unresponsive, and 33% of multifamily building owners admit to being unsupportive, or only supportive with conditions, of tenant participation in utility programs if it means filling out paperwork and allowing contractors to have access to the property.[20]

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[13] A 2012 U.S. EPA study on energy benchmarking found that while 70% of participating buildings saved energy, their average level of energy savings was a mere 2.4% per year. A 2013 study of the District of Columbia's benchmarking data shows a 3% decrease annual energy use. http://ddoe.dc.gov/node/992712

[14] LU-I.3 "Implement development policies to protect the public health, safety and welfare equitably among all segments of the population. **Address the needs of those who are disenfranchised in the process**."

[15] The Cadmus Group, *ESAP Program Multifamily Segment Study*, Prepared for PG&E, December 2013, p15

[16] The Cadmus Group, *ESAP Program Multifamily Segment Study*, Prepared for PG&E, December 2013, p57

[17] Energy Savings Assistance Program, Energy Upgrade California, Multifamily Energy Efficiency Rebates, Single-Family Affordable Solar Program, Multifamily Affordable Solar Program

[18] Low-Income Weatherization Program, CSD http://www.csd.ca.gov/Home/LowIncomeWeatherizationProgram.aspx

[19] Weatherization Assistance Program, http://www.csd.ca.gov/services/residentialenergyefficiencyservices.aspx

[20] The Cadmus Group, *ESAP Program Multifamily Segment Study*, December 2013, p92

- *Low awareness of financing and tenant programs:* About 65% of multifamily building owners and managers are *not* aware of any financing options that may assist with the expenses to upgrade or replace equipment and 35% have not heard of utility programs that provide income-qualified households with free equipment and energy efficiency services.[21]
- *Unwillingness to remedy health/safety threats:* Multifamily property owners and managers are often risk averse to perform health and safety (Indoor Air Quality) testing because they take on liability and disclosure requirements when threats to health or safety are discovered.[22]

No household, especially vulnerable, low-income rental households should be force to forego the multiple benefits of energy efficiency due to lack awareness or owner non-cooperation. Requiring full audits/asset ratings to educate building owners about the costs and savings of upgrade opportunities and financing and subsidy options, *alongside requiring underperforming buildings to be upgraded* using these available programs, would protect these vulnerable populations who have been historically left behind.

a.2. Analysis of Targets 1.1 and 1.2

The PEIR should clarify the Targets 1.1 and 1.2, which appear to require a 15% reduction in only a subset of buildings and while the target number of building increases between 2020 and 2035, there appears to be no increasing per-building reduction target happening between 2020 and 2035. The targets are far inferior to state targets,[23] the state's energy loading order that sets conservation and efficiency as the highest priority before procuring new generation,[24] and does not take into account the use of increasingly efficient technology in the future.

We believe this is a typo, as it was explained to us that way during previous correspondence with City staff in which we recommended this target be corrected. We reiterate this recommendation.

b.1. Recommendation to Include in Actions 1.1 and 1.2

The most successful and legally compliant approach to ensuring long-term energy savings in existing buildings is to use an approach similar to the state's recently released Existing Buildings Energy Efficiency Action Plan,[25] which recommends as actions:

- Mandatory benchmarking of all commercial and multifamily buildings *as a first step*;
- Mandatory "asset ratings" (detailed audits of the physical building efficiency such as HERS and ASHRAE versus purely operational use);
- Mandatory upgrades to consistently low-performing buildings to provide a guarantee of reducing energy use; and
- Significantly increase the City's outreach and education about energy efficiency, including using peer-to-peer education as well as mass marketing.[26]

[21] *ESAP Program Multifamily Segment Study*, December 2013, p83
[22] HMG, *Lessons Learned through Piloting Energy Upgrade California Multifamily Programs,* July 2013, p 13
[23] California's Long-Term Energy Efficiency Strategic Plan, CPUC, Jan 2011
[24] City loading order
[25] California's Existing Buildings Energy Efficiency Action Plan, CEC, March 2015

- Ensuring access to financing and funding, with a priority for facilitating improvements in low-moderate income properties.

b.1. Recommendation for Targets 1.1 and 1.2

- The CAP's energy efficiency *targets* should be consistent with state policies and should therefore be to reduce energy use in existing homes by 40% by 2020 and reach net zero energy in 50% of commercial buildings by 2035[27] or reach 50% reduction in all commercial buildings by 2035.

D. ACTION & TARGET 1.3 – MUNICIPAL ENERGY STRATEGY

a.1. Analysis of Action 1.3 Municipal Energy Strategy

The PEIR should analyze Action 1.3 for compliance with the CAP's social equity goals and the General Plan's commitments to prioritize and allocate city resources to ensure disenfranchised communities with the greatest need have access to public facilities and services.[28] Further clarification of and prioritization within this action is necessary to ensure such compliance.

a.2. Analysis of Target 1.3

The PEIR should analyze the noncompliance of Target 1.3 with state targets, as well as the General Plan commitment to LEED silver for remodeled and new municipal facilities,[29] and the state's Existing Buildings Action plan that calls for local government leadership.[30]

b.1. Recommendation to Include in Action 1.3

- CAP and Municipal Energy Strategy should prioritize energy efficiency upgrades and renewable energy installations on municipal facilities located within disadvantaged communities identified by CalEnviroScreen.

b.1. Recommendation to Include in Action 1.3

- The City should lead by example by setting Target 1.3 to reduce energy consumption at municipal energy facilities by 50% in all municipal buildings by 2035 or reach net zero energy in 50% of municipal buildings by 2035 as called for in state targets.[31]

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[26] California's Existing Buildings Energy Efficiency Action Plan, CEC, March 2015

[27] California's Long-Term Energy Efficiency Strategic Plan, CPUC, Jan 2011

[28] LU-I.3 "Implement development policies to protect the public health, safety and welfare equitably among all segments of the population. **Address the needs of those who are disenfranchised in the process**."
LU-I.4. **Prioritize and allocate citywide resources** to provide public facilities and services **to communities in need**. **Greater resources should be provided to communities where greater needs exist**.
LU-I.6. Provide equal access to public facilities and infrastructure for all community residents.

[29] General Plan CE-A.6 Design new and major remodels to City buildings, and where feasible, long term building leases for City facilities, to achieve at a minimum, the Silver Rate goal identified by LEED.

[30] California's Existing Buildings Energy Efficiency Action Plan, CEC, March 2015

[31] California's Long-Term Energy Efficiency Strategic Plan, CPUC, Jan 2011

E. ACTION 2.2 – NEW BUILDINGS' ENERGY USE

a. Analysis of Action 2.2

The PEIR should analyze the failure of CAP Action 2.1 to comply with the legally binding commitments in the City's General Plan's Conservation Element, Housing Element, and Mitigation and Monitoring Reporting Program to implement standards for new buildings and significant remodels to maximize efficiency and *specifically achieve net zero energy consumption* in new buildings.[32] The PEIR should rectify this noncompliance. The PEIR should also analyze Action 2.2's consistency with state targets that all new residential construction be net zero energy by 2020 and all new commercial construction be net zero by 2030.[33]

b. Recommendation to Include in Action 2.2

- Require new buildings and major renovations/remodels to have on-site clean energy such as solar meet their electricity needs, as the City's General Plan calls for.

F. ACTION 2.1 – CCA OR OTHER PROGRAM TO ACHIEVE 100% RENEWABLE ENERGY

a. Analysis of Action 2.1

We strongly support target 2.1 to achieve 100% clean energy citywide by 2035 and believe this to be an achievable target if implemented properly, as demonstrated in other jurisdictions. In order to ensure this target is achieved, meets CEQA requirements, and fulfills the CAP's social equity and job creation goals, that the City must have control over any solution proposed and provide certainty the target will be met.

The PEIR should therefore examine if community choice aggregation or "another program", as proposed in the plan, would provide the necessary enforceability and City control for achievement of the 2035 target.

The PEIR should additionally analyze Action 2.1's consistency with:

- The CAP's Social Equity target to prioritize disadvantaged communities for emissions reduction actions and programs;[34]
- The CAP's job creation goal to "provide support to disadvantaged communities and promote equitable job growth and economic opportunity;[35] and

[32] General Plan Conservation Element CE-A.5: "Develop and ***implement sustainable building standards*** for ***new and significant remodels*** of ***residential and commercial*** buildings ***to maximize energy efficiency***, and to ***achieve overall net zero*** energy consumption by 2020 for new residential buildings and 2030 for new commercial buildings."
General Plan Housing Element: "HE-J.8 **Require net-zero energy for new residential buildings** by the year 2020 to meet the State's goal outlined in the Long-Term Energy Efficiency Strategic Plan."
[33] California Energy Efficiency Strategic Plan, CPUC, Jan 2011
http://www.energy.ca.gov/ab758/documents/CAEnergyEfficiencyStrategicPlan_Jan2011.pdf
[34] CAP, p52
[35] CAP, p52

- The General Plan's commitments to:
  - Use small, decentralized, and appropriately-sited energy efficient power;[36] and
  - Prioritize and allocate city resources to ensure disenfranchised communities with the greatest need have access to public facilities and services.[37]

b. Recommendation to Include in Action 2.1

Programs to achieve the 100% clean energy target should:

- Facilitate solar installation in neighborhoods who are most impacted by climate change
- Commit to the state's energy loading order of conservation, efficiency, and local distributed clean energy before other energy procurement
- Provide the City a guarantee for achievement of the target
- Facilitate the creation of good jobs for local residents

F. ACTION 3.1, 3.2, 3.3, & 3.9: BICYCLING, WALKING, TRANSIT, AND LAND USE

a. Analysis of Actions 3.1, 3.2, 3.3, 3.9

We strongly support the targets to achieve 50% of commuter mode share via bicycling, walking, and transit by 2035 (Targets 3.1-3.3). We urge the PEIR and CAP to define a "commute" not simply as trips between home and the workplace, but also as trips to important resources such as grocery stores, health care, schools, and recreational activities. We believe the target to be achievable with the appropriate shift in City and SANDAG expenditures, actions, and project and policy approvals.

In order to ensure the final CAP transportation targets 3.1, 3.2, 3.3, and 3.9 are achieved and the strategy meets the requirements of CEQA, the General Plan, and the final CAP's social equity and job creation goals, the PEIR must analyze consistency with General Plan's commitments to:

- Improve mobility and accessibility for the non-driving elderly, disabled, and low income populations;[38]
- Prioritize and allocate city resources to ensure disenfranchised communities with the greatest need have access to public facilities and services;[39]
- Design transportation projects so that the resulting benefits and potential burdens are equitable;[40]

[36] General Plan, CE-I.12 "Use small, decentralized, aesthetically-designed, and appropriately-sited energy efficient power generation facilities to the extent feasible"
[37] General Plan, LU-I.3, LU-I.4, and LU-I.6.
[38] General Plan, LU-I.10 "Improve mobility options and accessibility for the non-driving elderly, disabled, low income and other members of the population."
[39] General Plan, LU-I.3, LU-I.4, and LU-I.6.
[40] LU-I.9.Design transportation projects so that the resulting benefits and potential burdens are equitable. Some of the benefits of transportation programs include improved accessibility, faster trips, more mobility choices, and reduced congestion. Common negative consequences include health impacts of air pollution, noise, crash-related injuries and fatalities, dislocation of residents, and division of communities.

- Eliminate disproportionate environmental burdens and pollution experienced by historically disadvantaged communities;[41] and
- Reduce vehicle-miles-travelled (VMT) and increasing the use of transit, walking and biking throughout, both through the City's policies, funding, and project approvals, as
- Use the City's position on SANDAG to adopt an RTP that is consistent with these mode-shift goals.[42]

The PEIR and CAP should use CalEPA's CalEnviroScreen tool to analyze and identify which communities have the greatest need, are historically disadvantaged and face disproportionate environmental burdens. Census tracts ranking in the top 25% of CalEPA's CalEnviroScreen scores within the County should be deemed to meet the above criteria and should be prioritized for transit-supporting and active transportation infrastructure funds. Attachment B is a map showing where these CalEnviroScreen areas overlap with SANDAG's Transit Priority Areas.

On top of CalEnviroScreen scores, the PEIR and CAP should use the City's 2014 Comprehensive Pedestrian Safety Study to further identify and prioritize high need for alternative transportation infrastructure in areas with a higher risk of pedestrian and bicycling collisions with motor vehicles. This study shows residents in low-income neighborhood are ten-times more likely to be hit by a car as a pedestrian residents living in more affluent neighborhoods.[43] Attachment C is a map showing where these high-collision-risk areas are.

Finally, we join the San Diego Housing federation in calling for the PEIR to analyze what additional enforceable implementation strategies and actions are needed to ensure reduction of vehicle miles travelled (VMT), including additional affordable housing in transit-oriented development. At the same time, it is important to avoid exposing affordable housing residents to excess air pollution levels and other hazardous materials that would be experienced should these projects be located near freeways and major roadways. Affordable housing sited appropriately near transit and away from major pollution sources can reduce VMT and transportation costs for low-income households-- who experience a higher transportation cost-burden than more affluent households-- as well as improve access to jobs and other resources necessary for being resilient in a changing climate.

[41] LU-I.13.Eliminate disproportionate environmental burdens and pollution experienced by historically disadvantaged communities.
[42] ME-C-2 "Provide adequate capacity and reduce congestion for all modes of transportation on the street and freeway system. (f) Evaluate RTP proposals for new or redesigned streets and freeways on the basis of demonstrated need and consistency with General Plan policies and community plan facility recommendations."
[43] Citywide Pedestrian Collision Analysis: City of San Diego Comprehensive Pedestrian Safety Study. Revised /4/28/2014. http://www.sandiego.gov/tsw/pdf/pedestriansafetystudy/pedcollisionanalysis.pdf

b. Recommendation to Include in Action 3.1, 3.2, 3.3, 3.9

- Prioritize neighborhoods that are most impacted by climate change, as identified by CalEnviroScreen, for funding and projects that improve bicycling and pedestrian infrastructure and transit access.[44] Areas identified as high risk for pedestrian and bicycling collisions should be the highest priority within these communities (i.e., El Cajon Boulevard, University Avenue, Market Street, Imperial Avenue, and Euclid Street).[45]
- Commit City funds to improve bicycling and pedestrian infrastructure citywide and access to transit, prioritizing disadvantaged communities. The amount of funds should be sufficient to ensure the CAP's mode-share goals are met or exceeded. The share of funds should *at a minimum* match CAP's mode-share goals and be adjusted upward periodically to ensure achievement of the goals.
- Commit City support for a Regional Transportation Plan that funds transit and active transportation projects *before* freeways.
- Commit to significantly increase affordable housing units near transit stops and jobs to reduce vehicle miles travelled and increase equity, while avoiding exposing affordable housing residents to excess air pollution levels and other hazardous material.

G. STRATEGY 5 - CLIMATE RESILIENCY

a. Analysis of Strategy 5

We support Target 5.1 to achieve 35% urban tree canopy average by 2035 and recommend the PEIR analyze the consistency of Action 5.1 and Target 5.1 with General Plan commitments and CAP Social Equity targets to prioritize disadvantaged communities most in need for actions, programs, and resources.

Additionally, while the CAP acknowledges the need for developing a stand-alone climate adaptation plan, it does not provide a deadline for adopting such a plan. There is a critical need for the City to better assess risks to our infrastructure, health, safety, and natural resources and take calculated action to reduce greater costs in the future, reduce vulnerability to climate impacts, prioritize limited resources where they will be most needed, and enhance local capacity to respond—especially for disadvantaged populations and communities. The PEIR and CAP must commit the City to adopting an Adaptation plan.

b. Recommended to Include in Strategy 5

- Increase trees and parks in disadvantaged neighborhoods first.
- Commit to adopting an actionable climate adaptation plan by 2017 that protects natural resources, wildlife, our coastline, infrastructure, and public health and safety.

[44] See Attachment B map
[45] See Attachment C map

H. CHAPTER 4 - SOCIAL EQUITY AND JOB CREATION

We strongly support the CAP's commitment to *prioritize programs and actions to reduce emissions in disadvantaged communities that rank in the top 25 percent of CalEnviroScreen's ranking for San Diego region communities.*

Recommendation:

- We urge the CAP and Alternatives to integrate this social equity goal throughout the strategies in Chapter 3, as identified in our comments in prior sections and in our project alternative recommendation.

We also support the CAP's existing job equity and job quality commitments to:

- Provide support to disadvantaged communities and promote equitable job growth and economic opportunity,[46]
- Include in CAP programs performance goals and data tracking for quality of jobs created and the demographic and geographic distribution of workers; [47] and
- Ensure all climate work done through City programs comply with the City's prevailing wage ordinance.[48]

The PEIR's economic analysis should examine impacts to local economy from creating clean energy and transit jobs. The analysis should examine not only the number of jobs but the potential geographic and demographic distribution of workers, and quality of jobs. We believe our recommendations to prioritize CAP actions in disadvantaged neighborhoods and integrate social equity, job equity and job quality throughout the CAP actions will show in the economic analysis the potential to create the greatest net benefit.

Recommendation:

- We urge the City to ensure these job equity and job quality goals are integrated into all CAP programs and projects that are funded or subsidized with public dollars, and that the goals are enforceable.

II. PROJECT ALTERNATIVES

The CAP environmental review should analyze and endorse an Alternate Scenario that strengthens the plan to comply with the General Plan and state policies, and integrates social and environmental equity into all of the greenhouse gas reduction strategies, using our recommendations in Section I, which are also provided as tracked changes to the September 2014 Draft CAP in the Attachment A.

[46] CAP, p52
[47] CAP, p52
[48] CAP, p52

III. PROCESS FOR FINALIZING & IMPLEMENTING THE CAP:
IMPROVE TRANSPARENCY, OUTREACH, AND INFORMATION

We are disappointed by (1) the absence of the full climate planning documents, including the appendices; (2) inadequate public engagement via the Task Force and other potential means; (3) the delay in hiring a Sustainability Manager, an Urban Forestry Manager, and Planning Department director. We are eager to see this process improve in transparency and public engagement as the plan and implementation proceed.

CONCLUSION

With the analysis and incorporation of our recommendations above, we look forward to supporting the adoption and implementation of the Climate Action Plan, so San Diego can do its part to combat climate change, reduce air pollution, achieve social equity, and improve quality of life, health, economy and environment for all San Diegans, including those most impacted.

Sincerely,

Kayla Race
Policy Advocate
kaylar@environmentalhealth.org
619-474-0220 x133

Cc:
- Mayor Kevin Faulconer
- Council President Sherri Lightner and Councilmembers
- Mike Hansen, Director of Land Use & Environmental Policy, Office of Mayor Faulconer
- Brian Schoenfisch, Senior Planner, Planning Department

ATTACHMENT A

CAP ALTERNATIVE SCENARIO RECOMMENDATIONS
RECOMMENDED MODIFICATIONS TO SEPTEMBER 2014 DRAFT

STRATEGY 1: ENERGY AND WATER EFFICIENT BUILDING

Target 1.1 Reduce energy use by 15% per square foot in 26% of total non-residential square feet by 2020 and reach zero net energy (ZNE) in 53% of total square feet by 2035 (or 50% reduction in energy use per square foot in 100% of non-residential square footage by 2035).

Target 1.2 Reduce energy use by 40% ~~15% per unit in 20% of~~ in residential housing units by 2020 and by 50% ~~of units~~ by 2035.

Action 1.1 and 1.2 (Efficiency in Existing Buildings): Present to City Council for consideration a non-residential (Action 1.1) and residential (Action 1.2) Energy and Water Conservation and Public Disclosure Ordinance that requires property owners to:

(a) Publicly disclose energy use and key building characteristics typical in "benchmarking" programs and policies

(b) Conduct and publicly disclose "asset ratings" (Detailed audits of the physical building efficiency such as HERS and ASHRAE, that provide actionable recommendations for upgrades with costs and benefits, packaged with incentives and financing options);

(c) Require underperforming properties to implement efficiency improvements within a set period of time.

Ordinance may be phased in by buildings size, age, energy use, or energy performance, and requirements may be triggered at specific dates, at points of transaction, or at other major events for buildings.

Supporting Measure (Financing) (p36): Pursue additional financial resources and incentives, including but not limited to funds from the California Greenhouse Gas Reduction Fund, ratepayer funds via a Regional Energy Network or SDG&E Local Government Partnership, and U.S. Housing and Urban Development and Department of Energy grants, for local programs to assist low and moderate income households and businesses with implementing energy and water efficiency measures identified by the conservation and disclosure ordinances, and to promote the expansion of greywater systems.

Target 1.3 Reduce energy consumption at municipal facilities by 15% by 2020 and an additional ~~25%~~ 50% by 2035.

Action 1.3 (Efficiency in Municipal Buildings) Present to City Council for consideration a Municipal Energy Strategy and Implementation Plan that prioritizes efficiency and renewable energy upgrades on properties in census tracts ranking in the top 25% of CalEnviroScreen scores in the County.

STRATEGY 2: CLEAN AND RENEWABLE ENERGY

Action 2.1 (Renewable Energy Citywide): Present to City Council for consideration a Community Choice Aggregation (CCA) or another comparable enforceable program that increases renewable energy supply on the electrical grid to achieve the 2035 100% renewable energy target and prioritizes local resources in disadvantaged communities and good-paying jobs for local residents.

Supporting Action: City will explore the option of utilizing a Green Tariff Shared Renewables Program as established by SB43 ~~renewable energy credits (RECs)~~ to contribute towards the 100% renewable energy target. (p37)

Action 2.2 (New Buildings' Energy Use): Present to City Council for consideration an ordinance to Implement General Plan Policy CE-A5 to achieve net zero energy consumption by requiring new residential and non-residential construction to install renewable energy to meet the property's electricity demand, ~~conduit for future photovoltaic and~~ electric vehicle charging stations, and ~~install plumbing for future~~ solar water heating to meet the property's water heating needs.

STRATEGY 3: BICYCLING, WALKING, TRANSIT, AND LAND USE:

Transit Priority Areas Definition (p38): The City defines a "transit priority area" as: (1) a census tract within the City that ranks in the top 25% of CalEPA's CalEnviroScreen scores within the County, or (2) an area within one-half mile of a "major transit stop"* or high quality transit corridor that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in SANDAG's Urban Transit Area Strategy's transit propensity network or an adopted Transportation Improvement Program or Regional Transportation Plan, as stated in Public Resources Code § 21099(a)(7);

The City shall prioritize planning and funding to achieve the CAP's transit, walking, and biking goals in the following order:

1. Areas that meet both of the city's criteria for a transit priority area (Meets the Public Resources Code § 21099 (a) (7) definition AND is in a census tract in the City that ranks in the top 25% of CalEPA's CalEnviroScreen scores within the County.
2. Census tracts in the City that rank in the top 25% of CalEPA's CalEnviroScreen scores within the County.
3. Meets the Public Resources Code § 21099(a)(7) definition of a transit priority area

(*A major transit stop is defined in Public Resources Code § 21064.3 as a site containing an existing rail transit station, or the intersection of two or more major bus routes with a

frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods).

Transit Priority Areas Rankings, Supporting Measure (p41): Develop new priority ranking for planning and funding infrastructure improvements and maintenance that support achieving CAP transit, pedestrian, and bicycling goals in Transit Priority Areas, using the following prioritization order:

1. Areas that meet both of the city's criteria for a transit priority area (Meets the Public Resources Code § 21099 (a)(7) definition AND is in a census tract in the City that ranks in the top 25% of CalEPA's CalEnviroScreen scores within the County.
    a. Areas identified as high risk for pedestrian and bicycling collisions should be the highest priority within these communities.
2. Census tracts in the City that rank in the top 25% of CalEPA's CalEnviroScreen scores within the County.
3. Meets the Public Resources Code § 21099(a)(7) definition of a transit priority area

This priority ranking system shall be integrated into the Capital Improvement Priority Matrix (Policy 800-14), for mobility assets and shall apply to all eligible sources of capital improvements funds, including but not limited to, revenue generated by TransNet, CDBG opportunities and Public Facilities Financing Plans (DIF/FBA), as well as any General Fund revenue allocated to the capital improvement program budget.

This priority ranking system shall also commit City funds for biking, walking, and transit supporting infrastructure in an amount sufficient to ensure the CAP's mode-share goals are met or exceeded. The share of funds should at a minimum match CAP's mode-share goals and be adjusted upward periodically to ensure achievement of the goals.

Action 3.1 (Transit): Implement the General Plan's Mobility Element and the City of Villages Strategy in Transit Priority Areas to increase the use of transit, prioritizing implementation in census tracts in the City ranking in the top 25% of CalEPA's CalEnviroScreen scores within the County.

Action 3.2 (Walking): Implement the City of San Diego's Pedestrian master Plan in Transit Priority Areas to increase commuter walking opportunities, prioritizing implementation areas that are located in in census tracts in the City ranking in the top 25% of CalEPA's CalEnviroScreen scores within the County and are at high risk for collisions between pedestrians and motor vehicles.

Action 3.3 (Bicycling): Implement the City of San Diego's Bicycle Master Plan to increase commuter bicycling opportunities, prioritizing implementation areas that are located in census tracts in the City ranking in the top 25% of CalEPA's CalEnviroScreen scores within the County and are at high risk for collisions between bicycles and motor vehicles.

Action 3.4 and 3.5 (Traffic Efficiency): Implement a Traffic Signal Master Plan (Action 3.4)and a Roundabouts Master Plan (Action 3.5) to reduce vehicle fuel consumption and improve safety and mobility, prioritizing corridors that have the highest pedestrian collision rates and are in census tracts ranking in the top 25% of CalEPA's CalEnviroScreen scores within the City.

New Supporting Measure: The City of San Diego's two voting representatives on the SANDAG Board shall vote and take other decision-making actions at SANDAG that are consistent with the CAP goals, the SANDAG Urban Area Transit Strategy (UATS) goals for regional and city transit connectivity and City Resolution R-2011-966 goals, which directs:

1. That the RTP prioritize public transportation and mass transit projects and minimize the expansion of single-vehicle general purpose highway lanes.
2. That the RTP advance the timeline of funding for key commute routes, improving transit frequency, and active transportation projects.
3. That the RTP provide greater clarity about how greenhouse gas emissions Development reduction targets are being met in the long term, specifically how the aims of SB375 will be met through the life of the Plan out to 2050.
4. That the Sustainable communities Strategy consider implementing concepts such as "Safe Routes to Transit" program, prioritizing a "transit First" system of projects, and ensuring that a Transit-Oriented strategy is developed to link mass transit with affordable housing development.

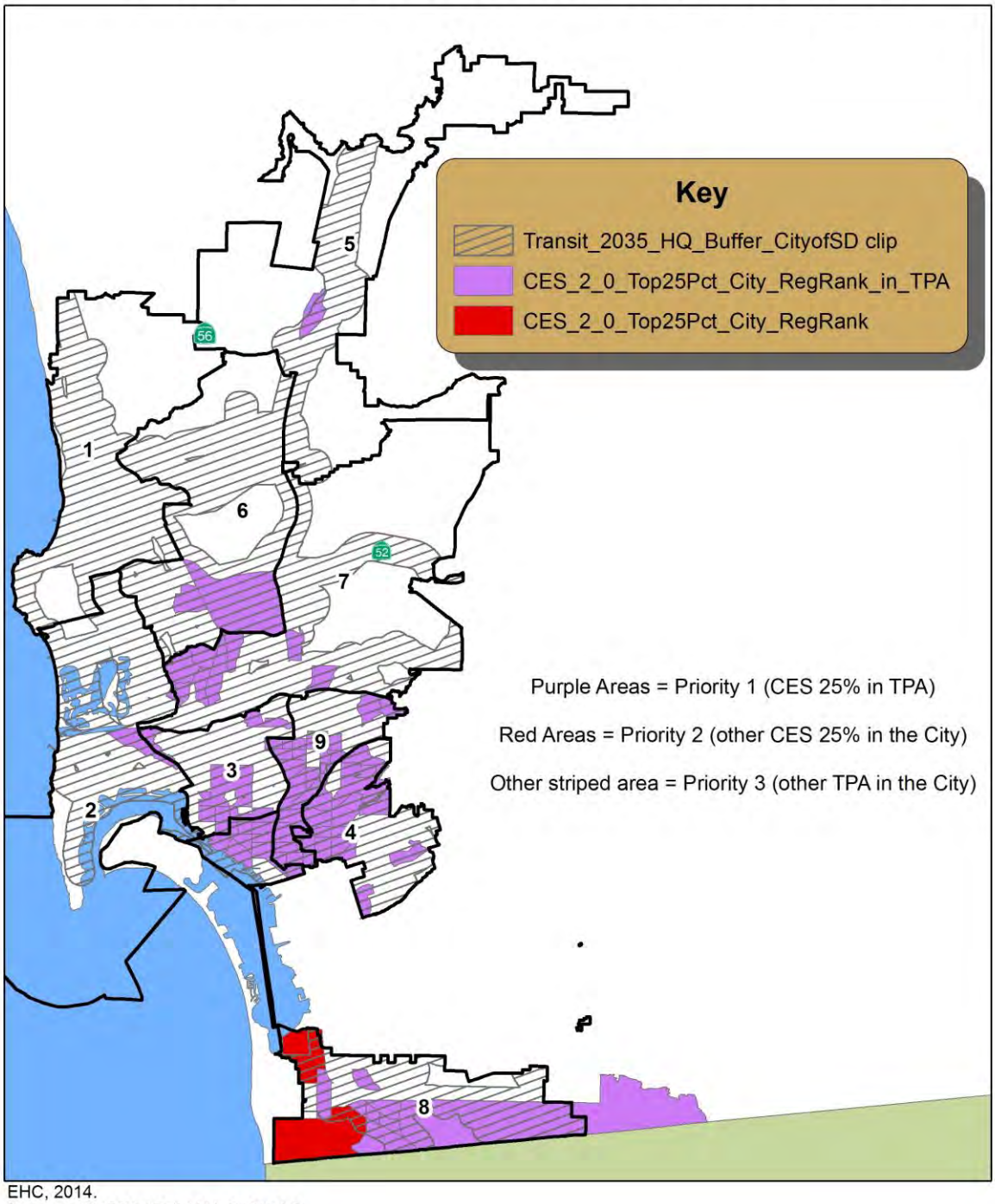
STRATEGY 5: CLIMATE RESILIENCY

Action 5.1 Present to City Council for consideration a city-wide Urban Tree Planting and Urban Parks Program that prioritize implementation in areas in census tracts ranking in the top 25% of CalEPA's CalEnviroScreen scores within the County.

New Action Commit to completing a full climate adaptation plan by 2017 to identify the greatest risks to our infrastructure, environment, and public health—especially in the City's most vulnerable communities—and plan to address those risks.

ATTACHMENT B – Transit Infrastructure Prioritization Recommendations

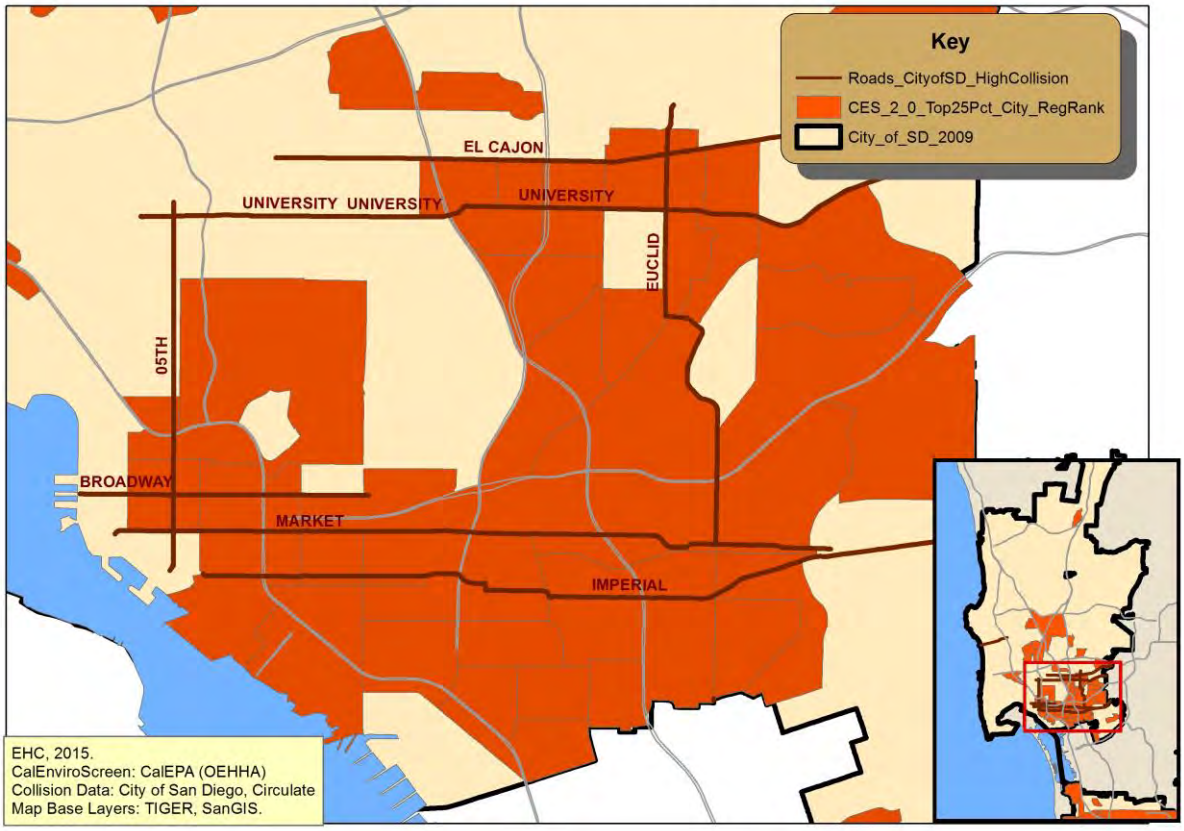
CalEnviroScreen2_0 Top 25%, City of San Diego Ranked within the Region, and Overlap with SANDAG 2035 Transit Project Priority Areas



EHC, 2014.
Sources: CalEPA (OEHHA), SANDAG
Map Base Layers: TIGER, SanGIS.

ATTACHMENT C –
High Collision Risk Areas for Transit Infrastructure Prioritization Recommendations

CalEnviroScreen2_0, Top 25% Regionally within City of San Diego, and High-Collision Traffic Corridors



SAN DIEGO 350
CLIMATE CHANGE ACTION

March 20, 2015

Rebecca Malone, Associate Planner
City of San Diego Planning Department
1222 First Ave, MS 501
San Diego, CA 92101

Via email: DSDEAS@sandiego.gov

Re: SanDiego350 Scoping Comments on the City of San Diego Climate Action Plan Programmatic Environmental Impact Report

Dear Ms. Malone,

SanDiego350 is committed to protecting San Diego's health, environment, and quality of life. Climate change threatens all San Diegans' right to live in healthy and resilient communities, but it impacts some neighborhoods more than others. The City should act now to reduce carbon pollution and address the disproportionate risks of climate change in certain neighborhoods.

SanDiego350 represents over 4,000 concerned individuals from all walks of life advocating for action on climate change, energy efficiency, and distributed generation within San Diego County and California. We advocate for renewable energy, environmental stewardship and local sustainability, and policies that will increase energy efficiency, mass transit, and create environmentally friendly cities. In particular, we are pleased that through the Climate Action Plan (CAP), the City is committing to 100% renewable energy by 2035, through enforceable measures that will meet state greenhouse gas (GHG) reduction targets (AB 32, S-3-05). We support the CAP's commitment to these top-line goals:

- Reduce GHG pollution to meet state goals: by 15% by 2020 and 49% by 2035;
- Use 100% clean energy citywide by 2035;
- Use public transit, walking, and biking for 50% of commutes by 2035;
- Reduce waste by 90%; and
- Achieve 35% urban tree canopy average by 2035.

However, the CAP is written to meet GHG reductions goals that, when passed in 2005 and 2006, were based on the best known science of the impacts of climate change at that time. However, scientists now state that an even more aggressive stance toward reducing emissions is needed, based on the observed effects of climate change, updated predictions and modeling, and the lack of political action on climate change on a global scale. Therefore, although the CAP only needs to meet state required reductions, it will be in the best interest of the City of San Diego to take a more aggressive stance, and reduce emissions beyond what is legally required.

We would like to take this opportunity to provide comments on the scoping period for the CAP.

We urge the City to strengthen, adopt, and implement an equitable, comprehensive, and enforceable Climate Action Plan that protects and invests first in neighborhoods which are most impacted by climate change, and cuts carbon pollution to comply with state climate laws, the City's General Plan, and City Council Resolution R-2015-68.

While we support the GHG reduction and top-line goals in the draft Climate Action Plan, the plan falls short in two critical areas: (1) It does not prioritize neighborhoods that are most impacted by climate change for transportation and energy actions; and (2) It does not do enough to reduce energy use in new and existing buildings. These shortcomings should be resolved in the final plan, as they are essential to ensure San Diego's working families can be resilient in a changing climate, manage their utility bills, improve home health, and safely get around the city to access jobs, healthcare, cooling centers, parks, and other vital resources.

<u>Specific Comments on the CAP</u>

Renewable Energy: Action 2.1 ("Present to City Council for consideration a Community Choice Aggregation (CCA) or another program that increases the renewable energy supply on the electric grid"). The City needs to determine through California Environmental Quality Act (CEQA) review whether "another program," as described above in Action 2.1, would actually be enforceable and achievable. The City is committing to 100% renewable energy, and a different program that is *not under the direct control of the City* would not be enforceable and therefore not an adequate CEQA mitigation option as required by the City's General Plan (2008).

We suggest that the City removes "or another program" from Action 2.1 as it does not meet the legal standards required of a CEQA document as currently written.

Animal Agriculture: Although energy and transportation are major contributors to GHG emissions, animal agriculture is responsible for 35% of methane and 65% of nitrous oxide emissions, which trap substantially more heat than carbon dioxide. Globally, animal agriculture is responsible for more emissions than all forms of transportation combined (UN FAO), with one more recent study finding it is responsible for up to 51% of total emissions (UN WorldWatch Institute). In not addressing animal agriculture, and more specifically, the demand for it by San Diego residents and businesses, as a substantial source of GHG emissions as well as water consumption and pollution, the CAP has a significant environmental impact that is currently not adequately analyzed.

Mitigation to less than significance could be achieved by adding an education component to inform San Diego residents and businesses about how reducing their consumption of meat, dairy and eggs will significantly reduce GHG emissions and depletion of potable water

resources in their production, as well as 30% of food waste in landfills which generates methane. The mitigation measure should also include assessment of effectiveness in reducing consumption of meat, dairy and eggs.

Water Use: Transporting water to San Diego County for use in our residences, businesses, and commercial sectors requires a vast amount of energy. The City is moving forward with the Pure Water Program which will be a benefit for our arid region, but will result in high emissions if water conservation programs are not taken seriously by the City, its residents, and its businesses.

Potential mitigation measures that should be included are expanding the use of gray water in existing housing, installing plumbing for gray water systems in all new construction, and limiting the number of high water crops (including animal agriculture) that are permitted in the City of San Diego.

Public Education:
There is an immense need for the public to be educated about climate change, and the real impacts that it is having on our neighborhoods, communities, and our future. People will be more likely to embrace the changes required by the CAP if they understand why we must act on climate change. The CAP is a perfect opportunity for the City to conduct public education. We would like to see public education incorporated into the plan and its implementation. This is a strategy that should begin today.

<u>The Climate Action Plan's environmental review should analyze and endorse an Alternate Scenario that strengthens the plan to achieve:</u>

Transportation Justice: Improve access, affordability, public health, safety, and equity

- Commit City funds to improve bicycling and pedestrian infrastructure citywide and increase access to transit, starting in neighborhoods which are most impacted by climate change, as identified by CalEnviroScreen. The amount of funds should meet or exceed the CAP's mode-share goals, and be adjusted periodically to ensure achievement of goals.
- Commit City support for a Regional Transportation Plan that funds transit *before* freeways.

Energy Justice: Close the 'green divide,' increase solar and efficiency in buildings

- Facilitate solar installation in neighborhoods who are most impacted by climate change.
- Require new buildings to have on-site clean energy such as solar meet their electricity needs, as the City's General Plan calls for.
- Require existing, inefficient buildings to conduct energy audits and efficiency improvements, while ensuring access to financing and funding, to implement the General Plan. Prioritize facilitating improvements in low-moderate income properties.

- Upgrade city properties with solar and efficiency in neighborhoods most impacted by climate change.

Good Jobs:

- Ensure CAP programs and projects funded or subsidized with public dollars create good-paying jobs for local residents

Climate Adaptation and Resilience

- Commit to adopting an actionable climate adaptation plan by 2017 that protects natural resources, wildlife, our coastline, infrastructure, and public health and safety.
- Increase trees and parks in disadvantaged neighborhoods first.

Additional Considerations for Environmental Review:

The environmental review for the Climate Action Plan and Alternate Scenarios should analyze:

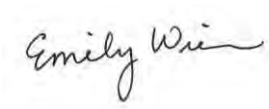
- Impacts on air quality and health, particularly in sensitive populations and areas high cumulative pollution burdens, as identified by CalEnviroScreen.
- Compliance with the City General Plan and state laws AB32 and S-3-05
- Enforceability and achievability of the actions proposed
- Consistency with regional planning documents, including the Multiple Species Conservation Program (MSCP)
- How recent freeway expansions and gas power plant approvals impact the "Business As Usual" GHG projections and whether that creates need for stronger CAP actions.

Process for Finalizing Plan: Improve Transparency, Public Outreach, and Information

We are disappointed by (1) the absence of the full climate planning documents, including the appendices; (2) lack of recent public engagement via the Task Force and other potential means; (3) the delay in hiring a Sustainability Manager, an Urban Forestry Manager, and Planning Department director. We are eager to see this process improve in transparency and public engagement as the plan and implementation proceed.

Thank you for your consideration of our comments. Climate change is a critical issue facing the San Diego region, and we are pleased that the City is moving forward with a Climate Action Plan that reaffirms its commitment to combating climate change, reducing air pollution, working towards social equity, and improving the quality of life, health, economy and environment for all San Diegans. We look forward to working with the City during the environmental review process, and in the plans' adoption and implementation.

Sincerely,



Emily Wier
Steering Committee Member
SanDiego350

Cc:

- Mayor Kevin Faulconer (kevinfaulconer@sandiego.gov)
- Council President Sherri Lightner and Councilmembers (sherrilightner@sandiego.gov; lorriezapf@sandiego.gov; toddgloria@sandiego.gov; myrtlecole@sandiego.gov; markkersey@sandiego.gov; chriscate@sandiego.gov; scottsherman@sandiego.gov; davidalvarez@sandiego.gov; martiemerald@sandiego.gov)
- Mike Hansen, Director of Land Use & Environmental Policy, Office of Mayor Faulconer (mhansen@sandiego.gov)
- Brian Schoenfisch, Senior Planner, Planning Department (bschoenfisch@sandiego.gov)

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Rebecca Malone, Associate Planner
City of San Diego Planning Department
1222 First Ave, MS 501
San Diego, CA 92101

Re: San Diego Climate Action Plan Scoping Comments - *Put Our Neighborhoods First*

Dear Ms. Malone,

As a champion of self-sufficiency for families living in poverty, MAAC has endeavored for 50 years to maximize the opportunities available to San Diego's most vulnerable populations and minimize the challenges they face. It is with this lense that MAAC has entered the conversation about protecting San Diegans' health, environment and quality of life. We don't want the communities that we serve to be overburdened by the long-term, negative impacts of climate change and ask that the City act now to reduce carbon pollution and address the disproportionate risks of climate change faced by certain neighborhoods.

We urge the City to strengthen, adopt, and implement a comprehensive, equitable, and enforceable Climate Action Plan that protects and invests first in neighborhoods that are most impacted by climate change, and cuts carbon pollution to comply with state climate laws, the City's General Plan, and City Council Resolution R-2015-68.

While we support the greenhouse gas reduction and top-line goals in the draft Climate Action Plan, we feel the plan can do more to prioritize neighborhoods that are most impacted by climate change. More specifically, we would the Climate Action Plan to be strengthened as follows:

- **Transportation Justice: Improve access, affordability, public health, safety, and equity**
  - Commit City funds to improve bicycling and pedestrian infrastructure citywide and increase access to transit, starting in neighborhoods which are most impacted by climate change, as identified by CalEnviroScreen. The amount of funds should meet or exceed the CAP's mode-share goals, and be adjusted periodically to ensure achievement of goals.
  - Commit City support for a Regional Transportation Plan that puts transit before freeways.

- **Energy Justice: Close the "green divide" and increase solar and efficiency in buildings**
  - Facilitate solar installation in our neighborhoods who are most impacted by climate change.
  - Ensure access to financing and funding, so that existing, inefficient building scan conduct energy audits and efficiency improvements.
  - Upgrade City properties with solar and efficiency in disadvantaged neighborhoods first.

- **Good Jobs**
  - Ensure CAP programs and projects funded or subsidized with public dollars create good-paying jobs for local residents.

MAAC
since 1965

Administrative Offices
1355 Third Avenue
Chula Vista, CA 91911
(619) 426-3595

Child Development
800 W. Los Vallecitos Boulevard
San Marcos, CA 92069
(760) 471-4210

www.maacproject.org

- **Climate Adaptation and Resilience**
  - Increase trees and parks in neighborhoods who are most impacted by climate change.
  - Commit to adopting a climate adaptation plan by 2017 that protects natural resources, wildlife, our coastline, infrastructure, and public health and safety.

The final Climate Action Plan should retain and achieve the current targets

- Reduce greenhouse gas pollution to meet state goals: by 15% by 2020 and 49% by 2035;
- Use 100% clean energy citywide by 2035;
- Use public transit, walking, and biking for 50% of commutes by 2035;
- Reduce waste by 90%;
- Increase urban tree coverage to 35% by 2035.

Additional Considerations for Environmental Review

The environmental review for the Climate Action Plan and Alternate Scenarios should analyze:

- Impacts on air quality and health, particularly in sensitive populations and areas high cumulative pollution burdens, as identified by CalEnviroScreen.
- Compliance with the City General Plan and state laws AB32 and S-3-05
- Enforceability and achievability of the actions proposed
- How recent freeway expansions and gas power plant approvals create a need for stronger CAP actions.

We also urge you to finalize and implement the plan in a transparent and public process, with robust public engagement.

With the analysis and incorporation of the above recommendations, we look forward to supporting the adoption and implementation of the Climate Action Plan, so San Diego can do its part to combat climate change, reduce air pollution, achieve social equity, and improve quality of life, health, economy and environment for *all* San Diegans.

Sincerely,

Arnulfo Manriquez
President & CEO

cc:
Mayor Kevin Faulconer
Council President Sherri Lightner
Councilmember Lorrie Zapf
Councilmember Todd Gloria
Councilmember Myrtle Cole
Councilmember Mark Kersey
Councilmember Chris Cate
Councilmember Scott Sherman
Councilmember David Alvarez
Council President Pro Tem Marti Emerald
Mike Hansen, Director of Land Use & Environmental Policy, Office of Mayor Faulconer
Brian Schoenfisch, Senior Planner, Planning Department

From:	Peter Brownell
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez; CouncilMember Marti Emerald; Hansen, Mike; Schoenfisch, Brian
Subject:	San Diego Climate Action Plan Scoping Comments - Put Our Neighborhoods First
Date:	Friday, March 20, 2015 4:53:47 PM

Rebecca Malone, Associate Planner
City of San Diego Planning Department
1222 First Ave, MS 501
San Diego, CA 92101

Dear Ms. Malone,

Climate change threatens all San Diegans' right to live in healthy and resilient communities, and it impacts some neighborhoods more than others. The City should act now to reduce carbon pollution and address the disproportionate risks of climate change in certain neighborhoods.

We urge the City to strengthen, adopt, and implement a comprehensive, equitable, and enforceable Climate Action Plan that protects and invests first in neighborhoods that are most impacted by climate change, and cuts carbon pollution to comply with state climate laws, the City's General Plan, and City Council Resolution R-2015-68.

We strongly support the CAP's commitment to prioritize programs and actions to reduce emissions in disadvantaged communities that rank in the top 25 percent of CalEnviroScreen's ranking for San Diego region communities. We believe that this prioritization assures that CAP will have the strongest impact in addressing the most pressing present effects of climate change.

We urge the CAP and Alternatives to integrate this social equity goal throughout the strategies in Chapter 3, as identified in our comments in prior sections and in our project alternative recommendation.

We also support the CAP's existing job equity commitments (p. 52) to:

o provide support to disadvantaged communities and promote equitable job growth and economic opportunity,

o include in CAP programs performance goals and data tracking for quality of jobs created and the demographic and geographic distribution of workers;

o and ensure all climate work done through City programs comply with the City's prevailing wage ordinance.

The PEIR's economic analysis should examine impacts to local economy from creating clean energy & transit jobs. The analysis should examine not only the number of jobs but also job quality and access of residents of disadvantage neighborhoods to these jobs. We believe our recommendations to prioritize CAP actions in disadvantaged neighborhoods and integrate social equity and job equity throughout CAP actions will show in the economic analysis the potential to create the greatest net benefit.

We believe that it is critical that the CAP address climate adaptation and resilience. Specifically, CAP must increase trees and parks in neighborhoods who are most impacted by climate change. Further the City should adopt a climate adaptation plan by 2017 that protects natural resources, wildlife, our coastline, infrastructure, and public health and safety.

The final Climate Action Plan should retain and achieve the current targets:

o Reduce greenhouse gas pollution to meet state goals: by 15% by 2020 and 49% by 2035;

o Use 100% clean energy citywide by 2035;

o Use public transit, walking, and biking for 50% of commutes by 2035;
o Reduce waste by 90%;
o Increase urban tree coverage to 35% by 2035.

The Climate Action Plan's environmental review should analyze and endorse the above recommendations for an Alternate Scenario that protects and prioritizes neighborhoods that are most impacted by climate change. We also urge you to finalize and implement the plan in a transparent and public process, with robust public engagement.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Peter B. Brownell, Ph.D.
Research Director
Center on Policy Initiatives
3727 Camino del Rio South, Suite 100, San Diego, CA 92108
619.584.5744 x34 | pbrownell@onlinecpi.org
www.onlineCPI.org | CPI on Facebook | @onlineCPI

Cc:
Mayor Kevin Faulconer (kevinfaulconer@sandiego.gov)
Council President Sherri Lightner and Councilmembers (sherrilightner@sandiego.gov; lorriezapf@sandiego.gov; toddgloria@sandiego.gov; myrtlecole@sandiego.gov; markkersey@sandiego.gov; chriscate@sandiego.gov; scottsherman@sandiego.gov; davidalvarez@sandiego.gov; martiemerald@sandiego.gov)
Mike Hansen, Director of Land Use & Environmental Policy, Office of Mayor Faulconer (mhansen@sandiego.gov)
Brian Schoenfisch, Senior Planner, Planning Department (bschoenfisch@sandiego.gov)

From: Raymond Paulson
To: DSD EAS
Subject: Fwd: Comments for plan - could be rewritten better - will this do?
Date: Friday, March 20, 2015 4:58:37 PM

Sending in comments - Please forward as required - Ray Paulson

CITY OF SAN DIEGO CLIMATE ACTION PLAN

1. COMMENT REVIEW –

A. Utilize ISO 14001 EMS system informally or formally, to ensure that this plan achieves the stated GOALS in the SD CLIMATE ACTION PLAN. The cities of SEATTLE and DALLAS have and while saving tax payer costs they focused on what the tax payers wanted along with improving the urban plan while lowering greenhouse gases. The ISO 14001 EMS formal register or informal work otherwise in most cases organizations including municipalities do not achieve the goals and with them they exceeds and people are happy with the results.
B. Include City Policy with VISION, MISSION, OBJECTIVES, GOALS and METRICS using S-TBL-LCA to filter solutions and guide effective policy – for all to read daily and understand.
C. Utilize LEAN, SIX SIGMA and TOC as improvement METHODS proven to work to identify VALID SOLUTIONS for the ISO 14001 EMS. For example new MONEY TOOL for municipalities is to deconstruct old buildings via NON PROFITS that do this for recycling the materials and receive the tax write off for donating recycled materials while creating key OPEN SPACE - and the higher density as the only solution is ruining san diego as the money took - real solutions are needed in URBAN PLAN for optimizing the whole and the parts of the city and county (Composite and parts view to find solutions).
D. Utilize Sustainability Triple Bottom Line Life Cycle Analysis (S-TBL-LCA) relevant CATEGORIES and CRITERIA to FILTER the VALID solutions for then subjectively making the best decisions with the necessary supporting information – single project and composite in S-TBL-LCA URBAN PLAN (City and County) to ensure success – with the S-TBL-LCA URBAN PLAN component most plans DO NOT WORK because the COMPOSITE VIEW THAT IMPORTANT to achieve results.
E. Include the tax payer via COMMUNITY CHOICE and other measures so that the best solutions are implemented.
F. For NEPA and CEQA EIS studies, utilize the per CAPITA amount San Diego owes to achieve global carbon dioxide concentration below 350 parts per million as moderate clean air act attainment (as goal) AND OR use the existing CAP goals extrapolated by 2035 from 2050 overall goal.
G. Annually update plans with solution made transparent to the public with the S-TBL-LCA information so they can make comments and suggestions that can be evaluated to find the best answers.
H. The Triple Bottom Line Sustainability has allegory to really get why this thinking system works as follows:
    a. Environment = Conditions and Appearance and True Value for Sustainability (e.g. ugly or over crowded brings reaction not self-moved intelligence behavior negatively impacting the economics and quality of life - crowed like Los Angeles is ugly - if the city scape is not intuitively right it robs quality of life and then economy and environment.

b. Economics = Activities (smart and proactive or reactive meaning negative costs), energy levels of the people and income levels and Core Values
c. Social = Social Behavior based on Education Levels or Thinking System (e.g. duality or act react bring regressive costs or negative economics or triple bottom line thinking bringing more abundance), Meaningful Experiences and Enlightened Ideals or Poor Ideals.

I. The plan should clearly state annual goals to meet the CAP for California by 2035 and 2050 with metrics showing progress. Plans should also require feasible projects with cost benefit transparent to public with COMMUNITY CHOICE for the best outcome by addressing all co2 sources that exceed 5% of the total each year.

The mutual interdependence of attracting top professors, artists, scientists, and other talent to raise their kids in San Diego predicts the value that can be generated by the economy requiring the right environment and also social life. Way too many workers are now commuting in from Temecula to work and spend in that area while mission valley mall degrades the shops to lower income and police and tattoo parlors and related activities – so that people with higher paying jobs will not attend – this is how Detroit and Los Angeles imploded inside while the higher wage workers commute 2 or more hours each way producing less value because they are more tired at their jobs. This is a reaction based URBAN plan unfolding in San Diego – and this greatly increases the CARBON FOOTPRINT. Understanding S-TBL-LCA and ISO 14001 EMS and LEAN/SIX SIGMA/TOC is paramount to be an effective manager or city official or staff member – engineers included and so forth. The US Navy and Industry has had to learn these tools to survive the global economy and not implode. Without change here the carbon footprint will continue to go up!

The city of San Diego used to be ranked finest city #1 – now <#25. Why – no solid plan by city officials and concerned citizens with the RIGHT EDUCATION to manage and share solutions. Los Angeles is a poor model and many cities like Detroit fell into the higher density money tool to falsely revitalize 20 years from more poverty according to URBAN PLANNERS. This has to change because The USA CITIES is the USA economy!!! And china and India and Germany are on the rise – we have to reeducate and get with the times.

I. With the above tools we begin to see how to make annual improvement plans transparent to the tax payer to make San Diego #1 finest city AGAIN – we have the weather – we are missing the EDUCATION on how to manage a city properly! To effectively reduce carbon emissions to CAP levels and beyond. The annual education and additional for responsible for this plan should include education for ISO 14001, LEAN-SIX SIGMA and TOC and Sustainability Triple Bottom Line Life Cycle Analhysis to select the best optimal solutions.

All modern day PLANS typically contain the following PLAINLY STATED elements as a POLICY –

2. Vision – missing - COMMENT without a shared VISION STATED for all city employees and council members to post on their areas to see it and know where it is posted and understand it poor results are predicted based on studies – ISO 14001 and other standards that get

results require this in a policy posted for all employees are to know where it is and understand the importance of it!

3. Mission – missing – Same comment as above -
4. Objectives – based on the report they are – COMMENTS PROVIDED

A. Energy and Water Efficient Buildings

B. Clean and Renewable Energy – COMMENTS – TRAIN city employees annually on the latest for lowest cost renewable energy sources (note finding the right training programs the key) – you cannot project manage effectively what you are not educated on for the best value for tax payer – proven by studies – the training element is missing for city officials and staff members and workers.

COMMENT ON WHAT IS AVAILABLE WITH PERFORMANCE MEASURES MET FOR IMPLEMENTATION – environment/economics/social performance SUSTAINABILITY TRIPLE BOTTOM LINE LIFE CYCLE ANALYSIS (S-TBL-LCA) studies found the following renewables the next feasible PRACTICAL STEP for benefits to society!!!

i. STUDY NEEDED - US navy is going to 50% algae oil based fuel for all planes, ships and vehicles began in 2012 and complete by 2020 – why? Sinking islands and polar caps from global warming cannot defend democracy because too costly – need more islands and ships for the new sea lanes in the poles beyond budget even when the G-7 economy was booming. Algae out performs corn, ten thousand plus gallons per acre vice corn 200 gallons per acre (net negative for carbon takes more fuel to harvest corn than fuel harvested) – Algae is grown where corn and food does not for enhanced economy – and corn best use and other food is best used as food – based on S-TBL-LCA studies by the US navy. Projected cost wholesale of Algae based gas is $1 per gallon when scaled up. 800 20x40 mile farms on desolate land not used today in the USA replaces all fuel needs for the USA providing new needed jobs – this would replace fracking etc. that are negative economics longer term because of environmental damage etc. The existing fuel systems can be used with algae oil based gas. See http://www.nasa.gov/centers/ames/research/OMEGA/ and http://www.sapphireenergy.com/locations/green-crude-farm.

ii. STUDY NEEDED - http://magnegas.com/ - Sewage treatment plants are overfilling in most major USA cities and help is needed – Magnetically formed Hydrogen Gas from SEWAGE provides fertilizer, clean water and Hydrogen Gas that can be MIXED with NATURAL GAS for everyday SAFE use – this magnetic formed Hydrogen Gas is SAFER like natural gas – will not flammable unless exposed to oxygen – Imagine that SEWAGE now brings in MONEY to municipalities rather than Cost!!! Much more efficient way of making energy from sewage and LOWER sewage treatment costs than what is being done at the San Diego POTW. Note – also Powell water electronic coagulation cost is 25 cents per 1000 gallon lowest cost electron to treat sewage water or drinking water to lower costs even more.

iii. STUDY NEEDED - Nuclear plants on the ocean shut down because of fukeshima (too risky and if all costs added and mining of uranium using fossil fuel based machines cost too much and do have carbon emissions) plant north of ocean side can be replaced with LARGE UNDER WATER OCEAN TURBINES SAFE FOR AQUATIC LIFE with electric lines to shore.

iv. STUDY NEEDED - Wind energy cost is the LOWEST cost for renewables. And CAL TECH in Pasadena has designed and is testing new vertical turbines with opposed spin to achieve 10X wind power in the same land space! Also being tested new wind turbines horizontal 2-3x more power can space much closer! Importing wind energy should be the lowest cost for

renewables.

v. STUDY NEEDED - Solar bought in bulk purchase agreements for roof tops owned by the utility for government buildings and homes to achieve LOW cost are being done in some areas.

C. Biking, a Walking and Transit – COMMENT - In Europe bike lane is made SAFE ENOUGH people bike a lot. The SAFETY factor has to be considered with link up through the areas to increase usage. Also for the trolley – a solar panel strip can be added to the trolley line the full length minimal width so the real estate is already available – and the electricity can be sent right where it is needed with smart controls to move the trolleys! Or feed the grid and use the grid energy (more practical).

D. Zero Waste – COMMENTS see http://www.asaie.army.mil/Public/ES/netzero/ Note – the army defines net zero waste and prioritizes categories for action and provides annual plans with metrics for achieving the net zero waste goal – all waste is VALUE for economics if we act SMARTER by SYSTEM DESIGN and also improves quality of life – no reason not to – etc.

Zero waste for sewage – most cities have old ceramic pipes and they are leaking – since they need to be replaced check out the city of IRVINE blue/green/gray water lines – all gray water can be treated for agriculture and city scape watering to then fill up aquifers to then be treated for human use – sewage to human use should be modified to sewage to agriculture and city scape watering to aquifer to treatment for human use.

E. Climate Resiliency – COMMENT is to modify Climate Resiliency category to "Climate Resiliency and Sustainable Urban Planning."

a. COMMENTS - urban planners state the new high rise apartments popping up on freeways not only clog traffic generating idling cars and CO2 but also become hornets nests in their terminology requiring more police and reaction based non sustainable spending. All cities are clogging up – is non-sustainable – they use whether it is Phoenix, Albuquerque, Dallas, Houston, Seattle etc., the results are the same. Cities are using HIGHER DENSITY to REDEVELOP CITIES becoming more and more like LOS ANGELES! LOS ANGELES is today poverty ridden. What is then the solution?

What was discovered in the early 2000's is the following – non-profit companies are now dismantling junk buildings for no charge because they retain revenue for the value of the materials in the recycling market. The donation tax credit for donating the junk building provides REAL INCOME to justify reducing density and a money method or tool to follow an URBAN PLAN FOR TRIPLE BOTTOM LINE SUSTAINABILITY USING LIFE CYCLE ANALYSIS – People in san Diego, the workers, have escaped to Temecula to be out of the overcrowding – and they spend their money in malls out of san Diego – and the san Diego malls are catering to lesser incomes – and eateries – like mission valley mall – becoming los Angeles like –if this continues san Diego will continue to decline as #1 city using real criteria to less than the #25 rating today – this decline is like Los Angeles using HIGHER DENSITY MONEY TOOL to justify redevelopment – until all professionals commute the inside urban core implodes – like in DETROIT this happened too…and employers found employees commuting 2 hours each way like Temecula – and less work performance – until people just leave the region – more implosion – this is happening needs to be stopped – stopping this will also lower Co2 emissions.

b. Building each village in San Diego complete to reduce day trips in cars period!!! The

people in Scripps ranch and the barbs have to drive far to get to their day – why? Poor urban planning!!!

c. If there is a single word that describes the San Diego region, it is “paradise.” And this paradise is our home. It is declining – using real criteria – the co2 footprint is inroads to getting urban planning done right to rebuild san Diego to #1 finest city in the USA.

F. The City of San Diego Climate Action Plan does include the S-TBL categories but it does not contain the PROACTIVE measures typically utilized to GET RESULTS.

For example, EPA via the CLEAN AIR ACT and other measures imposed limitations on what can come out of any combustion, ablation and evaporative air emission source to clean up the air. While this worked, what moved industry and people to make a bigger positive change was to develop pollution prevention or environmental improvement plans to improve the environment and include the cost savings and quality of life increase only to then naturally and organically motivate positive change – THIS WORKS! And will work for Co2 (e) emission reduction – HOW? ISO 14001 model informal or formally used -

Two examples come from of Seattle and Dallas who implemented the tenants of ISO 14001 standards a MANAGEMENT TOOL with METHOD to ensure that TAX DOLLARS are used to benefit the customer or tax payers in meaningful ways for a SUSTAINABLE TRIPLE BOTTOM LINE CITY – environment path analysis annually finds otherwise not found economic and social life performance improvements.

The ISO 14001 requires the entity, say the City of San Diego, to flow chart the SIGNIFICANT SOURCES of GREEN HOUSE GASES (and other forms of waste) because waste reveals a pattern of behavior from core values from a thinking system that is not working. To the rescue is the Sustainability Triple Bottom Line thinking system (environmental path deficits or waste reveals a pattern requiring root cause analysis and innovation to find economic and social performance increases) with relevant criteria to evaluate solutions. The methods to find solutions used today by the US navy and leading municipalities and corporations is LEAN, SIX SIGMA an THEORY OF CONSTRAINTS that may be used to analysis the flow chart of significant sources of waste including greenhouse gases.

Then, Relevant Sustainability Triple Bottom Line Life Cycle Assessment CRITERIA understood by the tax payer and city officials is used to FILTER OUT PROJECTS to then make a subjective decision on what will work or not work – community choice is natural fit to this process!

The city of Dallas and Seattle also mailed out full page newspaper ads to then find the top ten priorities to spend tax payer dollars correctly, including lower greenhouse gases as part of the proactive urban changes for reconstructing the city to be optimized or a SMART city meaning a SUSTAINABLE CITY. The result has been savings millions of dollars, stimulating the economy, improving the quality of life and also achieving net zero carbon emission goals.

Because of the power of that tool a comment – The CITY OF SAN DIEGO CLIMATE ACTION PLAN should include a plan updated annually with complete update every 5 years showing ways to reduce carbon and equivalent (CO2 (e)) emissions from any source that exceeds 5% of the total using feasible technology that is cost effective and expose the solutions to the public showing cost savings

and improvement to land use urban planning for quality of life.

G. The beauty factor – if a redevelopment is too crowded or ugly it is typically our intuition letting us know that the change is not sustainable – and leads to freeways that are clogged – increasing the co2 footprint from idling cars! Wider freeways and buildings right on the freeway is not sexy but is UGLY!!! UGLY is not sustainable.
H. What is sustainable is –

Environment – APPEARANCE and CONDITIONS – BEAUTY OR UGLY??????

Economics – CORE VALUES AS ACTIVIES PROACTIVE attracting professional talent to raise their kids in our area or REACTIVE SPENDING LIKE EXCESSIVE POLICE NEEDED BECAUSE OF URBAN PLANNERS PREDICTION THAT HIGH RISE APARTMENTS LEAD TO EXESSIVE POLICE NEEDS ETC… and also excessive carbon emissions due to clogged freeways and idling cars….drive to Los Angeles and see the poverty….STOP LA NOW used to be a slogan in San Diego – yet city planners state that their kids require a low cost home regardless of density and carbon emissions as an emotional response and not rational thinking – the city build out has limits – why crowd it up more and then impose limits generating a reaction based core value system – read your urban planning books and take seminars – education needed here!!!

Social - THINKING SYSTEM and core values – any deficit need MASLOW identified waste or poverty that requires remedy – carbon emissions is one sign and clue – get the S-TBL-LCA city and county urban plan right and net zero carbon can be achieved –

I. Achieve net zero carbon via S-TBL-LCA Urban plan in SYSTEMS THINKING using 5% or more of the total carbon sources as inroads to deficit finding to re-construct areas – using money tool for recycling building materials and tax write off as the income to justify lowering density in KEY SAN DIEGO AREA to get the freeways moving while lowering carbon emissions.
J. Road map to achieve net zero carbon – or CAP goals – flow chart all carbon source greater than 5% - and then USE LEAN, SIX SIGMA and THEORY OF CONSTRAINTS and S-TBL-LCA URBAN PLAN to evaluate technologies that will work – then filter with S-TBL-LCA relevant categories to filter the solution using an EMS ISO 14001 model for annual continual improvement – if that is not understandable AN EDUCATION is needed by city officials and staff to GET WITH THE TIMES – THE US NAVY and INDUSTRY has had to learn these tools to be cost wise effective for modern times with the new international markets opening!!!
K. NEPA and CEQA require an EIS – for carbon should be equated to per capital California and SCAL share for USA share from international view to reduce effectively – and demonstrate that this is happening – note - California can adopt forests and oceans to revitalize to offset Co2 like Hyundai motor company has and others….and a relief measure to find solutions….
5. GOALS – COMMENT how are goals are set each year to achieve objectives for CAP and beyond CAP goals – Utilize LEAN, SIX SIGMA, TOC as modern METHODS to identify GOALS from real progress that can be made – filtered with S-TBL-LCA
6. METRICS – COMMENT – what relevant metrics will be kept as feedback for achieving goals???

From:	Avital Aboody
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, March 19, 2015 5:37:11 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
- **Energy justice:** Put solar in our neighborhoods, give San Diegans a clean energy choice, and require buildings to be energy efficient
- **Jobs:** Create good-paying jobs for local residents
- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Avital Aboody

Aboodyavital@gmail.com
1345 Gregory St.

San Diego, CA, 92102

From:	Mia Bolton
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, March 19, 2015 10:45:30 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

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- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

Please consider implementing this plan first in low-income communities south of I-8. This part of San Diego is hit hardest by the effects of climate change making the air difficult to breathe, causing chronic respiratory problems amongst residents, particularly children, and much more. San Diego has the opportunity to do something and make real change. We can come out swinging with a Climate Action Plan that makes an impact right away if we work in communities that need help most fresh out of the gate.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Mia Bolton

mia@gomixte.com
5116 Narragansett Ave. #12

San Diego, California, 92107

From:	Nancy Dalton
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, March 19, 2015 11:56:59 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Nancy Dalton

ndalton@ucsd.edu
4494 Sunset Bluffs Way

San Diego, California, 92130

From:	Kyle Heiskala
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, March 19, 2015 5:34:32 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

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- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Kyle Heiskala
Bicycle Advisory Committee Member
heikyle.kh@gmail.com
1504 Robinson Ave. #1

San Diego, CA, 92103

From:	Lucas Salazar
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, March 19, 2015 10:42:26 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
- **Energy justice:** Put solar in our neighborhoods, give San Diegans a clean energy choice, and require buildings to be energy efficient
- **Jobs:** Create good-paying jobs for local residents
- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

I support this.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Lucas Salazar

lsalazar987@gmail.com
3520 Lebon Drive #5313

San Diego, CA, 92122

From:	Nadine Scott
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, March 19, 2015 11:26:15 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

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- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

These are common sense solutions that will positively impact the entire county.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Nadine Scott

nadia550@sbcglobal.net
550 HOOVER ST

OCEANSIDE, California, 92054

From:	Zulema Díaz
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Friday, March 20, 2015 12:27:16 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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- **Jobs:** Create good-paying jobs for local residents
- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Zulema Díaz
Adjunct Professor
zulediaz9@gmail.com
4141 Sycamore Dr.

San Diego, CA, 92105

From:	Alicia Roblez Lopez
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Friday, March 20, 2015 8:36:04 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Alicia Roblez Lopez

diss.ccourse@gmail.com
423 E 24th St. Apt 102

National City, CA, 91950

From:	Keith Mesecher
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Friday, March 20, 2015 9:10:01 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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- **Jobs:** Create good-paying jobs for local residents
- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Keith Mesecher

mesecher@cox.net
6448 Scimitar Drive

San Diego, CA, 92114

From:	Madelyn Sullivan
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Friday, March 20, 2015 10:35:25 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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- **Jobs:** Create good-paying jobs for local residents
- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Madelyn Sullivan

madelyn.sullivan@gmail.com
P O Box 232505

Encinitas, CA, 92023

From:	David Gangsei
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Saturday, March 21, 2015 10:18:45 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

David Gangsei

dgangsei@hotmail.com
5465 Madison Ave.

San Diego, CA, 92115

From:	Craig Rose
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Saturday, March 21, 2015 4:13:20 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Craig Rose

craigdrose@sbcglobal.net
10644 Escobar Drive

San Diego, Ca., 92124

From:	Jan Sachs
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Saturday, March 21, 2015 12:54:51 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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- **Jobs:** Create good-paying jobs for local residents
- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

Incentivize property owners to retro-fit buildings with energy efficient upgrades.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Jan Sachs
Board of Directors
jan.sachs@comcast.net
5765 Friars Rd. #162

San Diego, CA, 92110

From:	Pam Clark
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Sunday, March 22, 2015 11:37:03 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Pam Clark

pamczown@gmail.com
3121 Hawthorn St.

San Diego, CA, 92104

From:	Roberta Alexander
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Monday, March 23, 2015 1:50:40 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Roberta Alexander
Dr.
alexanderroberta77@gmail.com
4528 Vista St.

San Diego, California, 92116

From:	Lilia
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Monday, March 23, 2015 9:34:33 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Lilia
Director of Finance
liliae@environmentalhealth.org
1364 South 38th Street

San Diego, CA, 92113

From:	Giuliana
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Tuesday, March 24, 2015 9:06:15 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Giuliana

giulianas@environmentalhealth.org
1823 Casa Morro St #21

Chula Vista, CA, 91915

From:	Georgette Gomez
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; lorriezapf@sandiego.gov; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Tuesday, March 24, 2015 10:30:46 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Georgette Gomez

g.gomez.guzman@gmail.com
4125 Pepper Dr

San Diego, CA, 92105

From:	Huerta, Claudia
To:	DSD EAS
Subject:	Re: San Diego Climate Action Plan Scoping Comments - Put Our Neighborhoods First
Date:	Monday, March 30, 2015 2:27:26 PM

Dear Ms. Malone,

Climate change threatens all San Diegans' right to live in healthy and resilient communities, and it impacts some neighborhoods more than others. The City should act now to reduce carbon pollution and address the disproportionate risks of climate change in certain neighborhoods.

We urge the City to strengthen, adopt, and implement a comprehensive, equitable, and enforceable Climate Action Plan that protects and invests first in neighborhoods that are most impacted by climate change, and cuts carbon pollution to comply with state climate laws, the City's General Plan, and City Council Resolution R-2015-68.

The Climate Action Plan should be strengthened to achieve:

Transportation Justice: Improve access, affordability, public health, safety, and equity

- Improve bicycling and pedestrian infrastructure throughout the city and increases access to transit, starting in neighborhoods that are most impacted by climate change.
- Commit City support for a Regional Transportation Plan that puts transit *before* freeways.

Energy Justice: Close the 'green divide,' increase solar and efficiency in buildings

- Facilitate solar installation in our neighborhoods who are most impacted by climate change.
- Require new buildings to have clean energy such as solar to meet their electricity needs.
- Require upgrades to existing, inefficient buildings and ensure financing and funding access.
- Upgrade City properties with solar and efficiency in disadvantaged neighborhoods first.

Good Jobs:

- Commit to a plan that creates good-paying jobs for local residents.

Climate Adaptation and Resilience

- Increase trees and parks in neighborhoods who are most impacted by climate change.
- Commit to adopting a climate adaptation plan by 2017 that protects natural resources, wildlife, our coastline, infrastructure, and public health and safety.

The final Climate Action Plan should retain and achieve the current targets:

- Reduce greenhouse gas pollution to meet state goals: by 15% by 2020 and 49% by 2035;
- Use 100% clean energy citywide by 2035;
- Use public transit, walking, and biking for 50% of commutes by 2035;
- Reduce waste by 90%;
- Increase urban tree coverage to 35% by 2035.

The Climate Action Plan's environmental review should analyze and endorse the above recommendations for an Alternate Scenario that protects and prioritizes neighborhoods that are most impacted by climate change. We also urge you to finalize and implement the plan in a transparent and public process, with robust public engagement.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Claudia Huerta

Claudia Huerta – MSUP, Public Affairs and Latino Engagement Manager
Planned Parenthood Action Fund of the Pacific Southwest
1075 Camino del Rio South | San Diego, CA 92108

Email: chuerta@planned.org | Office: 619.881.5083 | Fax: 619.542.0486
Visit: voteforchoice.org | Give: ppactionca.org/donateppafpsw | Volunteer: ppactionca.org/takeactionppafpsw

From:	Jose Franco
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Monday, April 06, 2015 11:57:54 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Jose Franco

JGFranco81@gmail.com
1305 Piedra Street

San Diego, California, 92154

From: Herrmann, Myra
To: Malone, Rebecca; Litchney, Seth; Steinert, Kurtis
Subject: FW: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date: Thursday, April 09, 2015 4:23:06 PM

This email was in the DSDEAS mailbox today so thought I better forward. It's more plan-specific, but concludes with a statement that the environmental review should analyze and endorse the plan recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Enjoy!

Myra

MYRA HERRMANN, SENIOR PLANNER/ARCHAEOLOGY/TRIBAL LIAISON
City of San Diego - Planning Department-Environmental
1222 1st Avenue, MS 501
San Diego, CA 92101
(619) 446-5372
(619) 794-5562 (cell)
mherrmann@sandiego.gov
www.sandiego.gov

From: David Gangsei [mailto:dgangsei@hotmail.com]
Sent: Thursday, April 09, 2015 2:12 PM
To: DSD EAS
Cc: Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
- **Energy justice:** Put solar in our neighborhoods, give San Diegans a clean energy choice, and require buildings to be energy efficient
- **Jobs:** Create good-paying jobs for local residents
- **Climate change resilience:** Protect our natural resources, wildlife, coastline, infrastructure, and public health from the harmful impacts of climate change
- **Achieve bold goals and comply with local and state laws:** Meet or exceed the draft climate plan's goals to cut carbon in half, use alternative transit for half of commutes, use 100 percent clean energy, increase our urban forests and parks and reduce waste.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

David Gangsei

dgangsei@hotmail.com
5465 Madison Ave.

San Diego, California, 92115

From:	Herrmann, Myra
To:	Malone, Rebecca
Subject:	FW: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, April 09, 2015 4:23:46 PM

From: David Gangsei [mailto:dgangsei@hotmail.com]
Sent: Thursday, April 09, 2015 2:12 PM
To: DSD EAS
Cc: Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

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Sincerely,

David Gangsei

dgangsei@hotmail.com
5465 Madison Ave.

San Diego, California, 92115

From:	David Gangsei
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, April 09, 2015 2:11:58 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

David Gangsei

dgangsei@hotmail.com
5465 Madison Ave.

San Diego, California, 92115

From:	Kimberly Salazar
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Saturday, April 11, 2015 10:47:29 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Kimberly Salazar
UC San Diego Student
kimberlysalazar94@gmail.com
7852 Avenida Navidad 203

San Diego, California, 92122

From:	David Gangsei
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Monday, April 13, 2015 11:14:58 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

David Gangsei
psychologist
dgangsei@hotmail.com
5465 Madison Ave.

San Diego, California, 92115

From:	Andy Kopp
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, April 16, 2015 1:00:20 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Andy Kopp

andykoppsd@gmail.com
350 11th Ave, #341

San Diego, CA, 92101

From:	Carolina Prado
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Tuesday, April 21, 2015 3:52:42 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Carolina Prado

carolinapradotorres@gmail.com
4827 Wightman St

San Diego, CA , 92105

From:	Kathy Dervin
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Tuesday, April 28, 2015 2:45:28 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

- **Transportation justice:** Invest in transit, bicycling, and pedestrian infrastructure in our neighborhoods first, and put people and transit before freeways
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By Adopting a strong and equity oriented CAP, San Diego can provide a strong message to your residents and be an example to other cities Thanks for being a climate leader!

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Kathy Dervin
Climate and Health specialist
dervin.kathy@gmail.com
1909 San Antonio

Berkeley, CA, 94707

From:	Paula Mack
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Tuesday, April 28, 2015 12:38:03 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Paula Mack

mattsonc@cruzio.com
1111 Hope Way

Santa Cruz, CA, 95062

From:	Brian Polejes
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Tuesday, April 28, 2015 1:49:30 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Brian Polejes

bpolejes@gmail.com
3957 30th St. Unit 314

San Diego, CA, 92104

From:	Nancy Toba-Laba
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, April 30, 2015 2:42:15 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

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Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Nancy Toba-Laba

amoalila@hotmail.com
108 E 5TH ST

NATIONAL CITY, California, 91950

From:	mike clewis
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Friday, May 01, 2015 7:19:39 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

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Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

mike clewis
professional mover
miconeil@hotmail.com
2665 Gst #11

san diego, california, 92102

From:	Brina-Rae Schuchman
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Friday, May 01, 2015 11:09:20 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

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Please dare to include thinking and planning for RISING SEA WATERS that will require MAJOR adaptations, almost beyond our ability to handle, yet will demand that we do.

The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Brina-Rae Schuchman
Ms.
womenact@cox.net
6221 Del Paso Avenue

San Diego, CA, 92120-3133

From:	Dana Monroe
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Saturday, May 02, 2015 12:03:46 PM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

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Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Dana Monroe

danamonroe@cox.net
3535 Juniper St

San Diego, California, 92104

From:	Jane Naseem
To:	DSD EAS
Cc:	Mayor Kevin Faulconer; Councilmember Sherri Lightner; CouncilMember Lorie Zapf; Councilmember Todd Gloria; Councilmember Myrtle Cole; Councilmember Mark Kersey; CouncilMember Chris Cate; Councilmember Scott Sherman; CouncilMember David Alvarez
Subject:	San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action
Date:	Thursday, May 14, 2015 9:02:40 AM

RE: San Diego Climate Action Plan: Put Our Neighborhoods First for Climate Action

Dear San Diego Mayor Faulconer, City Councilmembers and Planning Department,

I urge you to approve an enforceable and comprehensive Climate Action Plan that commits to climate justice and protects, invests in, and takes action first in neighborhoods that are impacted first and worst by climate change and pollution.

The Climate Action Plan should be strengthened to achieve:

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The Climate Action Plan's environmental review should analyze and endorse these recommendations to protect and prioritize neighborhoods that are most impacted by climate change.

Thank you for supporting a healthy, sustainable, and just future for San Diego.

Sincerely,

Jane Naseem

janeoslin@gmail.com
4863 Bancroft St

San Diego, CA, 92116

From: 1
Subject: Start here, start now: Put our communities first for climate action
Date: Sunday, May 24, 2015 4:35:15 AM

Neighborhoods hit first and worst by climate change should be first for climate action.

The proposed City of San Diego Climate Action Plan doesn't do that.

Mayor and City Council-- Protect San Diego from climate change with a strong and enforceable plan that achieves:

- **Transportation justice:** Invest immediately in transit, bicycling and pedestrian infrastructure and measures in our neighborhoods first.
- **Energy justice:** Put solar in our neighborhoods, give San Diegans 100 percent clean energy and require new and existing buildings to be energy and water efficient.
- **Quality jobs:** Create good-paying jobs with skilled training for local residents.
- **Climate change resiliance:** Protect our natural resources, water supply, wildlife, coastline, infrastructure and public health and safety from the harmful impacts of climate change.
- **Science-based goals and compliance with state law and City General Plan:** Meet or exceed the draft Climate Action Plan's goals to cut carbon pollution in half, use 100 percent clean energy, use alternative transit for half of commutes, increase our urban forests and reduce waste.

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IP: 188.230.57.47

From:	Mia Bolton
Subject:	Start here, start now: Put our communities first for climate action
Date:	Wednesday, May 13, 2015 4:27:42 PM

Neighborhoods hit first and worst by climate change should be first for climate action.

The proposed City of San Diego Climate Action Plan doesn't do that.

Mayor and City Council-- Protect San Diego from climate change with a strong and enforceable plan that achieves:

- **Transportation justice:** Invest immediately in transit, bicycling and pedestrian infrastructure and measures in our neighborhoods first.
- **Energy justice:** Put solar in our neighborhoods, give San Diegans 100 percent clean energy and require new and existing buildings to be energy and water efficient.
- **Quality jobs:** Create good-paying jobs with skilled training for local residents.
- **Climate change resiliance:** Protect our natural resources, water supply, wildlife, coastline, infrastructure and public health and safety from the harmful impacts of climate change.
- **Science-based goals and compliance with state law and City General Plan:** Meet or exceed the draft Climate Action Plan's goals to cut carbon pollution in half, use 100 percent clean energy, use alternative transit for half of commutes, increase our urban forests and reduce waste.

Please prioritize climate action in the San Diego communities that need help most. It's only our livelihoods and our futures that depend on it.

Mia Bolton
miakbolton@gmail.com
5116 Narragansett Ave.
San Diego
CA
92107

IP: 4.15.240.83

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APPENDIX 5

Scoping Meeting Sign-in Sheet

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SIGN IN SHEET

For the

CLIMATE ACTION PLAN

ENVIRONMENTAL IMPACT REPORT SCOPING MEETING

Monday, March 2, 2015

NAME (PLEASE PRINT)	ADDRESS (PLEASE PRINT AND INCLUDE CITY, STATE & ZIP CODE) OR EMAIL ADDRESS
MONIQUE LOPEZ	2476 ISLAND AVE. 92102
MELANIE TYLKE	5510 OVERLAND AVE # 310 SD, CA 92123
Jean Costa	7661 Loma Vista Dr. La Mesa 91942
Joe La Cava	~~52~~ joe.lacava@gmail.com
Kayla Race	kaylar@environmentalhealth.org
Micah Mitrosky	MMitrosky@ibew569.org
Nick Erwin	desertguy1@sbcglobal.net
Rena Marrocco	littlelynx04-climateaction@yahoo.com
Colleen Dietzel	greenstore1@juno.com

SIGN IN SHEET

For the

CLIMATE ACTION PLAN

ENVIRONMENTAL IMPACT REPORT SCOPING MEETING

Monday, March 2, 2015

NAME (PLEASE PRINT)	ADDRESS (PLEASE PRINT AND INCLUDE CITY, STATE & ZIP CODE) OR EMAIL ADDRESS
Sylvia Ollinger	9050 Flanders Dr San Diego, CA 92126
Rodrigo De La Rosa	3276 Newton Ave SD. CA 92113
Rosario Garcia	952 22nd St-SD 92102
Luz Palomino	2463 K. St SD CA. 92102
Raymond. Paulson@gmail.com	6369 SDCA 92111
Phil Petrie	4047 Louisiana St SD, CA 92104
Louise Russell	3407 MISSISSIPPI ST SD, 92104
Angela Deegan	3885 BASS ST, LA MESA, CA 91941
Kimberly McGinley	Kimoceanbeach@yahoo.com
DOUGLAS KAT	2248 CUSHING ROAD SAN DIEGO CA 92106
Mary Lou Finley	5041 Guava Ave, Apt 110 La Mesa S.D. CA 91942
Howard Lee	City of La Mesa (staff) Planning
Chris Jacobs	City of La Mesa (staff) Planning

SIGN IN SHEET

For the

CLIMATE ACTION PLAN

ENVIRONMENTAL IMPACT REPORT SCOPING MEETING

Monday, March 2, 2015

NAME (PLEASE PRINT)	ADDRESS (PLEASE PRINT AND INCLUDE CITY, STATE & ZIP CODE) OR EMAIL ADDRESS
Kathy Smith	10208 Avenida Magnifica, SD 92131 Ca
Carolina Narvaez	2542 landis st SD
GINA SCHUMACHER	2506 HARTFORD ST. SD CA 92110
Masada Disenhouse	9318 Carmichael Dr La Mesa CA 91941

SIGN IN SHEET

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NAME (PLEASE PRINT)	ADDRESS (PLEASE PRINT AND INCLUDE CITY, STATE & ZIP CODE) OR EMAIL ADDRESS
Patricia Gracian	4609 Shoshoni Ave. San Diego, CA 92117
Hugh Moore	2961 EDELL PL SAN DIEGO, 92117 HMPEACE1e yahoo.com
BOB SILVERN	BOBSOO@COX.NET
Ashley Mazanec	ashleymazanec@gmail.com
SAM BALLARD	SAM@THEPROJECTLENNONOW.COM 92104
Kath Rogers	Kath@ClimateActionCampaign.org

SIGN IN SHEET

For the

CLIMATE ACTION PLAN

ENVIRONMENTAL IMPACT REPORT SCOPING MEETING

Monday, March 2, 2015

NAME (PLEASE PRINT)	ADDRESS (PLEASE PRINT AND INCLUDE CITY, STATE & ZIP CODE) OR EMAIL ADDRESS
Erick Ortega	
Maria Martinez	
Jose Hernandez	2137 Julian ave. San Diego CA
Monserrat Hernandez	✓ ✓ ✓
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	4032 Camino Calma San Diego, CA 92122
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Michael Brackney	michaelbrackney@gmail.com

SIGN IN SHEET

For the

CLIMATE ACTION PLAN

ENVIRONMENTAL IMPACT REPORT SCOPING MEETING

Monday, March 2, 2015

NAME (PLEASE PRINT)	ADDRESS (PLEASE PRINT AND INCLUDE CITY, STATE & ZIP CODE) OR EMAIL ADDRESS
Jack Shu	~~[illegible]~~ jkshu@cox.net 6040 Wetherby St. La Mesa CA 91941
Susan Randerson	rrande2@cox.net 831 Golden Park Ave., San Diego 92106
Roddy Jerome	roddy'jerome@aol.com
Adriana Covarrubias	adri_cova@hotmail.com
Norma Noreega	1719 1/2 Bone National city 91950
Joy Williams	JoyW@environmentalhealth.org
Emily Wier	Emily W@sandiego350.org
Nicole Mahter	Poway CA 92064
Mike Bullock	mike_bullock@earthlink.net
Craby Schubert	schubert@waterinnov8.com

APPENDIX 6
Scoping Meeting Comments

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3/2/15 SD Planning Department, Re CAP's NOP & Scope

5 PM to 7 PM; Balboa Park Club; 2144 Pan American Road West San Diego CA 92101

Michael Bullock, Sierra Club San Diego Transportation Chair
1800 Bayberry Drive; Oceanside, CA 92054; 760-754-8025

March 2, 2015
(346 words = 2.8 minutes)

Associate Planner Malone and City of San Diego Planning Department Staff:

I am Mike Bullock, Transportation Chair for the San Diego Sierra Club.

The City's 2007 General Plan promises to do a Climate Action Plan that will at least comply with state laws regarding climate. Now you have a draft Climate Action Plan and have recognized the CEQA obligation to prepare a Program level EIR.

The CAP and its Program EIR must include a climate-stabilizing set of Greenhouse gas emission targets, based on current science. The derivation must be shown so the public and decision makers understand how it has been determined that the target set is sufficient to prevent climate de-stabilization. Climate destabilization should be fully described.

These documents must have a clear connection between the action items in the CAP and what are identified as the required mitigation measures to reduce the GHG emissions to the target levels.

For these measures, or action items, to be meaningful they must be quantified and be enforceable and the process for enforcement needs to be specified. This was one of the flaws with the County of San Diego CAP and it is one that we hope you avoid by doing it right from the beginning. And of course for measures to be reasonable and enforceable, there also needs to be adequate funding.

We also support a CAP (or alternative to the CAP, included in the Program EIR Alternatives Analysis) that commits a fair-share of resources to low-income and underserved neighborhoods that are most impacted by climate change. Transit, complete streets, Transit Oriented Development, roof-top solar, neighborhood-scale solar, energy storage, micro grids, new parks, and affordable housing should all be included as part of either the CAP or the new alternative.

Regarding the planting of trees and the creation of new neighborhood parks, with stands of trees, we are pleased that the CAP includes both the carbon sequestration, which you properly recognize as a mitigation measure and the cooling effect on hot days, which you properly recognize as adaptation.

Reliable and well-defined funding must be included.

Thank you

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CITY OF SAN DIEGO

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Comments: I would like to make sure that Commercial entities are not exempted or excluded from the Community Choice Aggregate. Currently SDGE blocks community entities such as Schools & Military Bases from obtaining solar Panels thereby denying these entities the same cost savings that individual families get. These tax dollars would be put towards much needed programs within these entities

Name Rena Marrocco **Signature** [signature]

Address 1135 York Dr., Vista, CA 92084

Use back of sheet if additional space is necessary.

DSDEAS@SanDiego.gov

up to March 20

Rebecca Malone,
Associate Planner

City of San Diego
Planning Dept.
1222 First Ave. MS 501
San Diego, 92101

CITY OF SAN DIEGO

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Comments: The PEIR needs to ensure that the CAP meets state greenhouse gas emission targets, including AB32 & S-3-05, & to provide an analysis of what happens if these targets are not met. All energy ordinances proposed in the PEIR need to be analyzed with respect to the state's loading order, by prioritizing investments in energy efficiency first, then local renewable energy that is tied with investment in battery storage. An energy disclosure ordinance, as proposed in the current CAP – will not get us the needed reductions in energy use. Voluntary measures (e.g. for water reduction) need to have robust analysis to ensure that the stated targets in the appendices can be met.

Name EMILY WIER **Signature** Emily Wier

Address 4146 Bachman Pl #B, San Diego 92103

Use back of sheet if additional space is necessary.

Climate change affects native species found in San Diego, that are covered under the MSCP (Multiple Species Conservation Program). These species are declining due to a loss of habitat - and climate change exacerbates that ~~future~~ decline. Will the emissions reductions measured proposed in the CAP be sufficient to ensure that there will be no significant effects on these species? A robust analysis of these species and their resilience to climate change needs to be proposed. Potential mitigation measures that need to be analyzed include reviewing the MHPA Boundary, and potentially setting aside habitat upslope (e.g. higher elevations) to ensure that species can effectively migrate as habitats change, wildfires devastate our wildlands, and threaten our species biodiversity.

The PEIR needs to prioritize investments in sensitive receptors as described by CalEnviroscreen. These are the communities that are hit hardest by climate change, & least able to adapt.

This plan's participation process needs to be transparent and open. There are no technical appendices available to the public, and there has been no outreach to stakeholders. I have testified before to City staff about the need for public education to occur on climate change and the PEIR. Furthermore, there has been still no release of the adaptation plan. We need this information available to the public as we go through the CEQA process.

City of San Diego, Planning Department
Attn: Rebecca Malone, Associate Planner
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San Diego, CA 92101

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Comments:

I am speaking as a volunteer for the Unitarian Universalist Church's Justice Ministry We worked in a coalition for AB 32 and Human Right to water legislation with a view of equity and justice.

It is important that this EIR draft does not place an undue cost burden on lower income, lower served communities. We surely can increase the 4 gallons per capita of water saved for 2020 and 9 gallons by 2035 cited on page 35 of CAP. We can do this by targeting the highest water users/wasters.

Also the County's desalination plant that will feed our water region produces a high amount of G.H.G. per gallon of water and costs more than other methods. Hopefully we will NOT design or vote for such strategies.

Name Kathy Smith **Signature** Kathy Smith

Address 10208 Avenida Magnifica, San Diego, Ca 92131

Use back of sheet if additional space is necessary.

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San Diego, CA 92101

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Comments: The EIR should have a goal of maximizing the greenhouse gas emission reductions to the extent possible and at least meeting California's GHG reduction requirements under S-3-05 and AB32. To date the plan does not contain enough detail to ascertain how effectively the measures in the plan meet the above targets. The EIR should analyze: how well the plan achieves the GHG reduction goals; how well the proposed measures conform to the State's Loading Order (which prioritizes efficiency and renewable energy); how well the measures maximize transition of commuting from single occupancy vehicles to transit, carpooling, biking, walking & telecommuting; OVER →

Name Masada Disenhouse **Signature** Mdisenhouse

Address 9318 Carmichael Dr. La Mesa CA 91941

Use back of sheet if additional space is necessary.

Cont.

how well the measures ensure that our most impacted neighborhoods are prioritized for infrastructure and jobs related to climate mitigation; how well the plan works to reach 100% renewable energy asap but no later than 2035; and how well the plan addresses adaptation to and avoids the costs of delaying action on climate change, including costs associated w/ more frequent & intense wildfires, drought, sea level rise, ~~[illegible]~~ more heatwaves, and ~~the~~ increases in respiratory, cardiac, and infectious diseases. ~~associated~~

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Comments: I want to see a strong, enforceable, measurable climate action plan that prioritizes transit, & active transportation and community choice energy

Name Angela Deegan **Signature** Angela Deegan

Address 3885 Bass St, La Mesa, CA 91941

Use back of sheet if additional space is necessary.

City of San Diego, Planning Department
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Comments:

The CAP needs to be mandated and enforceable. That's the only way that it can be equitable, to assure everybody is participating in reducing GHG emmisation.

- The EIR should include - as an alternative - only implementation of the "Urban transit strategy" (found in the 2050 RTP appendix) as a means to reach the GHG reductions from cars.
- The EIR should include an economic analysis of roof top solar systems on homes and other developed facilities as compared to importing green energy from distant area - ~~Cost effectiveness~~ Green

Name JACK SHU Signature Jack Shu

Address 8040 Wetherly St. La Mesa CA 91941

jkshu@cox.net phone (619) 708 2050

Use back of sheet if additional space is necessary.

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Comments:

The environmental review needs to consider whether the reductions proposed in the CAP will be sufficient to meet the reductions outlined in the CAP. We need more than just voluntary actions to address climate change.

The CAP needs to follow the state's loading order by prioritizing energy efficiency first and then local, renewable energy such as rooftop solar.

Consider the strategy for building efficiency used by New York City to identify and target the most inefficient buildings first. In NYC 20% of the buildings consumed 80% of the energy.

Name Nicola Moelter **Signature**

Address 14489 Crestwood Ave. Poway CA 92064

Use back of sheet if additional space is necessary.

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Comments: Since Air conditioning & refrigeration will be very much needed in a warming world (& San Diego will be warmer), we need to seriously address and include in the SD CAP (not just in the Ports CAP) a commitment to include phaseout of the potent ("super") GHGs hydrofluorocarbons, which are 3,800 x worse than CO_2 ton for ton. The Port offers to switch its refrigeration (to HFC-32, I suppose). San Diego must too. This is a win-win (even for SANDAG): also switch auto AC HFC-134 to HFO-1234 fyl, which is 99.3% less warming. The EU has required this as of Jan 1, 2015, & the US EPA recommends it — & automakers, such as GM are doing it voluntarily; or auto AC should shift to CO_2, because even CO_2 is better than allowing HFC-134a become the 3rd worst global warmer by 2035.

Name Gabriele Schubert **Signature** Gabriele Schubert, MSc.

Address 2345 W. Jewett St., San Diego CA 92111

CAP reviewer, San Diego Foundation committee

Use back of sheet if additional space is necessary.

City of San Diego, Planning Department
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Comments: Climate change is the most important issue that we face today. San Diego should have a Climate Action Plan with ambitious, ~~enforceable~~ enforceable, and measurable policies for reducing greenhouse gas emissions. Let's become a global leader in combating climate change! To do this we need a plan that meets the ~~goa~~ targets set by AB-32 and S-3-05, ~~including~~ including the 2035 and 2050 targets, and provides the funding for it.

Name Janina Moretti **Signature** Janina Moretti

Address 4032 Camino Calma San Diego, CA 92122

Use back of sheet if additional space is necessary.

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Comments: I support a Climate Action Plan that prioritizes neighborhoods that are hit hardest by climate change. We need a CAP that is enforceable & measurable & that implements a Community Choice Energy (CCE) program. It should also meet the 2035 & 2050 reduction targets, as required in AB 32 & S-3-05. We need to promote mass transit, walking & biking over car use.

Name Sylvia Ollinger **Signature** Sylvia Ollinger

Address 9050 Flanders Dr, San Diego, CA 92126

Use back of sheet if additional space is necessary.

City of San Diego, Planning Department
Attn: Rebecca Malone, Associate Planner
1222 First Avenue, MS 501
San Diego, CA 92101

Roddey Jerome roddyjerome@aol.com

We need the city to act now to reduce the harmful impacts of climate change and cut carbon pollution w/ an enforceable climate action plan.
The alternate scenario should explicitly invest first in the neighborhoods who are hit first and worst by climate change on actions to: improve public transit, walking & biking access make homes & buildings efficient & healthy through requirements; install local clean energy and create good jobs

Raymond Paulsen 6369 Caminito Marcial SD CA 92111

(1) NATIONAL AMBIENT AIR QUALITY Standards Fed and State Equiv – for what is San Diego's fair share <350ppm. carbon

(2) Community Choice for renewables necessary to ensure BEST SOLUTIONS for tax payer.

(3) Plan should include mandate for identifying renewable energy + offshore mix w/ cost and payback available to the public for review + feedback.

(4) All meaningful plans today include Life Cycle Assessment and Life Cycle Sustainability Assessment (TRUE VALUE). How is LCA/LCSA incorporated into San Diego Climate Action Plan? Does it include cost for seavise, drought, bad weather and other negative impact costs to Society?

(5) CEQA requires EIS – Included should be (true valuebased) seavise, drought + safety potential!!!

APPENDIX 7
Scoping Meeting Transcript

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OPENING REMARKS:

Good evening and thank you for coming to the Environmental Impact Report public scoping meeting for the Climate Action Plan. My name is Rebecca Malone and I am an Environmental Planner for the City of San Diego's Planning Department. These meetings are referred to as EIR Scoping Meetings and are for the purpose of helping to define the scope of work for the EIR.

This meeting is required by the California Environmental Quality Act [CEQA] for projects which may have State-wide, Regional or Area-wide environmental impacts. The City's environmental review staff has determined that this project meets this threshold, and therefore scheduled this meeting to gather public input prior to the preparation of the project's environmental document.

Environmental review staff are required by the City's Municipal Code to provide the public and decision makers with independently prepared environmental documents which disclose impacts to the physical environment. This information is used by decision-makers as part of the deliberative process in approving or denying a project. The environmental document does not recommend approval or denial, but is provided as information on the environmental impacts of a project.

Now, a few comments about how the meeting will be conducted.

First, I'll provide a brief description of the project followed by a short presentation by the City's Planning Department. At the end of the meeting,

time permitting, the public is welcome to review any materials provided by staff and ask additional questions for clarification; however, these will not be part of the scoping meeting record.

This meeting is designed to get as much public input on areas that need to be addressed in the EIR in the time allotted for this meeting. Therefore, each speaker is asked to introduce themselves, state their address and complete their comments within three minutes. [Should we start to run short on time, I may need to further limit individual comment time. I will inform you if this is the case.] This entire meeting will last 2 hours and will end at 7 PM, March 2.

In addition to verbal comments, which are being taped for the record, there are forms available from City staff upon which you can provide written comments. We will need to have these comment forms submitted to City staff by the close of the meeting, or you can mail the completed form with your comments to the address listed on the back page. Please remember to put your name and address on the sign-in sheet before you leave the meeting if you would like to receive Notice of Availability for the Draft EIR.

Please refrain from conducting a debate on the merits of the project at this meeting, as this is not the purpose for tonight's gathering. Rather, please focus your comments on those environmental impacts you would like thoroughly analyzed in the project's environmental document. Lastly, I will be acting as the moderator and timekeeper for the duration of the meeting and, therefore, would respectfully request that you yield when

notified that your three minutes are up.

This meeting is being conducted in accordance with CEQA for the Climate Action Plan on Monday, March 2, 2015 at 5:00 p.m.

Thank you for your patience. We'll now begin with a brief presentation by the Planning Department.

BRIAN:

The City of San Diego Planning Department is seeking CITY COUNCIL APPROVAL for the adoption of the Climate Action Plan [CAP] and implementing regulations or policies, which may require amendments to the Municipal Code and/or Land Development Code. Former Governor Arnold Schwarzenegger's Executive Order S-3-05 established the 2050 statewide GHG reduction target of 80 percent below 1990 levels. The City of San Diego has prepared a draft CAP that identifies measures to effectively meet greenhouse gas [GHG] reduction targets for 2020 and 2035, as "interim" targets for achieving the 2050 target. The CAP estimates the GHG emissions for the City of San Diego in the baseline year 2010 to be around 12.8 million metric tons of carbon dioxide equivalent [MMT CO2e]. By 2020 the CAP estimates the City's emissions would increase to 13.9 MMT CO_2e, and to around 16.2 MMT CO2e by 2035. With implementation of the CAP, the City aims to reduce emissions 15 percent below the 2010 baseline by 2020 to around 10.9 MMT CO2e, and by a total of 49 percent by 2035 to 6.4 MMT CO2e. With implementation of the CAP, it is anticipated that the City would exceed its reduction target by 0.9 MMT CO2e in 2020

and 155,600 MT CO2e in 2035. The CAP relies on significant City and regional actions, continued implementation of federal and state mandates, and five local strategies with associated action steps for target attainment. The five strategy areas are:

Water & Energy Efficient Buildings;

Clean & Renewable Energy;

Bicycling, Walking, Transit & Land Use;

Zero Waste; and

Climate Resiliency.

Implementation of the CAP is divided into:

Early Actions [Adoption of the CAP-December 31, 2017],

Mid-Term Actions [January 1, 2018-December 31, 2020], and

Longer-Term Actions [2021-2035].

Through 2020, the CAP meets the requirements set forth in CEQA Guidelines Section 15183.5, whereby a lead agency [e.g. the City of San Diego] may analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce GHG emissions. Following adoption of the CAP, eligible individual projects preparing project-specific

environmental documents may tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts in their cumulative impacts analysis.

At this point, the Planning Department will make a brief presentation of the project.

BEGIN TRANSCRIPT:

I'm going to briefly go through the presentation bare with me. It's similar to a presentation we provided for the City Council's Committee meeting back in October.

On September 14, there… city council, Gloria, Councilmember Lightener, the updated 2014 Climate Action Plan highlighting many of the benefits to the environment and to the economy.

The draft climate action plans establishes a road map achieving Governor Schwarzenegger's executive order S305 which establishes 2050 statewide greenhouse gas reduction targets. The plan will also help San Diego become a leader in clean technology, renewable energy, and green jobs. Further, the capitol will implement the City's General Plan.

The cap supports numerous general plan policies, including: implementation of the city's … strategy, the conservation element, and the

mobility element. The four primary purposes of the climate action plan include a roadmap to see greenhouse gas reduction, supports the California regulations, implements the general plan, and provide … for new development for greenhouse gas emissions.

The CAP includes a 2010 baseline emission inventory. As demonstrated by this figure, the transportation sector contributes the largest output of greenhouse gas emissions due primarily to the single occupancy vehicle trips. This is followed by the energy structure and the waste emissions.

This figure depicts the 2010 baseline with the projected business-as-usual emission levels in blue and reduction targets for 2020 in blue and 2025 in orange. As I mentioned, the CAP has five goal strategies for greenhouse gas emissions for 2020 and 2035 targets. These targets will leverage the city's existing resources and provide clear direction of actions to be presented to city council for future consideration.

Also I want to emphasis that this is not a top-down plan, this requires broad participation from all San Diegans.

The energy- and water-efficient building strategy includes such actions as presenting to City council for consideration energy and water conservation disclosure ordinances, as well as the municipal energy strategy and implementation plan.

The clean renewable energy strategy includes the goal of achieving 100% renewable energy from the City's electrical grid by 2025.

The bicycle, walking, transit, and land use strategy includes the goal of achieving 50% of community trips in transit priority areas to take place …. by 2035. The zero waste strategy includes such action as presenting to city council for consideration a zero waste plan to divert sold waste and capture landfill, solid waste, and methane gas emissions.

The climate [resilience] strategy includes presenting to City council a city wide urban tree planting program as well as policy directions for a pair or stand-alone … adaptation plan.

The next steps including the preparation of the environmental document followed by a city council adoption process, and followed by annual monitoring of the plan once it's adopted.

Ok what we're going to do in addition to taking the comments that we're going to take tonight. You can still submit comments on the notice of preparation for the EIR up to March 20th of 2015 – so there's a few more weeks left. You can send them via email at dsdeas@sandiego.gov or you can send them by mail to Rebecca Malone at the address on the screen, and we'll leave this up here for a little while.

So what we're going to do right now is start taking comments from the public, and just one more thing that I'm going to let you know is that we are recording comments so we make sure we get all your comments. We do have a digital recording device. We will be recording all your comments.

So what we're going to do is we're now going to switch the microphone and point it around. You can come up, line up, and as Rebecca mentioned we're going to have you enter your comments into the microphone. Any special requests. Please do it in an orderly fashion. Everyone will have the opportunity to speak so give us about two minutes to rearrange the setting here, then you can just form a line down the middle of the row. And if you have any special requests, let us know.

[ADDITONAL INSTRUCTIONS GIVEN]

Q: Hello. My name is Raven Olsen. I work for the Navy as an environmental engineer. We've been very active in the sustainability process. And I have comments for the San Diego Plan. All meaningful plans today include life-cycle assessment and life-cycle sustainability assessment. Is LTA and LTSA incorporated into the decision making process for the plan for the best value for the taxpayer, and is it then consider are those cost for potential sea-rise cost, property loss, and drought and other negative impact that global warming can bring. Also your CEQA requires an Environmental Impact Statement and again are you including potential sea-rise, drought, and other negative global

warming impacts to your environmental impact statement for CEQA. That's my question.

Q: Good Evening, Associate Planner Malone and City of San Diego Planning Department Staff. I am Mike Bullock, and I am the transportation chair for the San Diego Sierra Club. The City's 2007 General Plan promises to do a Climate Action Plan that will at least comply with state laws regarding climate. Now you have a draft climate action plan has recognized the CEQA obligation to prepare a program-level EIR. The Climate Action Plan and its program EIR must include a climate-stabilizing set of greenhouse [definition/Emission] cards based on current science. The … must be shown so the public and decision-makers understand how it determined that the target [stat] is sufficient to prevent climate destabilization. Climate Destabilization should also be fully [discarded]. These documents must have a clear connection between the action items in the climate action plan and what are identified as the required mitigation measures to reduce the greenhouse gas emissions to those climate stabilizing target levels. For these measures or action items to be meaningful, they must be quantified and enforceable, and the process for enforcement needs to be specified. This is one of the flaws with the County of San Diego Climate Action Plan, and it is one that we hope you avoid by doing it right from the beginning. And of course for measures to be reasonable and enforceable, there also needs to be adequate funding. We also support a climate action plan, or perhaps an alternative to the climate action plan included in the program EIR Alternatives Analysis, that commits a fair share of local resources to low-income and underserved neighborhoods that are most effected by climate change. Transit [complete streets], transit-oriented development, roof-top solar, neighborhood scale solar, energy storage, micro-grids new parks, and affordable housing

should all be included as part of either in the climate action plan or the alternative study.

Regarding the planting of trees and the creation of new neighborhood parks with standing trees, we are pleased that the climate action plan includes both the carbon sequestration, which you properly recognize as a mitigation measure and the cooling on [blockades] which you properly recognize as adaption.

In all cases, reliable and well-defined funding must be included. Thank you.

18:33

Hi, … Lopez with the Environmental Health Coalition . I am a resident of the Sherman Heights neighborhood. The climate action plan has some very solid and tangible goal when it comes to transportation, and the shifting over the most from single-occupied vehicles which we saw [as most specific to] climate change here in San Diego. What I want to focus on is the solid goals, the how and the where. In reviewing the Climate Action Plan, I would like an emphasis on the how and the where.

How? We have these goals but do we have the funding in place that will make sure that these goals are accomplished? And one way to make sure that this is accomplished is finding/tying transpiration funding directing the [most] shared goals. So if our goal is 6% biking by 2020, at least 6% of the city's transportation funding should match that, and it currently doesn't.

[19:45] Where? We've heard a lot about who are most impacted by climate change. And those most impacted by climate change are the neighborhoods of Sherman Heights, City Heights, Barrio Logan, Logan Heights. And these neighborhoods can be easily identified using a [Cali page fold] called the CalEnviroScreen. And what we'd like to see are those neighborhoods identified and CalEnviroScreen… the neighborhoods that are prioritized for funding first when it comes to implementing biking, walking and transit infrastructure.

Additionally, how are we going to get there if our political leaders continue to support a regional transportation plan that is heavily focused on freeway expansion-type projects? I'll give you one example that goes right to the heart of San Diego. Right now our regional transportation plan, there are plans to expand the 94 freeway by two lanes. How can the city accomplish their goals of reducing vehicle miles traveled, of having a good mode-share in biking, walking and transit, if we are expanding lanes that will lead to more vehicle travel which will essentially lead to more greenhouse gases? You're all planners; you know that's where it will head. So it's important the how that the city, look at what's going on in regional planning. These are the freeways that go through the very communities which I mentioned to be prioritized. So to recap, the how: tying funding and mode-share goals, the where: look at CalEnviroScreen communities. And also another *how* is lining up the great goals with regional planning that's going on at the SANDAG level. Thank you.

21:54

Hello. My name is Jack Qu. I'm here to represent the Universal… ministry of California. We're a ... organization and the reason I'm here is because the climate action plan affects people. And we know that Climate Change affects people that are of color and poorer areas. Unfortunately, a lot of

what we try to do for climate change disproportionally puts the burden of costs on those populations, and that shouldn't happen.

That's something that this EIR should have analyzed, analyzed effects of your measures, your mitigation to different populations. Not only should the public benefit from these changes but the cost should not be disproportionally based off of it. For example, the Climate Action Plan that you have out now deals with transit centers instead of just dealing with transit centers we should deal with entire poor areas and neighborhoods. And those … should be made.

We know now, the planners know, that justly going in a circle around a transit center and saying that people will get there in 15 minutes in a quarter mile or half mile radius is not good planning. An EIR should look into those issues and deeper than that instead of coming up with simple goals.

Another [adept], we need mandated and enforceable goals, surely measures within the plan that will evoke those kinds of mandates and measures particularly if we are not meeting our goals - of meeting the hardest of the plan.

Thus we can be assured that this plan is effecting, participating with everyone. If we mandate something and make sure everyone does it, then it works. But basing the costs of climate or reducing green house gas emissions on a few ... populations is something that's not fair. One more example is we plan to reduce DMT. We know who's creating the DMT. It's not the poor, it's not the communities that are being affected by plan that looks into the effects of DMT reduction, who needs to have the DMT reduction, and how can we do that. What are the city policies that can affect that? We need a climate action plan that will not allow auto-centric developments to go unprepared for the fiscal now.

That's the kind of action plan that we need now, that will affect adequate change to city policies. Thank you.

24:45

Good evening. My name is Rodney Gerome. I live in San Ysidro. I am here today because my neighborhood needs and deserves a San Diego Climate Action Plan that puts our neighborhoods first. I have lived in San Diego 25 years. I love San Diego. But I know my neighborhood can be improved and needs to be improved.

I think [I've seen two seniors in wheelchair in a typical any route of public transportation], and I can only imagine were she goes to when she's by herself. Does she's not very often. But there are times when she has to do by herself, and just knowing as I help her with the poor handicap access on public transportation that needs a lot of improvements it's difficult. This is why it is important for San Ysidro and neighborhoods like San Ysidro to be first in any climate action plan for San Diego.

I understand family challenges apply to all of us, but I understand that it will have a different impact in different communities. You know [people get] on the trolley on a hot day because they live in old homes with no air conditioning, and it ain't easy need to get to cooler places where they have a lot of parks or trees.

You can't go to the doctor when you get sick because there's no public access or transportation options ……Bicycling and walking are due to lack of adequacy of bike lanes and sidewalks. You know climate change in our neighborhood presents a great threat to seniors and children who have already suffered health issues.

For these reasons I am demanding that climate action plan focus on neighborhoods like mine that need help the most. Thank you.

26:30

I'm Hillary with the Environmental Health Coalition. I'm going to go through both some of the tools we think you should use to analyze the plans as well as ... an alternative we think you should analyze.

And so for the plan we think you should analyze compliance with state laws 8032 and S305 through 2035 not just 2020 as well as compliance with the City's General Plan and if not in compliance the EIR should outline how the plan could come into compliance.

The plan could also analyze the extent to which the actions are enforceable and will actually achieve the target. The plan or the EIR should also analyze the air quality impact and economic impact, not just of the actions of the plan but of climate change and pollution on sensitive receptors in areas with high cumulative impact.

And how CalEnviroScreen is a tool you can use to identify those areas. And I think what you'll find right now is that the climate plan is not specifically prioritizing those areas of high cumulative impact for pollution reduction and so in order to help you with that analysis and improve the air quality in those areas we urge you to analyzes an alternative scenario that prioritizes the disadvantaged neighborhoods first in order to achieve the climate plan social equity goal. And so we hope that alternative scenario will achieve all of the goals that have been outlined in the plan but take actions to prioritize those neighborhoods so, as Lopez said earlier, for transportation, that investment city's money for sidewalks and for bike lanes, to the CAP in the CalEnviroScreen the disadvantaged neighborhoods

first, and the city should be tied to supporting in the regional transportation plan that puts people in transit before freeway expansion.

And for energy efficiency, as [Brian] said there are folks in our neighborhood who don't have efficient homes, don't have solar, and we need to make sure that the plan is actually getting solar in our neighborhoods and is actually getting the efficiency upgrades that they need until we are due to analyze that alternative and we'll submit more detailed written comments. Thank you.

29:07

TRANSLATOR:

GOOD EVENING. My name is Ariana Garcia. I live in National City and been there for eight years, but I am here today because I believe this plan will end up affecting our entire region. I may not live in San Diego but just like a lot of my friends and people I know in City Heights, Sherman, and Logan heights, my community is similar to theirs in that it's very impacted by pollution.

I live in an area that surrounded by auto body shops, auto body paint shops, and those shops effects the health of residents in our neighborhood. And it affects especially children affected with asthma and other respiratory problems.

Today I am here alongside San Diego residents because I understand that San Diego is the biggest city in our region and so this climate plan in San Diego will affect the whole region. It will. Also the decisions made with this plan will probably impact the decisions made by other cities.

Hopefully San Diego sees the importance of starting with the most impacted neighborhoods and other cities like National City can take the same [action]. Climate change impacts all of us. The reality is that it will impact some of us more than others.

We need action taken by the city. We need a climate plan that reduces the dangerous impact of climate change. That is why I am here asking and we are here asking that communities that are most impacted are where the climate action plan is taken first. I was hoping you would do that here in San Diego. We thank you for taking our comments into account. I hope you will listen to our suggestions.

32:30

Good evening. My name is Cathy Smith. I am from [Scripps Unitary] of San Diego. I'm here tonight speaking as a volunteer for the Unitarian Universalist Justice Ministry. We did work in the coalition for 8032 and the Human Right to Water legislation which we recently passed. We take a view of equity and justice. Some of the speakers have spoken of before. And it's very important to us that this EIR draft doesn't not place an undue cost burden on lower-income and lower-served communities.

For example, on page 35 of the EAT, sure we can do better and increase our conservation goals of 4 gallons per capita for 2020 and the state is 9 gallons by 2035. If we could do this by targeting the highest water usage, or water wasters. also the county's desalinization plant that does feed our water region produces a high amount of greenhouse gases per gallon of water [or] more, and hopefully we will not do all of this example or vote for such strategies. Thank you.

33:55

... Good evening I'm representing the American Lung Association of California.... .... already. I'm probably going to duplicate a couple of them and hopefully add a few more. There not doubt that once again the City of San Diego is on the leading edge of doing this. We've seen this happen at the county and SANDAG, so hopefully we've learned some lessons and will get this right the first time.

There's a sense of urgency to adopt the city's climate action plan, but we need to see the technical tendencies. We need to see in regards to what exactly is the implementation of that climate action plan. So we would hope that would get out before you get too far into the EIR. The EIR measures the public health impact of the baseline alternative as well as the public health benefits of the plan and any alternative.

The EIR needs to identify those green house gas reduction strategies that maximize full benefits of reducing air pollutants and providing drastic public health improvement. The EIR [discussed has a plan that] is enforceable and has measurable performance measures to meet the long term green house gas reduction targets. The EIR looks best [I think] how [Brian] mentioned is how the climate action plan steps within the City's General Plan [including the city villages] ... mentions a significant portion of green house gasses come from [road trips], from single-occupancy cars to transit, walking and biking. The resources needed to achieve those [road-trips] rather than third parities... The EIR must identify alternatives in the event those motions that don't or can't happen because of a lack of transportation investment. I hope that doesn't happen because that's a possibility.

Last, the EIR should identify an alternative that is more aggressive than the draft climate action plan ... greenhouse gas reduction against the socio-economic impact ... Thank you.

35:55

TRANSLATOR: Good Evening. My name is Rosario Rosia. I live in the community of Sherman Heights. I'm here today to talk about climate change, an issue that is very critical and affects the health of many residents in my community and throughout San Diego. We need the city to take action for the strong climate plan in order to reduce the dangerous impact that we're living in our communities. They impact our daily lives especially the health of our children. All of ... clean air. The residents in my community want a strong plan adopted and that the focus of this plan is correctly focused on a neighborhood most needed. In order to improve the environment our communities need to come first, because they are the ones stuck with the biggest impact. Thank you.

38:10

Good evening. I'm ... from La Mesa. and I think like to speak in favor of the community .. Energy. And the reason why this is important is because SDG&E being a for-profit organization has goals which are not aligned with those of the people of San Diego and with the climate action plan. Specifically the EIR goal is to make money. They're not concerned about the climate. They know this, for example, from the rise structure that the SDG&E has submitted to the California Public Utilities Commission [CPUC] for approval. That raise structure has two main provisions. 1] is a fixed monthly charge of $10 a month starting in 2017 and rising every year

after that. And there are planning on flattening the ... which are two tier close together. So either one of those features has the effect of de-incentivizing energy conservation and de-incentivizing rooftop solar. SDG&E 's goal is to sell electricity. They don't do that to people who have rooftop solar and they don't do that to conserve energy. So a community choice energy program will allow us to set rates that are consistent with encouraging people to reduce greenhouse emissions and conserve energy. Thank you.

40:00

hello, good evening. My name is Eric. I live in .... Barrio Logan. I'm here as a resident I've been talking to my neighbors [that I will be attending this meeting, and] this is a concern for all of us in Barrio Logan. I live in .... seen over the years in different communities - Barrio Logan, National City, Sherman Heights - we ... in San Diego have privilege for ... communities and .... Communities forgotten on solutions for the environment for the air we breathe.

Over the years all people have been getting sick, cancer, asthma, so we want these plans to focus on our communities to ... program for transportation for people who can't afford it.

I use a vehicle for transportation but also I use public transportation and then our communities don't have guidelines ... so we want those programs to come to our community and how when ... houses... how they will create jobs... we want in jobs for our community. And we want those programs to come to our community like low income.

They hear all these plans, but they don't mention how people of low income can apply, how people can benefit for all these programs. So we

want the programs for our community and how ... so many ... that we ... in our community. How can you regulate diesel for gas, natural gas? So that's ... we ... so we want you guys to regulate more of these transportational... the companies... more programs to bring more clean air communities .....Thank you.

42:19

Hello. My name is Emilie Weir. I live in Hillcrest. I have a couple of points to talk about today.

The first is the public participation process. I'm really concerned that it has not been really transparent up until now and I hope, and I'm happy that we're having this meeting today. For example the economic and environment sustainability passport needs to be moving forward with meetings that group forms for process for this action plan, ensuring that stakeholders are considered moving forward. Those are really important. We need to have the technical tendencies, those have not been released yet, also important in this a very public process. A goal is an adaptation plan. We've been repeatedly hearing of that coming and have not seen that yet. I checked the Logan order, this EIR needs to analyze whether the CAP is in line with the loading order as directed by the state. As you likely know that means energy efficiency first and then investments in local renewable energy. And battery shortage ... so making sure that plan follow that order.

And I think, as Bob mentioned earlier, community first energy should be considered the preferred alternative. This is the only way for the city to ensure that it has local control over its energy and can achieve 100% renewable energy goal, which I support. The plan needs to meet the state's greenhouse gas goals including 2015 and 2025 goals as Brian mentioned

needs to be enforceable and measurable. I would like to echo what Sheila Reese of Environmental Health Coalition mentioned earlier about investments in environmental justice communities and CalEnviroScreen these are ... communities that are hit hardest and first by climate change and they are the ones that are not as adapted to [the conflict level that will happen] So these need to be prioritized in the climate action plan and this EIR.

So climate change has a lot of living negative effects on our local wildlife and flora and fauna and this needs to be analyzed under the biological resources section of the EIR. And from wildfires to loss of habitat - I'm a biologist and I've seen how ... these treasured species that are consistent with San Diego, they need to be analyzed in the biological resources section. Thank you.

45:42

I'm... Vegan, I'm a volunteer with San Diego 350. I want to see a strong, enforceable, measurable climate action plan that prioritizes transit as the transportation of community choice energy. Thank you.

46:00

Hello. My name is Reina Morocco. I live in Linda Vista but I own some property in the City of San Diego... so this does impact me. I just want to make sure that the climate action plan does not exclude certain commercial entities from being covered by this or even benefiting from it. It has come to my attention that SDG&E ends up blocking military bases and the schools from getting solar panels, and that is so wrong because they don't

get the benefit of the tax dollars and their not able to save those and put those toward programs that we have [that is theirs] to go to.

So I just want to voice my support for the Community Choice Aggregate. I think that'd be a really good way of getting around that and superseding this. I just wanted to voice my support for the Community Choice Aggregate. I just wanted to [make sure] that it is applied to all. Thank you.

47:24

Hello. My name is Phil Petri. I live in North Park, and I want to thank you for having this scoping meeting about the CAP. This is what democracy looks like. Other people can address a lot of the facts much better than I. I'm an artist with a rather shaky [hand for those sorts] of facts. But I want to make this one basic point. I think it's very easy probably especially in your line of work where you're dealing with all kinds of different plans. Planning issues and so forth to think of this issue addressing climate change is just one issue among many that you have to face. I believe it is the issue, and it is the most important issue that you will face and it is all the other issues are going to be affected by this issue. So what we do about climate change now is huge. And I would urge you to do everything to make a very strong CAP and to make it enforceable. Thank you.

48:35 Hello, my name is ..., and live in La Mesa, and I am a volunteer with San Diego 350. The EIR should have a goal of maximizing the green house gas emission reduction to the extent possible and at least meeting the California greenhouse gas emissions requirements under S305 and 8032. To date the plan does not contain enough details to [act or maintain]

effectively the measures in the plan to meet the above targets, and we need those details.

The EIR should analyze how well the plan will reduce GHG reduction goals: how well those measures conform to the state's [loading order] which prioritizes efficiency and renewable energy; how well the maximizes transition of community measures from single-occupancy vehicles to transit, carpooling, biking and walking, and tele-commuting; how well the measures ensure that our most impacted neighborhoods are prioritized for infrastructure and jobs [that lead to] climate mitigation; how well the plan works to reach 100% renewable energy as soon as possible but no later than 2035; and how well the plan addresses adaptation to and avoid the costs of the delaying action on climate change, including costs associated with more frequent and intense wildfires, drought, sea-level rise, more heat wave and increases in respiratory, cardiac and infectious disease. Thank you.

50:03

Hello. My name is …Young, I'm from the Claremont area. I just have a list of things that would be my dream. You might use to get to the goal and of course some of these have been mentioned. I think there should be a program that would help residents to be able to upgrade their homes for home efficiency. I would love to see trees planted everywhere, more at parks and schools and vacant lots and along the sidewalks. We just have too few trees in this city.

When you create bike lanes, I've heard I Europe when they put those bike lanes between parked cars and sidewalks to avoid horrible accidents that we've seen between fast moving cars and the bicycle.

I would love to see you ban fracking and any activities that use the Halliburton loophole to evade our environmental laws. And that would help a lot in lowering all of these emissions.

I believe.....mass transit, I would love to see you use up some of those freeway lanes which have already destroyed areas for our wildlife. And have already been vetted for environmental impact.

I would love to see residential programs that help us put those solar rooftops on our houses and residential programs help us reuse our water for our plants, so that we will lower the energy required because we use drinkable water to water our plants and that's energy we shouldn't have to use. Same way these two programs for solar energy and water reuse I would like to see city-wide as well and for our city and commercial buildings to have solar put on all of them and to reduce their water.

Also to replace so much concrete that we have in our city with perhaps low water uses trees and shrubs. Thank you.

52:51

Good evening. My name is Michael Bradley. I was in Hillcrest, and I am a member of San Diego 350 also. I support all the recommendations and requests made before, and I'm going to restrict my comments to only one which has to do with the green house gas reduction targets that this plan is attempting to meet, or we should. I would urge that we do better than SANDAG has been doing until now, even trying to particularly the goals of S305 for 2050. .... [won] a lawsuit at the very moment that we need to make great progress in this. This is total madness to me.

I feel a great sense of urgency about this, particularly because the goals that we're attempting to meet here are already almost 10 years old. Those goals were set back when S305 and AD32 were passed and they were designed to help us avoid getting the two degree to hold the temperature increase to 2 degrees centigrade. It's become clear since that time that these goals in the plan are not adequate now.

So I hope that since these are the goals of the plan you will attempt to meet them in such a way that you're prepared to meet even stronger goals because the need is that great. Thank you.

54:42

I'm Louise Russell from North Park, and I have two main items that I would like to have analyzed in the EIR. And one is to move Strategy 2 in the Clean and Renewable Action 2.1 which is to present the city council a CCA. I would like you to move it from Phase 2 to Phase 1. I think that, in general, all of the plan is so spread out that this is something we need to get happening as soon as possible. And get us to 100% renewable and give us the choice to purchase through that rather than SCG&E. The second one is strongly ... enforceable and measurable plan. Each and every one of the goals and targets and the actions listed in the plan these are absolutely essential to the plan for any kind of meeting and any kind of positive outcome. Are these going to be in the technical document that people talk about? I can't find them anywhere, I don't know if that's the place for them? So my last comment, and you've probably heard this, is a project without resources is a hallucination. And I would say that a plan without measurable and enforceable [metrics] is also a hallucination, so good luck. Thank you.

56:17

Nicole [Caprit] from the Climate Action Campaign. As many of you know, I had some hand in drafting this plan . I think I would publicly say it has been disappointing the climate action plan - I've been going around to different planning groups and the Planning Department has accepted opinion [and see the value] in doing this education outreach. ... many groups have not heard of the climate plan. And they are aching to know what it is the city is doing for providing a really important service. This is a good form, and I'm grateful and I would suggest that as you move forward in the process you think of doing a broader education outreach program than what you're currently proposing. Also what mark is submitting more detailed comments and do need see the technical tendencies but some of things that I'm a little bit concerned with in the plan is that under community choice there was new language added that said in order to achieve 100% renewable energy we'll look at community choice for a comparable program. As you all know as a legal requirement to identify exactly how you're going to meet the goals in the plan, and to use a big term like other comparable programs, doesn't define how you're voting to meet these measures. So many this is a good [measure] curious … [we haven't seen] the technical tendencies, I would [submit that that] was a gap, and something that's going to need to be addressed. Under the smart growth and vehicle miles traveled, I'm very supportive of that measure and that goal to reduce the amount of cars on the road. But as I mentioned by Environmental Health Coalition... at this point they're there …the question is how exactly are you going to meet and achieve these vehicle miles traveled There's got to be some kind of methodology outlined in a more detailed way. And we need to …how you're o going to achieve those.... we obviously know that when you propose a city sustainability project often

meets with resistance, …because it's because ... hadn't been articulated. And effective community outreach and communication before submitting the project propose, but at the same time in this plan there's going to have to be some kind of nexus between the goal of getting vehicle miles reduction and actually what that specific strategy is going to be to get there. Also as an environmental health coalition previously made in terms of the bike, walking and transit. What is it going to take to achieve these goals? I think there's a gap in the current draft that doesn't say what and how many bike lanes and how many bike lanes we're going to need and specifically how we're going to fund those bike lanes. I think that's a gap. One thing to look at when you're looking at vehicle miles traveled is the data that shows that we have affordable housing near transit. We do get vehicle miles traveled ... DMT reductions, but also specific strategies to look at meeting that goal. Also echoing 350 also be achieved measuring several weaknesses in the goal we've always known that but we've skated out of the gate. But I think in terms of when you go out and talk to community that is the piece that their most concerned with, obviously. The drought, the heat wave, the fire, the sea level rise, they really have zero idea of what the city is doing to prepare for these changes. I think there's probably going to be more specificity outlined in the plan in how we're innovating these changes into future development. …and lastly i would echo comments on 350 and environmental health coalition overlaying the CAP social equity and how we're going to be innovating targets into strategies. That's something that we didn't do initial versions. And I think in the plan it's hopefully that's something that's going to get worked on in the process. Thank you very much.

1:00

Good evening. My name is .... I'm the .. of the San Diego Green party. I'd like to thank you for allowing us to speak with you tonight. As I've listened to all the people speak up until now I have seen many many options for what you can do. And many people have spoken of urgency. so i want to reinforce the idea of urgency. And the need for why San Diego in particular …. in the United States of America produces the most per capita than anywhere in the world. We are demanding the cause of that to act more than other places in the world. That puts things on San Diego as well. But one of the things I'm going to speak about specifically here is that there is urgency. I don't think we need to debate climate change is real. Climate change is happening, it is happening and it's going to cost money. We can pay for it now or we can pay more later. We need to pay now because every dollar you spend now is seven dollars now is just in ten years now and is fourteen dollars ten years from now is twenty-eight dollars you'll spend thirty years from now. The migration that we act on and do today is money that we save or more appropriately the next generation saves. I won't be here. In 2050, I'll be dead probably. I'm pretty old, already 50 years old. But I don't want to leave that legacy behind for the next generation. We have created this problem. We are the ones who are responsible. We need to act today to start fixing it. Thank you very much.

1:0

……the national corps foundation. As you know, there's some mitigation that has already occurred. Originating from our county with regards to the EIR. and I hope in this EIR that the city is …that abides by the .... that are made in this district. That is the climate action plan needs to be enforceable. These mitigation maters need to be enforceable and mandated through the whole jurisdiction. Second, you have to include not only S305 but also

scientific data. Scientific data and analysis that we need to meet those goals, not by 2050 but by 2035 or maybe even early. In fact there is no harm in doing that. And lastly, we missed out on economic benefits from doing this. There's been displayed that being a climate action plan .....are going to costs our communities, and I don't think that is good at all. We've heard lots of testimony already that shows the economic benefits the climate action measures sooner rather than later. That could be part of this ... plan, not just the EIR as well. Lastly, I'm hoping that we can take some real leadership. The [key per] and the person that developed it came from San Diego. We should provide that kind of leadership in terms of coming up with a plan that is enforceable to reduce our greenhouse gas emissions much earlier than what the goals are. We should achieve that. Achieve great is not going to be [great] here. We need an A+. That means exceed the greenhouse gas reductions that are in place. That has to be mandated. That is something that is equitable for all of our communities. We don't need to need technological fixes like electric cars - we know what the technology is to reduce greenhouse gas emissions: walking and biking. It's real simple. We know from climate cases what works. We know that in the appendences of the transportation plan is the urban transit strategy. That should be analyzed and ... within this EIR. It's a very simple one and it's one that the National Corps Foundation has proposed a [5010] transit plan... transit development within the next 5 to 10 years. We could have a much better transit system with a urban corps. Already have a plan in place. That should be one ... within this EIR. At least study that. If you don't study .... this, ...decide if you need to. That's all within this EIR that's required of CEQA. Thank you.

CLOSING REMARKS:

This closes the public environmental scoping meeting for the **Climate Action Plan**. Your input will be transcribed, considered by City staff for use in the scope of the EIR, and included as part of the official record for the document. Speakers and commenter's will also be placed on the notification list for further environmental review actions related to this project.

I would also like to remind everyone that this is just the start of the environmental review process and opportunities for public input. There will be other opportunities to provide comment on the project, such as during public review of the draft environmental document and any public hearings.

Thank you for taking the time to participate in the meeting and have a great evening!

****

Make the following statement for the record if no members of the public show-up for the meeting within the first 30 minutes:

However, there is no one here at this time so we will wait 15 minutes and go from there.

It is currently _____and no members from the public showed up tonight for the scoping meeting. So this will close the Public Environmental Scoping Meeting for the _____ project. The information provided from the City tonight will be considered in the scoping of the environmental document and included as part of the official record for the document. Thank you for taking your time to come out tonight and good evening.

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APPENDIX 8

Response to Comments – Supporting Materials

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Consciousness and Knowledge: Achieving Peace, Prosperity And Life-support Sustainability

An ELSI/Heartland Coalition Publication

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Cover picture Commentary

This is our home. Of all the planets we have found so far, ours is the only one with a life-support system. This system recycles the air we breathe, the water we drink and the food we eat. It also protects us from numerous rays, frequencies, fields, forces, etc. coming from space and considerable space debris.

Space debris is mostly burned up by friction with our planet's atmosphere. We see this as "shooting stars". The earth's magnetic field blocks or blunts various forms of cosmic radiation. If not for our planet's life-support system and earth's magnetic field, the Earth would be as lifeless as Mars appears to be.

Introduction
Please Share Worldwide!!!

www.jimbell.com

Hi, I'm Jim Bell,

Since these words are going out to the world, we probably haven't met until now. So whoever you are and wherever you live, it's nice to make your acquaintance.

I'm sending this out because I care.

I believe that when enough of us care about the well-being of our descendants and theirs, it will be easy to create world peace and bring everything we do for work or play into prosperity and life-support system harmony.

To share what I've discovered toward the above, I often use the San Diego/Tijuana Region, where I live, to show specific examples of how a particular region can become more life-support sustaining. The initial foundational focus for this region or any region is to become renewable energy, water and food self-sufficient. The more a region or even a country becomes self-sufficient in these essentials, the more it controls its economy and way of life.

The specifics of a region or country becoming renewable energy, water and food self-sufficient are dependent on its climate, renewable energy resources available locally and other particulars. Nevertheless, the principles behind making the San Diego/Tijuana Region sustainable can be applied worldwide.

My larger vision is that the economic, health and environmental benefits that the San Diego/Tijuana Region will gain by becoming renewable energy, water and food self-sufficient will be so positive, that the whole world will want to emulate them. The more this happens, the greater the chances that we can bring all human activities into life-support harmony.

Who will be first?

Whether or not the San Diego/Tijuana Region pioneers this effort, any region or country that does will take world leadership in the development and refinement of this vital new emerging industry; the industry of helping regions and countries around the world become sustainable, beginning with becoming renewable energy, water and food self-sufficient.

TELLING IT LIKE IT IS!!!

A Jim Bell & Common Sense Commentary
Sept. 2014 - Update

We humans are something special and rare.

Unlike any other species of life, we can choose to bring all human activities into peace, prosperity and life-support sustainability, or we can continue to damage our planet's life-support system until it fails.

Ultimately, choosing sustainability is about consciousness. If enough of us become conscious enough, it will be easy to create world peace and prosperity. It will be easy to leave our descendants a life-support sustaining world.

Unfortunately, at our present average level of consciousness, our quest to become more conscious will be cut short if we continue to live and make livings in ways that hurt others and cause life-support system harm.

This will result in a human and life in general dieback.* If serious enough, human extinction and even the extinction of life itself becomes a possibility.

*(A dieback is a drastic drop in the population of any particular species of life, or life in general, over a relatively short time period.)

Some people believe that a life-support failure has already begun. They offer evidence that:

+ As of mid-2012, an estimated 15%, or 1/6, of the world's population (more than one billion people) is malnourished or starving. Seventy percent of us (4.9 billion people) are unemployed or under-employed, have zero or next to zero access to healthcare and healthcare insurance, and are poorly nourished, clothed and housed.

+ Human activities are causing the extinction of an estimated 27,000 species of life each year. This corresponds to the rate of extinction around 65 million years ago when "the age of the dinosaurs" came to an end.

There are a number of theories as to its cause, but a consensus of extinction event scientists is leaning toward it being caused by an asteroid as large as 10 kilometers (6.2 miles) in diameter that struck the Yucatan Peninsula in Mexico around the same time.

Over the past 100 years and especially during the past 50 years, the rapid rate of species extinctions has been, and is still being caused by past and ongoing human assaults; assaults on each other as in war and its preparation and assaults on our planet's life-support system. It seems that the human family has become its own asteroid.

Human beings have generally been hard on our planet's life-support system. But prior to the 1800s, the world's population was still relatively small and the human capacity to change the earth was limited to what human and animal power could accomplish.

But with the industrial revolution came the development of powerful machines like bulldozers, steam shovels, tractors, trains and ships and cheap energy to run them. Through the use of these technologies, coupled with the use of dynamite, invented in 1867, the average negative impact on our planet's life-support system, per capita, greatly increased and is still increasing to this day.

Added to the still ongoing industrial revolution, came the chemical revolution. The soldiers of this revolution are chemists. Over the last 80 to 90 years, chemists have been paid to create an estimated 80,000 to 150,000 chemical compounds that never existed on our planet before chemists created them.

Many of these chemical compounds have been and continue to be added to our common planetary life-support system, our common environment, our common air, water and food.

We are now in the midst of biological, biochemical and electronic revolutions. Not surprisingly, these new revolutions are turning out to be just as damaging, and possibly more so, to human and life-support systems' health, than the industrial and chemical revolutions, established before them.

The result is that our bodies and our planet's life-support system are awash with chemical compounds that our bodies and life-support system have had zero experience responding to or processing. Since an estimated 1,000 new chemical compounds are being added to our common environment each year, we are breathing, drinking, eating, wearing, living in, etc., more human-created chemical compounds than ever before in history. This is especially hard on fetuses, infants and the young because they are exposed to these chemical compounds when they are most vulnerable to being harmed by them.

Not only is our average negative per capita impact on each other and our planet's life-support system still growing, the number of humans alive on our planet is growing as well. This growth is credited primarily to medical discoveries made by Louis Pasteur in the 1800s. Since Pasteur's discoveries, coupled with the general advance in prenatal, pediatric and medical care, the world's population has increased from less than a billion people in 1800 to 7.1 billion in 2013. If population growth continues as now, the world's population will grow to 8.1 billion people in 11 to12 years.

But even with all the above given, the bottom line question for those who love their children and grandchildren, for those who feel connected to the human family's future, and for those who feel connected to the beauty, majesty and sustainable productive potential of our planet's life-support system, is:

What should we do to give our children and future generations their best chance to live in a prosperous, peaceful and life-support sustaining future?

On the most fundamental level, answering this question comes down to consciousness. If we, as individuals, and as part of the human family, become conscious enough, it will be easy to resolve human differences without violence or its threat; it will be easy to develop economies and ways of life that are beneficial to everyone and completely life-support sustaining.

Obviously, achieving the above is our task and challenge, but how can this be accomplished?

The answer is simple. We need to develop economies and ways of life that are peaceful, prosperous and life-support sustaining. Here's how:

Step One - Become renewable energy self-sufficient.

When a home, community, city, county, region, state or country becomes renewable energy self-sufficient, it controls its energy supply and price, its economy, its way of life and almost everything else we need or want -- no matter what happens to the price and supply of energy on national and global markets.

Renewable Energy Self-sufficiency in the San Diego/Tijuana Region – 2020

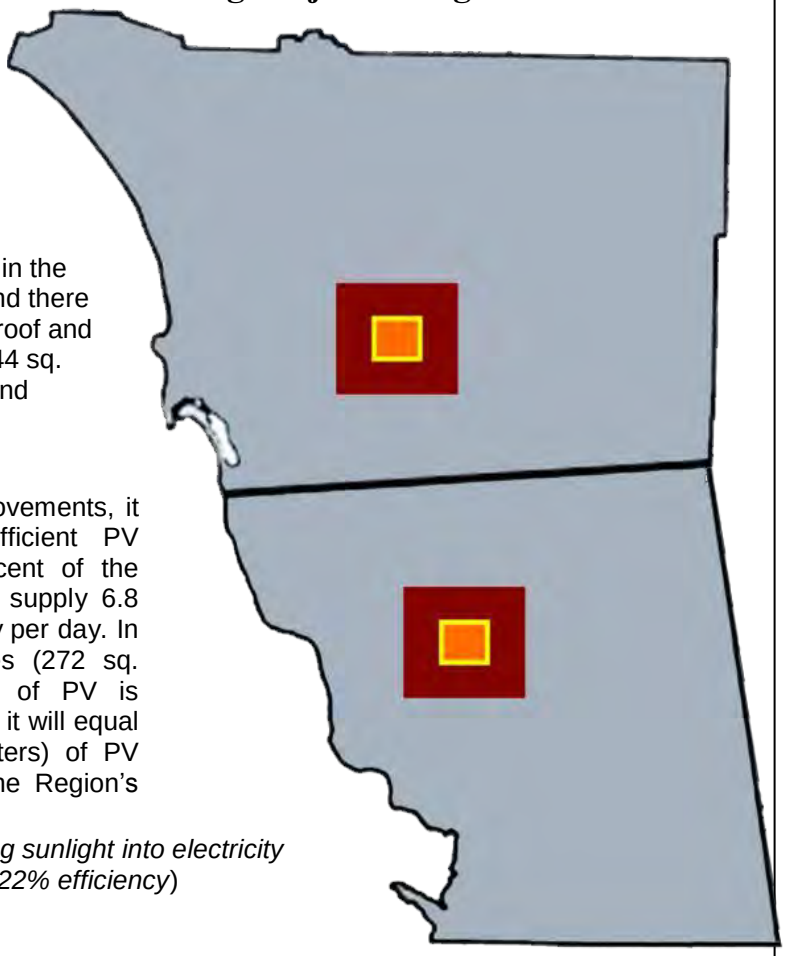
The San Diego/Tijuana Region's land area is 8,522 sq. miles or 22,072 sq. kilometers. The region's estimated 2020 population is 6.8 million people

Assuming that 6.8 million people live in the San Diego Tijuana Region in 2020 and there are 1,000 sq. ft. (92.5 sq. meters) of roof and parking lot per capita, there will be 244 sq. miles or 632 sq. kilometers of roofs and parking lots in the Region

.

With zero efficient energy use improvements, it would require installing 20%* efficient PV (photovoltaic) panels on 43% percent of the Region's roofs and parking lots to supply 6.8 million people with 40 kWh of energy per day. In 2020 this will equal 105 sq. miles (272 sq. kilometers). If the same amount of PV is installed on both sides of the border, it will equal 52.5 sq. miles or (136 sq. kilometers) of PV panels installed on each side of the Region's border.

**Twenty percent efficient at converting sunlight into electricity (Commercial PV panels now exceed 22% efficiency*)



By increasing energy use efficiency by an average of 40%, only 26% of the region's roofs and parking lots would need to be covered by 20% efficient PV panels to make the region renewable energy self-sufficient. In 2020, 26% coverage of the region's roofs and parking lots will equal 31.5 sq. miles on each side of the border.

ASSUMPTIONS:

+ Energy use per capita per day with zero energy use improvements ---------- 40kWh per capita per day
(16 kWh electricity, 24 kWh equivalents, in liquid and gaseous fuels)
+ Energy use per capita per day with a 40% increase in energy use efficiency ---------- 24kWh
+Yearly average of productive sunlight per day in the San Diego/Tijuana Region ---------- 5 hours

Additionally, solar energy in its various forms is free and even delivered free. The only cost to benefit from it are the labor and materials required to increase energy use efficiency and manufacture and install renewable energy collection devices to produce electricity, hot water, etc. Given that our inventors/developers are still getting better at saving energy and converting various forms of solar energy into

electricity, and other renewably generated fuels, the cost of efficiency improvements and renewably generated energy, will continue to fall.

To make renewable gaseous and liquid fuels, renewably generated electricity can be used to gasify or pyrolyze (heat up in a closed low oxygen chamber) clean wood wastes and landscape trimmings. In the San Diego/Tijuana Region where I live, the sustainable thinning of overgrown chaparral will contribute additional high energy materials for gasification. Thinning chaparral will also improve its habitat value for wildlife by opening it up for new plant growth. Additionally, thinning will reduce the severity and number of wildfires that occur in the Region today.

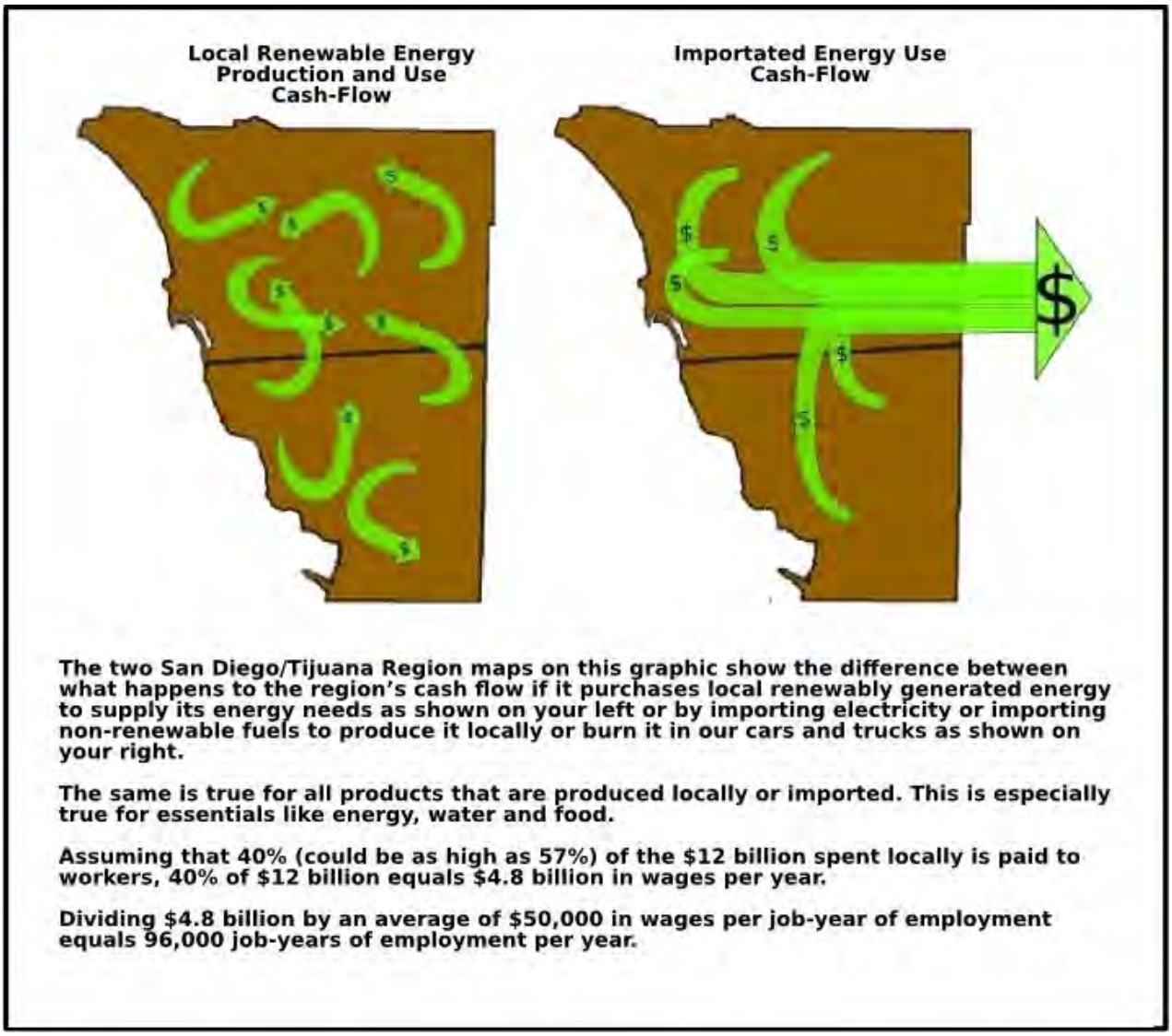
Once the gaseous and liquid fuels in the woody feed-stock are driven off, the mixture is distilled into renewably generated oil and liquid and gaseous fuels. Charcoal and soil amendments are the final products of the pyrolysis process.

Every level of becoming renewable energy self-sufficient creates opportunities. In the San Diego/Tijuana Region there is an abundance of direct sunlight, wind, biomass (plant and animal (including human) wastes), ocean currents, tidal differences, and waves. All these renewable energy sources can be used to make electricity and liquid and gaseous fuels.

But even if direct sunlight was the region's only renewable energy resource, it could become renewable energy self-sufficient by coupling a 40% increase in energy use efficiency and covering 26% of the region's roofs and parking lots with 20% efficient PV panels, (see previous graphics assumptions).

The most efficient commercially available PV panels to date are 22.5% efficient.

As a bonus, purchasing local renewably generated energy to supply the San Diego/Tijuana Region's energy needs will convert the region's current $6 billion negative-energy-purchase-cash-flow, (to pay for energy imports), into a $6 billion positive-energy-purchase-cash-flow. Assuming an economic multiplier benefit of, for every dollar spent on locally generated renewably energy, one additional dollar is spent in the region's local economy. This equals $12 billion in local economic activity per year. Buying locally generated renewable energy will create $12 billion of local economic activity per year, versus a $6 billion cash-flow loss.



Step Two - Become renewable water self-sufficient.

Water is essential to life. It is essential to the water-rich lifestyle most people in the developed world already have and that people in the developing world would like to have. To make the math easy to understand, the following assumptions are used in the calculations that follow:

+ The population of the Greater Tijuana part of the region is more or less the same as the population of San Diego County, currently, 3,100,000 people.

If this is true, the San Diego/Tijuana Region has a population of 6,200,000.

+ Also assumed is that everyone in the Tijuana part of the region would like to use the same amount of water per capita as is used per capita in San Diego County, around 180 gallons per capita per day.

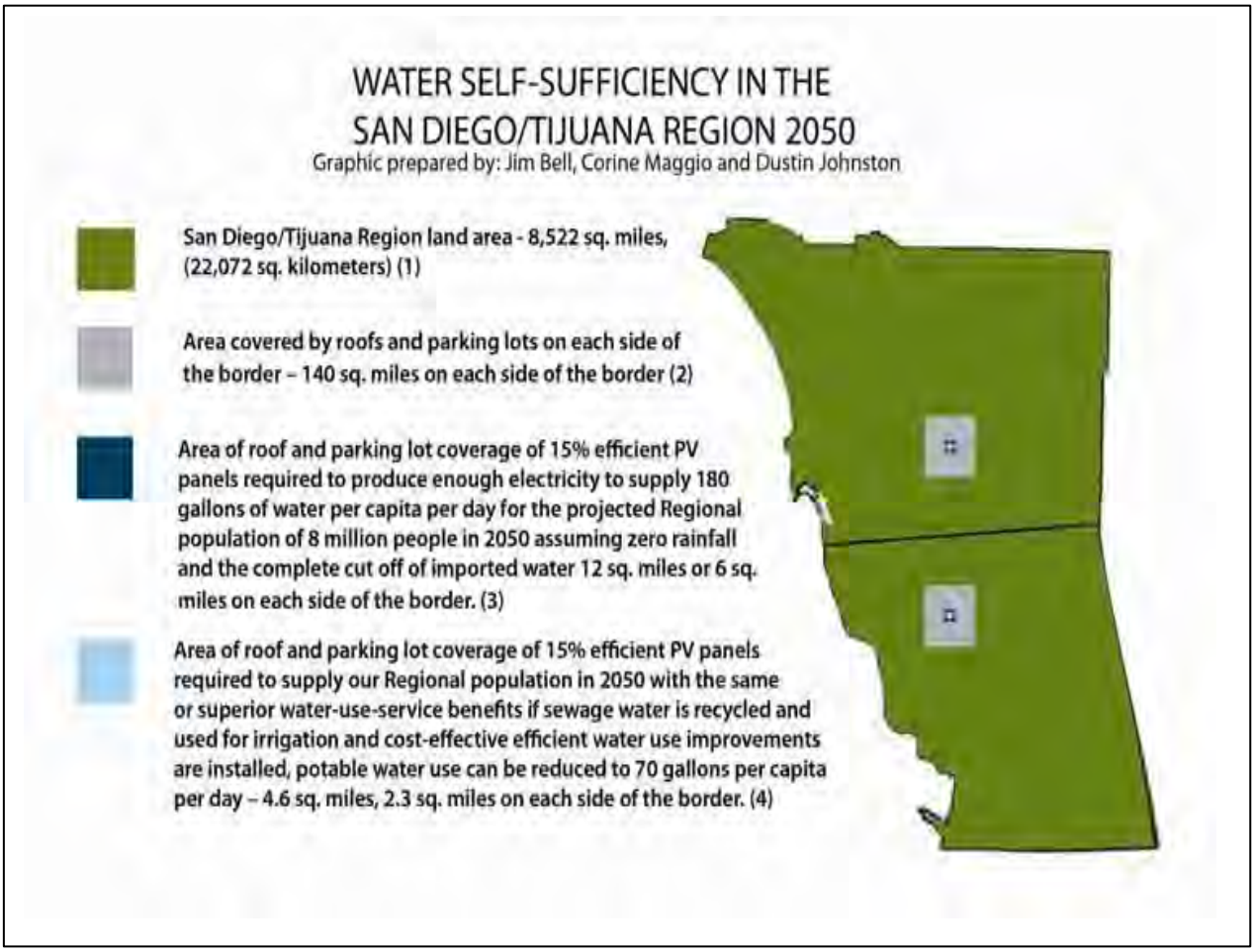
+ Given the assumptions above and assuming the worst case scenario of zero rainfall, zero recycled wastewater and zero imported water, can the San Diego/Tijuana Region become freshwater self-sufficient using renewably generated electricity to convert seawater into freshwater through reverse osmosis (RO)?

The answer is a resounding yes. Installing commercially available 20% efficient PV panels over 4% of the roofs and parking lots on either side of the San Diego/Tijuana Region, will produce 23,039,200 kWh of electricity per day or 11,519,600 kWh of electricity per day on each side of the region's border. Generating 23,039,200 kWh per day times 365 days per year equals 8,409,308,000 kWh per year. Multiplying 8,409,308,000 kWh per year times 65 gallons of freshwater per kWh of electricity consumed, equals 546,605,020,000 gallons of freshwater per year. Dividing 546,605,020,000 gallons by 7.48 gallons per cu, ft. equals 73,075,537,430 cu. ft. of water. Dividing 73,075,537,430 cu. ft. of water by 43,560 cu. ft. per acre foot equals 1,677,583 acre feet of water each year or 838,792 acre ft. of freshwater on each side of the border. (One acre ft. = 4,034 cu. meters.)

For reference, the San Diego County side of the region currently uses around 610,000 acre ft. of fresh water per year including county based agriculture.

If the region used cost-effective and life-support-system-effective ways to use water more efficiently, (low water use toilets, using graywater and disinfected recycled sewage water for irrigation, drip irrigation, collecting and storing rainwater runoff, etc.), only 1.5% of the roofs and parking lots in the region would need to be covered with 20% efficient PV panels to make the whole region completely renewable water self-sufficient.

To protect sea life from the RO process, sand filtered seawater will be extracted from wells close to the ocean. This way, eggs and small fish will be kept out of the RO process. Since the wastewater from the RO process will be twice as salty as seawater, it will be evaporated in shallow open ponds so salt and other minerals left behind can be mined. If any RO waste water needs to be returned to the ocean, it would be diluted by sand-filtered seawater to be no more than 20% saltier than natural seawater before being released into the ocean, diffusely.

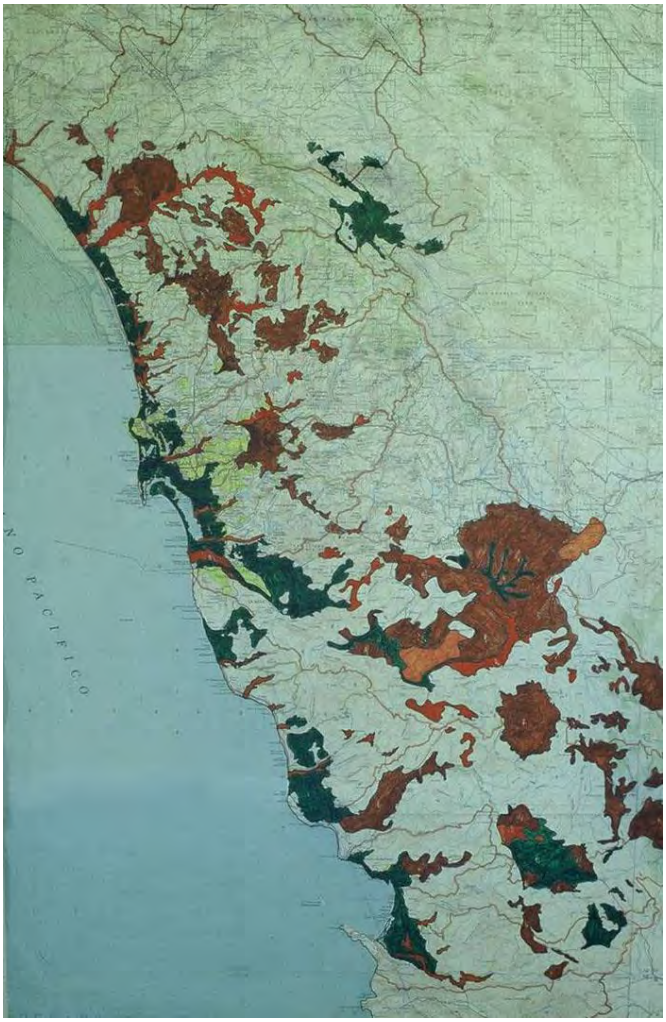


Step Three – Become renewable food self-sufficient.

With renewable energy and water self-sufficiency, comes the ability to be renewable food self-sufficient. It also allows for the growth of a great deal of fiber and lumber for local use and trading.

To make the San Diego/Tijuana Region and our planet permanently food self-sufficient, it is essential that we protect our agricultural soils from further development and other misuse. My research indicates that we still have enough agricultural soil in our region and on our planet to feed everyone a nutritious diet of tasty, sustainably-grown food with lots of variety.

Unfortunately, this will not be true for our region or world for long, if we do not protect and preserve our best agricultural soils for life-support sustaining agriculture and the sustainable production of wood and fiber.



There are 8 agricultural soil classifications in the San Diego/Tijuana Region. The map above only shows the region's 4 best agricultural soils, Red-1, Orange-2, Green-3, Brown-4. Knowing where your region's best agricultural soils are located comes under the heading of determining "where it's appropriate to do what." To develop a truly life-support sustaining future, we need to know about all the region's natural assets like local renewable energy, water and agricultural resources shown in the graphic. We also need to know its hazards like floodplains that flood and are subject to liquefaction during strong earthquakes like Mission Valley.

Step Four - Create a Real Free-Market Economy by Adopting "True-Cost Pricing" or "Cradle to Cradle Pricing".

Today, almost everything humans do causes human and life-support system harm. More precisely, it's not so much about what we do, but about HOW we are doing it.

The ways we support ourselves now depend on converting ever more renewable resources into nonrenewable and often, toxic trash, and in general, using renewable resources in ways that make them difficult to renew.

This begins by artificially reducing the cost of virgin materials versus using recycled materials by using our taxes to subsidize the harvesting and mining of them. The cost of virgin materials is further reduced by exempting material extractors from clean-up and repair after the extraction process is completed. The result is ravaged landscapes, overflowing landfills and ever more destruction of virgin land for raw materials to replace those we despoil and bury.

With true-cost-pricing or cradle-to-cradle pricing, the real cost of all products and services offered in the marketplace would be calculated by an independent unbiased body. This body would be charged with:

+ Determining the true-cost or cradle-to-cradle-cost of all marketplace offerings.

+ Calculating how much money should be added to each product's/service's retail price to cover paying for the health and life-support damage each product or service is causing or will eventually cause. This money will be held in reserve to pay for health and life-support system costs as they manifest. If products/services are ultimately determined to be human and life-support system benign, or even positive, no additional money would be added to their retail price.

Consumer Reports Magazine might be a good group to hire for this job. They carry zero product advertising in their magazine. They are also well known for their unbiased product/service/best value for its cost comparison studies. All they would need to add to their current analysis are human health costs and life-support damage costs.

Currently, the public pays these costs through taxes, health costs, property damage (acid rain), etc. In effect, the public is caught in the ironic position of actually subsidizing, with the taxes we pay, the very products and processes that are harming them, their property and their common life-support system.

Additionally, these subsidies retard the development and the commercialization of technologies that are more health and ecologically benign or even positive by artificially reducing the retail cost of ecological, health and socially damaging products and services.

With true-cost or cradle-to-cradle pricing, products and services with the lowest true and cradle-to-cradle cost would also have the lowest retail market price. As technologies become more ecologically sophisticated there is no reason for commonly used products to be any more expensive to purchase than they are now. In fact, in spite of the subsidies that health and life-support damaging products receive, the market price of some "Green" products is already lower than the harmful, often subsidized, products they replace. Most of them work better too.

Plus, it is always less expensive to prevent ecological, health and social problems than to fix them after they have been created.

Other true-cost/cradle to cradle pricing benefits include:

+ Incentivizing designers and manufacturers to create products and services that are in harmony with human and life-support system health.

+ The elimination of solid waste disposal. With true-cost-pricing or cradle to cradle pricing, everything sold in the marketplace would be designed to be reused, recycled or composted. When all costs are included, this is the most cost-effective thing to do.

+ The elimination of the pollution of the air we breathe, the water we drink and food we consume.

+ The more that people purchase locally produced items, especially essentials like energy, water and food, the more local jobs and business opportunities there will be.

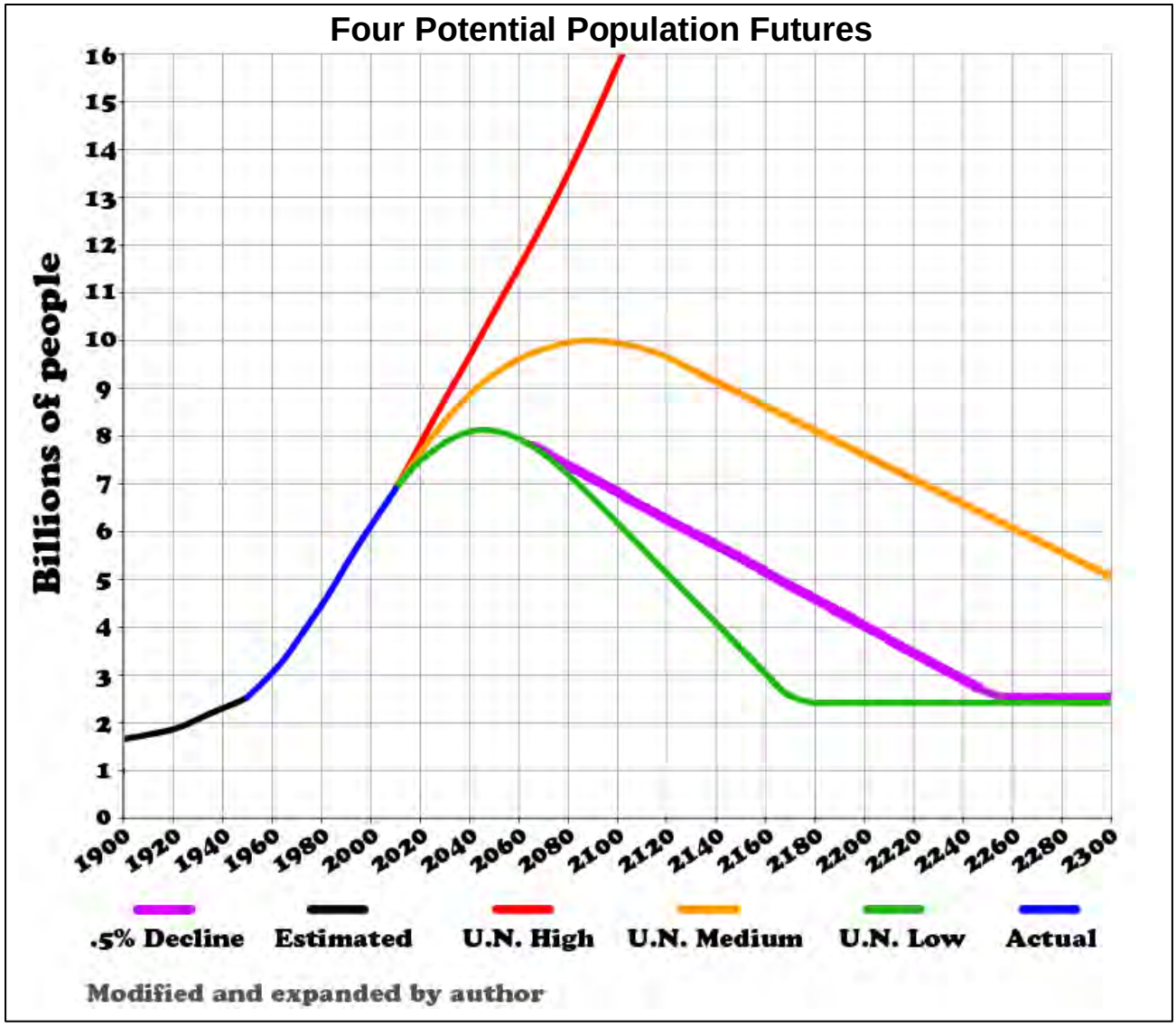
There is a general view that the free enterprise system is the antithesis of a healthy environment. With true-cost/cradle to cradle pricing, free market forces will be powerful tools toward creating a more secure life-support sustaining future for everyone.

Step Five – Reduce Population

The only just way to reduce population is for:
+ Women to be completely free to direct their own lives and especially their sexual lives.

+ Every man becomes an ally to ensure that women have every freedom available to men to direct their own lives, culturally and under the law, and the right to pursue fulfillment in any field of endeavor open to the human family.

+ The world's women to freely choose to have an average of no more than two birth children during their reproductive lives. Since some women would choose to bear zero children and others only one, some women could bear three or more and still meet the average of two births per woman goal. If the average number of children born per woman was two worldwide, the world's population would decline by ½% per year. This would mean that for every 1,000 deaths, there would be only 995 births. A ½% rate of population decline (shown as violet on the graph) would reduce the world's population from 8.1 billion to around 2.7 billion people in 200 years. The world's population around 1960 was 2.7 billion. Even if, for every 1,000 deaths there are only 999 births, the world's population would decline, but at a much slower rate.



Step Six – Protecting the Human Family from Natural Threats

In addition to bringing the human family into human and life-support harmony, there are naturally occurring threats to human and life-support system health and wellbeing. Terrestrial threats include increased volcanic activity or a super-volcano eruption. Such occurrences have the potential to blast enough fine particles of dust and ash into earth's upper atmosphere to reduce or even preclude food production for one or several years. Since we haven't yet developed ways to eliminate such threats and since volcanic activity can occur without much warning, storing a secure supply of food, water, clothing, shelter and the like is vital to minimize the negative impact that volcanic activity can cause to the human family.

Until a few years ago, storing energy, water, food and other essentials was our only option toward preparing for the occasional collisions with earth-orbit-crossing space-objects large enough to cause significant human and life-support system trauma if they collide with earth.

But, space exploration has shown us that we already have the technology and know-how needed to locate all collision bound space objects large enough to cause serious human and life-support system damage if they collide with us.

We also have the technology and knowhow to alter their course enough to avoid such collisions if we discover them soon enough.

If we start in earnest to create a Space Debris Defense System (SDDS), in ten years, we'd be able to nudge collision bound space objects, as large as 500 to 1,000 meters in diameter, off their collision course with earth. As our SDDS capabilities grow, the courses of much larger space objects could be altered enough to avoided collisions with earth.

As a bonus, developing a SDDS will pay for itself by being able to capture desirable close-passing-space-objects into earth or moon orbits for scientific study and mining.

Final Thoughts:

Bottom line, if we want to leave the birthright of a happy, healthy, prosperous, life-supporting sustainable future to our children and future generations, these 6 steps and becoming more conscious are the minimum we must do, and the sooner the better.

We've come so far, why blow it now? We know what can be done. All we have to do is, do it. If those living over the next 60 years or so develop life- support sustaining economies and ways of life planet-wide, there is little to stop us from accomplishing anything we can imagine on this planet and beyond, including the eventual sustainable colonization of other planets in our own galaxy and in the universe beyond, starting with getting it right here first.

For details on an investment strategy to make the San Diego County side of the Region renewable energy, water and food self-sufficient, go to www.jimbell.com and click on "Green Papers". Although this paper focuses on electricity, the same strategy, with slight modifications, can be used to make the whole region renewable energy, water and food self-sufficient as well. The paper shows that even at 2005 prices and PV efficiencies of 10%, becoming renewable electricity self-sufficient in San Diego County, would add billions of dollars to its economy and create over 400,000 job-years of employment. Now, commercially available PV panels are twice as efficient as the 2007 paper assumes and are less expensive too. This strategy can work almost anywhere on our planet, modified for climate, renewable energy sources available and other local conditions.

To Support This Work, Send Donations to the:
Ecological Life Systems Inst. (ELSI),
4862 Voltaire St., San Diego, CA 92107-2108 or
call 619-758-9020 or visit jimbell,com for more information.

Hubble Extreme Deep Field Photograph

This picture was taken from earth by pointing the Hubble Space Telescope at a small seemingly empty area of space. After 2 million seconds of exposure, empty space yielded the estimated 5,500 galaxies in the picture above. Some of these galaxies are calculated to be 90% as old as the universe itself.

This Deep Field Photograph shows that even if earth, our sun and solar system or even our own Milky Way galaxy disappeared from the universe, it wouldn't cause a ripple in the bigger scheme of things.

But, no matter how insignificant we may be, to our out credit, out of potentially billions of species of life that have already existed and gone extinct and an estimated 7.8 million species of life that are alive today, we are the only form of life that can understand the message written in this paper and act on it.

Will we? I don't know. I do know that we have the potential to do it. But if we don't do it soon, our chance to do it will be lost.

Center for Sustainable Energy™

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July 7, 2015

Delivered to CAP@SANDIEGO.GOV

The Mayor's Office

The Honorable Kevin Faulconer, Mayor of San Diego

Mike Hansen, Policy Advisor for Land Use and Environment

The Committee on the Environment of the City Council of the City of San Diego

Councilmember David Alvarez, Chair

Councilmember Chris Cate, Vice Chair

Councilmember Todd Gloria

Councilmember Marti Emerald

Climate Action Plan City Staff Leads

Brian Schoenfisch, Senior City Planner

Nancy Bragado, Deputy Director, Long-Range Planning

David Weil, Deputy Director, Energy, Sustainability & Environmental Protection

Cody Hooven, Sustainability Manager

Dear Mayor Faulconer, Environment Committee Members, and CAP City Staff Leads,

The Center for Sustainable Energy® (CSE; www.energycenter.org) appreciates the opportunity to submit comments in response to the March 2015 Draft of the City of San Diego Climate Action Plan. Headquartered in San Diego, CSE is a mission-driven nonprofit organization accelerating the adoption of clean and renewable energy technologies throughout California and across the country. For nearly twenty years, CSE has helped to create green jobs for San Diego residents and promoted local sustainable energy investments in partnership with the City, industry, utility and regional government partners.

CSE applauds Mayor Faulconer for championing a vision for San Diego to take action on climate change, grow the local economy, and enhance quality of life for all residents. As Program Administrator for half of a billion dollars of clean energy programs, including the California Solar Initiative and Clean Vehicle Rebate Program, we have seen our community step forward to adopt clean energy technologies at a rate that outpaces other cities in the state and across the country. San Diegans are proud of their city and are eager to make smart decisions to protect their environment and communities.

We provide the following comments to encourage the City to seize this opportunity and follow in the footsteps of California's bold and transformative energy policies, to become a national leader in climate

action by demonstrating its commitment to improving the efficiency of our buildings, create opportunities for local businesses, and offer pathways for residents to transition to clean energy technologies. We urge the Environment Committee and City staff to consider these additions in their upcoming review of the Climate Action Plan.

Energy and Water Efficient Buildings

Energy efficiency is our most cost-effective and plentiful energy resource at a cost of 2.8 cents per kilowatt hour compared to an estimated 7 cents for wind, 9.5 cents for solar, and 11 cents for coal.[1] Efficiency is also a necessary first step to achieving the 100% renewable energy goal described in Strategy 2. CSE applauds the City for its inclusion of residential and municipal building energy efficiency goals and looks forward to engaging in the stakeholder process to enact these measures.

Nevertheless, we believe the City can do more to prioritize energy efficiency, the most cost-effective carbon reduction strategy, in the Climate Action Plan. San Diego was recently ranked #27 out of the 51 largest U.S. cities for energy efficiency policy and programs[2], the lowest of any city in California and far behind San Francisco (4), Los Angeles (12), and San Jose (16). With this in mind, CSE encourages the City to adopt a goal to reduce nonresidential building energy consumption by 30% by 2035 and develop and implement a benchmarking and transparency ordinance.

Commercial and Multifamily Opportunities for Energy Efficiency

Energy use in buildings is the second largest source of greenhouse gas (GHG) emissions for San Diego after transportation. Commercial and multifamily buildings represent the largest energy usage in this sector and provide the greatest opportunities for cost-effective carbon savings. However, the current Draft Plan does not identify a commercial and multifamily building energy efficiency goal, action, or target. Energy efficiency in nonresidential buildings is foundational to a strong climate plan, and CSE urges the City to set a strong goal of at least a 30% reduction in energy use through efficiency by 2035.[3]

Benchmarking and Reporting Policy

Benchmarking and reporting energy and water consumption in buildings is a national best practice for improving energy management. Understanding energy use is the first step towards improving energy efficiency and ensuring that the City is on track to achieve the goals it sets forth in the Climate Action Plan. Benchmarking and reporting policies have been adopted by

[1] Maggie Molina, *The Best Value for America's Energy Dollar: A National Review of the Cost of Utility Energy Efficiency Programs*, American Council for an Energy Efficient Economy, 2014.
[2] American Council for an Energy Efficiency Economy, *The City Energy Efficiency Scorecard*, http://database.aceee.org/city-scorecard-rank.
[3] Los Angeles has set a goal of a 30% energy use reduction through a benchmarking and transparency policy, audits, retrocommissioning, and expanding resources and outreach through the LA Better Buildings Challenge, http://plan.lamayor.org/, p. 32.

fourteen cities, as diverse as Seattle, Washington, D.C., San Francisco, Atlanta, and Boston; to encourage property owners to track energy use over time, help local governments understand their building stock, and measure progress toward greenhouse gas reduction targets.

Similar to mpg ratings, benchmarking helps building owners, managers, and occupants document their buildings' energy use, providing an apples-to-apples comparison of energy consumption to similar buildings using ENERGY STAR Portfolio Manager®, a free online measurement and tracking tool supported by the Environmental Protection Agency. Portfolio Manager is used by 40% of commercial buildings across the country and is also the statewide tool used for Assembly Bill (AB) 1103 compliance.

The City of San Diego's Ridgehaven Green Building was the first in the nation to qualify for the ENERGY STAR in 1999 and this success motivated the City to further its commitment to green building initiatives. Including a benchmarking and transparency ordinance in the Climate Action Plan is a logical next step to reduce costs and emissions and is in direct alignment with the City's established vision to increase the number of facilities brought up to ENERGY STAR performance levels.

Benchmarking data can provide a record of improved energy efficiency for building owners and operators as well as help in planning capital investments, such as efficient equipment upgrades, on-site generation, and energy storage systems. Benchmarking also creates opportunities for local jobs, and, as an example, New York City anticipates that 17,000 new jobs will be created by 2030 as a result of their local benchmarking and reporting policies.

When cities adopt benchmarking, they shine a light on the true state of affairs for energy and water use – and that can lead to cost-effective citywide energy reductions. In cities that have enacted benchmarking and disclosure policies, resource consumption has been reduced by 2%-7%. For example, Minneapolis has reported $6 million in energy cost savings in just three years of benchmarking public buildings, and the District of Columbia has seen the number of ENERGY STAR certified buildings increase, moving it ahead of Los Angeles for the most ENERGY STAR buildings in the country.

CSE recommends the City include an action to develop and implement a benchmarking and transparency ordinance for large commercial and multifamily buildings in the final Climate Action Plan. With a commercial and multifamily benchmarking ordinance, San Diego can improve building energy and water efficiency, measure progress towards emissions reduction targets, help businesses cut their energy bills, and create local jobs. This cost-efficient strategy is encouraged by the California Energy Commission (Energy Commission) in its AB 758 *California Existing Building Energy Efficiency Action Plan*[4] in advance of a statewide benchmarking

[4] California Energy Commission, *California Existing Building Energy Efficiency Action Plan,* http://www.energy.ca.gov/ab758/, p. 44.

program anticipated in 2018. San Diego can help lead the State on these efforts, prepare its building owners, and apply for funding opportunities for this work through the AB 758 Local Government Challenge.

Clean and Renewable Energy

San Diego is a world leader in local solar installations, and it is fitting we set a goal of 100% renewable energy by 2035. This strong goal is the heart of the City's Climate Action Plan and sets it apart on the national stage for large cities across the country. CSE is confident that the City can meet this goal in a way that supports and grows the region's existing markets for distributed energy resources, including rooftop solar photovoltaics (PV), energy efficiency, demand response, and energy storage. As the Climate Action Plan moves into implementation, the City should prioritize strategies that ensure these local growth industries can flourish, thereby creating jobs, drawing new businesses to the region, and creating more clean energy opportunities for residents. Furthermore, ordinances that the City adopts towards the 100% renewable energy goal should support residents who have already adopted clean energy technologies.

Community Choice Aggregation (CCA), also called Community Choice Energy (CCE), has proven a successful strategy for providing customers with a choice in their energy supply and reducing utility bills for residents and businesses in Marin County, unincorporated Napa County, and the cities of Benicia, El Cerrito, Richmond, and San Pablo, which are served by Marin Clean Energy as well as those in the City of Lancaster served by Lancaster Choice Energy and Sonoma County served by Sonoma Clean Power. CSE applauds the Mayor for the inclusion of a citywide study on the feasibility of a CCA for San Diego in the Climate Action Plan and looks forward to this opportunity to engage in a broader conversation about energy choices for San Diegans.

We do contend, however, that the statement in the Note on page 35 of the Climate Action Plan, "…should the CCA Program or another program not be implemented, the City will explore the option of utilizing renewable energy credits (RECs) to contribute toward the 100% renewable energy target," is far too vague and open ended, perhaps enabling the use of out-of-state RECs to meet the City's goal of 100% renewable energy by 2035. Rather, we strongly urge the City's focus on local options to reach a 100% renewable energy target. Efforts should be local in nature to benefit local renewable energy businesses, create jobs, and increase resiliency for the city.

Whether through a CCA or not, the City should encourage its businesses and residents to secure solar energy resources from regional, i.e., "in basin", solar installations found on rooftops, carports, and ground-mounted systems which will provide significantly more local economic, job, and grid stability benefits than installations sourced through the State's Green Tariff Shared Renewables Program, which can come from out-of-state and out-of-country installations. Moreover, local, distributed renewable energy installations should continue to be fostered

through the use of Net Energy Metering, a proven mechanism for supporting customer investment in solar and a key component to the growth of San Diego's solar market. The City should also push for the expansion and use of Net Energy Metering in different ways. For example, in California, there are nuanced sub-tariffs that have expanded Net Energy Metering's benefit beyond one installation and one customer with tariffs such as Virtual Net Metering, Meter Aggregation, and Renewable Energy Self-Generation Bill Credit Transfer (RES-BCT). Expanding Net Energy Metering beyond artificial boundaries, such as the aforementioned Net Energy Metering sub-tariffs, can help San Diego cultivate true community solar initiatives that benefit San Diego's single and multi-family homeowners and renters, business owners, schools, and local government.

Bicycling, Walking, Transit and Land Use

Transportation accounts for 44% of San Diego regional greenhouse gas emissions and 54% of the City of San Diego's greenhouse gas emissions.[5,6] Reducing emissions through a combination of reduced travel demand, alternative fuel vehicles, increased fuel efficiency, and improved vehicle operation practices is thus critical to meeting AB 32 emissions reduction goals for 2050. CSE appreciates the attention paid to multiple transportation and land use emissions sources in the Climate Action Plan and hopes to support these efforts as they are implemented.

In addition, CSE would like to offer several suggestions for the Climate Action Plan's multi-modal transit and land use goals. Regarding structure, the Climate Action Plan discusses municipal Zero Emission Vehicle (ZEV) deployment under Strategy 2 Action 2.1 and Strategy 3. CSE suggests that the Climate Action Plan present ZEV infrastructure and vehicle adoption in combination, because they compose an integrated transportation strategy.

Regarding Climate Action Plan transit content, California Executive Order B-16-2012, the ZEV Mandate, requires that the state have 1.5 million ZEVs on the road by 2025. This means the state only has ten years to add 1.4 million ZEVs and supporting infrastructure.[7] Achieving this target will require strong local and regional support. Additionally, as the *California Transportation Plan 2040* indicates, to meet state goals, adoption of fleet-wide ZEVs, incorporation of Sustainable Community Strategies in transportation plans, and other initiatives including increased carpooling, commuter biking and walking, road pricing, and public transit,

[5] Energy Policy Initiatives Center (EPIC), *San Diego County Updated Greenhouse Gas Inventory*, 2013, http://catcher.sandiego.edu/items/usdlaw/EPIC-GHG-2013.pdf.
[6] Energy Policy Initiatives Center (EPIC), *San Diego County Updated Greenhouse Gas Inventory*, 2013 http://catcher.sandiego.edu/items/usdlaw/EPIC-GHG-2013.pdf.
[7] Center for Sustainable Energy*, San Diego Regional Alternative Fuel Assessment*, 2015 http://www.sdcleancities.org/wp-content/uploads/2014/10/DRAFT-REGIONAL-ASSESSMENT-4.16.15.pdf.

will be necessary.[8] San Diego is home to car2go, North America's first electric car sharing program. The City of San Diego has also recently signed on to the West Coast Electric Fleets initiative of the Pacific Coast Collaborative to evaluate the addition of ZEVs to its municipal fleet, and participates in the PEV Readiness Plan and Regional Electric Vehicle Infrastructure working group. These are proactive first steps to support the AB 32 2050 target and interim state targets. CSE encourages the City to accelerate these efforts and be a leader in intelligent transportation planning and promoting ZEV deployment.

Zero Emission Vehicle Adoption in the Municipal Fleet

To help the state meet ZEV targets, CSE suggests that the City look beyond the West Coast Electric Fleet's 10% municipal fleet goal and consider charting a path toward 100% municipal fleet ZEV adoption. This would allow the City to take preemptive and pioneering steps necessary to achieve state goals. The City might also consider updating Administrative Regulation 90.73 with stronger alternative fuel vehicle and ZEV requirements for publicly and privately owned vehicles, including all vehicle types and classes as technology becomes available. It should concurrently identify additional funding mechanisms to cover incremental costs. It could compare progress to the State of California via the Clean Vehicle Rebate Project and other alternative fuel vehicle program data. The City also sets a target for 100% conversion from diesel fuel used by municipal solid waste collection trucks to CNG or other alternative low-emission fuels by 2035. CSE recommends that the City expand goals for medium-duty vehicles in addition to municipal waste collection trucks, because a variety of technologies are already available for medium-duty vehicles. The City should further expand alternative fuel types beyond CNG, particularly to include natural gas. The City can utilize the San Diego Regional Alternative Fuel Coordinating Council (Refuel) and its ultimate readiness plan to guide next steps in initializing truck conversion.

Electric Vehicle Fueling Expansion

The City of San Diego is a state leader in alternative vehicle fueling stations. CSE also commends the City for its online permitting of EV charging stations and regional leadership of Technical Policy 11B-1 to address accessibility to EV charging stations. To expand upon the City's present efforts, CSE recommends that it add a streamlining mechanism for vehicle permitting to its Climate Action Plan. It could also adopt CALGreen voluntary codes to encourage new multifamily dwellings and commercial developments to include prewiring for Level 2 charging infrastructure. More visible charging stations will encourage consumers to adopt alternative fuel vehicles. The City might also consider adding a goal for working with electric vehicle car sharing services to reach underserved communities. These steps would ensure that San Diego continues to be a strong leader in the alternative fuels market while helping achieve state goals.

[8] California Department of Transportation, *California Transportation Plan 2040*, 2015, http://www.dot.ca.gov/hq/tpp/californiatransportationplan2040/.

Policies to Reduce Vehicle Miles Traveled

The Climate Action Plan's Bicycling, Walking, Transit, and Land Use Strategy offers several strong goals to support reduced emissions. Transportation mode-shift policies provide the co-benefits of safety, affordability, equity, accessibility, and economic growth. Therefore, CSE encourages aggressive, near-term investment in transit, walking, and biking infrastructure.

The City should consider creating a goal for codifying a multi-modal, or "complete" streets policy. Research indicates complete streets increase safety, encourage walking and biking, and have a positive economic impact, while being affordable to implement.[9] In prioritizing infrastructure projects, CSE also suggests the City consider environmental equity tools in addition to Transit Priority Areas.[10] Transit-oriented development is especially effective when combined with affordable housing or placed in low-income communities. Low-income households tend to drive 25-30% fewer miles when living within a half mile of transit and 50% fewer miles when living within one-quarter mile of transit compared to those in non-transit-oriented developments.[11] According to TransForm, higher income households drive twice the miles and have twice the number of vehicles, on average, as extremely low income households living near frequent transit, so prioritizing transit-oriented development in low-income communities offers a greater marginal benefit for both emissions reductions and residents' access to transportation.[12]

The City might also create a goal of developing flexible parking codes such as parking development requirements "unbundled" from new building development to increase density and decrease vehicle miles traveled. Unbundling parking development from residential housing developments may decrease developer costs and encourage alternative transportation, without impacting neighborhood parking congestion as might be expected.[13] Lastly, the City could consider a transit-first approach to development to avoid highway expansion, which increases induced vehicle miles traveled.[14] This might include an expansion of car sharing or bike sharing services. Overall, the City's Climate Action Plan offers a variety of important steps to decrease GHG emissions via a comprehensive, multi-modal transit and land use approach. With the

[9] Smart Growth America, *Safer Streets, Stronger Economies*, 2015, http://www.smartgrowthamerica.org/research/safer-streets-stronger-economies/.
[10] One such tool the City can reference is the California Office of Environmental Health Hazard Assessment, *CalEnviroScreen Version 2.0*, http://www.oehha.ca.gov/ej/ces2.html.
[11] TransformCa.org, *Why Creating and Preserving Affordable Homes Near Transit is a Highly Effective Climate Protection Strategy*, 2014, http://www.transformca.org/transform-report/why-creating-and-preserving-affordable-homes-near-transit-highly-effective-climate.
[12] TransformCa.org, 2014.
[13] TransformCa.org, *Parking Database Challenges Residential Parking Requirements*, 2015, http://www.transformca.org/news-article/parking-database-challenges-residential-parking-requirements.
[14] Handy, S. & Boarnet, M.G, *Impact of Highway Capacity and Inducted Travel on Passenger Use and Greenhouse Gas Emissions*, 2014, California Environmental Protection Agency Air Resources Board, http://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf.

adoption of these additional elements, the City's plan would provide a greater reduction in emissions in alignment with the state's 2050 emissions reduction goals.

Conclusion

As San Diego sets out to achieve both economic growth and GHG emission reduction goals, all parties must work together to coordinate, develop, and enact sound energy policies. These policies and programs will continue to attract and retain businesses, create green jobs, and help local residents thrive—all while providing security and benefits for future generations of San Diegans.

Economic growth, cleaner air, and a more efficient, interconnected city structure are among the factors of why it is important the City passes a comprehensive Climate Action Plan with strong goals and support for cutting-edge clean energy measures and technologies.

San Diego is a vital player in the California economy and is a model city for sustainable growth and prosperity. Through this Climate Action Plan, the City has the opportunity to attract more investment dollars, continue to create clean energy jobs, and positon itself as a national leader in clean energy policy that delivers real local economic benefits.

CSE looks forward to working with the City of San Diego to overcome challenges associated with a changing climate by implementing the tenets of this plan to ultimately best serve residents and businesses, keep the City economically booming and culturally vibrant, and continue to develop a clean energy future in America's finest city.

Kind Regards,

Jack Clark
Director of Programs
Center for Sustainable Energy
Board Member, San Diego Energy Advisory Board
Member, SANDAG Energy Working Group

Hanna Grene, LEED AP
Policy Manager, Energy Efficiency and Building Performance
Center for Sustainable Energy

CLIMATE CHANGE IS A CHILDREN'S ISSUE

Adopted by Convention Delegates May 2015

WHEREAS, There is broad scientific consensus that Earth's climate is warming at a unusual pace compared to natural changes in climate experienced in the past; and

WHEREAS, There is broad scientific consensus among climate scientists that human activities, contributing to greenhouse gases, are the dominant cause in climate warming; and

WHEREAS, Children represent a particularly vulnerable group already suffering disproportionately from both direct and indirect adverse health effects of climate change; and

WHEREAS, The greenhouse gases emitted into the atmosphere will accumulate over the coming decades and will profoundly impact today's children as adults and future generations; now therefore be it

RESOLVED, That the California State PTA urge its units, councils and districts to educate parents on the impact of climate change on children's health and future welfare; and be it further

RESOLVED, That the California State PTA, its units, councils and districts, urge school districts to educate students on climate and energy literacy and human sustainability; and be it further

RESOLVED, That the California State PTA, its units, councils and districts urge school districts to support programs and strategies to make schools more climate-safe and energy efficient models to prepare children for climate changes already underway; and be it further

RESOLVED, That the California State PTA, its unit, councils and districts urge school districts to serve as role models for practices that promote energy conservation, alternative energy sources, reducing dependency on automobile travel and encouraging sustainable practices; and be it further

RESOLVED, That the California State PTA consider climate change a children's issue and urge its units, councils and districts to advocate for comprehensive local, state and national legislation to substantially reduce man-made contributions to climate change and to mitigate its impact on children's health; and be it further

RESOLVED, That the California State PTA submit this resolution to the National PTA for consideration by the delegates at its convention.

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Continued on next page

BACKGROUND SUMMARY

According to thousands of peer-reviewed studies, the Earth's temperature is warming and the dominant reason is due to human activities. In California, climate change will cause more frequent and intense forest fires, more air pollution and deadly heat waves, a significant reduction in the snowpack and state water supplies, sea level rise and erosion along California's long coastline.

Today's children are already being impacted by climate change. Because of their physical, physiological, and cognitive vulnerability, children are more susceptible to adverse health effects from environmental hazards. As impacts of climate change worsen in the coming years, anticipated direct health consequences of climate change will include injury and death from extreme weather events and natural disasters, increases in climate-sensitive infectious diseases, increases in air pollution–related illness, and more heat-related, potentially fatal, illness. By rallying to protect and prepare our children today, we help the nation, the planet and future generations.

BOULEVARD PLANNING GROUP

P.O. BOX 1272, BOULEVARD, CA 91905

July 15, 2015

TO: Mark Wardlaw, Director San Diego County Planning & Development Services & Phil Trom, Regional Plan Project Manager, SANDAG

FROM: Donna Tisdale, Chair, Boulevard Planning Group & as an individual; 619-766-4170; tisdale.donna@gmail.com

VIA: mark.wardlaw@sdcounty.ca.gov & SDForward@sandag.org

RE: COMMENTS ON SANDAG'S SAN DIEGO FORWARD DRAFT REGIONAL PLAN & DRAFT EIR

At our regular meeting held on July 2nd, after reviewing issues, concerns, and options, the Boulevard Planning Group (BPG) voted unanimously (7-0-0) to authorize the Chair to submit comments on their behalf. The BPG is an elected community land use advisory group, located in fire-prone and groundwater dependent rural eastern San Diego County, under the jurisdiction of San Diego County. *County policy requires that our comments be sent to them directly and copied to non-County entities*.

These comments, focused on rural impacts and concerns, are limited in scale and scope due to a lack of time and other obligations.

According to conflicting and erroneous census summaries, Boulevard's population is somewhere between 319[1], 1,099[2], and 1,700[3], with approximately 24 % or our population listed as American Indian. The Campo, Manzanita, and La Posta tribal communities are adjacent to the Boulevard Planning Area and our communities share the same resources and schools. A majority of our school children qualify for free meals. We believe our current predominantly low-income population is between 1,200 and 1,500.

We feel that SANDAG'S Regional Plan and key goals (Mobility Choices; Habitat and Open Space Preservation; Regional Economic Prosperity; Environmental Stewardship; Partnerships and Collaboration; and Healthy and Complete Communities) have not really been applied to our area. There seems to be a chronic bias towards urban areas, while shunting the harmful industrial scale projects into our sensitive and scenic rural areas, even though we all pay into the same system.

Our Group generally supports point-of-use generation and storage projects, with proper installation, filters, and clean inverters on new and existing homes, ranches, schools, Border Patrol facilities, tribal casinos, and similar participating facilities. We strongly oppose industrial scale projects that suck up millions of gallons of local sole-source drought-stressed potable groundwater resources, increase traffic on rural roads that were never designed for this type of heavy traffic/abuse, provide few to no local

[1] http://www.california-demographics.com/boulevard-demographics#

[2] http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

[3] http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

jobs, alter our rural community character and quality of living, increase already significant fire risk and degrade property values, wildlife habitat, and public health and safety. We are unwilling hosts.

Main issues of concern include but not limited to the following:

- Limited backcountry outreach, taxation without representation, exploitation of drought - stressed sole-source groundwater resources, renewable energy conversion of rural neighborhoods, scenic and other natural resources and wildlife, disproportionate impacts to predominantly low-income communities, inadequate rural transportation funding.

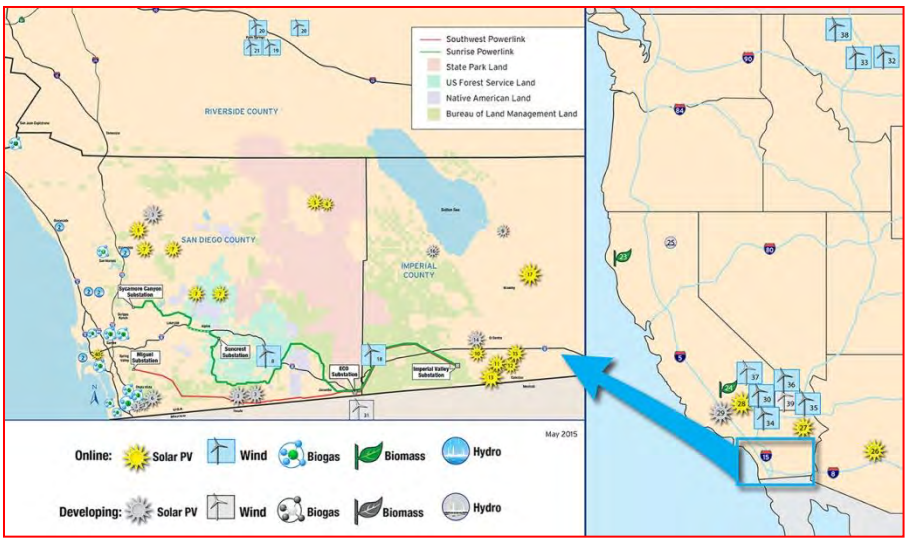
Mega Region = exploitation of resources with little to no benefits for impacted communities:

- Boulevard and Jacumba are included in the Mega Region and are targeted for exploitation and conversion of our absentee-owned ranchlands, public lands, and open space, into a commercial industrial renewable energy / transmission sacrifice zone, where no such zoning exists.
- If allowed to proceed, the planned conversion would overwhelmingly benefit San Diego's urbanized areas at the expense of our fire-prone wildlands, drought-stressed groundwater resources, currently clean air quality, property values, rural and scenic character, wildlife, public health and safety, and rural quality of life.
- The addition of thousands of acres and hundreds of miles of fire-sparking and fire-fighting electrical obstacles increases already high insurance costs for our impacted residents.

SANDAG's Regional Energy Planning[4]

- From our rural view, the Guiding Principles including Social Equity and Environmental Justice are merely empty catch phrases that have not resulted in additional or noticeable protections/benefits for the disproportionate impacts we have been, and continue to be, subjected to at the hands of SANDAG and other local entities, developers, and organizations.
- SANDAG should do what they can to prioritize, protect, and incentivize property owners and their rights to install point-of-use renewable energy generation and storage.
- The 2012 RES update is now outdated due to the rapid growth/spread of renewable energy[5].
- SDG&E's current on-site DG / PV installation rate is much higher than expected.
- As of May 15, 2015, the San Diego Reader reported that SDG&E claimed a rate of 32% renewable energy including 369MW of rooftop solar, 59MW from 11 solar projects in San Diego County, and 789MW from 6 large-scale solar projects in Imperial County[6].The article also includes SDG&E's map of projects (below), that show additional in-state and out-of-state energy project locations.
- SDG&E reports they will be compliant with 33% renewables mandate by the end of 2015.

[4] http://www.sandag.org/uploads/projectid/projectid_374_18168.pdf
[5] http://www.energyalmanac.ca.gov/renewables/solar/index.php
[6] http://www.voiceofsandiego.org/topics/science-environment/rooftop-solar-doesnt-help-sdge-with-clean-goals/



- @ ***<u>page 64, Recommended Actions that raise concerns for our rural communities and for which no community outreach has taken place in the impacted areas, that we are aware of:</u>***
    - **<u>RE-1</u>** (Identify potential locations in the region that could accommodate utility-scale renewable energy infrastructure).
        - Disproportionately impacted communities are usually the last to be informed—placing them in an unjust position of trying to catch up and undo what has already been done behind the scenes, with little to know transparency.
    - **<u>RE-2</u>** (Explore options to pre-permit zones of appropriate land for renewable energy development – renewable energy parks).
        - Developers often quietly approach legislators and decision makers, in an ex-party manner, to support changes that place outside interests over community interests, with no notice to those communities. Rural communities then have to belatedly scramble to find a way and funds defend themselves against often publicly funded projects and developers and biased decision makers.
    - **<u>RE-3</u>** (Identify existing barriers to siting large-scale renewable energy installations (e.g., renewable energy parks) in the San Diego region).
        - So-called barriers and freedom of speech are often our only defense against well-funded and politically connected crony capitalism and politically driven projects. Rural communities have rights, too, and deserve protection rather than concerted efforts by outsiders to alter long-fought community plans and zoning.
    - Mountain Empire Health/Collaborative was funded by SANDAG for rural community outreach that did not include any meetings in Boulevard or Jacumba. Campo is about an hour round-trip from Boulevard and longer from Jacumba.
    - While we appreciate the services they do provide for rural residents, on the issue of renewable energy projects and San Diego Forward, Mountain Empire Health/Collaborative has a conflict-of-interest because, despite major community opposition, they have accepted potentially quid-pro-quo money from several energy developers in exchange for supporting their projects, including Iberdrola (200MW Tule Wind), Soitec Solar (80 MW Rugged Solar, 60MW Tierra Del Sol Solar, 5MW LanWest

and 22MW LanEast), and the Hamann Companies who are absentee hosts to Soitec's Rugged Solar.

- We strongly oppose any Infrastructure Financing Districts or similar renewable energy overlay zones for our communities. Some recent IFD proposals did not even allow a vote by local residents/property owners. How equitable is that??
- Calling them renewable energy "parks" is a misnomer. At ground zero, they are ugly, noisy, water-sucking, dust, glare, and electrical-pollution-generating industrial energy zones enclosed by 6 foot chain link fences topped with barbed wire—converting fragrant chaparral, scenic pasture lands and high meadow habitat and blocking wildlife corridors.
- Commercial urban and suburban properties / warehouses with lots of flat roof space and lots of open parking lot spaces can and should be covered with PV parking shade covers. They make far better targets for so-called renewable energy parks, and don't require such extensive, expensive, and destructive transmission projects that generate a high guaranteed rate of return for monopoly utilities and increased rates for consumers.

Limited Public Transit Choices:

- Boulevard/Jacumba and other rural communities have very limited public transit options. Our communities are not even included on most of the maps.
- Senior & Disabled Transportation Services:
  - It is our understanding, through Mountain Empire Health, SANDAG currently provides about $5,000 towards gas cards for people who are willing to transport disabled and seniors to town and back from rural east county.
  - Those grant funds are appreciated. However, drivers do not get paid anything for their time and they must have Red Cross training which limits participation.
  - SANDAG should consider providing and/or reinstating funds for a transport vehicle and drivers.
  - Rural tribally owned casinos offer an untapped potential win-win opportunity for additional rural transportation and park and ride options (GHG reductions) through sharing casino shuttle buses and parking resources/expenses for non-gaming public transit.
  - Outreach, details, and SANDAG or other funding options would need to be proposed, worked out with, and approved by, willing individual tribal governments/entities.

4.6 Water Supply[7]:

- Small rural water districts/companies and even tribal agencies sign controversial water sales agreements without full or fair disclosure to their shareholders / members; agreements often appear to violate bylaws, tribal rules and regulations, LAFCO spheres of influence, and grant restrictions.
- The federally designated Campo-Cottonwood Creek Sole Source Aquifer was left out: http://www.epa.gov/safewater/sourcewater/pubs/qrg_ssamap_campocottonwood.pdf

[7] http://www.sdforward.com/pdfs/EIR/EIRch4section16.pdf

- The Campo-Cottonwood Creek Sole Source Aquifer boundaries include Mount Laguna, Pine Valley, Morena Village, Lake Morena, Campo, Cameron Corners, Potrero, Barrett Junction, Tecate US, most of the Cuyapaipe (Ewwiiaapaayp), Manzanita, La Posta, and Campo tribal lands, Live Oak Springs, all of the Boulevard Planning Area that lies west of the Tecate Divide, and portions of Guatay and Descanso.
- Live Oak Springs Water Company was left out of Table 4.16-1; this water company is currently in receivership. Unauthorized bulk water sales to San Diego Gas & Electric's ECO Substation project were curtailed by the CPUC in recent years, unauthorized water sales to construct the 30-acre3 Boulevard Border Patrol Station, and there was a County suit over water quality reports.
- Use of drought stressed groundwater resources for major regional energy and transportation projects must be halted. These projects can and should be required to use recycled water for construction.
- Close to 100 million gallons of water was needed for construction of SDG&E's $435 million ECO Substation near Jacumba which will connect industrial wind and solar projects, in the US and Baja California Norte, to the Southwest Powerlink. The EIR originally estimated only 30 million gallons would be needed[8].
- The source of the water was not included in the EIR/EIS, but was generated later in the Water Supply Plan, which denied the public's right to review and comment or challenge the controversial groundwater resources.
- Bulk potable water sales for SDG&E's project from the City of San Diego were increased approximately 60 million gallons.
- Over 1.15 million truck miles and related Green House Gas emissions were generated solely by hauling water to this groundwater dependent rural project site. How green is that??
- 15 million gallons of water was taken from the Campo reservation wells for the same project.
- Tribal members alleged they were not properly notified or allowed to vote on the sale of their precious water resources.
- The limited review included misleading and false information. Despite estimates that no impacts would occur, local springs, tribal and private off-site wells were negatively impacted, and did not fully recover, as predicted by reports, due to lack of adequate recharge (rain). Mature Oak trees were also impacted by reduced groundwater.
- The CPUC approved SDG&E's ECO Substation project but failed, as required in the mitigation plan, to monitor private wells within 1 mile of the Jacumba Community Service District wells that were the source for millions of gallons of water to the ECO Substation.
- Several well owners have complained that those water sales have impacted their wells but they have little to no recourse and have not vote if they are not part of the local water district.
- The CPUC is now the subject of numerous investigations, including criminal. They have abused, violated, lost the public trust.
- Currently, CalTrans has a project on I-8 in our area. We have received conflicting information on the source of water being used. One manager identified the source as the Jacumba Community Services District (JCSD). However, a JCSD ratepayer asked about the water sales and was informed that JCSD *was not* supplying groundwater to that project.
- The source of water should not be an unsolved mystery. It should be fully disclosed and vetted.

[8] http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/MPR%2014_SDG&E_Request.pdf

- Use of reclaimed water must be prioritized and used before precious vanishing groundwater resources are taken from exploited low-income rural communities to support for-profit projects for absentee owners/developers that serve other communities.

WS-1B Use Reclaimed Water & WS-1C Ensure Adequate Water Supply @ page 4.16-26:

- We strongly support the required use of recycled water for construction sites and for concrete operations and real confirmation of adequate water supplies. Often times, the actual Will Serve forms reference the use of water if it is available at the time the project actually starts construction. They are generally vaguely worded and do not pass the smell test, and yet decision makers rely on them as valid proof that water will be available for a project.
- We strongly oppose manipulation and obfuscation of groundwater data and the suppression of the real world impacts these projects represent to those who rely on those groundwater resources, in order to support politically driven projects. It is neither equitable nor fair.
- We have seen this manipulation repeatedly for large-scale energy/transmission projects such as SDG&E's ECO Substation that estimated 30 million gallons but required closer to 100 million gallons.
- Similar water use underestimates were produced for the Soitec Solar projects planned for almost 1,200 acres or rural Boulevard—immediately adjacent to existing homes and small ranches all reliant on their private wells.
- Dudek originally failed to include significant water consuming project components for the Soitec's Rugged Solar project planned in Boulevard and were forced to revise their reports by over 30% or so when their omissions were caught by concerned residents.
- Dudek also erred on the groundwater resources available for Sunroad's Madera Golf Course in Poway that resulted in allegations that numerous non-participating wells were being drawn down[9]. Elected officials were then persuaded by Dudek to allow the golf course to continue pumping and the wells dropped significantly within 60 days. Dudek was proven wrong by real world impacts, and yet they keep getting hired to push whitewashed or greenwashed jobs through.

EIR/EIS section 4.

- Utility scale renewable wind, solar, and related electrical infrastructure projects are destroying /degrading the rural panoramic views, iconic landscapes, vanishing Mediterranean Mosaic / native habitat and wildlife corridors, overall aesthetics and visual resources viewed from multiple Eligible Scenic Highways in the transition areas (between the mountains and the desert floor) of Campo, Boulevard and Jacumba: I-8; Historic Route/Old Hwy 80; Hwy 94; Buckman Springs Road; Lake Morena Drive, and more.

Energy 4.5-1 @ page 1[10]:

[9] http://www.pomeradonews.com/news/2014/jan/27/low-water-level-forces-maderas-golf-club-to-shut/
[10] http://www.sdforward.com/pdfs/EIR/EIRch4section6.pdf

This section needs to be updated to factor in the thousands of megawatts of new wind and solar that have already been approved and or/ installed in Southern California since 2010, and to include SDG&E's most recent claims of already reaching their 33% goal for renewable energy.

- The unnecessary targeting of rural low-income communities and conversion of carbon sequestering native vegetation and productive farmland into renewable energy zones must also be recognized and reversed.
- Point of use energy and storage systems should be recognized as the priority over large-scale rural projects that alter communities and resources.

4.6 & Table 4.6-2 @ page 4[11]:

- **San Diego County's Climate Action Plan has been rejected by the courts and rescinded.**
- **Project list needs to be updated to include the following:**
    - Soitec's Lan West and Lan East projects were eliminated in the Final EIR for Soitec Solar; Soitec never followed through on Major Use Permits for either project.
    - Soitec's Tierra Del Sol Solar project was terminated by the company on March 4, 2014, after County approval, due to lack of buyers and the high cost of $12 million or so for approximately 6 miles of new high voltage transmission line through highly flammable Boulevard residential areas.
    - SDG&E should have been aware of the termination, because by December 2014, they had already terminated all their PPA contracts for Soitec's four Boulevard projects.
    - The court recently set aside San Diego County approvals for Soitec's Rugged Solar and Tierra Del Sol Solar projects in Boulevard.
    - Invenergy's Desert Green project (developed by Soitec) began operation in December 2014[12] and is connected to SDG&E's Borrego Microgrid.
    - Construction of Imperial Energy Center West is well under way.
    - Energia Sierra Juarez (ESJ) Phase 1 is now operational and highly visible and intrusive, day and night, from the communities of Jacumba and Boulevard and for travelers on I-8 and Historic Route 80 that are both eligible as scenic routes.
    - An additional 1,000 MW expansion of the ESJ wind project is planned for construction on the almost 500,000 acres of ejido land in Baja California Norte under contract to Sempra or related entities. The energy is slated for export to California via SDG&E's ECO Substation.

Cumulative Impacts 5.0[13]:

- Utility scale wind and solar projects and related infrastructure / ENERGY SPRAWL must also be addressed, especially in the disproportionately impacted communities of Boulevard and Jacumba where absentee owners lease their lands to mostly foreign investors and companies at the expense of a wide variety of local resources, residents, visitors, and a struggling tourism based economy.

[11] http://www.sdforward.com/pdfs/EIR/EIRch4section6.pdf
[12] http://sdbj.com/news/2014/dec/09/desert-green-solar-farm-begins-commercial-operatio/
[13] http://www.sdforward.com/pdfs/EIR/EIRch5.pdf

- Cumulative impacts include Climate Change with predictions of hotter and drier weather with reduced rainfall and groundwater resources along with increased fire risk for our rural communities.
- We have no access to imported or alternate water sources other than having water hauled in by truck at great expense.

Appendix A[14]:

- The planned Jacumba / Jacume Port of Entry is listed @ page 38
- The Desert Line project and $1.82 billion in 2014 dollars @ page 38 seems to be a pie-in-the-sky project based on the current condition of the mostly original cross ties and tracks that are overgrown and filled or eroded in many places.
- Both are listed as Projects of interest to SANDAG; to be financed by other parties.
- If they ever come to fruition, both projects will impact our rural communities and resources, and will require a significant amount of water. Where will that water come from?
- Table A-5 @ page 47; Bicycle/Pedestrian improvements listed for I-8 on-off ramps @ a cost of $500,000 to $3 million each: I-8 @ Pine Valley, Buckman Springs, Kitchen Creek, Crestwood, Boulevard, Jacumba, In ko Pah
- Our communities would prefer to have those millions of dollars used for other local improvements that better serve residents. We rarely see bicycles on I-8 in our area, most use Hwy 94 and Historic Route 80.
- Boulevard does not even have a library or real community center, but we are still trying.

Appendix G: Green House Gas (GHG) inventory and projections[15]:

- Please take note of section 11 and the pie chart (Figure 2) on page 23
    - Chaparral and other vegetative cover do sequester carbon, along with undisturbed desert and high desert soils.
- GHG emissions are increased along with other air pollutants (inhalable dust and sand), and carbon sequestration is lost, when thousands of acres of native vegetation and undisturbed native soil crusts are disturbed for industrial scale renewable energy projects.
- GHG emissions are also increased with each mile/acre of new electrical infrastructure and large-scale energy storage systems, such as the 160 cargo containers of batteries on 7 acres approved in February by San Diego County with the 140MW of Soitec Solar CPV projects planned for Boulevard communities.
- Electrical pollution is also a source of air pollution generated by these massive energy projects that has a negative impact on public health and safety, wildlife, and livestock.
- Some of the related adverse health impacts of exposure to electrical pollution are documented in the science-based Bioinitiative Report[16] and Dr. Samuel Milham's Dirty Electricity book and website[17].

[14] http://www.sdforward.com/pdfs/chaptersNPrintAppendices/DraftAppendixA-C.pdf
[15] http://www.sdforward.com/pdfs/DraftAppendixD-2012GHGInventoryForSDCountyAndProjections.pdf
[16] http://www.bioinitiative.org/
[17] http://sammilham.com/

- Increasing wireless smart grid, appliances, and communications equipment has a dark side and adverse health impacts that are not recognized, considered, or addressed.
- Increased ground currents from massive electrical projects can also migrate off-site and into homes through plumbing and common neutral wires on the distribution system. See Ground Currents paper by Duane A. Dahlberg, Ph.D., of Electromagnetic Research Foundation, Inc. [18]
- Luckily for Boulevard, the Soitec CPV project approvals (80MW Rugged Solar; 60 MW Tierra Del Sol Solar) were recently set aside by the court. Soitec actually self-terminated their Tierra Del Sol CPV project in March due to a lack of buyers.
- **Section 12 Water:**
    - This section does not appear to include the significant amounts of energy consumed and GHG impacts for the potable water currently being pumped and /or transported for construction/operation of industrial scale renewable energy/ transmission projects in rural areas where no imported water is available.
    - Hundreds of millions of gallons of potable drinking water has been and will be trucked from the City of San Diego and other urban sources, and from potable groundwater extraction from both on-site wells and from very small rural water companies/districts with little to no disclosure or input from shareholders/rate payers.
    - San Diego Gas & Electric's $435 million East County (ECO) Substation project used close to 100 million gallons of water that required over 1.15 million truck miles and GHG emissions to transport that water up to 140 miles roundtrip to site located east of Jacumba. The EIR erred significantly by originally estimating 30 million gallons would be needed.
    - It is unclear if the energy consumed by rural residents to pump their own groundwater in groundwater dependent areas that are not served by water companies or districts.

Appendix H Social Equity: Engagement and Analysis[19]:

- As of July 1st, Latinos are officially the new majority in California[20].
- How will this new majority impact the definition of MINORITY (endnote #2) and the Low-Income Minority data used in the Draft Regional Plan and DEIR?
- Predominantly low-income rural communities should qualify as "disadvantaged", regardless of their ethnic composition.
- Large scale energy /transmission projects, meant to serve urban/suburban San Diego, generate lots of heavy traffic, heavy equipment, and heavy water trucks that frequently exceed load limits on local roads and damage roadbeds on our limited number of paved roads, including the concrete bed of Historic Route 80 and Historic Route 94.
- Rural transportation issues/concerns are not readily evident in the Regional Plan or DEIR.
- Mountain Empire Health/Collaborative did hold several meetings but none were held in Boulevard or Jacumba, according to the write up @ page 67, which includes several spelling errors.
- **We do support the Highest Priorities listed on page 67**:

[18] http://www.buergerwelle.de/assets/files/ground_currents_links_to_cancer.pdf?cultureKey=
[19] http://www.sdforward.com/pdfs/DraftAppendixH-SocialEquityEngagementAndAnalysis.pdf
[20] http://sanfrancisco.cbslocal.com/2015/07/08/its-official-latinos-are-the-majority-in-california/

- Seniors and our region's youth are most impacted by the lack of mobility.
- Lack of transportation connectivity further impacts the health conditions of our region's population.
- Limited transportation options coupled with limited access to food is a challenge.
- Limited access to technology does not allow our region to be informed on para-transit programs.
- *Reopening the volunteer driver reimbursement program.*

Appendix U9 Regional Energy Strategy[21]:

- **Renewable Energy @ page 4**
  - The County's 2013-2015 Strategic Energy Plan[22] appears to focus on streamlining small scale wind and solar and point-of-use generation—*not industrial scale projects*.
  - The County's Climate Action Plan has been rescinded after court losses.
  - The County's Comprehensive Renewable Energy Plan has apparently stalled with the next meeting date for the Phase One report expected to be in the fall of 2015.
  - The County's Wind Energy Ordinance has unresolved CEQA litigation in the Court of Appeals.
  - Iberdrola's 200MW Tule Wind project was approved in 2012 for approximately 13,000 acres (abutting the Boulevard Planning Area) but has not yet started construction; they have no Power Purchase Agreement and no Eagle Take Permit; they also requested a 2-year extension for BLM's Notice To Proceed. BLM granted a one-year extension to December 2015, saying a 2-year extension may not be in the public interest.
  - Invenergy's lease with the Campo Kumeyaay Nation for the 160MW Shu'luuk Wind and solar project (abutting Boulevard Planning Area) was terminated after the tribe voted it down due to inadequate lease payments and health concerns.
  - Enel Green Power's 90-150 MW Jewel Valley Wind and solar project in Boulevard was withdrawn after the Wind Energy Ordinance was approved to include low-frequency noise limits and restriction of new wind energy projects to the Wind Resource Area in the NE section of Boulevard near the Tule Wind project in McCain Valley (McCain Valley National Cooperative Land and Wildlife Management Area and McCain Valley Recreation Area).
  - SDG&E withdrew their 57 MW Manzanita Wind project after failing to secure site control from the Manzanita Band of Kumeyaay Nation whose members have complained of adverse health and well being impacts generated by noise and electrical pollution generated by the existing 50MW Kumeyaay Wind turbines located on Campo tribal lands next door.

- **Progress since Regional Energy Strategy adoption @ page 6:**
  - San Diego County has made significant progress on reducing energy/water use at their facilities and meeting LEED standards on new construction.

[21] http://www.sdforward.com/pdfs/DraftAppendixU9-RegionalEnergyStrategyAndRegionalEnergyStrategyGoalsSummaryForTheSDRegion.pdf
[22] http://www.sandiegocounty.gov/reusable_components/images/dgs/Documents/Energy_StrategicEnergyPlan.pdf

- SDG&E's Borrego Microgrid[23] project, which has been around since 2010[24], should be added to UCSD microgrid resource listed.

- **4.4.1 Greenhouse Gas Emissions in the San Diego Region & Table 4-2:**
  - It is unclear if the Green House Gas (GHG) Emissions are included for Sempra's Costa Azul LNG import facility, located in the San Diego area, just south of the border.
  - Sempra is transitioning Costa Azul into an export facility.
  - The Costa Azul facility shares San Diego's air basin and within the MEGA REGION.
  - The cooling and heating process required to convert natural gas to and from Liquefied Natural Gas (LNG) is highly energy intensive and should be counted for local emissions.
  - LNG is also transported via diesel run ships and those transportation emissions must also be counted.

5.2 Renewable Energy & 5.2.2[25]

- Intermittent wind and solar projects cannot and should not be compared to base load energy that can generally provide energy 24/7 for decades.
- Wind and solar projects have unproven track records for longevity with some thin film PV projects already having to replace faulty panels.
- The plan's comparison of the cost of renewable energy to base load gas-fired power does not include the cost of load-following backup generation or energy storage which can significantly increase the costs of renewable.
- Congress has yet to extend multiple lucrative incentives (PTC-ITC) that artificially reduce the price of wind and solar through billions in tax payer dollars. If not extended, or if the incentives are extended at reduced rates, the cost of renewable energy will increase accordingly.
- The plan does not appear to address the significant and historic drop in natural gas prices, related to increased domestic production through fracking.
- The drop in natural gas prices has triggered Sempra's rush to export cheap gas through multiple LNG facilities that are being converted from import to export facilities. That means the gas will still be burned for fuel somewhere, while local energy costs rise to support renewables.
- The cost of renewable energy also appears to neglect the cost of concrete, the mining of silica sand, rare earth, steel and other materials required for wind and solar components, and the GHG emissions generated for manufacturing and transporting those materials, for the planned transition from fossil fuels.
- The cost of SDG&E's $1.9 billion Sunrise Powerlink, $465 million East County (ECO) Substation east of Jacumba, and other multi-million projects must be included in the cost of renewables, including the disproportionate and unreimbursed costs to impacted communities and resources.

Thank you for your consideration of these limited comments.

Any errors or omissions are unintentional…

[23] http://www.utilitydive.com/news/sdge-microgrid-uses-solar-storage-to-avoid-outage-in-small-town/400147/

[24] http://energy.gov/sites/prod/files/SG%202010%20Peer%20Review%20-%20Borrego%20Springs%20Microgrid%20-%20Tom%20Bialek,%20SDG%26E.pdf

[25] http://www.sandag.org/uploads/projectid/projectid_374_18168.pdf

COLAB's public comments to Imperial County's Draft Programmatic Environmental Impact report, Imperial County Renewable Energy and Transmission Element Update

We thank the Imperial County's Planning and Development Department, the Imperial County Planning Commission and the County Supervisors for their efforts to establish an update to the Master Plan to include the Renewable Energy and Transmission Element component. COLAB is certainly supportive of economic development, growth in the business community and employment for our residents. We find many of the areas in the proposed plan sufficient to meet the known issues surrounding the emerging renewable energy development.

Over the last several months, we have met with staff to express concerns and are pleased that most have been address. We ask today that you provide direction on the following comments and requests for changes to the plan.

1. **Reclamation bonding** for the solar projects appears inadequate and is not inflation-protected. We are additionally concerned that the reclamation bonding company may no longer be in business at the time it is needed, twenty or thirty years from now. Reclamation bonding as it exists for current projects is simply another lengthy, expensive lawsuit. A potential solution is to require the public utility or industry owned utility that purchases the power to be contractually bound to perform all reclamation duties in the event the renewable energy entity does not. This alleviates the burden on the county and the taxpayers. The public utility or industry owned utility that is also in a much better position to obtain reclamation bonds to ensure that no claim will be made against the public utility or industry owned utility that, provided the public utility or industry owned utility that remains jointly and severally liable for all reclamation duties. Imperial County must not rely on the developer or a bonding company for reclamation." In many cases the renewable energy company's projects will be a single-asset Delaware LLC with no other assets. The landowner, the county and hence the taxpayer will be unable to collect anything from that legal entity. We are not asking the power company to provide a "guaranty". That would be difficult to enforce.

2. A **Letter of Credit** should not be considered acceptable for reclamation bonding. It is simply too easy for a letter of credit it be cancelled. This is advice from our financial members. We believe that, under your direction, this is a more secure requirement to the bonding.

3. The current reclamation plans for solar development are undervalued, with one exception. The average cost per acre in May was only $3935. Additionally reclamation bonding requirements record keeping appears lax, and needs to be strengthen with a public report generated each year. We are pleased that staff has *reviewed the reclamation plans and have agreed with us. We understand that letters to all solar companies that have developed farms and those who are in progress have been issued a letter that the reclamation plans need to be redone to include the removal of materials (not included in the cost) and that resell of the materials should not be included in the cost analysis. Once the new reclamation plan is approved, a new value will be required. The plan, prior to acceptance, need to specify that the cost of removals be included and that the cost of resell of materials be excluded from the calculation.*

4. We request that all CUP's require that the public utility or industry owned utility that be jointly and severally liable for the reclamation cost of the project, to the same extent as the developer. This should also be required by County Ordinance to provide the County and the taxpayer with the authority to preclude the energy companies from walking away from the project, which may be a hazardous waste site, permanently poisoned and the land never again farmable. The public utility company is in a better position to enforce the contract provisions with the developer that the landowner or the County.

5. Another county ordinance should preclude the use of chemicals that are permanent soil sterilizers as a weed control effort. The impact to the soil and its surrounding area can never be repaired. Any application of chemicals on solar farms should be permitted just as they are on agricultural lands. We understand that rather than an new ordinance, the Ag, *the Ag Commissioner will now include language in the Pest Management Plan to preclude permanent soil sterilizers on any site that may be returned to agricultural use. We ask that you provide that direction to accomplish this.*

6. The county should set a standard for solar panels to preclude the use of any toxic material. Like the permanent soil sterilizers the use of toxic materials cannot be reversed. Like the concern for the exposed playa at the Salton Sea, the spread of these toxic substances could be significant to surrounding area, especially those with crops—and children. This component in the Air Quality mitigation and relative to toxic fumes from toxic materials in the solar panels should be strengthened. It also needs to be addressed for Hazards and Hazardous Material and Hydrology and Water Quality sections to include a component the potential for toxic material in the solar panels It is our understanding that this is agreeable and we ask that your provide direction to make this change to preclude know hazardous materials and that should a material be reclassified as hazardous, appropriate remediation will be required.

7. We also find the second option for Prime Farmland (AG-1A) inadequate and it be amended to be to 1.5 ration of the fair market value. After all the intent is to allow the development on the edge of the farmable land, not on it. This preserves the right of the landowners, and while providing incentives to the developer to seek all viable options prior to considering prime farmland. While the plan pushes renewable energy projects to the fringes of the agricultural land –prime and non-prime, additional measures on the reclamation requirements are needed. We do not see this as unreasonable. It is the same requirement used by Kern County.

8. By all accounts, the employment projections for the recently approved solar projects were overstated. Additional due diligence by staff, the planning commission, and ultimately Board of Directors must be added a component of the plan.

Thank you again. We believe that with the inclusion of these modification, Imperial County will have a valuable tool for the future development of renewable energy here.

EXHIBIT A

COASTAL ENVIRONMENTAL RIGHTS FOUNDATION

October 1, 2012

Anna McPherson
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Via Electronic Mail
Dsdeas@sandiego.gov

Re: City of San Diego Climate Mitigation and Adaptation Plan (CMAP)
Comments on Draft Negative Declaration and CMAP

Dear Ms. McPherson:

Please accept the following comments on behalf of Coastal Environmental Rights Foundation (CERF). CERF is a nonprofit environmental organization founded by surfers in North San Diego County and active throughout California's coastal communities. CERF was established to aggressively advocate, including through litigation, for the protection and enhancement of coastal natural resources and the quality of life for coastal residents.

CERF supports the City of San Diego ("City")'s efforts to prepare a Climate Mitigation and Adaptation Plan to address the significant impact continued greenhouse gas (GHG) emissions and climate change will have on our environment, locally and globally. While CERF applauds the City for its efforts, the CMAP simply does not go far enough, and certainly does not establish a threshold below which contribution to greenhouse gas emissions will not be cumulatively considerable.

As detailed below, in order to truly reduce GHG emissions and make the necessary reductions, the City must be more aggressive in its approach. Further, in order to qualify as a California Environmental Quality Act (CEQA) tiering document, the City must meet the mandates of CEQA Guideline section 15183.5. The CMAP does not meet these standards.

I. The CMAP Reduction Goals Are Too Weak

The City purportedly relies on the CARB Climate Change Scoping Plan directive for local agencies to develop a CMAP target that tracks the statewide target. (CMAP, p.2-1). The *Climate Change Scoping Plan*, Pursuant to AB 32, The California Global Warming Solutions Act of 2006 (Scoping Plan) specifically states:

> "Therefore, California State government has established a target of reducing its greenhouse gas emissions by a *minimum* of 30 percent below its estimated business-as-usual emissions by 2020 – *approximately a 15 percent* reduction from current levels." (Scoping Plan, p. 24, emphasis added).
>
> In addition to tracking emissions using these protocols, ARB encourages local governments to adopt a reduction goal for municipal operations emissions and *move toward establishing similar goals for community emissions that parallel the State commitment* to reduce greenhouse gas emissions by approximately 15 percent from current levels by 2020. (*Id*., p. 27, emphasis added).

Notably, the Scoping Plan qualifies the 15 percent reduction from current levels as an estimate to substitute for a 30 percent reduction below BAU emissions in 2020 and is a *minimum* target. Moreover, the local government plans are meant to parallel the State commitment – not take advantage of it. Thus, the City has short-changed the CMAP process in the following ways: (1)

setting the goal as a minimum 15 percent reduction from current levels; and (2) taking credit for state and federal measures in the local CMAP.

In setting the goal at the minimum target (or slightly above), the City has left itself no margin of error. If any of the implementation measures do not work as expected, or any of the other CMAP modeling assumptions do not prove to be accurate[1], the City will have left to work even more aggressively in the future to "catch up". The City must develop a CMAP with a margin of safety built in to the reduction target to account for future unexpected increases or modeling/calculation errors.

In addition, though the Scoping Plan provides a local target of 15 percent below baseline, this number was adapted from the statewide target: 30 percent below business as usual (BAU) in 2020. (Scoping Plan, p. 24). The City chooses not to use the 30 percent below BAU target (which would be a lower target) and simultaneously takes credit for state and federal implementation measures that should be part of the BAU. As a result, 59 percent of the City's reduction "measures" come from implementation of state and federal policies for which there is "no additional local action". (CMAP, p. 4-7).

Thus, the City is not committing to reduce GHG emissions by 15 percent below baseline or 30 percent below BAU. Rather, the City proposes to reduce 2020 BAU emissions by *12 percent*.[2] Available guidance indicates the local governments should not take advantage of statewide fuel emission standards and RPS reductions in developing local plans.[3] In order for local plans to work in parallel with the state, as suggested in the CARB Scoping Plan, the City cannot rely on the state or federal measures over which it has no control.

II. The CMAP Water Efficiency Measures Will Not Increase Conservation

The CMAP and Negative Declaration (Neg. Dec.) qualify water use efficiency improvements as an energy-reduction measure. The stated goal of water use efficiency is reducing daily per capita water consumption to achieve the SB7X goal of 142 daily gallons per capita by 2020 and 116 daily gallons per capita by 2035. (CMAP, p. ES-3, p. 4-2, Table 4-3). According to the City's 2010 Urban Water Management Plan (UWMP), the City has already achieved this target – so no additional energy savings will result from baseline conditions. (2010 UWMP, pp. 3-6 to 3-10 [reflecting 2010 annual daily per capita water use was 127 gallons per capita per day]).[4]

The City should also be aware that current CEQA documentation and water supply assessments being circulated for various projects paint a different water supply picture than

[1] Indeed, the City's baseline (an average of 2004, 2007-2009) from which to calculate reductions could have been compared to the actual 1990 emissions (for which the City apparently did conduct an inventory) for a cross-reference. (Negative Declaration, p. 6). EPIC's San Diego County GHG Inventory estimates Countywide emissions went up 18 percent from 1990. (EPIC San Diego County GHG Inventory Executive Summary, p. 3). If this holds true for the City, a 15 percent reduction in "baseline" emissions will surely fail to get us to 1990 levels in 2020.

[2] BAU with federal and state strategies beyond 2020 is 12,254,548. The target is 10,754,790. This is a 12 percent reduction from BAU.

[3] See Local Government Operations Protocol For the quantification and reporting of greenhouse gas emissions inventories Version 1.1 May 2010, pp. 23-26 (scopes and double-counting); see also, Climate Action Planning: http://www.coolcalifornia.org/article/step-3-develop-a-climate-action-plan (reflecting lack of reductions allocated to state or federal level measures)

[4] It should also be pointed out that the City's 2020 goal in the UWMP is particularly lax as the City chose one of four options to calculate the SBX7 goal. (2010 UWMP, p. 3-10). The second available method would have set the target at 133 gpcd. (*Id*. at p. 3-8).

assumed in the CMAP. For example, the City's Environmental Impact Report (EIR) for the Shawnee/Riverbend project set for City Council review and approval on October 2, 2012 a Water Supply Assessment (WSA) contained in Appendix K. The WSA states:

> The utilization of 116 gallons per person per day is the City's acceptable standard for single-family water consumption (including landscaping) and 80 gallons per person per day for multi-family water use (includes landscaping)...[5]

In response to the EIR and supporting WSA, CERF submitted comments questioning the reliability of the 116 and 80 gpcd figures. The City has remained steadfast in relying on this water usage assumption for an almost 1000-unit proposed project.[6] (See FEIR Response to Comments p. RTC-15). Thus, the City's CEQA baseline is either incorrect for the CMAP (meaning no energy reduction will be realized because water conservation targets have already been met) or for the Shawnee/Riverbend project will use more water than anticipated (meaning the City will not have enough supply to meet the water supply needs of the new project, and will have to find new sources).

Before the City claims conservation as an energy reduction measure, it must accurately and transparently quantify its current and future anticipated water supply. Until this is done, the City must assume its water efficiency measures will not only fail to result in energy reduction, but will likely incentivize water waste because of the embarrassingly low UWMP and SBX7 targets set by the City. To that end, CERF suggest the City set the following real energy efficiency reduction goals:

1) Develop a water supply loading order that rates energy-intensive options such as desal as a supply of last resort;
2) Set a SBX7 goal of 86 gallons per capita per day, following the example of Sydney, Australia[7] (with a similar climate)

III. The City's Must Prepare an EIR To Evaluate Project Alternatives

The City's CEQA problems are two-fold: (1) the currently proposed CMAP is supported by a Neg Dec, which claims no significant environmental impacts will result from the project; and (2) the CMAP is meant to be used as a tiering document for future CEQA climate change cumulative impacts analysis pursuant to CEQA Guideline section 15183.5. (CMAP, pp. 2-2, 2-6, 2-7; Neg Dec p.1).

Although a CMAP is meant to serve as a qualified GHG reduction plan under CEQA Guideline section 15183.5, it fails to meet the applicable requirements. In doing so, the CMAP also ensures GHG emissions will continue to increase because projects which rely on the CMAP will not prepare project-specific GHG analysis or mitigate GHG impacts on a project-specific level. (Neg. Dec., p. 1). In that regard, the Neg Dec provides that adoption and implementation of the CMAP would not generate GHG emissions that may have a significant impact on the environment, but instead would reduce GHG emissions over the baseline business-as-usual condition. (Neg Dec, p.

[5] WSA, p. 4, Table 3-1

[6] Specifically, part of the City's response was: "In addition, typical usage has for quite a while been 14 HCF, and can be seen referenced in many documents such as proposed water service rates and charges. In general, the number was identified some time ago and has not been updated. With the current conservation efforts and other factors, the actual water usage has been going down." (FEIR, p. RTC-15).

[7] http://www.cityofsydney.nsw.gov.au/environment/water/currentstatus/waterconservation/waterdemand.asp

26). However, by implementing the CMAP, the City would actually be foreclosing meaningful project-specific analysis. Because the monitoring and inventory specifics have yet to be articulated (and many years may pass before they are developed), the City may approve numerous projects and fail to analyze the project-specific GHG impacts. (CMAP, pp. 6-1-6-2). As a result, these projects will be approved without adequate alternatives analysis or mitigation measures. Further, without specific and enforceable implementation measures, the CMAP cannot be relied upon to establish a threshold below which the contribution to GHG emissions would not be cumulatively considerable. (CEQA Guideline Section 15183.5(b)(1)(B)).

Further, the City only has a reduction target for 2020. In the interim, local GHG emissions will continue to contribute to climate change. As pointed out in the Sierra Club letter, the City will be contributing to overall GHG emissions each year until 2020, and those GHGs remain in the atmosphere for decades to 100 years. Thus, without annual, interim benchmarks and targets, the City will be exacerbating climate change until 2020 (and likely beyond since the 2020 target is not aggressive enough).

IV. Conclusion

Unless the City implements a more aggressive target for GHG emission reductions and relies on *local* measures to reduce emissions, it will not be in compliance with the local AB 32 directive. Further, if the City relies upon the CMAP for future project-specific analysis, significant impacts to GHG emissions will result. CERF urges the City to consider its role in reducing GHG emissions as the local entity with land-use authority. The City should more seriously considert implementing the General Plan policies by urging SANDAG (and using its voting power at SANDAG) to develop a Regional Transportation Plan (RTP) that prioritizes public transit instead of freeway widening. As evidenced by the current litigation against SANDAG, the RTP itself, and the metrics set in the RTP are woefully inadequate. As a leader in the region, the City can do better. CERF urges the City to comply with AB 32 and with CEQA, and go back to the drawing board.

Thank you in advance for your consideration of our comments.

Sincerely,

COASTAL ENVIRONMENTAL RIGHTS FOUNDATION

Marco A. Gonzalez **Livia Borak**

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September 28, 2012

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Via E-mail, to the two emails shown above

Subject: Comments Regarding
1. San Diego's Draft Climate Mitigation and Adaptation Plan (C-MAP)
2. The Negative Declaration document for the C-MAP

Dear Ms. Pratt and Ms. McPherson:

I appreciate the opportunity to communicate with you concerning this important topic. As the Chair of the Chapter's Transportation Committee, I will primarily restrict my comments to climate and climate mandates on regional and city-wide transportation. With the help of chapter-energy-policy expert Bill Powers, I will offer comments on energy.

Introduction

Understanding the relationship between global warming and transportation requires the use of mathematics. Therefore, it is useful to give you a summary of my professional experience. I have a BSEE degree and a Masters of Science, Engineering (MSE) degree. I worked for 36 years at Lockheed Martin, in Sunnyvale. For the last 20 years there, I worked as a satellite-systems engineer. One of my responsibilities was to develop equations and methods to measure and then compensate out, through satellite database upload, the misalignments of the key antennas on the MILSTAR communication satellite.

My responsibility is to speak for the Chapter on regional and local transportation matters. Therefore, I have spoken many times before the SANDAG Board of Directors on the topics of Climate and Transportation, where he I often stated:

1. Above all else, SANDAG must adopt an RTP that will ensure that SANDAG does its part to stabilize the climate at a livable level.
2. This means at least achieving the reductions specified in the Governor's Executive Order S-3-05.
3. The SB 375 target, for year 2035, which CARB gave to SANDAG, as just 13%, would instead have to be 35.1%, in order to support the S-3-05 trajectory.

4. The above result is so important that SANDAG needs to evaluate its validity, by reviewing the mathematics shown in Reference 2 (Sierra Club to SANDAG, April 20, 2011, *California Air Resources Board (CARB) Greenhouse Gas (GHG) Reduction Targets, Issued to SANDAG, in Accordance with SB 375, for the Year 2035*) and reporting back its findings.
5. The money allocated to freeway expansion, including Managed Lanes, should be reallocated to build and operate transit.
6. "Smart", as in "smart growth", needs to be defined as "VMT-reducing" so "smart growth" means "VMT-reducing growth"; therefore "smart" strategies and developments could be evaluated and ranked on a VMT-reduction-per-dollar-spent, basis.
7. Likewise, expenditures on bicycle transportation strategies should be evaluated and ranked on a VMT-reduction-per-dollar-spent basis.
8. When SANDAG draft reports are placed on line for public comments, all of the public submittals, that are of reasonable length and that are submitted in an acceptable format, should be placed on line for the general public, the media, and the Board to view.
9. Unbundling the cost of parking and driving is technologically feasible; is much more equitable than most current systems, which make it artificially cheap to drive and park; and is a strategy which would significantly reduce driving, congestion, air pollution, and greenhouse gas (GHG) emissions. It would give people more choice over how to spend their own money.

The SANDAG Board has never responded in any way to any of these suggestions, requests, and facts. This is disappointing. I do not think this represents the interests of the City of San Diego. The Board majority seems unable to keep up with changing circumstances and it seems out of touch with emerging technologies. The Board majority needs outside help, a fresh start, and a new direction. San Diego controls 40% of the 100 weighted votes. SANDAG can take no action without approval of the weighted vote.

Please note that Item 8 above applies to the comments you receive on your draft C-MAP, such as this one.

Conclusion That the C-MAP Requires an EIR Process Under CEQA

As shown on Page 2 of http://docs.sandiego.gov/citybulletin_publicnotices/CEQA/PN1300%2520Climate%2520Mitigation%2520and%2520Adaptation%2520Plan%2520(CMAP)%2520Draft%2520ND%252008%252020%25202012.pdf, the C-MAP will serve as a qualified GHG reduction plan (GHGRP) under CEQA guidelines. It must quantify and establish a level, based on substantial evidence, below which the GHG emissions from activities covered by the plan would not be cumulatively considerable. The level needs to be established that supports (does its part proportionately) climate stabilization because destabilizing levels are certainly cumulatively considerable. As shown in Reference 1, the proxy for stabilization is the Executive Order S-3-05 ("S-3-05") trajectory, recognizing that what is important is the area under the two straight lines connecting the 3 points of S-3-05. This is shown in Figure 1[1]. This means that if any years have emissions about the straight lines, there will need to be enough years *below* the straight lines to

[1] From http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf, *California's Scoping Plan*. The 1990 level is from Page 21. The 2000 level could not be found so it was estimated to be 3% below the average for the years 2002 to 2004, taken from Page 14 of *California's Scoping Plan*.

compensate for the amount of GHG emitted that was over the limit. The 3 points are 2000 levels by year 2010, 1990 levels by 2020, and 80% below 1990 levels by 2050. The last two of these points mean that 40% below 1990 levels by year 2035 is acceptable. This will not be achievable without significant policy change. Yet the outcome of achieving this trajectory is poor and no rational human being, let alone an environmentalist, would wish that outcome on our planet. However, the outcome gives us a chance to avoid destabilization (which would equate to a collapse of our population, to include the possibility of extinction). So while achieving the S-3-05 trajectory is a bad outcome, not achieving it is so bad as to be unacceptable. We must at least achieve S-3-05. Note that a similar plot could be constructed for the world. However the world emissions are not below the 2000 values. In fact, in 2010 the world broke all records for emissions. 2011 world emissions exceeded the 2010 levels. These records were set, in spite of a world recession. San Diego's job in formulating this C-MAP is, in part, to understand and to support the science and mathematics of stabilization. Supporting stabilization means the adoption of enforceable policies that will achieve the reductions required. This will set an example for other cities, the state, other states, and other countries.

Your work to date fails to explain the science and mathematics of climate stabilization. To its credit, it shows what may be the reductions necessary for San Diego to support climate stabilization from 2020 to 2035, relying on the 2008 CARB Scoping Plan's request for cities to achieve a 2020 emission level that is "15% below current levels". However, the C-MAP fails to have a plan to achieve the needed reductions. In fact, as shown in Section 4.1 of this letter, the reductions "expected" (your word on Page 4.2) total 6,762,879, although what must be achieved is 11,033,225 (units are MT CO2e). Therefore, this plan is setting an example of failure to stabilize the climate. The reduction, that you only "expect", is not even close to what is needed. Therefore the negative outcome of doing this plan, in its current form, is to contribute greatly to climate destabilization. This is hardly an acceptable or insignificant outcome. Therefore your conclusion that no EIR is required under CEQA law for adopting the current CAP is incorrect. Decision makers need to understand that this C-MAP, in its proposed form will contribute significantly to climate destabilization, as a cumulative impact, with other cities that adopt GHGRPs that fail to meet the targets needed to support climate stabilization. Furthermore, there are many feasible mitigation strategies that you fail to recognize. For example, it would be feasible for the city to amend its off-street parking ordinances to require the unbundling of the cost of car parking. This would increase fairness and economic choice while it would reduce driving. However, even though you posted a report that explains this strategy, http://www.sandiego.gov/environmental-services/pdf/sustainable/parkingcosts.pdf, you ignored it, in violation of CEQA law requiring your full consideration of feasible mitigations.

From the above-identified "pdf" file comes the key requirement:

> ***Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions levels.***

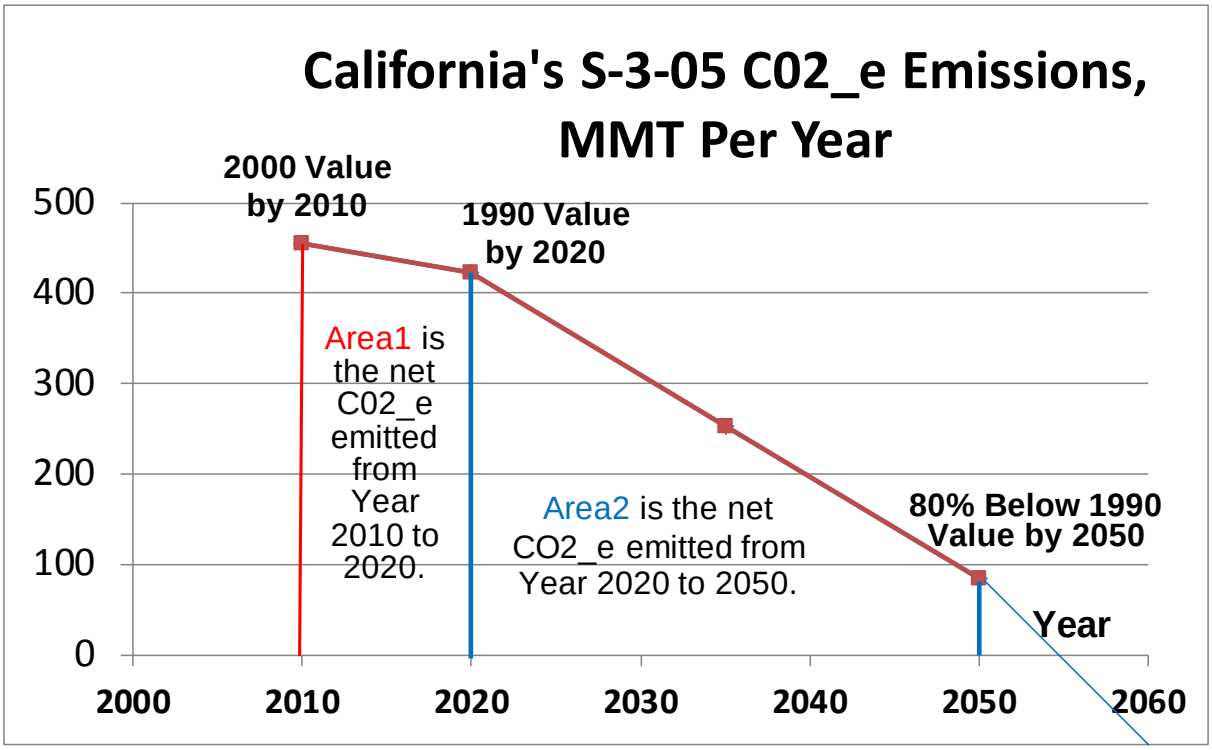
Unfortunately, that has not been done.

1.0 Comments on the Draft C-MAP's Chapter 1, *Introduction*

Section 1.3, "Climate Science" contains valuable information. It should be improved. The point should be made that, primarily due to our burning fossil fuel (coal, natural gas, gasoline, and diesel), we are adding great quantities of CO2 to the atmosphere and that atmospheric C02

traps heat. The section is missing a description of the extreme danger we face. The human catastrophe of climate destabilization needs to be described.

Figure 1 Plot of What Climate Scientists Say California Must Achieve to Support Climate Stabilization (S-3-05)

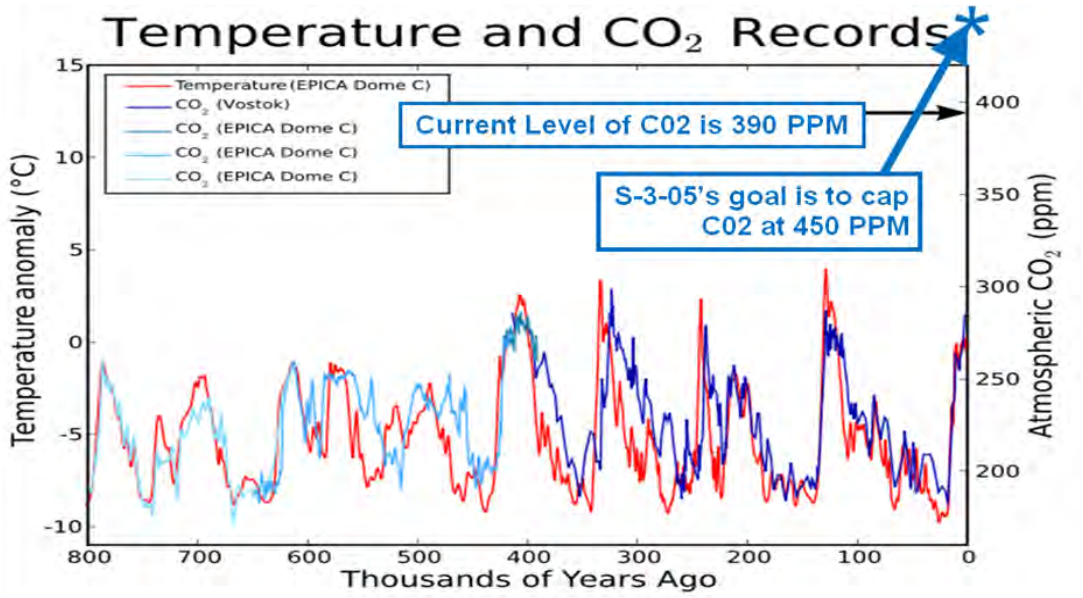


More specifically, this section fails to inform the reader (often, a decision maker) of the urgency and extreme danger posed by our climate crisis. The June 2008 issue of *Scientific American* (*The Ethics of Climate Change*, by Professor John Broome) reports that the levels of GHG expected in 20 years (16 years now) will result in a 5% chance of a 14.4 degree Fahrenheit increase in the earth's temperature and this would be an "utter catastrophe" and create the possibility of a "devastating collapse of the human population, perhaps even to extinction".

The C-MAP's Figure 1.1 fails to show the historic temperature profile. For that information, it is necessary to also show Figures 2 and 3 of this letter. They are known to be factual representations. Note that the 450 PPM value is shown. That would be a level of atmospheric C02, if the world achieves the S-3-05 trajectory (Figure 1, for California), which it probably will not. However, if the world somehow manages to achieve the S-3-05 trajectory, the value of 450 PPM would occur in year 2050. The atmospheric level of C02 then needs to be brought down to less-dangerous levels, by further reductions in emissions. To reduce atmospheric levels of CO2 the amount emitted each year would need to be less than the total net CO2 sequestered by all natural processes.

Figure 2 shows that the C02 levels shown on your Figure 1-1 plot, which are around 370 PPM, correspond to temperatures of nearly 10 degrees Centigrade. Such temperatures would risk a catastrophic collapse of the human population, to include the eventual extinction of our species.

Figure 2 **Atmospheric CO2 and Mean Temperature, 800,000 Years Ago, with 450 PPM C02 Shown**



There are no adaptation strategies that could successfully deal with such an outcome. Figure 3 clearly shows that, although the temperature rise is somewhat masked by solar activity, underneath that relatively high-frequency temperature variation, the temperature rise, which is due to the trapped heat caused by the higher-than-normal C02, is already taking place. The trapped heat's effect on our atmosphere will be delayed as it melts ice and warms the ocean. We must at least achieve the S-3-05 trajectory. It is our only hope.

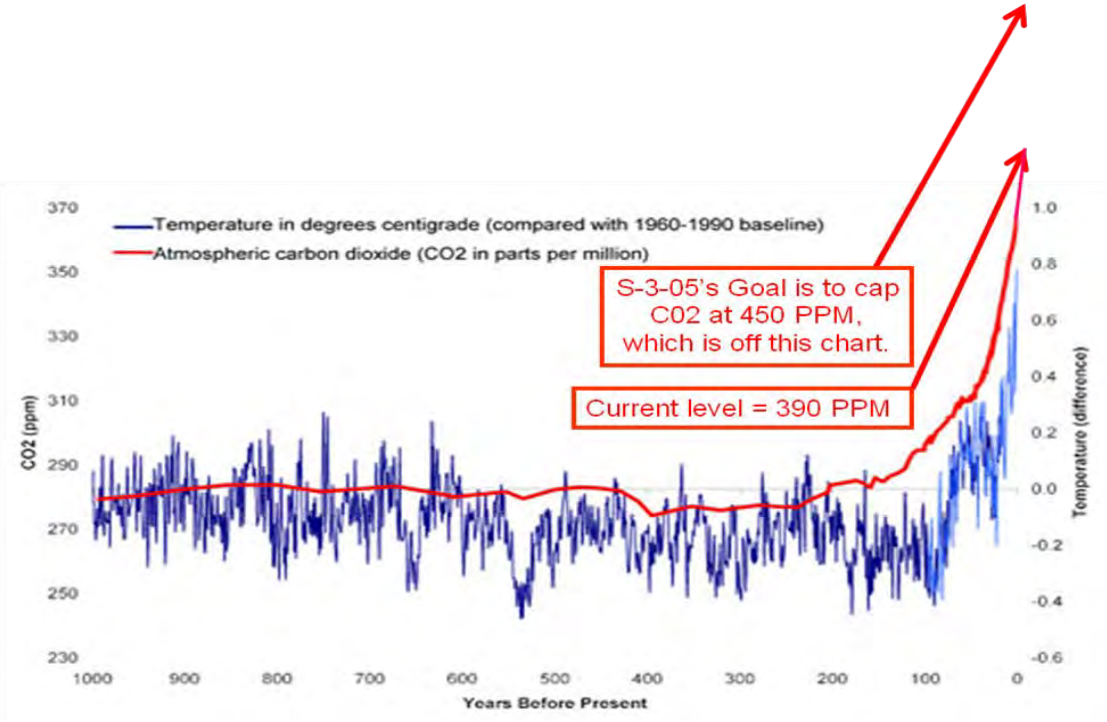
Reference 1, http://www.aqmd.gov/ceqa/handbook/GHG/2009/april22mtg/CBDcomments.pdf, has descriptions of the likelihoods of various S-3-05 outcomes, first in terms of temperature rise. Even if we achieve S-3-05, there is a 50% chance that the temperature rise will exceed 2 Degrees Centigrade. A 2 degree Centigrade rise in temperature would have very serious negative consequences, as described in Reference 1. There is a 30% chance that the temperature change would exceed 3 Degrees Centigrade, which is described as "exponentially worse" than the 2-Degrees-Centigrade outcome. And so on. Having the world atmospheric level of CO2 go above 500 PPM is unthinkable and yet that seems to be exactly what is happening.

The omission of these facts in Section 1.3 amounts to a cover up of our dangerous and currently out-of-control predicament. We are threatened with nothing less than extinction.

The discussion also covers up the fact that changes are happening much faster than earlier descriptions would lead us to believe. For example, in http://www.globalenergyworld.com/mobile/news/6124/, we learn that current trends would eliminate the summer ice at the North Pole by 2020. The earlier descriptions said it would happen before 2100. In the article, NASA climate expert James Hansen pointed out that we are in a planetary emergency.

The insert on Page 1-5 on Mitigation and Adaptation should be improved. The point needs to be made that no adaptation can be successful without sufficient mitigation. How much is sufficient needs to be evaluated and explained in your report.

Figure 3 Atmospheric CO2 and Mean Temperature, Over the Last 1,000 Years



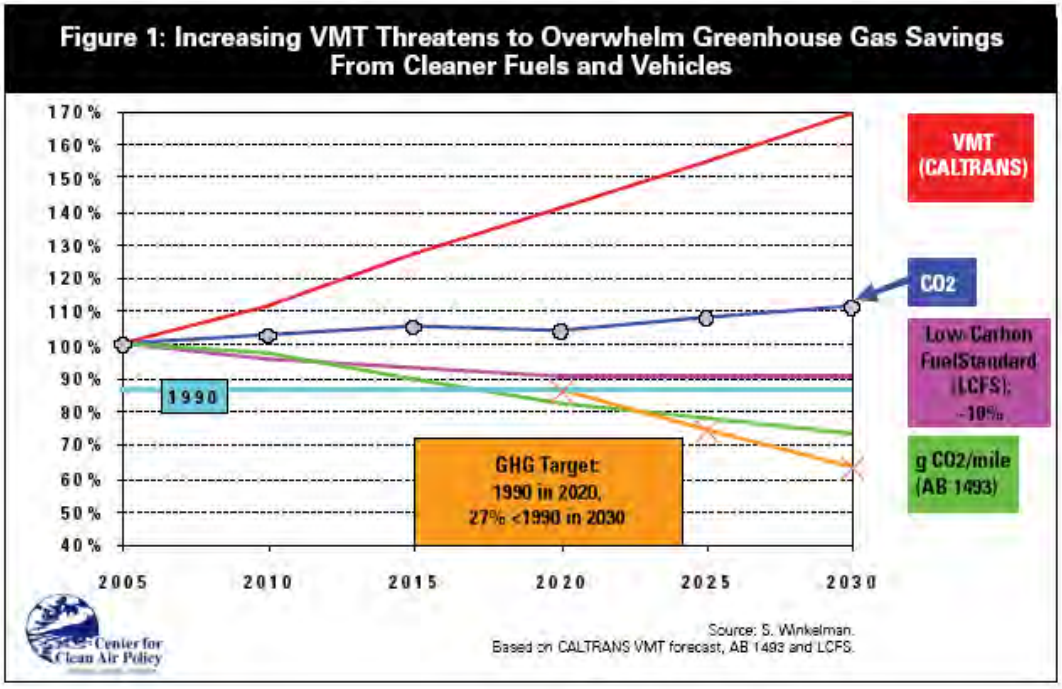
The cap and trade section, on Page 1-6 is not particularly useful and its inclusion suggests to the reader that this can take care of the problem. However, capping gasoline by price or availability is a poor strategy that risks a severe political backlash. CARB's AB 32 Scoping Plan states that cap and trade is a "back stop" meaning that it might save us if other strategies fail. San Diego's C-MAP is a document where good plans could be formulated. These plans must increase fairness while they reduce driving. They must be transparent. They must be acceptable to the public. This is an important reason that the severity of our climate crisis should be fully described.

2.0 Comments Chapter 2, Regulatory and Policy Guidance

2.1 AB-1493 and the Low Carbon Fuel Standard (LCFS)

It is very disappointing that you have omitted AB-1493, also known as "Pavley1" (named after State Senator Fran Pavley), which mandates reducing the CO2 per mile driven, average, for our California fleet of cars and light-duty trucks. This chapter needs to include Figure 4 of this report. Figure 4 is taken from Reference 3. It is Steve Winkleman's plot and is the basis for SB-375. "Pavley" is shown as the green line on Figure 4. The LCFS is shown as the purple line on Figure 4. Winkleman's plot will pull various strategies together and show why we need to reduce VMT. Leaving out Steve Winkleman's plot is unacceptable.

Figure 4 S-3-05 Trajectory (the Gold Line) AND the CO2 Emitted from Personal Driving (the Blue Line), where that C02 is a Function (the Product) of the California-Fleet-Average CO2 per Mile (the Green Line), Predicted Driving (VMT, in Red), and the Low-Carbon Fuel Standard (in Purple)



There is no particular significance to the “outpouring of support”, claimed for the LCFS, on Page 2-1. CARB hearings show that there is also opposition from organization that advocate for “food not fuel”. We need to realize the LCFS mandate is not going to be easy to achieve and we need to plan a safety factor into our driving reduction targets, in case the LCFS mandate does not materialize. This is also true for the Pavley trajectory.

2.2 S-3-05

Your paragraph on S-3-05 is inadequate. The trajectory of Executive Order S-3-05 is much more important than just the numbers in an Executive Order. Your failure to recognize its importance shows a lack of understanding of the science and mathematics of climate stabilization. The numbers contained in S-3-05 are no less than a road map to human survival. It has 3 points, not just the 2 you name. The point you left out is 2000 levels by 2010. Perhaps you thought that since the current year is beyond year 2010, this point is not important. Nothing could be further from the truth. What matters is the area under the two straight lines. I have shown this in Figure 1. Reference 1 explains the importance of S-3-05 and its result of 450 PPM. Reference 1 and all of Reference 1’s references need to be described in your Chapter 2. The fact that the S-3-05 trajectory is the target of an executive order is also important. However, Reference 2 shows that CARB ignored S-3-05 when it executed SB 375. San Diego must take responsibility for supporting climate stabilization.

2.3 Global Warming Solutions Act of 2006

Your Global Warming Solutions Act of 2006 description again shows your lack of understanding of the science and mathematics of climate stabilization. There is no way a single target in a single year can be a "Solution". What matters is the trajectory of reductions provided by the climate scientists. AB 32 only includes one point because that is all that the legislature could get passed. This weakness should be pointed out, not covered up. The single point is the middle point of S-3-05. It gives no guidance for the years before and after year 2020. Again, the area under the two straight lines, as shown in Figure 1 is what matters. CARB has earned our distrust since they gave year 2035 targets to our state's MPOs, like SANDAG, that are about one-third what is needed to support climate stabilization. This will be shown later in this letter. CARB has given the cities a target for year 2020 of 15% below the 2008 values. This may or may not be equivalent to what really must be achieved, which is the 1990 value, by 2020. What is the relationship between 15% below the 2008 value and the 1990 value that must be achieved by year 2020?

2.4 SB 375

2.4.1 Unacceptable Oversight: Climate Stabilization Question

Your comments on SB 375 are correct. However, they do not consider whether or not the targets provided by CARB equate to having the car-and-light-duty truck sector support climate stabilization, with S-3-05 serving as the proxy for climate stabilization. Governments have a responsibility to protect the health and safety of its citizens, even young people. Instead of just accepting the GHG 2035 target of 13%, it is necessary to compute what is required to support climate stabilization. The calculations are shown in Reference 2. Also, it is misleading to call the reduction "GHG". It is really a reduction in vehicle-miles-travelled (VMT) as will be shown. Finally, you should state that the reductions are per-capita and with respect to year 2005. These facts are by conventions adopted by CARB.

2.4.2 Compute the Required Driving Reductions (Reductions in VMT)

2.4.2.1 Introduction

The required 2035 value of driving reductions can be computed. The calculations for SANDAG, for the Year 2035, will be shown here. Driving reductions are per capita, with respect to Year 2005. This can be understood by carefully considering the following two items:

1.) Page 8, of http://arb.ca.gov/cc/sb375/staffreport_sb375080910.pdf, which says, "The RTAC recommended that targets be expressed as a percent reduction in per-capita greenhouse gas emissions from a 2005 base year"

2.) the first footnote in the table of CARB calculations, http://arb.ca.gov/cc/sb375/mpo.co2.reduction.calc.pdf, which says: "The CO2 emissions presented in this table do not include reductions from Pavley (better mileage for the California fleet of cars and light duty trucks) and LCFS (low carbon fuel standards) regulations."

Since no reductions are counted from Pavley and the LCFS regulations, reducing driving is the only way to achieve these reductions. "Pavley" (named after Senator Fran Pavley) refers to a lowered average C02 per mile driven. Both "Pavley" and the "LCFS" reduce the emissions per mile driven. Since these reductions are not being counted, the reductions shown come only from per capita, percent reductions in driving, or "vehicle-miles travelled", VMT. *Therefore, the so-called GHG per-cent reductions are really VMT per-cent reductions.*

2.4.2.2 Background Information

2.4.2.2.1 Factors Used to Compute Required Driving Reductions

The reduction in per-capita personal driving, needed to achieve any desired level of GHG emission, can be computed using predicted population growth and two of the variables shown in Figure 4, which is Reference 3's Figure 1. The two needed values are the CO2 emitted per mile driven (the green line, sometimes referred to as "Pavley", since AB1493 was authored by Senator Fran Pavley) and the fractional advantage from achieving low carbon fuel standards (LCFS, the purple line).

The variables plotted in Figure 4 are the factors which can be used to multiply 2005 values to get the values for the year shown. For example, in 2030, the CO2 emitted from the cars and light-duty trucks in California (the dark blue line) can be computed to be 1.12 times as large as it was in 2005. It can also be said that the value will be 12% larger than it was in 2005. Likewise, the green line, which is CO2 per mile driven, for the California fleet of cars and light-duty trucks, is predicted to be .73 times the 2005 value. This means the value is predicted to be reduced 27%, below its 2005 value. Figure 4 also shows that the 1990 value of emissions (the light blue line) was about 13% less than it was in 2005.

The S-3-05 trajectory is shown as the gold (or dark yellow) line. It is the factors that can be used to convert 2005 values of emissions to values for the years shown. For example in 2030, emissions will need to be 37% lower than they were in 2005, to meet the S-3-05 mandate.

To make use of these variables, the following mathematical facts are used.

If variable "A" is equal to the product of variables "B" and "C" and the multipliers used to convert these three variables to some future time are "f_A", "f_B", and "f_C", then

Equation 1: $A = B*C$

Equation 2: $F\_A * A = F\_B * B * F\_C * C = F\_B*F\_C * B*C$

Using Equation 1, Equation 2 can be written as

Equation 3: $F\_A * A = F\_B*F\_C * A$

Dividing both sides by "A" gives

Equation 4: $F\_A = F\_B*F\_C$

It would seem that emissions would be equal to the miles driven (the red-line value) multiplied by the CO2 per mile driven (the green-line value). However, by convention, the Low Carbon Fuel Standard must also be multiplied to get the emissions. By extension of the above result (from 2 variables to 3 variables), this means that the dark-blue-line values are the product of the green-line values, the red-line values and the purple-line values. For example in 2030, the dark-blue value of 1.12 can be computed by multiplying the green-line value of (.73), times the red-line value of (1.7), times the purple-line value of (.9). As a check, (.73)*(1.7)*(.9) = 1.1169, which is reasonably close to the (eye-ball-estimate) value of the dark-blue line, for year 2030, 1.12.

2.4.2.2.2 Observation on Business as Usual (BAU)

Although the primary purpose of Section 2.4.2.2 is to explain the relationship between the values of Figure 4, so they can be used to compute the needed driving reductions, the sample calculation for the year of 2030 shows that "business as usual" (BAU) driving, which

is represented by the Figure 4 red-line values, will not allow the emission levels to get down onto the gold line (S-3-05), as needed. In other words, Pavley and the LCFS are not enough. This shows the need for SB 375. It also shows that the C-MAP must identify enforceable strategies to achieve significant driving reductions.

2.4.2.3 Overview of the Key Relationship and Derivation of the Needed Formula

The S-3-05 net reduction in GHG emissions, from cars and light-duty trucks, expressed as a fraction of 2005 emissions, is obtained by multiplying four factors together. Using the information presented in Section 2.4.2.2 and the definitions of Table 1, the following equation (the key relationship) can be used.

Eq. 1 f **=** f_Pavley **x** f_Fuel **x** f_Population **x** f_Per CapitaVMT

Eq. 2 is derived from Eq. 1.

Eq. 2 f_PerCapitaVMT **=** f ***/*** **(** f_Pavley **x** f_Fuel **x** f_Population**)**

Table 1 **Factor Definitions, with Respect to Year 2005**

Factor Definitions	
All are for for the year of interest, with respect to year 2005 values. Except for Population, all are for cars and light-duty trucks.	
f	**net factor of the emissions of Greenhouse Gas**
f_Pavley	**factor of the average statewide mileage**
f_Fuel	**factor of the reduction of GHG due to fuels that burn less carbon**
f_Population	**factor of the population in the region of interest**
f_PerCapitaVMT	**factor of per capita driving**

2.4.2.4 Getting the Values to Use in the Equation

Figure 4 is from Reference 2 (http://www.nrdc.org/globalWarming/sb375/files/sb375.pdf), a widely-respected report on SB-375. Figure 4 will supply all of the needed values, except for the factor of population. Neither Figure 4's red-line values nor its blue-line values are used. Its gold (or dark yellow) line is the S-3-05 trajectory.

2.4.2.4.1 Getting the Net Factor of the S-3-05 Emissions of Greenhouse Gas in 2035, with Respect to 2005 Values

To get the net factor of the emissions of GHG, for year 2035, and with respect to year 2005, it is necessary to extrapolate the Governor's Executive Order target values (the gold line of Figure 4), out to year 2035. Figure 4's gold line shows that this factor is 0.87 in 2020 and is 0.64 in 2030. Therefore, in year 2035, the factor will be

0.64 + [(.64 - .87) / (2030-2020)] * (2035-2030) = 0.525

2.4.2.4.2 Getting the (Pavley) Factor of the Average Statewide Mileage in 2035, with Respect to the 2005 Value

To get the Pavley reduction factor, for Year 2035, it is necessary to extrapolate the average statewide mileage factor data, which is Figure 4's green line, out to Year 2035. It is 0.82 in 2020 and it is 0.73 in 2030. Therefore, in Year 2035 the statewide mileage factor data will be

$$0.73 + [(.73 - .82) / (2030-2020)] * (2035-2030) = 0.685$$

Pavley 1 ends in Year 2017. It is widely assumed that it will be replaced by what is often called "Pavley 2". The extrapolation computed here is based on the assumption made by the author of Figure 4, as shown in the slope of the green line from year 2020 to 2030. Based on the authoritative credentials of the authors of Figure 4, this is the best assumption that can be made at this time. Assuming that the California fleet will continually get more efficient, in terms of C02 per mile driven, relies on an assumption that a significant fraction of our car owners will be able to purchase newer-model cars, that there will be a continued political will to keep pushing car makers to improve efficiency, and there will be no insurmountable technical barriers to improved efficiency.

2.4.2.4.3 Getting the Factor of the Reduction of GHG Due to Fuels that Burn less Carbon

Looking at the purple line of Figure 4, it is clear that this factor will be 0.9 in 2035.

2.4.2.4.4 Getting the Factor of the Increase in Population

The factor for population in San Diego County is computed using the populations estimated in CARB's http://arb.ca.gov/cc/sb375/mpo.co2.reduction.calc.pdf, namely 3,034,388 people in 2005 and 3,984,753 people in 2035. So the factor, from 2005 to 2035 is 3,984,753/3,034,388 = 1.313. (This could be smaller for the City of San Diego.)

2.4.2.5 Computing the Required Per-Capita Driving Reduction, for 2035

The 4 values, computed in Subsection 2.4.2.4, are used in Eq. 2, to compute the required factor.

Eq. 2 f_PerCapitaVMT **=** .525 **/ (** .685 **x** 0.9 **x** 1.313 **)**

Therefore, f_PerCapitaVMT = .649.

This corresponds to a 35.1% reduction in per-capita driving, in year 2035.

2.4.2.6 Computing the Net Amount of Driving, in 2035, Compared to 2005, and its Significance

The net factor of driving in 2035, compared to 2005, is the product of the per-capita factor of driving (.649, as just computed) and the factor of population change (1.313, as computed in Subsection 2.4.2.4.4).

Multiplying these two factors together (increase-in-driving-per-population factor multiplied by the increase-in-population factor) gives a factor as follows:

Factor of net driving in 2035 compared to 2005:

$$= .649 \times 1.313 = .8515.$$

This means that even though San Diego County's population will grow by 31.3%, from 2005 to 2035, the people living in San Diego County must collectively drive nearly 15% less than the people in San Diego County drove in 2005. This is important information. It means that there is no reason whatsoever to expand roads. This is good news because it means

that money earmarked for highway expansion can be used to upgrade transit. It also means it is time for both SANDAG and the San Diego to step away from “Business As Usual” because policies will have to be adopted to reduce driving.

2.4.3 SB-375 Conclusion

The climate-stabilization-supporting driving reduction for San Diego should be computed. It is doubtful that the results will differ much from the County calculations. If the population growth is slower, that means the per-capita driving reduction will be smaller than the 35.1% value computed for the County. However, the 15% net reduction would not change. For safety and conservatism, it is hereby assumed that the per-capita driving reduction, with respect to 2005 should be 35.1%, for the City of San Diego.

2.5 SB 97

It is repeated that destabilizing levels of GHG are unacceptable, due to the severity of destabilization. GHGRP’s must ensure support for climate stabilization. This is the key point that has been missed by the effort so far.

2.6 Adaptation Strategy

As stated previously, this section must clearly state that adaptation is impossible without sufficient mitigation. How much mitigation is sufficient should be one of the primary determinations of the C-MAP. Instead, the authors of the C-MAP seem to take the view that the CARB mandates for 2020 are sufficient and the 2035 Target needed to support climate stabilization does not have to be met. Adaptation is important if the world manages to stabilize the climate at a livable level. In that case, adaptation makes sense. Otherwise, adaptation can only delay some bad outcomes and, during the delay, worse outcomes may occur.

2.7 Regional Actions, SANDAG

This section fails to question whether or not the CARB target of reducing driving by 13% by 2035 has any relationship to what is needed to support climate stabilization. As shown in Section 2.4 of this letter, the correct number is 35.1%, not 13%. CARB has betrayed the trust of all people. They have defeated the intent of SB 375. SANDAG played a major role by suggesting the 13% value to CARB, without any consideration as to its climate stabilization support. Instead, SANDAG assumed that all of their freeway expansion plans could be executed and then computed the 13% value, so that freeway expansion could continue.

2.8 Region Actions, Port District

The description is only about adaptation. This is incorrect. The Port must also do mitigation. As always, you fail to mention that the Port cannot adapt to destabilization.

2.9 Regional Actions, Water Authority

As always, you fail to mention that the water authority cannot adapt to destabilization.

2.10 Regional Actions, San Diego County

The county’s CAP fails to support climate stabilization. Therefore, it fails to be consistent with CEAQ guidelines. You mention AB 32 (a single target for 2020) but fail to mention the trajectory of S-3-05. Again, your apparent view is that climate stabilization is not worth consideration.

2.11 Your Figure 2.2

This figure fails to show the connection from CARB to SANDAG. That connection is required by SB 375. Under SB 375, CARB gives SANDAG driving reduction targets for the years 2020 and 2035.

2.12 CMAP Consistency with CEQA (Page 2-6)

As stated, the CMAP is a project under CEQA. If the project were done in accordance with CEQA, it would guarantee that the city has enforceable policies that will support stabilization. However, it its current form, it sets a precedent of not incorporating the science and mathematics of climate stabilization and then identifying sufficient feasible mitigations that will support that stabilization. It sets a example of failure. If other cities follow this example, California will not be able to support stabilization. Many states have no interest in stabilization. California needs to succeed in supporting stabilization, in part, to set an example. It is difficult to ask China and India to stop building coal-fired electrical generating plants while California and other states are expanding their freeways, in spite of the fact that the science and mathematics of climate stabilization shows that we must drive less, even as our population increases and in spite of the fact that our cars and fuels are getting cleaner. This CMAP contributes to climate destabilization and fails to consider feasible mitigations. As one example of an ignored feasible mitigation, even though you posted a report that explains the strategy of unbundling the cost of car parking, http://www.sandiego.gov/environmental-services/pdf/sustainable/parkingcosts.pdf, you ignored it. This is in violation of CEQA law, which requires your full consideration of feasible mitigations that have been brought to your attention.

3.0 Comments on Chapter 3, Emission Inventory, Forecasts, and Reduction Targets

Your decision to use the average emissions over years 2004 to 2008 to establish a “current baseline”, relative to CARB’s Scoping Plan, is probably reasonable, since the date of the Scoping Plan is 2008. You should quote the 2008 Scoping Plan, http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf, on Page 28, where it says:

> In addition to tracking emissions using these protocols, ARB encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State commitment to reduce greenhouse gas emissions by approximately 15 percent from current levels by 2020.

This 15% below “current” levels is, we hope, a proxy for the more correct 1990 levels, given to us by climate scientists as a target for 2020. You should state this, if it is true. We will have to assume it is true. It seems reasonable from our other readings. For example, Figure 4 shows 1990 emission levels to be 13% below 2005 levels. This may be 15% below 2008 levels.

Figures 3.1 through 3.6 show that transportation is a significant contributor and will grow in its importance, unless meaningful policies are adopted.

Table 3.2 shows a margin for 2020 of about 150,000 MTCO2e, which is good news. However, the problem is that unless this C-MAP is improved, government will put off the strategies that must be developed so that in 2020, the steep slope (emission reductions per year) of emissions needed (as described in S-3-05 as, by 2050, 80% below the 2020 target, which is to say the 1990 levels) can be achieved, so as to follow the trajectory needed that is shown in Figure 3.7. For transportation, this corresponds to the large 35.1% per-capita driving reduction

(with respect to 2005) needed by 2035. The Figure 3.7 value, for 2035 can be computed as the product of the 2020 target of 10,754,970 and the factor of (.6), because this is a 40% reduction, half of the 80% needed by 2050. The value is 6,452,982 MT CO2e. This means that that Figure 3.7 does show the trajectory that MUST be achieve if the C-MAP is going to support climate stabilization, as it must.

By using the 2020 BAU value from Table 3.2, of 14,643,089, the 10.5 years from the baseline (computed by subtracting the year 2009.5 from year 2020), and the baseline value of 12, 652,906, it is possible to compute the slope from 2009.5 to 2020 and use it to compute the projected 2035 value of 17,486,207, for BAU. All of the significant values of Figure 3.7 need to be explained in terms of how they are computed.

The bottom of Page 3-4 contains the following dissappointing statement, in response to Figure 3.7, where emphasis has been added to highlight the worst sentence:

> *Since the time horizon of the CMAP carries the City forward to 2035, measures have been recommended that will continue to reduce GHG emissions after 2020. For planning and illustrative purposes, the CMAP assumes that the same GHG reduction measures used to meet the 2020 target will be implemented through 2035 with increased participation rates.* ***However, the City also anticipates that changes to federal and state regulatory framework and advances in energy efficiency technology will occur.*** *Therefore, the City may amend the CMAP after 2020 and allow these changes to supplement or replace some of the measures.* ***It is clear that the collective effect of these additional state and federal mandates and emerging technologies will be needed to achieve the 2035 reduction target.***

In the first place, Figure 3.7 shows a complete failure of the C-MAP to achieve the reductions required to support climate stabilization. In the second place, why does ”the City” “anticipate” changes to state and federal regulations and advances in technology? The San Diego Republican mayor and his party supported Proposition 23, which would have suspended AB 32. If Mr. Romney were to win the presidential election, there is little chance that the federal government would advance new regulations. It would be more likely that the federal government will stop enforcing regulations and give the fossil fuel industry even more of what they want than the current Obama administration. If mayoral candidate De Maio becomes the next mayor, he has promised to focus on roads, not transit. He has given no indication that he is interested in climate stabilization. The current mayor has endorsed Mr. De Maio, who is also backed by the owners of the Union Tribune, a newspaper that has hardly distinguished itself on the topic of climate. The failure shown Figure 3.7 (quantified in Section 4.1 of this letter) means that additional feasible strategies are needed, not wishful thinking. Who do you consider to be the “City”? How does the “City” have the technical background to know that advances in technology will emerge that will save us? The Pavley trajectory is assuming more efficient cars will be invented, marketed, and bought at some best-estimate rates. How is the “City” qualified to assume that some better outcome will occur? The current (and perhaps next) mayor belongs to a political party that has been working to eliminate the regulations that make the Pavley trajectory more likely. For example, the previous President of the United States sued California, challenging its right to enact Pavley (AB 1494).

4.0 Comments on Chapter 4, Geenhouse Gas Emissions Reduction Measures

4.1 Table 4.

Table 4's title and the discussion of Table 4.1 cover up the failure of the C-MAP to achieve the reductions required to support climate stabilization. The title of Table 4.1 is "Local and State/Federal Strategies and Related GHG Emission Reductions for 2020 and 2035 *to Reach Target*". However, the emissions fail to reach the target, for 2035. The phrase "to Reach Target" is incorrect. The 2035 reductions do NOT reach the target.

In order to do your job and show this, quantitatively, it is necessary to go back to Table 3.2 and Figure 3.7. By using the 2020 BAU value from Table 3.2, of 14,643,089, the 10.5 years from the baseline (computed by subtracting the year 2009.5 from year 2020), and the baseline value of 12, 652,906, it is possible to compute the slope from 2009.5 to 2020 and use it to compute the projected BAU 2035 value of 17,486,207. Since the 2035 value of emissions must be 40% below the 2020 value, the 2035 emission level must be 10,754,970 (from Table 3.2) times (.6). This is 6,452,982. Therefore the net emission reductions that must be achieved in 2035 are 17,486,207 – 6,452,982 = 11,033,225. However, Table 4.1 shows that the total GHG reductions are only 6,762,879. This is a failure that betrays the trust of our young people. Quantitatively, the additional needed reductions, to support climate stabilization, are the difference as follows: 11,033,225 – 6,762,879 = 4,270,346.

The column of Table 4.1 titled as "% of Total Reduction", is the % of the total reduction achieved by this unacceptably weak C-MAP, NOT the % of what is needed. Of course the achieved totals will sum to 100%. The title of the Table, which included the false phrase, "to Reach Target" and the sum, which is 100%, is sure to lead the casual reader to conclude that the target reductions are being met, "100%".

4.2 Table 4.3's Emission Category of Transportation, Parking Policy Change to Improve Multimodal Transportation Options

The parking strategies described as "decrease parking spaces" and "increase parking prices" suggested by the Energy Policy Initiative Center (EPIC) are weak because

1.) they only apply downtown, and most driving is done in the suburbs and

2.) they are sure to be met with politically-motivated objections that are not without considerable merit.

As shown in Figure 5, I made this point nearly a year ago. As shown in Figure 6, Linda read the contents and the ideas made sense to her. The fact that no one contacted me further is another indication that feasible mitigations are not being considered.

There will be more information on how to unbundle the cost of parking in Section 6 of this letter.

4.3 The C-MAP's Section 4.3

It is good that you recognize that reducing VMT should be the highest priority for meeting climate requirements.

It is unfortunate that you use the word "pricing". We all pay the price, even if we never drive. Parking is expensive to provide and the price gets paid by everyone.

Figure 5 Email Explaining the Problems with the EPIC Parking Suggestions

From: Mike [mailto:mike_bullock@earthlink.net]
Sent: Saturday, December 17, 2011 11:34 AM
To: Pratt, Linda Giannelli
Cc: mdisenhouse@cox.net; karibu7@cox.net; janina.moretti@gmail.com; petriep@hotmail.com; franco@environmentalhealth.org; Scott Anders; Nilmini Silva-Send
Subject: Regarding SD's C-MAP's Approach to Parking Policy

Linda Giannelli Pratt
Chief Program Manager
Re: SD C-MAP's Approach to Parking Policy

Hi Linda,

I would like to improve this C-MAP. I am so pleased that EPIC is involved. They are the best and Nilmini (Dr. Silva Send) and I already have a good working relationship. She is one of the local people that helped me get my parking plan ideas formulated. Unfortunately, we have not had a policy discussion in over 3 years and my ideas have evolved beyond "cashout", which was my primary interest the last time we talked.
The current C-MAP Parking policy proposal is

1. Less parking
2. Charge for it

These reinforce common misconceptions:

- **government wants to make our lives miserable**
- **parking is actually free now.**

Both proposals, as stated, are like a "please punch me here" target. Kevin Faulkner's aid made the "point": we need more parking, so these are bad ideas; I am defending the interests of the people in my district!

So I think the CMAP's current work on parking can be improved, from just a political-strategy standpoint. Besides this, I think the free market should determine the amount of parking. The amount will naturally decline, if we have a good system in place. The off-street parking ordinances are now seen by many as no more than a baseline starting point. SANDAG has a good report showing that there is usually too much parking. We can and must move beyond SANDAG on how to price, which is to "unbundle the cost". The key of "unbundling" is that regular people get parking-lot earnings. This will help, politically, because most people like to get money mailed to them.

Here is a better one-sentence description:

- **A comprehensive policy to unbundle the cost of parking, to include the possibility of *positive TDM*, if needed.**

The response to that description will be the far better: "what the heck does that mean?" This is a good response. The person asking the question can then learn that

1.) Parking is never free
2.) Consumers deserve to know where their money is going. (They are suffering a lower wage, a higher rent, and a higher cost of most of the things they buy, due to "free" (or underpriced) parking.)
3.) This current inequity can and should be fixed, even without the threat of climate destabilization
4.) This fix, with just the free-market base price, might be enough and
5.) If not enough, the new infrastructure will support price increases beyond the fair-market price, if needed (this is "positive TDM"; the start point is "zero TDM"; free parking is "negative TDM"; see the bottom of Page 7, Reference 4 .

Most unfortunately, "positive TDM", like "unbundling the cost of parking" is only explained one place in the world and that is my published report, which I have attached. **Let's work together in 2012 to make parking policy the strongest part of this plan.** We must leap-frog over "best practice", if we are going to have success. This was clear at Thursday's Port C-MAP meeting, once the reductions were considered beyond 2020. They are very large. It would be best to move beyond BAU thinking now. For parking, we can start with a formulation and then a simplified demonstration project.

Regards to all,
Mike Bullock

Figure 6 **Email With Showing a Positive Reaction to the Proposed Change**

From: Pratt, Linda Giannelli

To: Mike

Sent: Monday, December 19, 2011 10:07 AM

Subject: RE: Regarding SD's C-MAP's Approach to Parking Policy

Great comments, Mike, and I can see how your proposal may be a better approach. I will check with our team and see how this works with the Development Services Dept.

Thanks again very much!

Linda
Linda Giannelli Pratt
Chief Program Manager
Our San Diego.
What's your legacy? Planet now.
www.SDClimateMAP.org
City of San Diego Environmental Services Department
office 858-492-5088 cell 858-518-7834
LPratt@SanDiego.gov

From: Mike [mailto:mike_bullock@earthlink.net]
Sent: Saturday, December 17, 2011 11:34 AM
To: Pratt, Linda Giannelli
Cc: mdisenhouse@cox.net; karibu7@cox.net; janina.moretti@gmail.com; petriep@hotmail.com; franco@environmentalhealth.org; Scott Anders; Nilmini Silva-Send
Subject: Regarding SD's C-MAP's Approach to Parking Policy

Linda Giannelli Pratt
Chief Program Manager

Re: SD C-MAP's Approach to Parking Policy

Hi Linda,

I would like to improve this C-MAP. I am so pleased that EPIC is involved. They are the best and Nilmini (Dr. Silva Send) and I already have a good working relationship. She is one of the

The better word is “unbundling”, which is short hand for the phrase is “unbundling the cost”. California spends about $4B per year to maintain our roads, but only gets about $2B in gas tax, which is the closest thing we have to a road use fee. San Diego could be influential at SANDAG and SANDAG could in turn be influential with our state government on this issue. Unbundling the cost of parking could be done by San Diego with no help from SANDAG. However, SANDAG would quickly endorse the concept if San Diego decided to start an implementation program. There is nothing about technology to efficiently unbundle the cost in a way that is cost effective and convenient for both drivers and non drivers. This is explained in Section 6.

Money spent to reduce driving, whether it is to incentivize “smart growth”, unbundle driving cost, or make it easier to use the alternatives such as active transportation or transit, should always be prioritized on the metric of VMT reduction per dollar spent.

Please see Section 6 for the details on what transportation options should be advanced.

5.0 Energy Recommendations

1) The draft CMAP (appendix) assumes residential PV costs $8/watt and commercial $6/watt. Best in class residential is currently at $3.50/watt (see attached SNL article quoting Clean Energy Partners/Google). CMAP should include a “best case” PV sensitivity scenario where 2012 rooftop PV is at $3.50/watt residential, $2.50/watt commercial PV. The 2020 best case assumed prices should be one-half these values per CEC projection of PV costs dropping in half from 2010 to 2020. 2020 rooftop PV is at $1.75/watt residential, $1.25/watt commercial PV. Assume all “best in class” rooftop PV systems use microinverters with 25-year guarantee (same as panels). The sensitivity scenario should include a recalculation of the projected rooftop PV in MW resulting from the lower cost of PV.
2) Include a quantitative description of the energy efficiency and zero net energy targets in the California Energy Efficieny Strategic Plan instead of simply noting the EE Strategic Plan exists (Masada – see p. 10 of attached PPT).
3) Include a quantitative description of the targets in Gov. Brown’s the Clean Energy Jobs Plan, specifically the target of 12,000 MW of new local renewable energy and 4,000 MW of new combined heat & power (CHP) statewide by 2020. Project how much of this capacity would be located in SDG&E territory based on a proportionate allocation, assuming SDG&E represents about 8 percent of statewide electricity demand. Local renewable energy for SDG&E territory should be about 1,000 MW, and new CHP would be about 300 MW by 2020 (Masada – see p. 11 of attached PPT).
4) It is important to include these quantitative values to put in context the rooftop PV and CHP capacity estimates included in the CMAP for 2020.

6.0 Transportation Strategies to Support Stabilization

6.1 Zoning and Other Strategies to Reduce Driving Near Good Transit Stops

Sprawl should be stopped. Zoning to increase density and height should be applied within walking distance of existing and funded transit stops on transit lines with service at or above levels shown to significantly reduce driving and car ownership for those living within walking distance of its stops. As soon as possible, California needs to implement an equitable and environmentally-sound road use fee pricing system that will unbundle the costs of building roads, of maintaining roads, and of the external economic losses road use imposes on society in general, such as environmental and health costs. This will cause the market to support so-called “smart growth”, mixed-use development over urban sprawl. The City needs to seek legislation to help make this happen.

“Smart” needs to be defined as “VMT-reducing”. This will allow strategies that are proposed or required at such developments to be evaluated for value. Unbundling the cost of parking should also be developed and required, as described in Reference 4. (Reference 4 was presented at the Sustainable Land Use and Transportation Session of the Air and Waste Management Association's 103rd Conference and Exposition, in the summer of 2010. It is

therefore published and peer reviewed.) This will give consumers, residents and employees more control over their money. It will also reduce driving, as shown in Reference 4's Table 1.

Zoning within the qualifying areas should eliminate density and height limitations, as well as minimum parking requirements. Investors will respect the market limitations as there will be poor demand for developments that don't work for those that buy, rent or lease in such developments. Besides this, when projects are proposed, good modeling will determine functionality. Meeting the relaxed zoning does not have to mean automatic approval. The political process will litigate the tension between neighborhood concerns and the need to reduce driving. The off-street parking ordinance should require that the parking costs are unbundled, using either the method of parking operating as its own profit center or using the methods describe in Reference 4.

6.2 TransNet Tax Reallocation

In Section 2.4.2 showed that driving in San Diego County must decease by 15%, from 2005 levels. Therefore, there is no need for more highway lanes and so the TransNet tax money allocated to highway expansion needs to be reallocated to transit. Although this is a SANDAG Board decision, it should be pointed out by the San Diego Board members at every opportunity.

6.3 How to Increase Walking and Biking

The C-MAP's reliance on the SANDAG plans, including the Regional Bicycle Plan, should be reduced and the need to improve those plans should be stated. The primary problem with these plans stems from the refusal of the SANDAG Board to require that expenditures be ranked on their estimated ability to decrease driving. Project and strategy ranking should be based on driving reduction per dollar spent.

6.3.1 Education and Projects to Support Bicycle Transportation

As stated, the criteria for spending money for bicycle transportation should be to maximize the resulting estimated reductions in driving. The following strategies will probably do this.

6.3.1.1 Projects

Each of SANDAG's smart growth place types, both existing and planned, shown on SANDAG's well-documented Smart-Growth Concept Map, should be checked to see if bicycle access could be substantially improved with either a traffic calming project, a "complete streets" project, more shoulder width, or a project to overcome some natural or made-made obstacle. These projects should be prioritized using a cost/benefit ratio metric.

It is hereby assumed that 80% of the money available for the Regional Bicycle Plan (over a billion dollars) should be used to fund the projects. They should be selected for implementation, from top of the list (lowest cost/benefit ratio) down, until the money is used up. An example of one of these projects, for the proposed town center near the corner of I-5 and SR-78, is to devise a method to restore the shortest-distance route from Vista Way to Vista Way, which is currently broken by Interstate 5. This would connect a large South Oceanside coastal neighborhood with a regional shopping center, which includes a large grocery store. The current connection is long and hilly, compared to a bridge to restore the pre-I-5 route.

Building recreational bike paths is generally not a cost-effective expenditure. It sends a message that bikes do not belong on the road.

6.3.1.2 Traffic-Skills 101 Classes

The remaining 20% of the money should be used to do the following.

1.) Teach interested adults about bicycle accident statistics (most serious injuries occur to cyclists in accidents that do not involve a motor vehicle), car-bike accident statistics (most are caused by wrong-way riding and errors in intersections; clear cut hit-from-behind is rare), and how to ride in all conditions, to minimize problems.

2.) Teach riding-in-traffic skills and how to ride in other challenging conditions, by having the class members and instructor go out and ride in real conditions, until proficiency is achieved.

Students that pass a rigorous written test and demonstrate proficiency in traffic and other challenging conditions are paid for their time and effort.

These classes should be based on the curriculum developed by the League of American Bicyclists and taught by instructors certified by the League.

Assuming a class size of 3 riders per instructor and that each rider passes both tests and earns $100 and that the instructor, with overhead, costs $500 dollars, for a total of $800 for each 3 students, means that $200M (computed as 20% of $1B) could educate $200M/$800 = 250,000 classes of 3 students, for a total of 750,000 students, out to year 2050. This is about 20% of the population of San Diego County.

6.4 Comments on Transportation Demand Management

SANDAG and all the cities and the county include “TDM” in their discussions of how to reduce VMT. By taking the position that transportation demand management must only be programs that reduce driving, many documents foster the widespread belief that driving levels are the result of free economic choice, and that this free choice must be made less likely by offering some new incentive to not drive or causing drivers to suffer some sort of punitive measure when they insist on driving. That approach to TDM is conventional but it is also misleading.

To engender objectivity, the concept needs to be considered beyond the conventional points of view. More specifically, TDM should be viewed as the adoption of policies that affect the amount of driving. These 3 classifications of TDM are suggested in Reference 4:

- "Positive", which reduces driving, such as charging for parking at a higher rate than what is justified by its value,
- "Zero", which is neutral in its affect on driving, such as charging for parking at the rate which is justified by its value, and
- "Negative", which increases driving, such as charging for parking at a lower rate than what could be justified by its value.

It should then be pointed out that so called "free parking" is a widespread form of a (significantly) negative TDM. The only way to make this TDM more negative would be to pay people for parking their car.

This treatment will increase objectivity towards the idea of "TDM". After all, who really wants their demand for anything to be "managed"? However, many current policies manage demand for driving by encouraging driving. If we could just get all the "levers" adjusted to "Zero TDM", all of our congestion and driving-related climate destabilization problems would be greatly reduced. Besides this, there is a basic fairness issue. Having at least "Zero TDM" should be the law of the land. This is true, even without the challenge and mandate of climate stabilization. One of the best TDM measures would be to unbundle the cost of parking in all locations, as explained in Reference 4. After these systems are

installed, it would be possible to adjust the charge above the zero-TDM level. It is important to note that the earnings go back to those for whom the parking is built. This makes the positive TDM more popular since everyone likes getting monthly earnings.

6.5 Unbundling the Cost of Car Parking

For the vast majority of destinations in California, the cost of car parking is hidden within other costs. This has serious consequences. For example, at most places of employment, parking costs reduce the wages that can be paid to all the employees, even those that never use the parking. Similarly, at most apartment complexes, bundled parking costs increase the rent and this is true, even for families that do not own a car. Bundled parking costs routinely increase the costs of goods, such as groceries, for all customers. Again, this is even true for those that do not drive. Since governments require businesses to provide minimum levels of parking, they are involved in this economic discrimination towards those that drive less.

Driving less is, to some degree, a lifestyle choice. Since government has no valid reason to encourage driving, the lifestyle choice of less driving deserves constitutional, or at least legal, protection from any practices that discriminate against it, economically. So far, the City has not taken an active role in educating its citizens on how parking policy effects economic fairness or how parking policies that are more fair could reduce driving.

On June 22nd 2010, I presented a paper on how parking could be operated to unbundle parking costs in a way that supports the sharing of parking. This was at the 101st Conference and Exhibit of the Air and Waste Management Association, in Calgary, Canada. The session, *Sustainable Land Use and Transportation*, included the paper, *A Plan to Efficiently and Conveniently Unbundle Car Parking Costs*. The paper was well received. It was published as a proceeding of the Conference. It is Reference 4. Reference 4 is therefore both peer reviewed and published.

The following points, taken from the Reference 4, apply.

- Vehicle miles traveled (VMT) are a major cause of global warming and pollution.
- California's Metropolitan Planning Organizations (MPOs) need to adopt strategies that reduce vehicle miles traveled (VMT), in order to at least meet the S-3-05 trajectory, for years 2020 and 2035.
- The appropriate pricing of parking is one of the least-costly tools documented to reduce VMT.
- New technologies, such as sensors feeding data into computer-generated billing and earnings distribution, offer the potential to efficiently bill drivers for parking, pay earning to those for whom the parking is built, and alert law enforcement of trespassers.
- Reformed parking policies can increase fairness, so that, for example, people who use transit or walk do not have to pay higher prices or suffer reduced wages, due to parking.
- Methods to unbundle parking cost are inefficient, unless they support the spontaneous sharing of parking spaces. Shared parking, with unbundled cost, would ultimately allow the City to require significantly less parking.
- Typical current systems of timed parking and metered parking are far from ideal. Such parking has no automated record keeping, so it is difficult to know where there is too much or too little parking.

- Good policies will eventually let cities and the county turn parking minimums into parking maximums.

Less land and resources devoted to parking will support mixed use and make “smart growth” more economically viable.

Here is the abstract of Reference 4.

> The *Introduction* shows documented driving reductions due to the pricing of parking. It notes that although the benefits of priced and shared parking are known, such parking has not been widely implemented, due to various concerns. It states that a solution, called “*Intelligent Parking*,*”* will overcome some of these concerns, because it is easy to use and naturally transparent. It asserts that this description will support a “Request for Proposal” (RFP) process. Eight background information items are provided, including how priced parking would help California achieve greenhouse gas reduction targets. A story demonstrates some of the key features of *Intelligent Parking*. Arguments for less parking, shared parking, and priced parking are made. Barriers to progress are identified. The fair pricing of parking is described. New ways to characterize transportation demand management are presented. Seven goals of *Intelligent Parking* are listed. Eleven definitions and concepts, that together define *Intelligent Parking*, are described. This includes a method to compute a baseline price of parking and how to adjust that price instantaneously to keep the vacancy above 15% (“Congestion Pricing”). An implementation strategy is described.

This abstract aroused enough interest among those responsible for A&WMA’s *Sustainable Land Use and Parking* session that they requested a manuscript, which was ultimately selected to become part of the written Conference Proceedings and for presentation. We hope that it will similarly arouse the interest of the Mayor, City Council, and staff. The City should work to help execute the implementation strategy described in Reference 4.

The City could also play a pivotal role by helping to find a demonstration project, probably at a school or an office. Reference 5 gives the specifics on how this could be done. Reference 4 describes an implementation strategy in its Implementation Section, on Page 16. The City has the authority, in its off-street parking ordinances, to require cooperation with an agency implementing unbundling and this would be the correct action, after a sufficient number of successful demonstrations have been achieved. “Successful” would need to mean that nearly all stakeholders would be pleased with the program.

If fully implemented, this strategy, by itself, would probably decrease driving throughout the City by between 15% and 25%. This is shown in Reference 4’s Table 1.

Here is an email indicating that the basic features of enforcement, charging, distributing earnings, and sending out monthly statements would not be difficult.

Email Showing that the Basic Required Technology Could Be Easily Developed

> ----- Original Message -----
>
> **From:** David Carta
> **To:** 'Lisa Rodman' ; 'Mark Tanner' ; 'Kelli' ; 'Nicole' ; 'Mark S.' ; 'John'
> **Cc:** 'Mike Bullock'
> **Sent:** Wednesday, January 13, 2010 5:40 PM
> **Subject:** RE: RFID_ParkingNewCalsbadHS
>
> Dear Carlsbad School Board,

I wanted to send a quick note discussing the technical feasibility of tracking cars into a lot without impacting students or requiring the need for gates. Mike Bullock and I have discussed this project; it can be accomplished straightforwardly by utilizing Radio Frequency Identification and/or Video Cameras integrated with automated license recognition systems. The cars would need to register with the system at the start, but it would be fairly painless for the users after the initial installation. The back end database system can also be implemented both straightforwardly and at a reasonable price.

This is not necessarily a recommendation of the proposal for unbundled parking. Rather it is strictly an unbiased view of the technical feasibility of the proposal to easily and unobtrusively track cars, both registered and unregistered, into a fixed lot.

Best regards,

David R. Carta, PhD
CEO Telaeris Inc.
858-449-3454

6.6 Unbundling the Costs of Driving

6.6.1 Introduction

This measure would require a state and/or federal government action. Therefore, like advocating for cleaner cars, the role of the City would be to understand the value and then advocate for this measure, at the state and federal level. SANDAG could help.

“Unbundling”, in the heading above, denotes that the money collected should be paid out to those that are losing money under the current system. This means, for example, that the money collected to account for increased health-care costs, caused by the air pollution the public must breathe, would go to reduce the cost of health care, not to build or even maintain roads.

6.6.2 A Comprehensive Road-Use-Fee Pricing System To Unbundle the Cost of Driving

Abstract This section contains a listing of road pricing principles. It provides an example of a road-use fee structure that supports the listed principles. Useful background information is provided. Arguments in favor of the presented example are presented.

Initial Note For many reasons, including the climate crisis, a comprehensive road-use fee pricing system is needed. It would be optimal for the state to implement the type of system described in this section. However, the state has a long history of irresponsibility in pricing road use. It is hoped that global warming will change this. Certainly, all the MPO’s in the state should be urging our state government to wake up and take action. If these efforts fail, the MPO’s will have to proceed as best they can to implement as much of these road-use pricing system components as possible.

6.6.2.1 Road-Use Fee Principles

1. The first principle is that of “full-cost pricing”. Driving has enjoyed a favored status in this state and in this country, resulting in sprawl, health-damaging pollution, global warming emissions, and congestion. We should advocate for the elimination of that favoritism in California, primarily by adopting this first principle.

2. Secondly, the current economic rewards for good mileage vehicles must not be eroded. Due to global warming, motorists need to “go electric” as soon as possible.

3. In addition, road-wear factors (primarily weight), the noise generated, and the pollution generated by each individual vehicle must be taken into account. This will increase fairness and support a shift to lighter, cleaner, and quieter vehicles.

4. The time and place of travel must be incorporated to reduce congestion.

5. Any road-use fee structure must do no economic harm to low-income drivers.

6. As road-use fee technologies evolve, privacy must be protected at each step.

An Example of a Conforming Road-Use Fee Structure

Condition 1

100% of the funding for all of the expenses of public roads, *excluding* those costs associated with future expansion (covered in Condition 3), comes from a road-use fee (that may include a fuel excise tax), that ultimately (as affordable technology can support) would contain the following **Features**:

Feature 1: a VMT Fee A base, per-mile (VMT) component fee paid by all motorized vehicles for road construction and maintenance. It would vary by model so that the incentive to drive efficient vehicles is at least as large as for our current fuel excise tax. This means that a Prius would be much cheaper, per mile, than a Hummer.

Feature 2: a Carbon Fee An additional per-mile carbon component part is computed using an effective fee per gallon that is equal or larger than the fuel tax that this per-mile carbon fee might replace, to correlate with the amount of CO2 emitted. This could either be charged at the pump, as it is now done, or could be added to the VMT fee by using a price per mile computed by dividing the effective price per gallon by the charged vehicle's (year and model) average mileage, in the units of mile per gallon.

Feature 3: a Road Wear Fee An additional per-mile component part that is proportional to the vehicle's (year and model) average weight, or other road-wear variable of the vehicle being charged.

Feature 4: an Air Pollution Fee An additional per-mile component part proportional to the charged vehicle's (year and model) average pollution level, to be used to compensate people, schools, businesses, governments, and corporations harmed by pollution, with this rate set for full compensation.

Feature 5: a Noise Pollution Fee An additional per-mile component part proportional to the average noise pollution level of the charged vehicle, to compensate people, schools, businesses, governments, and corporations harmed by noise pollution, with the rate set for full compensation.

Feature 6: a Congestion Fee An additional per-mile component part or, alternatively a multiplier, to account for either time and place, or instantaneous traffic flow rate, to reduce or eliminate congestion, with the proceeds of this fee (collection minus collection cost) used for either the expansion or the operation of transit systems that would tend to reduce this congestion.

Feature 7: Low Income Relief A fractional multiplier that would reduce the total per-mile cost for drivers with a sufficiently low income and a sufficiently high need to drive, but only available for a period of calendar time sufficient for the driver to change their circumstance creating the need to drive, unless this is impossible. Item 7 of 6.6.2.3 has more detail.

Feature 8: Privacy Privacy protections so that where and when people drive, the vehicle they drive, and any Feature 7 advantage, is fully protected, unless a warrant is issued by a judge in response to substantiated allegations of a serious, felony crime.

Condition 2

The per-mile charges of Condition 1 must be large enough to fund yearly payments to the municipalities having large, limited access roads (AKA "freeways") within their boundaries (thereby keeping land off of their property-tax rolls), with these yearly payments equal to the average yearly property tax per acre of the adjacent land, multiplied by the total acreage covered by the road's right of way, including frontage roads.

Condition 3

No expansion of the system of public roads should be done unless market research and traffic modeling show that the net revenue of the proposed road or additional lanes will fund all the expenses identified in Conditions 1 and 2.

Condition 4

No expansion of the system of public roads should be done unless it is shown that the expansion will not negatively impact the state's AB32 and S-3-05 goals and responsibilities.

Condition 5

The sales tax on gasoline and diesel fuel should remain. Its revenue can be used as is the revenue from any other sales tax that is collected on consumer items.

6.6.2.2 Background Material

This section provides information about the current level of the fuel tax, the difficulty of raising the fuel tax, the use of the fuel *sales* tax, lane performance during times of high demand, demand under the condition of "full cost pricing", political "push back" to full cost pricing, other opinions that a pure fuel tax is becoming obsolete, and finally, information indicating that a road-use fee could be raised by a simple majority in the state legislature.

1. Current Level of Fuel Excise Tax

A full accounting of the fuel excise tax and what it currently pays for is not our responsibility. A significant segment of the population probably believes that current fuel tax rates are high enough. However, a San Diego County newspaper, the North County Times (NCT), in a February 9, 2009 article, reported that the Chair of the California Transportation Commission (CTC) recently wrote that the fuel tax currently contributes nothing to road construction **and only provides half of the money needed annually for repairs:**

http://www.nctimes.com/articles/2009/02/09/news/columnists/downey/z8591536f3e7332da882575510076fa1e.txt

Increasing the state gas and diesel taxes, unchanged at 18-cents per gallon since 1994 – when the final one-cent increase mandated by Proposition 111 (June, 1990 that doubled the nine-cent excise fuel tax over a 5-year period) was added, is long overdue.

2. The Difficulty of Raising the Fuel Tax

To raise the fuel tax would require a 2/3rd majority vote of the legislature. In addition, according to a CNN report, http://www.cnn.com/2009/POLITICS/02/20/driving.tax/

"Officials including [Secretary of Transportation] LaHood have opposed raising the national gas tax, particularly in the current recession, and have said a new system is needed."

3. Use of the Fuel *Sales* Tax

California has a sales tax on all consumer items sold in the state, except food and medicine. The revenues from sales taxes are generally placed in our state's general fund. However, an exception to the general rule has been made for the sales tax on gasoline and diesel. By the conditions of a successful ballot measure, the sales tax on fuel must be used to support roads, which supplements the excise tax on fuel (also known as the "gas tax"), allowing the excise tax to be lower than necessary.

4. Lane Performance When There Is High Demand

From the DOT's Freeway Management and Operations Handbook:

http://ops.fhwa.dot.gov/freewaymgmt/publications/frwy_mgmt_handbook/fmoh_complete_all.pdf, Page 1-18, comes the following:

> As flow increases from zero, density also increases, since more vehicles are on the roadway. When this happens, speed declines because of the interaction of vehicles. This decline is negligible at low and medium densities and flow rates. As the density further increases, these generalized curves suggest that speed decreases significantly just before capacity is achieved, with capacity being defined as the product of density and speed resulting in the maximum flow rate. This condition is shown as optimum speed "So" (often called critical speed), optimum density "Do" (sometimes referred to as critical density), and maximum flow "Vm". (7). In general, this maximum flow (i.e. capacity) occurs at a speed between 35 and 50 mph.
>
> Efficient freeway operation depends on the balance between capacity and demand. In the simplest terms, highway congestion results when traffic demand approaches or exceeds the available capacity of the highway system. As vehicle demand approaches highway capacity, traffic flow begins to deteriorate. Flow is interrupted by spots of turbulence and shock waves, which disrupt efficiency. Then, traffic flow begins to break down rapidly, followed by further deterioration of operational efficiency.

Therefore, when demand is allowed to significantly exceed capacity, the flow rate drops well below optimum. In fact, speed can drop to nearly zero. With no intervention, freeway lanes can be counted on to fail, just when they are needed the most.

5. Demand, Under the Condition of "Full-Cost" Pricing

The price-setting stipulations of "An Example of a Conforming Road-Use Fee Structure", Features 1 through 6 of Condition 1, in conjunction with Condition 2, could be described as "full cost pricing". It is not our responsibility to do an analysis to calculate what the average price per mile would need to be or to then determine how much driving would be reduced in reaction to this price. It could be that driving would decrease so much that congestion would disappear and the new problem would be to figure out what to do with the excess land buried under unneeded highway lanes and how to meet the large new demand for transit.

6. Political Pushback to the Notion of Full-Cost Pricing

There are many, well-funded "think tanks" and political figures and institutions that argue against raising the cost of driving. So far they have been largely successful in keeping the taxes on driving low.

7. Other Opinions That a Pure Fuel Tax Is Becoming Obsolete

There are many indications that more decision makers are adopting the view that the fuel tax either needs to be replaced or supplemented. The following examples are presented, with the first three being taken from the same NCT article identified in Item 1 of this Section (6.6.2.2).

First the Chair of the CTC pointed out that, “People are driving more-fuel-efficient cars and ones that run on alternative fuels and buying less gas. As a result, they are paying less in gas taxes”. The author of the NCT article states that the CTC Chair and others are calling for “phasing out the gas tax,” in favor of a VMT fee.

Second, Will Kempton, director of the California Department of Transportation, told local officials in Valley Center recently "we need to make a transition to a new way of collecting transportation funds." Kempton also said the state should consider following the lead of Oregon, which is exploring a tax based on the number of miles a person drives.

Third, Jim Earp, a California Transportation Commission member from Roseville, added, "Either that or we're going to have to jack up the gas tax considerably."

Fourth, the Christian Science Monitor editorial, February 27, 2009, “A road map to better US roads,” says, “Congress should heed a panel that suggests replacing a tax on gas with one on miles driven.”

http://www.csmonitor.com/2009/0227/p08s01-comv.html It goes on to say, “In Europe, the Netherlands will transition to a VMT (fee) by 2014 and Denmark by 2016. Changing behavior is the key to 21st century transport that must unclog crowded highways and reduce dependence on fossil fuels. Taxing miles alerts drivers to the real cost of using roads and can better motivate them to drive less. A VMT (fee) is the more reliable and efficient way to pay for transport. Its time has come.”

Finally, according to a CNN report, http://www.cnn.com/2009/POLITICS/02/20/driving.tax/, Speaking to The Associated Press, Transportation Secretary LaHood, an Illinois Republican, said, "We should look at the vehicular miles program where people are actually clocked on the number of miles that they traveled."

8. Raising a Road-Use Fee Could Be Done By a Simple Majority

The Sacrament Bee printed an article by Dan Walters, on January 20th, 2009, describing a proposal to help close California’s budget gap.

http://www.nctimes.com/articles/2009/01/20/opinion/walters/zd5e9d64561b6efd78825753e006c951a.tx.

The key elements from the article are as follows.

1.) Senate President Pro Tem Darrell Steinberg insists that it's legal, basing that assertion on a 5-year-old opinion from the Legislature's legal office.

2.) The plan would eliminate excise and sales taxes on gasoline and raise other taxes to help close the budget deficit, then "backfill" the gasoline taxes with a new "fee" that would actually increase the bite on motorists by 50 percent, from 26 cents a gallon to 39 cents. **A "fee" can be imposed by a simple majority vote as long as it relates to actual services rendered by government.**

Note that this fee approach is relatively far from meeting all of the stipulations of this letter. However, it would represent significant progress.

6.6.2.3 Arguments in Favor of Road Use Fees

This Section provides an analogy demonstrating why roads should be operated for the equal benefit of all. It presents some of the consequences of the current level of our state fuel tax. It argues that a road-use fee should include a vehicle miles traveled (VMT) component and that furthermore, a component should relate to congestion pricing (i.e. needs to account for *specific* time and place of travel). It argues that a road-use fee should account for environmental impacts, should protect low-income families, and contain privacy protections. It explains why revenue from a road use fee should be used to pay an effective property tax to municipalities. It argues that these methods would help to alleviate the state's budget problems. It states that it is easier to discuss setting a road use fee than it is to discuss increasing an excise tax on fuel. Finally, it briefly discusses some of the emerging technologies and the relationship between technology and this resolution.

1. Full-Cost Pricing

Roads should be priced so that they are no longer an economic burden on those that choose to drive less than average. Yet, it is hard to be objective about roads. Here's an analogy. Assume that California owned a large number of 2-bedroom apartments that it allowed families to live in if they paid a tax of $500 a month, even though the market rental value of the apartments was $1000 a month. Clearly, the people living in the apartments are the winners and all the other citizens of California are the losers, because if the state set the price to the market value, it would have additional money that it could either use for the benefit of all citizens or it could return the money to everyone as a tax rebate. Some might note that since there are a large number of these apartments, almost everyone that wants one could get one, so those that don't live in these 2-bedroom apartments are losing out because of their own poor choice. However, since not every citizen wants to live in these apartments, the State's practice is indefensible. The correct thing for the state to do would be to allow low-income citizens to remain in the rental units at the subsidized price of $500 a month, stop calling the price-per-month a "tax" and instead call the price-per-month a "user fee", and set the price for the families that are not low income to the market value of $1000 per month. In this case, the low-income families remain winners. Even though all the others are losers, they are losing much less than before. This assumes that the state takes the additional earnings and uses it in a way that benefits all citizens. Buying more 2-bedroom apartments would not qualify. This analogy's original operation is similar to what California does by under pricing road use fees, as described below.

2. Consequences of the Current Level of Fuel Tax

a. Economic Inequity

Because our state fuel tax is too low, funds derived from taxes (and fees) that are not related to the choice of driving a car must be used to support our system of public roads. Examples are our sales tax, our income tax, our property tax, and the development fees that increase many of our costs. In effect what is happening is that money is systematically *being taken* from those that drive less and *being given* to support those that drive more.

This violates a fundamental principle of our free market system. People should pay for what they use and, conversely, people should not be forced to pay for what they do not use. It is true that we often willingly violate this principle, for some higher purpose. Education, mass transit, and Section 8 housing are good examples. However, there is no valid reason to

increase driving by making it artificially cheap to drive, or for that matter, to park a car. The facts about global warming suggest quite the opposite.

b. Global Warming Threat and the California Example of Road-Use Pricing

From http://www.sandiego.edu/EPIC/ghginventory/GHG-On-Road1.pdf.pdf, we learn that in San Diego County, emissions from on-road vehicles are about 46% of regional GHG emissions. Many world leaders know that many of our citizens have taken all of the time and cost variables into account and then built their life around their automobiles. How can we expect the world to do its part to reduce GHG emissions, if they see us unwilling to reform the way we price the use of roads, so as to conform to the basic free-market principles that we claim to hold dear?

c. Other Pollution

Besides GHG emissions it is well known that on-road transportation contributes significantly (around 50% by some accounts) to our air and noise pollution. Cars cause air and water pollution directly and indirectly. This occurs when they are manufactured, when their fuel is transported and refined (refineries are, by far, the biggest cause of ground-water contamination in California), and when they are driven.

d. Urban Sprawl

The dominance of the automobile is the primary reason for our sprawling, urban land-use patterns. For example, it is well known that a simple 4-lane freeway, with frontage roads, can consume 26 acres per mile. An acre of land can only park 117 cars. Sprawl has taken valuable farm land, wet lands, and wild-life habitat. It makes it more difficult to walk or to bicycle. It also makes it more difficult to provide or to use transit.

e. Summary Statement

GHG emissions, urban sprawl and air, water, and noise pollution are made worse by making driving seem artificially inexpensive to the public. Note that for every penny earned by raising the price per mile to drive to its correct value, a penny could be cut from other taxes and fees that are unrelated to driving. Secretary of Transportation Ray LaHood's statement ("we can't raise the gas tax in a recession") shows that he misses this important point. This point has been made by the Sierra Club, as shown in http://www.sierraclub.org/policy/conservation/trans.aspx, where it says, of subsidies to driving, "These subsidies should be publicly scrutinized and eliminated by appropriate fuel and carbon taxes, parking and road user charges, . . ."

3. The Use of the Gasoline *Sales* Tax

As stated in Section III. 3, currently the *sales* tax on fuel must be used for the same purposes as the *excise* tax on fuel. This is contrary to the normal rule for sales taxes, whereby sales taxes are used for general-fund purposes, unrelated to the item sold. For example, the sales taxes from running shoes are not removed from the general fund to be used to build running facilities. Likewise, the sales tax on alcoholic beverages is not separated out to be used to subsidize the building of more drinking establishments. If we are going to end our unfortunate favoritism towards roads, we need to end the practice of using the sales tax from gasoline as if it were an additional fuel excise tax. This practice would be ended if the implied recommendations of this report were enacted. The sales tax on gasoline should continue, but the tax on the sale of gasoline should go to the general fund, as does the tax on the sale of other consumer items.

4. Reasons to Adopt a VMT Based, Road-Use Fee

From a Global Warming perspective, there is a hierarchy of favored personal transportation modes.

Mode 0: Telecommuting (no need to leave the house)
Mode 1: Walking
Mode 2: Cycling (skate boarding and any other device-aided, non-motorized transportation mode)
Mode 3: Electric bikes and scooters
Mode 4: Transit
Mode 5: Electric cars or cars that get great mileage
Mode 6: Other cars

In terms of reducing pressure to expand road capacity, Modes 0, 1, 2, and 3 are many times more desirable than even Mode 4, which is many times better than Mode 5. The point here is that as much as we want to see more electric cars and more cars that get exceptionally high mileage, we should not lose sight of the fact that unless all road users pay their fair share, those people using Modes 0, 1, 2, 4, and 4 are not being fully rewarded for not using road capacity, and this is poor environmental policy, based on the desirability factors shown. All cars are large, manufactured devices with a finite life. They promote sprawl. People that routinely use Modes 0 through 4 have often set up their lives so that they could drive less. Those life-style choices need to be fully rewarded.

5. Reasons to Adopt Road-Use Pricing Methods Tied to *Specific* VMT

a. Need to Support Condition 1's Feature 6

The current fuel tax is simple and, in theory it could be raised to cover the costs of driving, for those vehicles that use fuel. Alternatively, it is easy to imagine odometers that transmit their values at scheduled times to a billing computer. With vehicle-recognition schemes, implemented at the pump or within the billing computer containing odometer data, it would be possible to expand these simple methods to support Section 6.6.2.1's Features 1 through 5, Feature 7, and Feature 8. However, these simple methods would not support congestion pricing, Feature 6. Feature 6 is sufficiently important that it must be identified and supported.

b. Value of (Condition 1's Feature 6) Congestion Pricing

Various names have been proposed for Section 6.6.2.1's Feature 6, including "congestion pricing" or "convenience pricing". Regardless of the name, it is a powerful way to reduce our society's propensity for expanding highways. Proponents of freeway expansion frequently mention the fact that highway "gridlock" harms our public safety because it can significantly delay emergency vehicles. Individuals in society see this in personal terms. We can all imagine a need to get home to attend to a child, or to get to an emergency room. The consequences of congestion can go well beyond being just a frustrating inconvenience. Sometimes people feel that they would pay almost anything to be able to drive at higher speeds. How many people have missed a plane, or a train, or a critical business meeting, "stuck in traffic"? Besides this, lanes also often support transit. Transit success requires dependable and reasonably fast bus travel. In addition, stop and go traffic wastes fuel, increases GHG, and increases unhealthy emissions.

"Convenience Lanes" could provide an option for drivers when they feel it is worth the extra money to drive beyond congestion speeds. This pricing also provides a means to keep one or more lanes operating close to their theoretical capacity, instead of at the greatly reduced flow

rate that comes when demand is large. The pricing can adjust automatically to keep demand below capacity, on one or more lanes. This means that congestion in parallel lanes will clear sooner than if all lanes were allowed to stay severely congested.

"Convenience Lanes" also offer the hope of significant revenue generation, if enough people are willing to, in effect, bid up the price. (This will probably happen if the price of driving is kept low enough in regular lanes that there are still times and places where congestion is significant.) Feature 6 would require that proceeds (collection minus collection costs) be used for transit systems that would tend to reduce the congestion. The lanes and roads that are parallel to the "convenience priced" lanes can be counted on to fail to carry their capacity when serious congestion strikes. Fortunately, there is no comparable effect for transit. Although it is conceivable that transit demand could exceed transit carrying capacity, when this happens, the transit can be counted on to continue to carry its full capacity.

c. Condition 1's Feature 6 and Road Price Variability

Some roads are relatively expensive to build; others are relatively inexpensive. There is no reason we have to settle for charging the same per-mile price for all roads. Similarly, driving at different times should be priced differently. It is well understood that freeways are sized and expanded to facilitate peak driving times. Since it is more costly to provide the added capacity needed at peak times, it is reasonable to charge peak-time drivers more. Charging more at the times that demand is high will tend to smooth out traffic demand over various times of the day.

d. Condition 1's Feature 6 and Pollution

Feature 6 can reduce congestion. This is important because stop-and-go traffic emits more pollution and GHG emissions than lanes operating at "optimum speed" as identified above.

e. Condition 1's Feature 6 Supported by the California Transportation Commission (CTC)

These powerful arguments have evidently been recognized by the CTC. In their *Addendum to the 2007 Regional Transportation Plan Guidelines*, *Addressing Climate Change and Greenhouse Gas Emissions During the RTP Process***,** adopted on May 29, 2008, they provide strong support to lane pricing.

http://www.catc.ca.gov/programs/rtp/Adopted_Addendum_2007_RTP_Guidelines.pdf,

In the CTC's Pricing Strategies Section (Page 3), the CTC instructs Metropolitan Planning Organizations to "model adding pricing **to existing lanes**, not just as a means for additional expansion. **Variable/congestion pricing should be considered**."

Variable/congestion pricing cannot be done without Section II's Feature 6 of its Condition 1.

f. Arguments to Support Road-Pricing Guidelines

There is widespread confusion regarding who owns existing lanes and what promises were made. Converting existing, "free" lanes to be lanes that are priced can be justified by explaining that fuel taxes have always been road-use fees and that any stated or implied promise that paying fuel tax entitled drivers, for all time forward, to drive free on the roads that the fuel taxes may have been used to fund was specious. Specifically, the claim that drivers "already paid" for roads through the payment of fuel taxes is incorrect because (*i*) many drivers have just started driving; (*ii*) many drivers that paid fuel tax for many years have died; and (*iii*) paying a fee to use a public road is no different than paying rent to use property and paying rent does not lead to quasi ownership. These same arguments can be used against

statements supporting the idea that drivers can forever drive free over a bridge because the tolls have paid off the loan for the bridge.

6. Reasons for Condition 1's Features 2 – 5

These features charge vehicles for their environmental impacts.

7. Reasons for Condition 1's Feature 7

The ability of low-income families to be able to drive to work and other essential family errands must be protected. However, given our challenge of global warming, this needs to be "constructive charity". The features shown in Section 6.6.2.1 suggest that a billing computer will probably be involved. If so, that computer's database can, perhaps at the individual's discretion, be supported with information such as current housing details, current salary, job location, occupation and job skills to include a full resume, childcare, location of family and friends, hobbies, or recreational pursuits, and other items that could be related to the individual's current need to drive. When the software determines that the person qualifies for a reduced multiplier of the full cost of driving (a subsidy), it could then also run various programs to offer, in creative, tailored, form letters, suggestions for changing circumstances to reduce driving. This could involve a search for jobs, a search for suitable housing, a search for daycare, and a search for better locations to pursue hobbies or recreation. The availability of transit would be considered in the software and would be offered. Job training could be suggested or offered at a discount. If circumstances support it, the person could also be asked if they would be interested in a class on riding a bicycle in traffic (Traffic Skills 101, taught by League-of-American-Bicyclist-certified instructors). Taking such a class could earn the person a financial award, perhaps to include a new or used bicycle. The software would put a high priority on helping the person achieve a lifestyle that requires less driving. As a last resort the software would take into account the congestion level of various routes and offer a driving route that requires a reduced subsidy.

8. Reasons for Condition 1's Feature 8

Privacy must be protected, unless confidential disclosure to law enforcement agencies is ordered by a judge based on reasonable cause. We currently rely on laws and judges to protect our privacy regarding what we say on the telephone, our emails, our internet activities, and the information we provide on our tax forms. This information could be both politically revealing and highly embarrassing, to the point where it could seriously degrade our personal and professional lives. In terms of protecting our democracy, it is especially important that our political activities be protected. Where we drive and park a car is also somewhat sensitive in this regard. However, in most cases it is less sensitive than our emails and what we say on the phone. Cell phone companies already have information about our travel. Many locations, such as Dallas, have "toll-tags" that record every time someone goes through a toll plaza and charges them accordingly. The conclusion is that the argument that many people will never accept a computer, with built in privacy protections, from having information about where we drive is overblown and not supported by the facts.

9. Reasons for Condition 2

Railroads pay property tax on the land under their tracks. Utility companies pay property taxes on the land under their transmission lines. There is no reason that large highways should not pay a property tax for the land they take off the tax rolls in each community. The favored status of roads should be eliminated.

10. California's Budget Problem

California currently has a large budget gap. Children may lose their health care and education cuts may be severe. Many state funding programs for transit may be cut. This strategy might help to reduce some of these cuts.

11. Raising the Fuel Tax vs. Pricing a Road-Use Fee

There are advantages in reframing the question from should we raise the fuel tax to: Should we replace the fuel tax with a road-use fee and, if so, how should we set the price of the road-use fee? Item 2 of Section 6.6.2.2, *Background Material,* above showed that a 2/3rds vote is needed in the state legislature to raise a tax; while, as shown in Item 8 of Section 6.6.2.2, *Background Material*, above, only a simple majority is needed to set and then raise a user fee. Besides this, there are a lot of common misunderstandings about our fuel taxes. Many think they are a mechanism whereby drivers somehow buy new roads. This confusion was discussed in detail in Item 1 of Section 6.6.2.3, *Arguments in Favor of Road-Use Fees*. If we can move the discussion to one of how to properly set the price of road use, we will have already made large gains in framing the question to the advantage of environmentalists, climate realists, and everyone that recognizes that it is time to stop favoring driving.

12. Technology

It is not the City's responsibility to pick the technologies that will ultimately be used in the implementation of the road-use pricing described. Email and phone conversations with employees of *Skymeter*", http://www.grushhour.blogspot.com/, indicate that they were ready to respond to a Request For Proposal (RFP) to implement VMT pricing in the Netherlands, to include every road in the country. Their proposal would have been that each car would have a GPS unit, about as large as an eye-glasses case, sitting on the dash. It would contain a database of roads and a variable set of pricing coefficients. The GPS software would determine the car's location with sufficient accuracy so as to support software computing a running tabulation of charges, as the car is driven. *Skymeter* officials state that the final challenge was to design the software so that the unit would function when the car was being driven in the presence of GPS reflections, such as in city "canyons" which is to say around multiple large buildings. They have solved this problem with additional algorithms and have demonstrated this in the most severe conditions they could find. However, they don't want to have to distinguish between lanes, suggesting that congestion pricing on large multi-lane roads, where pricing varies between parallel lanes, may require a Radio Frequency Identification (RFID) overlay pricing scheme, such as is currently used for "toll tags."

There are probably several, perhaps even many, ways to accomplish road-use pricing that has the features described in this Section. For example, license plate recognition is now probably inexpensive and reliable, since it is often used at stop lights.

6.7 Conclusions of Section 6, Transportation Strategies to Support Stabilization

In Section 2.4.4 of this letter, it was computed that, for the cars-and-light-duty-truck sector to support stabilization, the per-capita driving reductions, with respect to 2005 levels, here in San Diego County, would have to be at least 35.1%. The best strategies to reduce VMT are summarized here, with the estimated driving reductions (per-capita, with respect to 2005 levels) for each one shown in square brackets:

1.) Comprehensive (equitable and environmentally sound) road use fee pricing system, as could be installed by *Skymeter*; [15%]

2.) Unbundling the cost of car parking; [15%] (This estimate is based on Table 1 of Reference 4.)

3.) Good bicycle projects and bicycle education; [5%,]

4.) Stopping all freeway expansions and reconfiguring TRANSNET to be 67% for transit and 33% for road maintenance [10%]

These strategies could be implemented by 2020, not 2035, and would decrease per capita driving by a sum of at least 45% (15+15+5+10). However, Item 4 would take time because the additional transit might not be built by 2020. The strategies to do this are primarily those that increase fairness for all, especially families that drive less than average. Item 2 could be done by San Diego alone. Items 3 and 4 would require SANDAG cooperation. Item 1 would require state implementation. Since San Diego controls 40 of SANDAG's 100 weighted votes, the City could control SANDAG actions, if the City could get other cities to see the need for climate stabilization. For example, San Diego with 40 votes, Chula Vista with 8 votes, and La Mesa, with 2 votes, could block any action by SANDAG. SANDAG could go from being a climate-killing organization to a climate-saving organization. SANDAG could also influence our state government to stop ignoring our need for a road-use fee. Other MPOs would join SANDAG, since all MPOs and all California cities need to develop plans to grow and yet achieve a GHG emission trajectory out to 2035 and beyond that will support climate stabilization.

7.0 Conclusions & Questions

If this C-MAP is changed so that it adopts a plan of enforceable, feasible mitigations and thus develops an enforceable plan that supports climate stabilization beyond year 2035, it can avoid the necessity of an EIR process under CEQA. However, the current proposal contributes significantly to climate destabilization and ignores feasible mitigations. Therefore adopting this "project" requires an EIR process, under CEQA. After reading and considering the supporting comments of this letter, do you agree with these conclusions? If not, why?

Section 1 of this letter identifies climate information that must be included in any C-MAP so that readers clearly see the challenge and danger of our climate crisis. After reading and considering the supporting comments of this letter, do you agree with this conclusion? If not, why?

This letter computes that per-capita driving must be reduced by 35.1% by 2035, compared to 2005 levels. The corresponding *net* driving reduction is 15%. After reading and considering the supporting comments of this letter, do you agree with these conclusions? If not, why?

The current plan has little or no enforceable reductions and only shows a set of expected and proposed reductions that total 6,762,829 MT CO2e, even though a reduction of 11,033,225 MT CO2e is needed to support climate stabilization. (This is shown in Section 4.1 of this letter, with the calculations based on Table 3.2 and Figure 3.7 of the C-MAP.) After reading and considering the supporting comments of this letter, do you agree with these conclusions? If not, why?

Although a strong parking policy strategy is needed, the current C-MAP proposal (C-MAP Table 4-3) is weak and invites strong criticism. A winning strategy is proposed in this letter. After reading and considering the supporting comments of this letter, do you agree with these conclusions? If not, why?

Section 5 of this letter contains strong energy proposals to improve the proposed C-MAP. After reading and considering the supporting comments of Section 5, do you agree with this conclusion? If not, why? Please answer this for each of the 4 recommendations in Section 5 of this letter.

Section 6 shows a set of transportation strategies that would achieve support for climate stabilization. Some of them are difficult, but they are all feasible if the City pursues them aggressively. After reading and considering the supporting comments of this letter, do you agree with these conclusions? If not, why?

Respectfully submitted,

Mike Bullock
1800 Bayberry Drive
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760-754-8025
Sierra Club San Diego Transportation Chair

References

Note: References 2 and 5 were attached in the email sent to the City that contained this letter. The other references can be viewed at the links shown.

1.) Letter from *Center for Biological Diversity*, to Elaine Chang, Deputy Executive Officer of Planning, Rule Development, and Area Sources of the South Coast Air Quality Management District**;** *Comments on Survey of CEQA Documents on Greenhouse Gas Emissions Draft Work Plan and Development of GHG Threshold of Significance for Residential and Commercial Projects*; April 15, 2009. http://www.aqmd.gov/ceqa/handbook/GHG/2009/april22mtg/CBDcomments.pdf.

2.) Letter, Sierra Club Transportation Chair to SANDAG Board, *California Air Resources Board (CARB) Greenhouse Gas (GHG) Reduction Targets, Issued to SANDAG, in Accordance with SB 375, for the Year 2035*, April 20, 2011

3.) *Communities Tackle Global Warming, A Guide to California's SB 375*; Tom Adams, Amanda Eaken, and Ann Notthof; June 2009. http://www.nrdc.org/globalwarming/sb375/files/sb375.pdf

4.) M. Bullock & J. Stewart, *A Plan to Efficiently and Conveniently Unbundle Car Parking Costs*; Paper 2010-A-554-AWMA, from the Air and Waste Management Association's 103rd Annual Conference and Exhibition; Calgary, Canada, June 21-24, 2010. http://www.sandiego.gov/environmental-services/pdf/sustainable/parkingcosts.pdf

5) Letter, Bullock to the Honorable President Richard Holober and Members of the Board of Trustees, San Mateo County Community College District; *An Updated Parking Policy, in Light of the Controversy Surrounding the Removal of Building 20, Greenhouse, and Gardens, to Add Parking*; July 27, 2011

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The San Diego Chapter of the Sierra Club is San Diego's oldest and largest grassroots environmental organization, founded in 1948. Encompassing San Diego and Imperial Counties, the San Diego Chapter seeks to preserve the special nature of the San Diego and Imperial Valley area through education, activism, and advocacy. The Chapter has over 11,000 members. The National Sierra Club has over 700,000 members in 65 Chapters in all 50 states, and Puerto Rico.

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December 13, 2013

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Via E-mail, to the two emails shown above

Subject: Comments Regarding the City of San Diego's Draft Climate Action

Dear Mr. Schoenfisch and Ms. McPherson:

I appreciate the opportunity to communicate with you concerning this important topic. As the Chair of the Chapter's Transportation Committee, I will primarily restrict my comments to climate and the required, climate-stabilizing reductions and how they can be achieved in the sector of regional and city-wide transportation. My background and the detailed, required mitigations are contained within Reference 1. All of the references should be considered part of this letter.

The Draft CAP Target, Based on S-3-05, of 49% below the 2010 Emission Levels by 2035, Must Instead be *83*% below the 2010 Emission Levels, by *2030* (not 3035).

CEQA law requires that the negative impacts of failure be explained. In this case, failure is climate destabilization, where the positive feedbacks take over and all hope is lost. This would result in the probable loss of most, if not all, life on our planet. CEQA law also requires that the science-based remedy or mitigation set be clearly defined and planned, if feasible. Note that in this case, nothing is more infeasible than failure. Regarding our climate crisis, success is our only rational option. There have been many recent articles explaining that reductions much larger than the S-3-05 trajectory are now required. Reference 2 will be used here. What is needed can be determined by keying off the scientific truth shown on Page 20 of Reference 2 (emphasis added):

> An abrupt cessation of all CO2 emissions, whether in 2015 or 2030, is unrealistic, in part because industry, other business, and consumers alike need time to retool and reinvest in emission-free options to fossil fuels. Accordingly, Amici Scientists have proposed a glide path to secure an atmosphere whose CO2 concentration is no higher than 350ppm. Their plan requires fossil fuel CO2 emissions reductions of 6 percent annually, coupled with programs to limit and reverse land use emissions (i.e., massive reforestation). These actions could achieve the goal of restoring the atmosphere to approximately 350ppm within this century if the

> plan were commenced without delay, and then adhered to. However, consistent with the abrupt phase out scenarios discussed in the prior paragraph *supra*, if the 6 percent annual emission reductions are delayed until 2030, then the global temperature will remain more than 1oC higher than preindustrial levels for nearly 300 years. Considered in another way, the required rate of emissions reduction would have been about 3.5% per year if reductions had started in 2005, while **the required rate of reduction, if commenced in 2020, will be approximately 15% per year.** Accordingly, the dominant factor is the date at which fossil fuel emissions phase-out begins.

The above words and Reference 2 in general means that S-3-05's 2050 target, of 80% below 1990 values, needs to be achieved in 2030. This can be computed as the 0.85 factor (from 15% per year) to the tenth power (10 years, from 2020 to 2030), which is 0.1968. Therefore the correct target, is not for year 2035, but is instead for year 2030. Finally, it must be computed as (0.85 x .2) = .17 or 87% below the 1990 value. The truth is that we need to adhere to the standards of AB 32, which is that we must maximize reductions by adopting all measures that are technically feasible and cost effective. All of the mitigations described in Reference 1 meet both of these simple criteria and so our job now is to implement them as soon as possible

You Should Show How the Target of 49% Below 2010 Levels by 2035 Was Computed

It is from the S-3-05 trajectory between the "1990-level-by-2020" target and the "80%-below-the-1990-level-by-2050" target. The 1990 value is said to be 15% below 2010. Therefore, for 2020, the factor 0.85 must be applied to the 2010 reference year. Since 2035 is half way between 2020 (in 2020, a factor of 1 applies, relative to the 1990 value) and 2050 (in 2050, a factor of 0.2 applies, relative to the 1990 value, since it is 80% down), the factor to get to 40% (halfway between 100% and 80%) below 1990 is 0.6. (Alternatively, 0.6 is halfway between 1.0 and 0.2.) Therefore the factor is computed as the product of 0.85 and .6 = .51, which is 49% down from 2010, as you show, on Page 3, in the "By the numbers" box.

The Draft is Better Than Other Local CAPs

I have worked on the climate action plans of San Diego County, our Port Authority, and the cities of San Marcos and Vista. They are all failures. According to a Superior Court Judge, the County CAP has no enforceable measures. I would say that if there are any enforceable measures in any of these CAPs (the Port's Board may have no intention of ever finalizing a CAP), they are far too little and far too late. Your draft CAP is better. It has a 2035 target that conforms to S-3-05. Five years ago, it might have been possible to argue that such a target was legally defensible.

The CAP also has some good comments regarding car-parking policy. The measures need to be improved, however. Still, they at least show a willingness to suggest a departure from Business As Usual (BAU). The Port's draft, which may never get completed, has about matched this effort, in offering parking-policy reform. The San Marcos and Vista CAPS have nothing more than the minimal-help suggestion of offering better parking places to Zero-Emission vehicles (ZEVs).

Bring the Car-Parking Reform Measures Up to a Higher Level of Climate-Stabilization Support

People, even people in government that should know better, often call bundled-cost parking "free". Parking is very expensive to provide. It is never free.

A very high percentage of the car-parking facilities in San Diego are operated as bundled-cost parking. This is especially true in the suburban areas of San Diego, where the per-capita vehicle-miles travelled (VMT) is higher than the city average. Besides this, implementing parking systems that unbundle the cost of parking need to start with a reduced set of features, compared to a full-featured system. It is unwise to suggest that good systems should not be implemented in the suburbs. If a factory in section of San Diego that had no transit at all were to unbundle the cost of its parking, there would be very little hardship on drivers, because most of the workers would continue driving. For example, if there were 100 workers and the charge was $5 per day and only 2 employees biked to work and everyone else drove alone, the money to be divided among the 100 employees would be $490 dollars per day. Each worker (this simplified example assumes everyone works the same number of hours per day) would earn $4.90 per day. The two bicycle riders would net a plus $4.90 per day. The drivers would net a loss of ten cents per day. Note that if the two unused parking spaces could be rented out to the general public, for $5 per day, the drivers could break even. The authors of the Draft CAP seem to think that unbundling in the suburbs would not work. This is false, as the simple example shows.

Specifically, the following word changes are recommended

IS:

3.3.3 Develop a Parking Plan by 2020 to include measures such as **unbundled parking for commercial and residential sectors** in urban areas, flexible parking pricing to reflect supply and demand in City neighborhoods.

SHOULD BE:

3.3.3 Develop a Parking Reform Implementation Plan by 2015, to include methods to unbundle the cost of parking, first at schools and places of employment, but to extend into all parking, in both suburban and urban areas, by 2025. The first reduced-feature, demonstration projects, which would include automated, monthly pricing-and-payout statements, with net earnings or charge, should be implemented no later than 2017. By 2020, these reduced-feature systems should cover no less than 50% of all work-place parking that was previously bundled-cost parking. The system should eventually include instantaneous pricing to ensure availability; fully shared, anybody-can-park-anywhere parking availability with no or very infrequent time limits; GPS-system directions to the best parking at the desired price; accurate price estimations; mailed statement features that will protect privacy; and the capability to reduce price as need to protect low-income drivers and handicapped drivers. By 2025, 80% of all parking that would have been unbundled-cost parking in BAU in 2012, would be covered by these systems. Parking on the property of single-family homes, apartments up to 6 units, and all individually owned parking behind garage doors are exempt. All on-street parking is covered by this system. More detail can be seen for one such system at http://www.sandiego.gov/environmental-services/pdf/sustainable/parkingcosts.pdf.

Bring Other Transportation Reform Measures Up to a Higher Level of Climate-Stabilization Support

Note that in order to have cars and light-duty trucks (light-duty vehicles, LDVs) support climate stabilization, clean cars, clean fuels, and less driving are needed. The allocation of each method of reducing CO2 emissions needs to be made so the difficulty of getting sufficiently clean cars (CAFÉ standards) and fuels (Low Carbon Fuel Standards) will roughly equal the difficulty of getting the driving reduction needed. This problem was worked in

Reference 1 but it needs to be reconsidered given that cars are going to be much cleaner but the new 2030 target will still require a large reduction in driving. (I plan to report on my own findings this summer, at the Air and Waste Management Association's annual convention.

IS:

3.2.1 Complete 5-Year Strategic Implementation Plan of the Bike Master Plan by 2015, including establishing implementation performance measures such as SANDAG bike counts, an evaluation of the number of network miles, green lanes, buffered bike lanes, number of bike racks installed, number of miles of lane diets, and the number of miles paved and restriped lanes.

SHOULD BE:

3.2.1 Complete 5-Year Strategic Implementation Plan of the Bike Master Plan by 2015, including establishing implementation performance measures such as SANDAG bike counts, an evaluation of the number of network miles, green lanes, buffered bike lanes, number of bike racks installed, number of miles of lane diets, and the number of miles paved and restriped lanes. When spending money to increase the use of active transportation, measures should be ranked and implemented based on the criterion of estimated vehicle miles travelled (VMT) per dollar spent. For example, subsidizing the League of American Bicyclist classes on how to safely ride in traffic ("Traffic Skills 101") may be the best use of active-transportation funds being spent to reduce driving.

IS:

3.2.3 Establish new priority ranking for prioritizing infrastructure improvements in high quality transit areas that will be integrated into Capital Improvement Priority Matrix, Community Development Block Grant opportunities and Public Facilities Financing Plans by 2015.

SHOULD BE:

3.2.3 Establish new priority ranking for prioritizing infrastructure improvements in high quality transit areas that will be integrated into Capital Improvement Priority Matrix, Community Development Block Grant opportunities and Public Facilities Financing Plans by 2015. When spending money to improve so-called "smart growth", measures should be ranked and implemented based on the criterion of estimated vehicle miles travelled (VMT) per dollar spent. Therefore "smart" should be defined as "VMT reducing", as in "VMT-Reducing" Growth.

IS:

3.4.1 By 2035, implement SANDAG measures to meet GHG reduction targets from passenger vehicles to comply with SB 375, including telecommuting, carpooling, vanpooling, buspooling, bottleneck relief, HOV/HOT lanes, and safe routes to school.

SHOULD BE:

3.4.1 By 2020, start implementing the SANDAG measures and more, as needed, to meet GHG reduction targets from passenger vehicles to comply with SB 375, by bringing about modal-split shifts to telecommuting, carpooling, vanpooling, active transportation, and transit use. These measures need to include improved road-use pricing mechanisms. Here, "complying with SB 375" means achieving the driving reductions and clean-car and fuel standards required to get the LDV sector to support climate stabilization, regardless of what CARB and SANDAG might say.

Final Comments

Other mitigations, which are described in detail in Reference 1, need to be implemented. It may also be useful to consider Reference 11, which is from a "boiler plate" we have developed to improve a CAP.

Respectfully submitted,

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Sierra Club San Diego Transportation Chair

References

Note: References 1, 2, 4, 7, and 8 were attached in the email sent to the City that contained this letter. The other references can be viewed at the links shown.

1.) Letter from Sierra Club Transportation Chair to Linda Giannelli Pratt and Anna McPherson, regarding San Diego's C-MAP and Negative Declaration document for the C-Map, September 28, 2012, sent in an email on 9/29/2012 at 12:21 AM

2.) BRIEF OF SCIENTISTS AMICUS GROUP AS *AMICI CURIAE* IN SUPPORT OF PLAINTIFFS-APPELLANTS SEEKING REVERSAL, ALEC L., *et al*.,*Plaintiffs Appellants*, v. GINA McCARTHY, *et al*., *Defendants – Appellees*, USCA Case #13-5192 Document #1465822 Filed: 11/12/2013 (Attached in the email containing this letter)

3.) Letter from *Center for Biological Diversity*, to Elaine Chang, Deputy Executive Officer of Planning, Rule Development, and Area Sources of the South Coast Air Quality Management District**;** *Comments on Survey of CEQA Documents on Greenhouse Gas Emissions Draft Work Plan and Development of GHG Threshold of Significance for Residential and Commercial Projects*; April 15, 2009.
http://www.aqmd.gov/ceqa/handbook/GHG/2009/april22mtg/CBDcomments.pdf.

4.) Letter, Sierra Club Transportation Chair to SANDAG Board, *California Air Resources Board (CARB) Greenhouse Gas (GHG) Reduction Targets, Issued to SANDAG, in Accordance with SB 375, for the Year 2035*, April 20, 2011 (Attached in the email containing this letter)

5.) *Communities Tackle Global Warming, A Guide to California's SB 375*; Tom Adams, Amanda Eaken, and Ann Notthof; June 2009. http://www.nrdc.org/globalwarming/sb375/files/sb375.pdf

6.) M. Bullock & J. Stewart, *A Plan to Efficiently and Conveniently Unbundle Car Parking Costs*; Paper 2010-A-554-AWMA, from the Air and Waste Management Association's 103rd Annual Conference and Exhibition; Calgary, Canada, June 21-24, 2010.
http://www.sandiego.gov/environmental-services/pdf/sustainable/parkingcosts.pdf

7) Letter, Bullock to the Honorable President Richard Holober and Members of the Board of Trustees, San Mateo County Community College District; *An Updated Parking Policy, in Light of the Controversy Surrounding the Removal of Building 20, Greenhouse, and Gardens, to Add Parking*; July 27, 2011 (Attached in the email containing this letter)

8.) *Ideas and Proposals for San Diego CAP Improvements*, December 12, 2013, based on a boiler-plate document, written by a group of San Diego Chapter activists who were working on multiple climate action plans. (Attached in the email containing this letter)

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The San Diego Chapter of the Sierra Club is San Diego's oldest and largest grassroots environmental organization, founded in 1948. Encompassing San Diego and Imperial Counties, the San Diego Chapter seeks to preserve the special nature of the San Diego and Imperial Valley area through education, activism, and advocacy. The Chapter has over 11,000 members. The National Sierra Club has over 700,000 members in 65 Chapters in all 50 states, and Puerto Rico.


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A Plan to Efficiently and Conveniently Unbundle Car Parking Costs

Air and Waste Management Association Paper 2010-A-554-AWMA

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ABSTRACT

The *Introduction* shows documented driving reductions due to the pricing of parking. It notes that although the benefits of priced and shared parking are known, such parking has not been widely implemented, due to various concerns. It states that a solution, called "*Intelligent Parking,"* will overcome some of these concerns, because it is easy to use and naturally transparent. It asserts that this description will support a "Request for Proposal" (RFP) process. Eight background information items are provided, including how priced parking would help California achieve greenhouse gas reduction targets. A story demonstrates some of the key features of *Intelligent Parking*. Arguments for less parking, shared parking, and priced parking are made. Barriers to progress are identified. The fair pricing of parking is described. New ways to characterize transportation demand management are presented. Seven goals of *Intelligent Parking* are listed. Eleven definitions and concepts, that together define *Intelligent Parking,* are described. This includes a method to compute a baseline price of parking and how to adjust that price instantaneously to keep the vacancy above 15% ("Congestion Pricing"). An implementation strategy is described.

INTRODUCTION:

It has been well established that appropriately priced parking will significantly reduce driving[1]. Most case studies presented in Table 1 are evaluations of the most general type of "car-parking cash-out": *a program that pays employees extra money each time they get to work without driving*. They show that a price differential between using parking and not using parking will significantly reduce driving, even when transit is described as poor. Since driving *must* be reduced[2], the pricing of parking is desirable.

Shared parking is also recognized as desirable because it can sometimes result in less parking being needed.

Although the advantages of pricing and sharing parking have been recognized for many years, these practices are still rare. This paper identifies some of the reasons for this lack of progress. The pricing and sharing method of this paper has a natural transparency and ease of use that would reduce many of the concerns. This paper also suggests that those governments that have the necessary resources can take the lead role in developing and implementing the described systems. These governments will recover their investments, over time.

This paper describes how parking facilities could be tied together and operated in an optimum system, named *Intelligent Parking*. The description of *Intelligent Parking* is sufficient to support a "Request for Proposal" process, leading to full implementation.

There are two distinct parts to *Intelligent Parking*. The first is how to set the price. The second is how to distribute the earnings. Briefly, the earnings go to the individuals in the group for whom the parking is built.

Table 1 Eleven Cases of Pricing Impact on Parking Demand

Location	Number of Workers @ Number of Firms	1995 $'s Per Mo.	Parking Use Decrease
Group A: Areas with poor public transportation			
West Los Angeles	3500 @ 100+	$81	15%
Cornell University, Ithaca, NY	9000 Faculty & Staff	$34	26%
San Fernando Valley, Los Angeles	850 @ 1	$37	30%
Costa Mesa, CA	Not Shown	$37	22%
Average for Group		**$47**	**23%**
Group B: Areas with fair public transportation			
Los Angeles Civic Center	10,000+ @ "Several"	$125	36%
Mid-Wilshire Blvd, Los Angeles	1 "Mid-Size" Firm	$89	38%
Washington DC Suburbs	5,500 @ 3	$68	26%
Downtown Los Angeles	5,000 @ 118	$126	25%
Average for Group		**$102**	**31%**
Group C: Areas with good public transportation			
U. of Washington, Seattle, WA	50,000 employees, students	$18	24%
Downtown Ottawa, Canada	3,500 government staff	$72	18%
Bellevue, WA	430 @ 1	$54	39%*
Average for Group, except Bellevue, WA Case*		**$45**	**21%**
Overall Average, Excluding Bellevue, WA Case*			**25%**

* Bellevue, WA case was not used in the averages because its walk/bike facilities also improved and those improvements could have caused part of the decrease in driving.

PERTINENT BACKGROUND INFORMATION

- Vehicle miles traveled (VMT) are a major cause of global warming and pollution[2, 3].
- California's Metropolitan Planning Organizations (MPOs) will need to adopt strategies that reduce vehicle miles traveled (VMT), in order to meet SB375 GHG reduction targets, to be issued by the California Air Resources Board in late 2010, for years 2020 and 2035[2].
- The appropriate pricing of parking is one of the least costly documented tools to reduce VMT.
- New technologies, such as sensors feeding computer-generated billing, offer the potential to efficiently bill drivers for parking and alert law enforcement of trespassers.
- Reformed parking policies can increase fairness, so that, for example, people who use transit or walk do not have to pay higher prices or suffer reduced wages, due to parking.

- Methods to unbundle parking cost are inefficient unless they support the spontaneous sharing of parking spaces. Shared parking with unbundled cost would ultimately allow cities to require significantly less parking.
- Typical systems of timed parking and metered parking are far from ideal. Parking has no automated record keeping, so it is difficult to know where there is too much or too little.
- Good policies will eventually let cities turn parking minimums into parking maximums.

A GLIMPSE INTO A POSSIBLE FUTURE

Jason is driving to work for the first time in several years. He has decided to save money by carrying home a new 3-D, big-screen computer, which he plans to purchase at a store near his office after work. He wanted to avoid paying delivery charges.

Things have been changing around his office development since they unbundled the cost of parking at the near-by train station. Many people who caught the early trains and lived close to the station stopped driving and parking in the best parking spaces; demand for housing close to the station went up; and wealthy riders, who insisted on driving, did so, confidant that they could always find parking as close to the platform as their schedules required, due to congestion pricing. Who would have guessed how much those people were willing to pay? It was shocking. Parking-lot earnings, paid to round-trip train riders, meant that the net cost to ride the train went significantly down. Ridership and neighborhood vitality both went significantly up. All Jason knew was that the price to park at his office had been going up yearly because of increased land values. His parking-lot earnings from his office had been increasing almost every month, due to the ripple effect of train riders parking off-site at cheaper parking. Some of them were using his office parking.

As he pulls out of his driveway, he tells his GPS navigation unit his work hours (it already knew his office location), the location of the store where he plans to buy the computer, and his estimated arrival and departure times at the store. He tells the GPS unit he wants to park once, park no more than 1 block from the store, walk no more than 1 mile total, and pay no more than an average of $2 per hour to park. He is not surprised to hear the GPS tell him that his request is impossible. He tells the GPS he will pay an average of $3 per hour and learns that the GPS has located parking.

It guides him into a church parking lot. He hopes the church will use his money wisely. The GPS tells him the location of a bus stop he could use to get to work and the bus's next arrival time at the stop. With automatic passenger identification and billing, the bus has become easy to use, except that it is often crowded. Jason gets out of the car and walks to work, with no action required regarding the parking.

Three weeks later, when Jason gets his monthly statement for his charges and income for automotive road use, transit use, parking charges, and parking earnings, he finds that the day's parking did indeed cost about $30 for the 10 total hours that he parked. He notes that the parking-lot earnings for his office parking averaged about $10 per day that month. He then notices the parking lot earnings from the store, where he spent about $1000 dollars. He sees that the parking-lot earnings percent for the store that month was 1.7%, giving him about $17. So for the day, Jason only spent a net of about $3 on parking. Then he realized that he should have had the computer delivered after all. If he would have bicycled that day, as he usually did, he would have still gotten the $27 earnings from the two parking facilities and he would have paid nothing

for parking. So the choice to drive cost him $30. He remembers that the delivery would have only been $25 dollars. Oh well. He enjoyed his before-work and after-work walks.

THE CASE FOR LESS PARKING

Less parking will support more compact development.[1] This makes walking and biking more enjoyable and less time consuming. There would certainly be less "dead space", which is how parking lots feel to people, whether they arrive by car or not, after they become pedestrians.

Since parking can be expensive, less parking can reduce overhead costs significantly, such as leasing expense and parking-lot maintenance cost. Less overhead means more profit and less expense for everyone. A need for less parking can create redevelopment opportunities at existing developments and reduce project cost at new developments.

At new developments, car-parking costs could prevent a project from getting built.[2]

THE CASE FOR SHARED PARKING

Shared parking for mixed uses means that less parking is needed. For example, shared parking could be used mostly by employees during the day and mostly by residents at night.

Fully shared parking means that very little parking would be off limits to anyone. In a central business district with shared parking, drivers would be more likely to park one time per visit, even when going to several locations. Pedestrian activity adds vitality to any area.

THE CASE FOR APPROPRIATELY-PRICED PARKING

To Reduce Driving Relative to Zero Pricing

Traditional Charging or Paying Cash-out Payments

As shown in the Introduction, this relationship (pricing parking reduces driving) is not new.[3]

Using results like Table 1, at least one study[4] has used an assumption of widespread pricing to show how driving reductions could help meet greenhouse gas (GHG) target reductions. Dr. Silva Send of EPIC http://www.sandiego.edu/epic/ghgpolicy/ assumes that all work locations with 100 employees or more in San Diego County will implement cash-out, to result in 12% less driving to work. Currently, almost all employees in San Diego County "park for free", unless they happen to work in a downtown core area.

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[1] This is especially true of surface parking, which only accommodates 120 cars per acre.

[2] On September 23, 2008, a panel of developers reviewed the Oceanside, Ca. "Coast Highway Vision" http://www.ci.oceanside.ca.us/pdf/chv_finalvisionstrategicplan.pdf. Parts of this plan were described as smart growth.

At the review, developer Tom Wiegel said, "Parking is the number 1 reason to do nothing," where "do nothing" meant "build no project." The other developers at the meeting agreed.

[3] For many years the Victoria Transport Policy Institute (VTPI) has been recognized as a source of reliable information on "Transportation Demand Management", or TDM.

From http://www.vtpi.org/tdm/tdm72.htm#_Price_Parking:

> Even a relatively small parking fee can cause significant travel impacts and provide significant TDM benefits.

"TDM Benefits" refers to the many public and private benefits of having fewer people choosing to drive.

Current, Best-Practice "Unbundling"

The "best-practice" use of the phrase, "unbundled parking cost", is to describe the case where either the cost of parking, for the case of a condominium, or the rent for parking, for the case of an apartment, is separated from either the purchase price and common fees or the rent of the dwelling unit.

This gives the resident families the choice of selecting the number of parking spaces they would like to rent or buy, including the choice of zero. This would tend to reduce the average number of cars owned per dwelling unit and, in this way, would also tend to reduce driving. Its major drawback is that this method does not encourage sharing.

To Increase Fairness and Protect the US Economy

It is stated above that almost all employees in San Diego County "park for free". Of course there is really no such thing as "parking for free". So-called "free parking" always reduces wages or increases costs. At a work site, it reduces everyone's wage, even those employees that never drive. At an apartment complex, so-called "free parking" increases the rent. Therefore, "free parking" at work or at apartments violates the fundamental rule of the free market, which is that people should pay for what they use and not be forced to pay for what they do not use. Parking should at least be priced to achieve fairness to non-drivers.

The US economy would also benefit. Reductions in driving would lead to reductions in oil imports, which would reduce the US trade deficit.[4]

BARRIERS TO PROGRESS

Given all this, it might seem that the widespread pricing of parking should have happened by now. However there are barriers. In 2007, a majority of the City Council of Cupertino, Ca. indicated that they wanted their City Manger to negotiate reduced parking requirements with any company that would agree to pay sufficient cash-out payments. To this date, no company, including Apple Inc., has expressed an interest. Most companies probably perceive cash-out as expensive. Even if they realize they could get a reduced parking requirement in exchange for paying sufficient cash-out amounts and even if the economics worked in support of this action (quite possible where land is expensive), they want to stay focused on their core business, instead of getting involved in new approaches to parking, real estate, and redevelopment.

On the other hand, simply charging for parking and then giving all the employees a pay raise is probably going to run into opposition from the employees, who will feel that they would be losing a useful benefit.

In addition, neighbors fear the intrusion of parked cars on their streets. Permit parking, which could offer protection, is not always embraced. City Council members know that a sizable fraction of voting citizens believe that there can actually never be too much "free parking",

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[4] From http://en.wikipedia.org/wiki/Balance_of_trade#Warren_Buffett_on_trade_deficits, Warren Buffet wrote in 2006,

> "The U.S. trade deficit is a bigger threat to the domestic economy than either the federal budget deficit or consumer debt and could lead to political turmoil. Right now, the rest of the world owns $3 trillion more of us than we own of them."

Professor Shoup's famous book[5] notwithstanding. Some Council members probably feel that way themselves.

It doesn't help that current methods of charging for downtown parking are often very inefficient.[5] For example, downtown Oceanside, California has parking meters that will only accept coins. Besides this, all their on-street, downtown parking is timed, with maximums from 10 minutes to 4 hours. These time limits are enforced by a city employee, who applies chalk from a tire to the street and then records the time. However, by watching the time and moving their car soon enough, drivers can avoid getting a ticket. Of course, they could instead drive to the mall and not have to worry about having coins or elapsed time since parking. It is not surprising that downtown merchants often object to charging for parking.

In summary, those that resist charging for parking, *based on their perceptions*, include

- Companies, *who fear the complexity and expense of paying cash-out payments*;
- Employees, *who fear of losing a current benefit*;
- City leaders, *who fear the political repercussions*;
- Downtown patrons, *who dislike the inconvenience and worry*;
- Downtown business owners, *who fear that it will drive away customers*.

THE COST, VALUE, AND FAIR PRICE OF PARKING

Estimated and Actual Capital Cost

Surface Parking

One acre of surface parking will accommodate 120 cars. Land zoned for mixed use is sometimes expensive. At $1.2 million per acre, the land for a single parking space costs $10,000. Construction cost should be added to this to get the actual, as-built cost of each parking space. Estimated cost can be determined by using appraised land value and construction estimates. For new developments, after the parking is constructed, it is important to note the actual, as-built cost.

Parking-Garage Parking

One acre of parking-garage will accommodate considerably more than 120 cars. The construction cost of the garage and the value of its land can be added together to get the total cost. Dividing that total cost by the number of parking spaces yields the total, as-built cost of each parking space. Adding levels to a parking garage may seem like a way to cut the cost of each parking space, for the case of expensive land. However, there is a limit to the usefulness of this strategy because the taller the parking garage, the more massive the supporting structural members must be on the lower levels, which increases total cost. Parking-garage parking spaces are often said to cost between $20,000 and $40,000. The actual costs should be noted.

Underground Parking

In order to compute an estimate for the cost of a parking space that is under a building, it is necessary to get an estimate of the building cost with and without the underground parking. The difference, divided by the number of parking spaces, yields the cost of each parking space. The

[5] According to Bern Grush, Chief Scientist of Skymeter Corporation http://www.skymetercorp.com/cms/index.php, often two-thirds of the money collected from parking meters is used for collection and enforcement costs.

cost or value of land plays no role in the cost of this parking. However, it does not follow that this parking is cheap. Underground parking spaces are often said to cost between $60,000 and $90,000 dollars each. Although there will be an "as built" cost of the building with the parking, there will never be an "as built" cost of the building without the parking. However, after the construction is done, the estimate for the cost of the underground parking should be reconsidered and re-estimated if that is needed. The final, best-estimate cost should be noted.

Value

Initially, value and cost are the same. For surface parking and parking-garage parking, the value would initially be the same as the as-built cost. For underground parking, the value would initially be the same as the best-estimate cost. However, over time, the value must be updated. Both construction costs and land-value costs will change. The value assigned to a parking place should always be based on the current conditions.

Fair Pricing

Parking space "values", as described above, must first be converted to a yearly price by using a reasonable conversion factor. This conversion factor could be based on either the "cost of money" or the "earnings potential of money". It is expected that this conversion factor would be 2% to 5% during times of low interest rates and slow growth; but could be over 10% during times of high-interest and high growth. For example, if the surface parking value is $12,000 and it is agreed upon to use 5% as the conversion factor, then each parking spot should generate $600 per year, just to cover capital costs. The amount needed for operations, collection, maintenance, depreciation, and any special applicable tax is then added to the amount that covers capital cost. This sum is the amount that needs to be generated in a year, by the parking space.

The yearly amount of money to cover capital cost needs to be re-calculated every year or so, since both the value and the conversion factor will, in general, change each year. The cost of operations, collection, maintenance, depreciation, and any special applicable tax will also need to be reconsidered.

Once the amount generated per year is known, the base price, per unit year, can be computed by dividing it (the amount generated per year) by the estimated fraction of time that the space will be occupied, over a year. For example, if a parking space needs to generate $900 per year but it will only be occupied 50% of the time, the time rate charge is $1800 per year. This charge rate per year can then be converted to an hourly or even a per-minute rate. The estimated fraction of time that the parking is occupied over a year will need to be reconsidered at least yearly.

NEW DEFINITIONS TO PROMOTE AN OBJECTIVE VIEW OF PRICING

- The "fair price" means the price that accounts for all costs.
- The "baseline amount of driving" means the driving that results from the application of the fair price.
- "Zero transportation demand management" ("zero TDM") is the amount of demand management that results when the fair price is used. It will result in the baseline amount of driving.
- "Negative TDM" refers to the case where the price is set below the fair price. This will cause driving to exceed the baseline amount. Since TDM is commonly thought to be an action that reduces driving, it follows that negative TDM would have the opposite effect.
- "Positive TDM" refers to the case where the price is set above the fair price. This would cause the amount of driving to fall below the baseline amount.

Clearly, so-called “free parking” is an extreme case of negative TDM. The only way to further encourage driving would be to have a system that pays a driver for the time their car is parked.

THE GOALS OF *INTELLIGENT PARKING*

- There is only one agency operating all parking. (“All parking” does not include driveways and garages in single-family homes.) *Intelligent Parking* is designed and installed by regional or state government, using low-bid contractors, with design and start-up costs covered by the overhead portion of collection fees.
- Nearly all parking is shared. Almost always, anyone can park anywhere. Those who want exclusive rights to parking will pay “24/7” (all day, every day).
- Parking is operated so that the potential users of parking will escape the expense of parking by choosing to not use the parking. This characteristic is named “unbundled” because the cost of parking is effectively unbundled from other costs.
- Parking is priced and marketed to eliminate the need to drive around looking for parking.
- Parking at any desired price is made as easy as possible to find and use.
- Records of the use of each parking space are kept, to facilitate decisions to either add or subtract parking spaces.
- The special needs of disabled drivers, the privacy of all drivers, and, if desired, the economic interests of low-income drivers are protected.

DEFINITIONS & CONCEPTS OF *INTELLIGENT PARKING*

Parking Beneficiary Groups

There are at least 7 types of beneficiary groups. Note that in all cases, members of beneficiary groups must be old enough to drive.

1.) People who have already paid for the capital cost of parking. An example of this type of beneficiary group would be the owners of condominiums, where parking has been built and the cost is included in the price of the condominium. Note that although they have technically already paid for the parking, if they borrowed money to pay for some portion of the price, the cost is built into their monthly payment. This illustrates why the value of parking and the cost of borrowing money (rate of return on money) are key input variables to use to compute the appropriate base, hourly charge for parking.

2.) People who are incurring on-going costs of parking. An example of this type of beneficiary group is a set of office workers, where the cost of ‘their” parking is contained in either the building lease or the cost of the building. Either way, the parking costs are reducing the wages that can be paid to these employees.[6]

3.) People who are purchasing or renting something where the cost of the parking is included in the price. Examples of this beneficiary group are people that rent hotel rooms, rent an apartment, buy items, or dine in establishments that have parking.

[6] Such parking is often said to be “for the benefit of the employees”. Defining this beneficiary group will tend to make this statement true, as opposed to the common situation where the employees benefit only in proportion to their use of the parking.

4.) People who own off-street parking as a business. They could be the individual investors or could be a government or government-formed entity.

5.) People who are said to benefit from parking, even though the money for the parking has been supplied by a source that may have very little relationship to those that are said to benefit. An example of this group would be train riders that make round trips from a station which has parking that is said to be "for riders". Students at a school with parking would be another example.

6.) People who are considered by many to be the logical beneficiaries of on-street parking. Owners of single-family homes are the beneficiaries of the parking that is along the boundaries of their property. The same status is given to residents of multi-family housing.

7.) Governments. Since they build and maintain the streets, they should get a significant benefit from on-street parking.

Unbundled Cost and Spontaneous Sharing

"Unbundled cost" means those who use the parking can see exactly what it costs and those who don't use the parking will either avoid its cost entirely or will get earnings to make up for the hidden parking cost they had to pay. This conforms to the usual rule of the free market where a person only pays for what they choose to use. Unbundled cost is fair.

"Spontaneous sharing" means that anyone can park anywhere at any time and for any length of time. Proper pricing makes this feasible.

How to Unbundle

The method of unbundling can be simply stated, using the concept of "beneficiary group" as discussed above. First, the fair price for the parking is charged. The resulting earnings[7] amount is given to the members of the beneficiary group in a manner that is fair to each member. Methods are described below.

Why this Supports Sharing

Members of a beneficiary group benefit financially when "their" parking is used. They will appreciate users increasing their earnings. They are also not obligated to park in "their" parking. If there is less-expensive parking within a reasonable distance, they might park there, to save money. This is fine, because all parking is included in the *Intelligent Parking* system.

Computing the Earnings for Individuals

Intelligent Parking must be rigorous in paying out earnings[7]. For a mixed use, the total number of parking spaces must first be allocated to the various beneficiary groups. For example in an office/housing complex, 63.5% of the parking might have been sold with the office. If so, the housing portion must be paying for the other 36.5%. For this case, it would follow that the first step is to allocate 63.5% of the earnings to the workers and 36.5% to the residents.

[7] The earnings amount is the revenue collected minus the collection cost and any other costs that will have to be paid due to the implementation of *Intelligent Parking*. The costs associated with the parking, paid *before* the implementation of *Intelligent Parking*, should *not* be subtracted from the revenue because they will continue to be paid as they were before the implementation of *Intelligent Parking*. Therefore, these costs will continue to reduce wages and increase the prices of goods and services.

How the monthly earnings are divided up among the members of the beneficiary group depends on the beneficiary group type. For each member, the group's total monthly earnings amount is always multiplied by a quantity and divided by the sum (the sum is the denominator) of that quantity, for all members.

For example, for each employee, the multiplier is the number of hours that the employee worked over the month while the denominator is the total number of hours worked by all employees over the month. At a school, for each student, the numerator is the total time spent at the school, over the month, while the denominator is the sum of the same quantity, for all the students.

For a train station with parking being supplied for passengers that ride on round trips of one day or less, the numerator is the passenger's monthly hours spent on such round trips, over the month; while the denominator is the total number of hours spent by all passengers on such round trips, over the month. Radio Frequency Identification (RFID) units on passengers could support an automated calculation of monthly charges for fares, as well as monthly hours on round trips.

At a shopping center, the numerator is the sum of the money spent by the shopper, over the month, while the denominator is the total amount of money spent by all shoppers over the month.

At a condominium, the numerator is the number of parking places that were paid for (directly or indirectly) by the resident family and the denominator is the total number of parking places at the condominium project; similarly, for apartment complexes.

Where Earnings Are Low

The goal is that if someone doesn't park, they don't pay, either directly or indirectly, because the earnings that they get will balance out their losses (like reduced wages, for example). However, charging for parking that few want to use will not sufficiently compensate the people that have been forced, or are being forced, to pay for such parking. The only remedy in this case is to redevelop the parking or lease the parking in some other way, for storage, for example. The earnings from the new use should go to those that are in the beneficiary group that was associated with the low-performing parking.

Why This Method of Unbundling Will Feel Familiar to Leaders

Developers will still be required to provide parking and will still pass this cost on, as has been discussed. There will be no need to force an owner of an exiting office with parking to break his single business into two separate businesses (office and parking).

Parking beneficiaries are identified that conform to traditional ideas about who should benefit from parking.[8]

Unbundling the Cost of On-Street Parking

The revenue from on-street parking in front of businesses will be split evenly between the city and the business's parking beneficiaries. All of the earnings from on-street parking in front of apartments or single-family homes will be given to the resident families.[9]

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[8] Showing exactly where parking earnings go will reduce the political difficulties of adopting pay parking in a democracy where the high cost of parking is often hidden and rarely discussed.

[9] Although governments own the streets, often, back in history, developers paid for them and this cost became embedded in property values. Admittedly, how to allocate on-street parking earnings is somewhat arbitrary. With

Special Considerations for Condominiums

Unbundling for a condominium owner means that, although their allocated amount of parking has added to their initial cost, their allocated amount of parking also earns money for them. Unbundling for a condominium could also mean that an owner can choose to have control over a single or several parking places. Such parking spaces could be equipped with a red light and a green light. If the red light is lit, this will mean that the space is not available for parking, except for the person who is controlling the spot. If the green light is lit, it will mean that the space is available to anyone. A space that is being reserved with a red light is charged at the full price to the condominium owner that has control over the space. The owner that controls these spaces can change the state of the parking space (available or not available) by either a phone call, on line, or at any pay station system that might be in use for the system. After condominium owners experience the cost of reserving a space for themselves, they might give up on the idea of having their own, personal, unshared parking space; especially since *Intelligent Parking* will give most owners and their guests all the flexibility they need in terms of parking their cars.

Some people think that condominium parking should be gated, for security reasons. However, parking within parking garages needs to be patrolled at the same frequency level as on-street parking, which is enough to ensure that crime around either type of parking is very rare. Cameras can help make parking garages that are open to the public safe from criminal activity.

Special Considerations for Renters

Unbundling for renters means that, although their allocated amount of parking increases their rent, their allocated amount of parking also earns money for them. Therefore, their traditional rent (includes parking) is effectively reduced by the money earned by those parking spaces allocated to them. Renters will be motivated to either not own a car or to park in a cheaper location. Parking in a cheaper location is not a problem because all parking is part of the *Intelligent Parking* system. Renters will welcome anyone to park in "their" parking, because it will increase their earnings.

Special Considerations for Employers

At first, companies may want the option of offering "free parking" to their employees so as to be able to compete with traditional job sites. This means giving employees that drive every single day an "add-in" amount of pay so that the sum of the add-in and their parking-lot earnings equals their charge, for any given monthly statement. The operator of the parking, which sends out statements, can pay out the "add in" amount, in accordance with the company's instruction. The company will then be billed for these amounts. There could be no requirement for the company to provide any such "add-in" amount to the employees that don't drive every day. This would allow the company to treat its every-day drivers better than other employees and so this would be a negative TDM. However, this economic discrimination would be substantially less than the current, status-quo, economic discrimination, where drivers get "free" parking and non-drivers get nothing.

Clusters of Parking

Clusters are a contiguous set of parking spaces that are nearly equal in desirability and thus can be assigned the same price. They should probably consist of from 20 to 40 spaces. For off-street

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congestion pricing and efficient methods, governments may earn significantly more than they are under current practices.

parking, they could be on either side of the access lane to the parking spaces, so that an observer could see the 20 to 40 cars, and get a feel for the vacancy rate. At a train station, clusters will normally be organized so that their parking spaces are approximately an equal distance from the boarding area. On-street clusters would normally conform to our current understanding of what a block is, which is to say from one cross street to the next cross street. The width of the street and the length of the block should be taken into account in defining on-street clusters of parking and in deciding if the parking on either side of the street should or should not be in the same cluster of parking spaces.

Examples of Good and Bad Technology

Parking Meters or Pay Stations

Parking meters are a relic of an earlier period, before computers. Pay stations do not add enough usefulness to merit their inclusion in *Intelligent Parking*, except as a bridge technology. Once good systems are set up, pay stations should cost additional money to use because of their expense. It would be best to devise an implementation strategy that will minimize their use when the system is first put into effect and will take them out of service as soon as possible.

Radio Frequency Identification Backed Up by Video-Based "Car Present" and License Recognition

Government will eventually enter into an RFID (Radio Frequency Identification) age. Organizers of large athletic events already have. Organizers that put on large open-water swims, foot races, and bike rides have routinely used RFID for many years.[10] An RFID vendor in San Diego[11] states that passive RFID units cost less than $5, are reliable, are durable, and they could be used to identify cars as well as people. He also sees no problem in implementing most of the features of *Intelligent Parking*.[12]

Automatic Data Collection and Sending Out Statements

Note that the "back end database" of Dr. Carta's written statement[12] refers to the ability to send statements of earnings and billing to students.[13]

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[10] For example, over 20,000 people ran the 2008 Bay-to-Breakers foot race in San Francisco. Each runner had a "chip" in their shoe lace. Each runner's start time and finish time were recorded and all results were available as soon as the last runner crossed the finish line.

[11] David R. Carta, PhD, CEO Telaeris Inc., 858-449-3454

[12] Concerning a Final Environmental Impact Report-approved and funded new high school in Carlsbad, California, where the School Board has signed a *Settlement Agreement* to consider "*unbundled parking*", "*cash-out*", and "*pricing*", Dr. Carta wrote, in a January 13th, 2010 written statement to the Board,

> I wanted to send a quick note discussing the technical feasibility of tracking cars into a lot without impacting students or requiring the need for gates. Mike Bullock and I have discussed this project; it can be accomplished straightforwardly by utilizing Radio Frequency Identification and/or Video Cameras integrated with automated license recognition systems. The cars would need to register with the system at the start, but it would be fairly painless for the users after the initial installation. The back end database system can also be implemented both straightforwardly and at a reasonable price.
>
> This is not necessarily a recommendation of the proposal for unbundled parking. Rather it is strictly an unbiased view of the technical feasibility of the proposal to easily and unobtrusively track cars, both registered and unregistered, into a fixed lot.

[13] In an earlier email on this subject, Dr. Carta wrote,

Putting it Together

Certainly, government, and in particular transit agencies and parking agencies, could use RFID-based technology. For example, when a person with an RFID unit which is tied to a billable address or a credit card with an open account gets on a bus or a train, they should not have to pay at that time, visit a pay station, or "swipe a card" that has a positive balance. Utility customers that pay their bills are not required to pre-pay. The same courtesy should be extended to transit riders, people that drive on roads, people that get parking-lot earnings, and people that park cars. There should be one monthly bill or statement, for all four activities.

Global Positioning Systems GPS

An alternative model is to have GPS systems in cars that would detect the car's parking location, that location's current charge rate, and would perform all of the charging functions in the car. The only information the parking-lot-enforcement system would need is whether or not a car being parked is owned by a bill-paying owner. The car owner's responsibility would be to pay the bills indicated by the box in the car. The box would need to process a signal that a bill had been paid. It would also need to process pricing signals.

Not Picking Winners

The purpose of this report is to describe what an ideal system would do, *not* how it is done. How a proposed system works is left to the systems, software, and hardware engineers that work together to submit a proposal based on this description of what an ideal system does.

Privacy

Privacy means that no one can see where someone has parked, without a search warrant. Also, the level of the detail of information that appears on a bill is selected by the customer.[14]

Ease of Use for Drivers

For credit-worthy drivers that have followed the rules of the system, pay parking will not require any actions other than parking. Paying for all parking fees over a month is then done in response to a monthly billing statement. Parking will feel to the consumer like a service provided by a municipality, such as water, energy, or garbage. One important difference is that users belonging to a "beneficiary group" will get an earnings amount in their monthly statement. Those that earn more than what they are charged will receive a check for the difference. This ease of use will make all parking less stressful.

Base Price

Off-Street

This is not too tough - we probably would integrate with a service that already sends physical mail from an electronic submission instead of re-inventing this wheel.

[14] License plates that have no RFID tags fail to use the best technology to accomplish the primary purpose of license plates, which is to identify and help intercept cars used in a crime. Identifying cars is a legitimate government goal. Protecting privacy is also a legitimate goal. Both goals can be realized with good laws, good enforcement, and good systems engineering.

Off-street parking is priced so that even if demand does not threaten to fill the parking beyond 85%, the money generated will at least equate to an agreed-upon return on the parking value and pay all yearly costs. Equation 1 shows the calculation of the hourly rate.

$$r_{BaselineHourly} = \frac{(r_{Investment} \times v_{Parking}) + c_{YOPD}}{(n_{HoursPerYear} \times f_{TO})} \quad \textbf{(Eq. 1)}$$

where:

$r_{BaselineHourly}$	=	the computed baseline hourly rate to park
$r_{Investment}$	=	yearly return on investment, such as .06
$v_{Parking}$	=	value of a parking space, such as (parking garage) $40,000
c_{YOPD}	=	yearly operations[15] plus depreciation, per space, such as $100
$n_{HoursPerYear}$	=	number of hours per year, 24 x 365 = 8760 Hours per Year
f_{TO}	=	fraction of time occupied, such as 0.55.

For the example values given, the base hourly rate of parking, to cover the cost of the investment, operations[15], and depreciation is $0.519 per hour. This could be rounded up to $0.52 per hour. This price could also be increased to result in positive TDM, to reduce driving more than the fair-price, zero-TDM amount.

On-Street

If on-street parking is located within walking distance (one-quarter mile) of off-street parking, its base price is set equal to the closest off-street parking's base price. Otherwise, it is set to some agreed-upon value, like fifty cents per hour. However, on-street parking has a special meaning for downtown merchants and for neighborhoods, two powerful political forces in any city. Merchants that have few cars parking on their street, even though it is permitted, are probably failing in their businesses. They would like free parking to help draw visitors to their store front. Neighborhoods that are not impacted by parking would probably prefer no pricing. For these reasons, for any on-street parking cluster, no price is charged until the cluster occupancy reaches 50%. (Time of day is irrelevant.)

Congestion Pricing

The time-rate price of parking is dynamically set on each cluster of parking, to prevent the occupancy rate from exceeding 85% (to reduce the need to drive around looking for parking). An 85% occupancy rate (15% vacancy) results in just over one vacant parking space per city block[5]. If the vacancy rate is above 30%, the price is left at the baseline hourly rate. If vacancies fall below 30%, the price can be calculated in a stair-step method, such as shown in Table 2.

Equation 2 is an alternative method.

In either case, the total charge is time parked, multiplied by the time-averaged, time-rate price. The base multiplier would be adjusted to be just large enough to keep the vacancy rate from falling below a desired level, such as 15%, so it is always easy to find parking.

[15] This includes money for policing, cleaning, maintenance, any applicable parking tax, and all collection costs. Collection costs will need to include an amount to recover the development and installation costs of *Intelligent Parking*.

Table 2 Hourly Rates for 2 Base Multipliers and a Baseline Hourly Rate of $0.52

Vacancy Rate	Base Multiplier = 2			Base Multiplier = 2.5		
	Multiplication		Hourly Rate	Multiplication		Hourly Rate
	Formula	Value		Formula	Value	
Above 30%	2^0	1	$0.52	2.5^0	1	$0.52
25% to 30%	2^1	2	$1.04	2.5^1	2.5	$1.30
20% to 25%	2^2	4	$2.08	2.5^2	6.25	$3.25
15% to 20%	2^3	8	$4.16	2.5^3	15.625	$8.13
10% to 15%	2^4	16	$8.32	2.5^4	39.0625	$20.31
5% to 10%	2^5	32	$16.64	2.5^5	97.6563	$50.78
Below 5%	2^6	64	$33.28	2.5^6	244.1406	$126.95

$$r_{HourlyRate} = r_{BaselineHourly} \times \left(B^{(30-V)/5}\right), for\ V < 30;\ r_{BaslineHourly}, otherwise \quad \textbf{(Eq. 2)}$$

where:

$r_{HourlyRate}$ = the congestion-priced hourly rate to park

$r_{BaselineHourly}$ = the baseline hourly rate to park, such as $0.52 per hour (taken from from Eq. 1.

B = the base of the multiplier being computed, such as 2.50

V = the vacancy rate percent, such as 17.5, for 7 vacancies in a cluster of 40 spaces, 100*(7/40) = 17.5

For the example values given, the hourly rate of parking would be $9.88 per hour.

Pricing Predictions and Notifications

Drivers will develop strategies for their routine trips. The computer system that keeps records of parking use will also provide help for users. The *Intelligent Parking* website will direct a user to an appropriate cluster of parking if the user provides the destination location or locations, the time and date, and the hourly rate they wish to pay. If the walk is going to be long, the website could suggest using transit to get from the cheaply-priced parking to the destination. In such cases, the website may also suggest using transit for the entire trip.

Another user option is to specify the time, location, and the distance the user is willing to walk. In this case, the computer would give the cheapest cluster of parking available at the specified walk distance. The price prediction would be provided.

All price predictions would also have a probability of correctness associated with them. If a user can show that a computer has predicted a much lower price than what actually occurred, with a sufficiently high probability, it would be reasonable to charge the user the predicted price rather than the actual price.

Websites could routinely inform viewers when occupancy rates are expected to be unusually high, due to a special event (for example, a sporting event). The parking system website will always give current and predicted hourly rates for all locations. The hourly rates of parking will

also be available at a phone number and possibly at pay stations. The base-price hourly rate, for any parking cluster, would be stable and could therefore be shown on signs. Parking garage entrances could have large video screens showing both predicted and existing price. Users will also learn to look at parking and judge whether congestion pricing applies, or could apply, while their car is parked. It would not be long before these capabilities are added into GPS navigation systems.

Prepaid RFID

To be inclusive, pay stations or convenience stores will offer a pre-paid RFID that can be set on the dashboard of a car. This will support drivers with poor credit or drivers who have not obtained the necessary equipment to support the normal, trouble-free methods. This will also work for drivers that do not trust the system to protect their privacy for a certain trip (by removing or disabling the permanent RFID) or for all trips. No billing would occur.

Enforcement

The system would notify the appropriate law enforcement agency if an unauthorized car was parked. Authorized cars would need either a pre-paid RFID or equipment indicating that their owners had *Intelligent Parking* accounts and were sufficiently paid up on their bills.

IMPLEMENTATION

This description of *Intelligent Parking* will help to implement efficient parking systems. Parking at train stations, schools, and government buildings could introduce many of these concepts. This description of *Intelligent Parking* is sufficient to support a "Request for Proposal" process, which could lead to full implementation. Widespread installation should be done by a government agency, to minimize actions required on the part of the private sector. Laws would simply require the cooperation of all private-sector and government entities.

SUMMARY

A parking plan, *Intelligent Parking* has been described.

1. Technology will make it easy to use for most drivers.
2. Its parking is almost always shared, to support mixed uses.
3. It unbundles cost by charging and having earnings go to the parking beneficiaries.
4. Traditional groups, such as single-family home owners, employees, tenants, train riders, and students benefit from parking. The benefit is equal for drivers and non-drivers.
5. Baseline prices are computed primarily from the value of the parking and an agreed-upon rate of return. On-street parking is free until it is half full, at which time its base price often matches that of the closest off-street parking.
6. For all parking, price is dynamically increased to guarantee availability. Earnings are therefore only limited by what people are willing to pay.
7. Technology helps drivers find parking and decide if they want to drive or use transit.
8. Prepaid RFIDs provide service to those who have poor credit or don't want to be billed.
9. Disabled and perhaps low-income drivers will have accounts that allow them to park at reduced prices and perhaps avoid congestion pricing. Specially designated spots might also be required for disabled drivers.

10. The system will provide reports showing where additional parking would be a good investment and where it would be wise to convert existing parking to some other use.
11. Privacy will be protected. Law enforcement officials would need a search warrant to see where someone's car has been parked. The level of detail on billing would be selected by the car's owner.
12. Implementations could begin in carefully selected locations and expand.

Global warming, air pollution, trade deficits, and fairness are some of the significant reasons that governments have a responsibility to implement *Intelligent Parking*.

ACKNOWLEGEMENTS

The following people have offered encouragement, specific information, and/or special insights.

Dr. Dennis Martinek, Oceanside Planning Commissioner; Sandra Goldberg, California Deputy Attorney General; Jerry Kern, Oceanside, City Council; Amy Volzke, Principal Planner, City of Oceanside; Dr. Nilmini Silva-Send, Senior Policy Analyst of the Energy Policy Initiative Center; Diane Nygaard, Director of Preserve Calavera and founder of Nelson Nygaard, Consulting Associates; Lisa Rodman, Trustee, Carlsbad Unified School District; Dr. Michael McQuary, President, La Jolla Democratic Club; Joan Bullock; Judy Jones, San Diego County Central Committee, California Democratic Party; Patrick Siegman, Principal and Shareholder, Nelson Nygaard; Andy Hamilton, San Diego Air Pollution Control District; Renee Owens, Conservation Chair, San Diego Sierra Club; Caroline Chase, Executive Committee Chair, San Diego Sierra Club; Ed Mainland, Co-Chair, Energy-Climate Committee, Sierra Club California; Bern Grush, Chief Scientist, Skymeter Corporation; and the following San Diego Area Government (SANDAG) employees: Susan Baldwin, Senior Regional Planner; Bob Leiter, former Director of Land Use and Transportation Planning; Coleen Clementson, Principle Planner; and Stephan Vance, Senior Regional Planner.

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KEYWORDS

A&WMA, Parking, Unbundled, Shared, TDM, cash-out, pricing, beneficiary, greenhouse gas, GHG, GPS, RFID

Equitable and Environmentally-Sound Car-Parking Policy at a Work Site

By Mike Bullock mike_bullock@earthlink.net

Aug. 30, 2015

Introduction

This paper describes a parking policy that distributes the benefit of parking to all employees, regardless of how often they choose to drive. It does this by

- Charging a fair price for the parking, per unit of time parked, and by
- Giving the total earnings (*total parking-lot earnings*) to the employees, such that each employee's share of the *total parking-lot earnings* is proportion to the time they spend at the work site served by the parking.

The following, additional, optional action would guarantee that no driver loses money under the policy:

- Adding a *must-drive bonus* to each driver's share of the *parking-lot earnings*, if it happened that their share of the *parking-lot earnings* is less than their parking-lot charge. This means that the employee's *must-drive bonus* would be equal to their *parking-lot charge* minus their share of the *parking-lot earnings*.

If an employer decided to pay a *must-drive bonus* to its employees, it would be possible to allow employees to effectively "opt out" of the program so they would not need to be mailed the car-parking statements. The system would feel like "free parking" to them.

Reference 1 describes a more comprehensive policy that will efficiently and conveniently unbundle the cost of parking in all circumstances. It is available at the following URL: http://www.sandiego.gov/environmental-services/pdf/sustainable/parkingcosts.pdf.

The system described herein is less complex because it does not include congestion pricing, price predictions, or policies that are unique to on-street parking. These features can be eliminated, because it is assumed that there will be an adequate supply of parking, so no congestion pricing is needed; that the price can be relatively stable, so no price predictions are needed; and finally, that employees can be successfully required to park only in their parking, so there is no need for new, on-street parking policies, designed to protect adjoining neighborhoods from the intrusion of additional parked cars. If the adjoining neighborhoods had permit parking with a 2-hour limit for cars with no permit, very few employees would ever park those neighborhoods, in any case.

Rationale

This system of “unbundled parking cost” will allow all stakeholders to see the actual value of the parking. It will reduce single-occupancy driving to work. Less driving will reduce traffic congestion, air pollution and greenhouse gas (GHG) emissions.

Parking is expensive to provide. Therefore, if no parking had been provided, the saved money could have been invested to increase employee salaries. The method described in this paper allows employees to gain some of that lost salary back, by driving less.

Providing free or underpriced parking only benefits employees that would drive every day, even if they had a method to recover some of their lost salary.

Methods

The parking is operated on the behalf of the employees, as if it were their own business. Those that drive to work are therefore their own customers.

Charge for parking is proportional to time parked and is charged to the employee associated with the car. (A charge rate that is acceptable to all must be established.) For example, if sixty cents per hour is selected, the charging software could round off the parking duration time to the nearest minute and apply a one-cent-per-minute charge. The data-collection method could be implemented with RFID’s on cars being detected at parking-lot entrances and exits. Unauthorized cars coming into the employee parking facilitiy would be identified with license-plate detection and, if a car belonging to a felon is driven into the parking lot, a warning notice could be sent to authorities, if this is desired by the company leaders.

Earnings (net revenue, minus the cost of collection and distribution) are given to the employees; in proportion to the time they spend at the work site. This could be based on an employee’s schedule or, for more accuracy, could be based on “time-at-the-work-site” data, collected using personal radio frequency identification units (RFIDs) and detectors that are tied to a central, implementing computer. The variables used to compute the amount of money to be paid to an employee are shown in Table 1. The corresponding formula is shown in Figure 1.

Parking statements are automatically sent out monthly, showing the individual’s charges and earnings. If desired, the statements could include a *must-drive bonus*, so that no driver losses money under the system. The *must drive bonus* would probably need to come from funds available for employee compensation.

Implementation

Since this is a new system, it would be prudent for the company leaders to have the vendor take the full responsibility for operating the system, for the first 10 years. This arrangement would ensure that the vendor would debug the system and continue to look for operational efficiencies, over the 10 year period. A sliding scale of vendor-compensation could be specified in the contract, as follows: The vendor could operate the system for 10% of the revenue, for the first 5 years; 5% of the revenue, for the next 3 years; and 2% of the revenue, for the final 2 years. For example, if it is assumed that, on average, 600 cars are parked for 8 hours, for 200 days per year, at a rate of 50 cents per hour, then the yearly revenue would be $480,000 per year. The vendor would therefore collect $240,000 over the first 5 years, $72,000 over the next 3 years, and $28,800 over the last two years. Figure 2 shows contact information and excerpts of received emails, from a San Diego vendor. This vendor has stated that the design and installation of a fully-automated system would be easy to perform.

Table 1 Variables Used to Compute an Employee's Monthly Earnings

Definitions to Compute an Employee's Monthly Earnings	
$T_{Employee}$	The Employee's Monthly Time at the Work Site
$T_{AllEmployees}$	Total Monthly Time at the Work Site, All Employees
$E_{AllEmployees}$	Total Monthly Earnings from the Employee Parking

Figure 1 Formula Used to Compute an Employee's Monthly Earnings

$$E_{Employee} = T_{Employee} * (E_{AllEmployees} / T_{AllEmployees})$$

Introducing a New Price Differential, for Driving, Compared to Not Driving

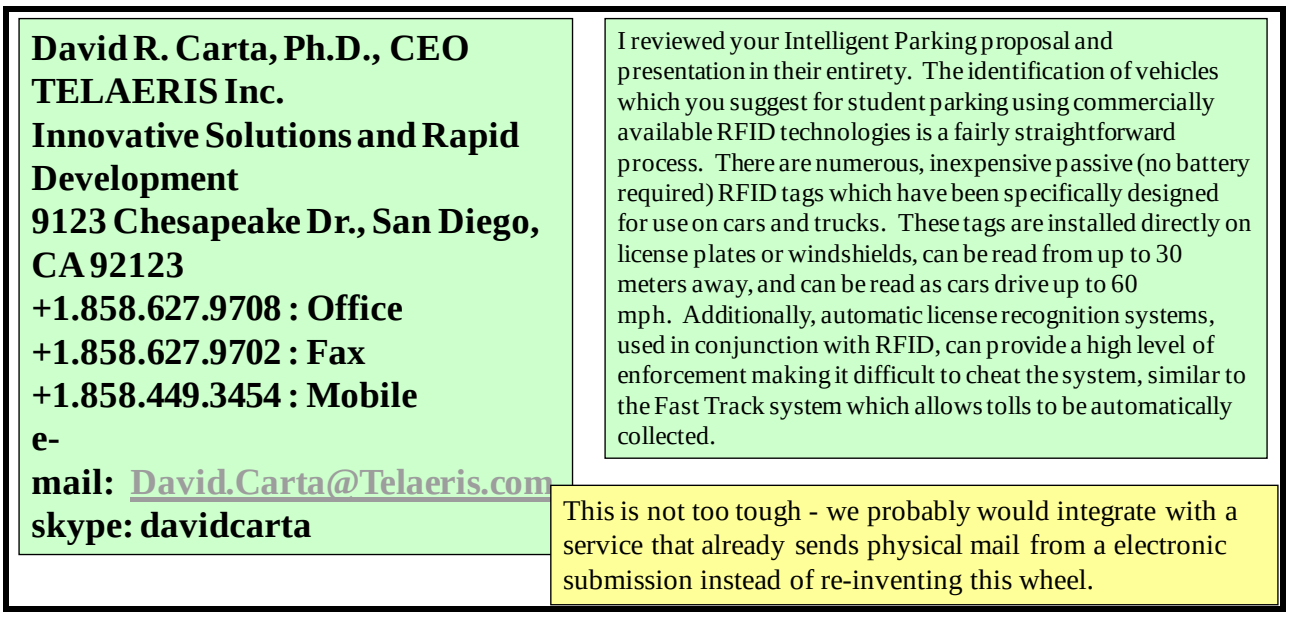
Table 2 shows that introducing a price differential into the choice of how often to drive will decrease the amount of driving.

Other Benefits

Depending on the work site's location and the size of its access roads, there could be a substantial decrease in local congestion, improving the health of all employees and those living near the congestion. This parking policy will show neighbors that the company is working to be a good citizen. This program will encourage active transportation, meaning

modes that provide exercise for the employees. It will also teach the employees the value of parking. It is recommended that the method of determining the selected rate of charge be shared with both the employees and the community at large. This program can be thought of as a demonstration project of a new approach to parking.

Figure 2 One Set of Identified-Vendor Information



Green House Gas Impacts

S-3-05 is a California Governor's Executive Order to drop the state's Year 2020 levels of greenhouse gas (GHG) emissions to the state's level of 1990 emissions and to drop the state's Year 2050 level of GHG emissions to 80% *below* the state's 1990 levels. If the world were to achieve similar reductions, the earth's level of atmospheric C02 would be capped at 450 parts per million (PPM). Figures 3, 4, and 5 show how large 450 PPM is, compared to values over the last 800 thousand years. Reference 2 shows that the goal of S-3-05 is to limit atmospheric C02 to 450 PPM and it also shows that even if this cap is achieved, the risk of a human catastrophe caused by global warming is significant. Reference 3's Figure 1 shows that a significant reduction in driving is critically needed.

Conclusion

Adopting this program would benefit the employer, the employees, and the community, in many ways. They will all gain an added understanding of economics, technology, and the power of the free-market principle that sometimes it is better to have people pay for what they use and not force people to lose money for something they don't use. All the members

of the work-place community could take pride in being part of this pioneering effort to reduce driving and greenhouse gas emissions. It would be a demonstration of the fundamental features of Reference 1. It would set an example for other employers.

Table 2 Eleven Cases of Pricing Impact on the Amount of Driving

Impact of Financial Incentives on Parking Demand			
Location	**Scope**	**1995 dollars per mo.**	**Parking Use Decrease**
Group A: Areas with little or no public transportation			
CenturyCityDistrict, West Los Angeles	3500 employees at 100+ firms	$81	15%
Cornell University, Ithaca, NY	9000 faculty & staff	$34	26%
San Fernando Valley, Los Angeles	1 employer, 850 employees	$37	30%
Costa Mesa, CA		$37	22%
Average for Group		**$47**	**23%**
Group B: Areas with fair public transportation			
Los Angeles Civic Center	10000+ employees, several firms	$125	36%
Mid-Wilshire Blvd., Los Angleles	1 mid-size firm	$89	38%
Washington DC Suburbs	5500 employees at 3 worksites	$68	26%
Downtown Los Angeles	5000 employees, 118 firms	$126	25%
Average for Group		**$102**	**31%**
Group C: Areas with good public transportation			
University of Washington, Seattle Wa.	50,000 faculty, staff & students	$18	24%
Downtown Ottowa, Canada	3500+ government staff	$72	18%
Bellevue, WA	1 firm with 430 employees	$54	39%[2]
Average for Group, but not Bellevue Washington		**$45**	**21%**
Over All Average, Excluding Bellevue Washington			**25%**

[1] **Parking vacancy would be higher!** [2] **Not used, since transit & walk/bike facilities also improved.**

Figure 3 Atmospheric CO2, Increasing Over Recent Decades

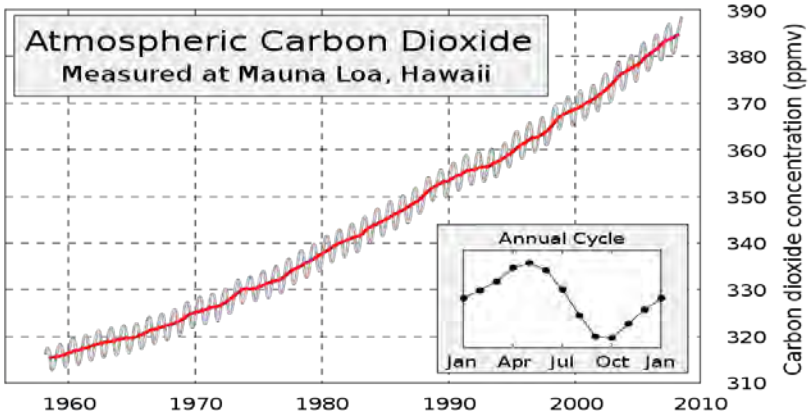


Figure 4 **Atmospheric CO2 and Mean Temperature, 800,000 Years Ago, with 450 PPM C02 Shown**

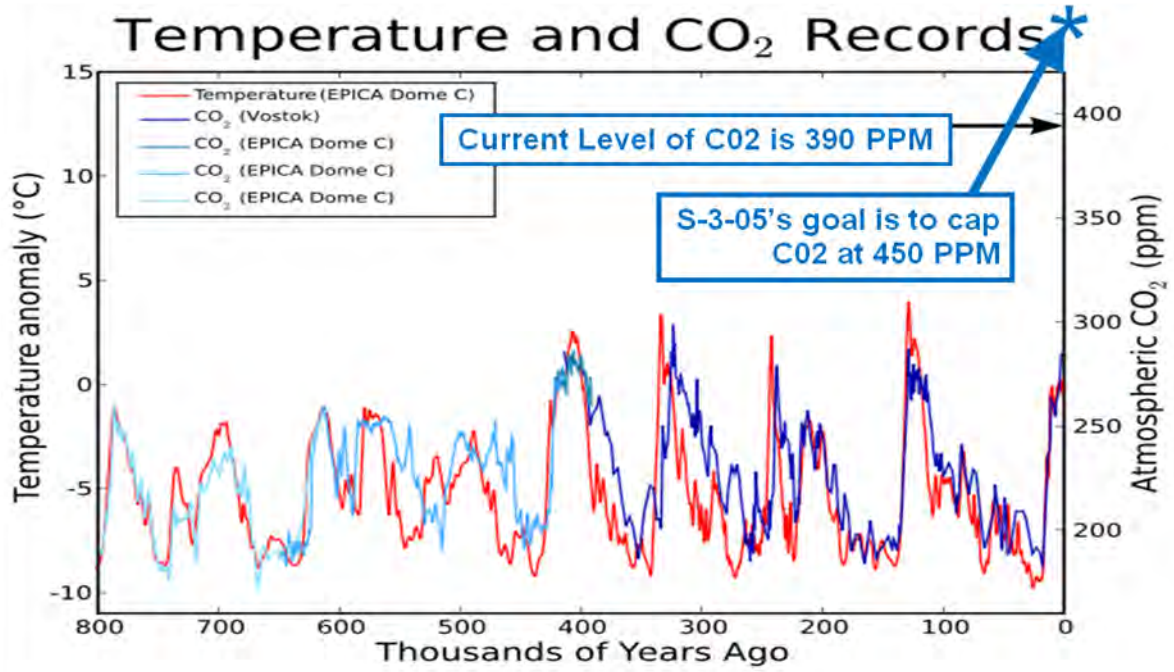
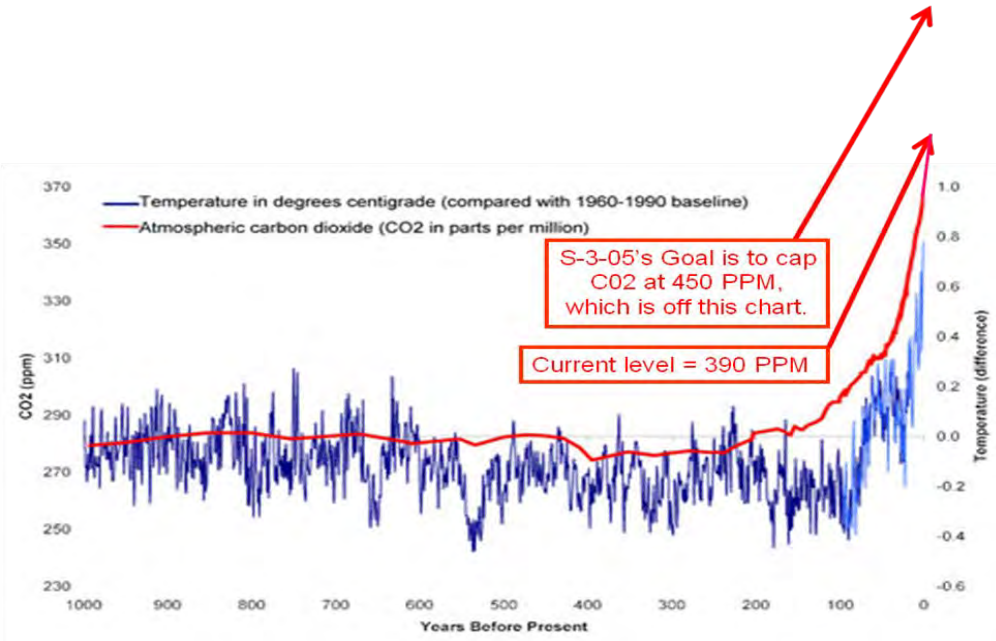


Figure 5 **Atmospheric CO2 and Mean Temperature, Over the Last 1,000 Years**



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Equitable and Environmentally-Sound Car Parking Policy at Schools

By Mike Bullock mike_bullock@earthlink.net

July 20, 2011

Introduction

This paper describes a parking policy that distributes the benefit of parking to all students of driving age, regardless of how often they choose to drive. It does this by

- charging a fair price for the parking, per unit of time parked,

and by

- giving the earnings to all students of driving age, in proportion to the time they spend at the school.

This same method is applied to the school's employees.

Reference 1 describes a more comprehensive policy that will efficiently and conveniently unbundle the cost of parking in all circumstances. It is available at the following URL: http://www.sandiego.gov/environmental-services/pdf/sustainable/parkingcosts.pdf.

The system described herein is less complex because it does not include congestion pricing, price predictions, or policies that are unique to on-street parking. These features can be eliminated, because it is assumed that there will be an adequate supply of parking, so no congestion pricing is needed; that the price can be relatively stable, so no price predictions are needed; and finally, that students and employees can be successfully required to park only at the school, so there is no need for new, on-street parking policies, designed to protect adjoining neighborhoods from the intrusion of additional parked cars.

Rationale

This system of "unbundled parking cost" will allow all stakeholders to see the actual value of the parking. It will reduce driving to the school. Less driving will reduce traffic congestion, air pollution and greenhouse gas (GHG) emissions.

Parking is expensive to provide. Therefore, if no parking had been provided, the saved money could have been invested to increase employee salaries. The method described in this paper allows employees to gain some of that lost salary back, by driving less.

Providing free or underpriced parking only benefits employees that would drive every day, even if they had a method to recover some of their lost salary.

Methods

The parking is operated on the behalf of the students and employees, as if it were their own business. Those that drive are therefore their own customers.

Charge for parking is proportional to time parked and is charged to the student or employee associated with the car. (A charge rate that is acceptable to all must be established.) For example, if sixty cents per hour is selected, the charging software could round off the parking duration time to the nearest minute and apply a one-cent-per-minute charge. The data-collection method could be implemented with RFID's on cars being detected at parking-lot entrances and exits. (Unauthorized cars coming onto the campus would be identified with license-plate detection and, if a car belonging to a felon is driven onto the campus, a warning notice could be sent to authorities, if this is desired by the school board.)

Earnings (net revenue, minus the cost of collection and distribution) are given to students of driving age and to employees, in proportion to the time they spend at the school (except for the days they were "dropped off", meaning chauffeured; this feature is described in the next paragraph). This could be based on a student's or employee's schedule or, for more accuracy, could be based on "time-at-the-school" data, collected using personal radio frequency identification units (RFIDs) and detectors that are tied to a central, implementing computer. The variables used to compute the amount of money to be paid to a student are shown in Table 1. The corresponding formula is shown in Figure 1. The same approach would be used to compute the earnings of the employees.

Table 1 Variables Used to Compute a Student's Monthly Earnings

Definitions to Compute A Student's Monthly Earnings		
$T_{Student}$	The Student's Monthly Time at the School	
$T_{AllStudents}$	Total Monthly Time at School, All Students	
$E_{AllStudents}$	Total Monthly Earnings from the Student Parking	

Figure 1 Formula Used to Compute a Student's Monthly Earnings

$$E_{Student} = T_{Student} * (E_{AllStudents} / T_{AllStudents})$$

"Drop off" (chauffeured) policy is as follows. Students may only be dropped off in designated areas. Cars used for this purpose must be authorized and associated with either a student or an employee. For the day that a car is used for drop off or pickup, the student or employee associated with the car accumulates no time at the school, used for the purpose of computing earnings.

Parking statements are automatically sent out monthly, showing the individual's charges and earnings. For students, the net earnings, for those that drive less than the average, could be distributed in the form of a check, or could be deposited to a school-board-created 401K or other type of savings account. This savings account money could then be used for college tuition or awarded to the student when they turn 21 years of age, if that is desired by the school board. Studies have shown that students that have a savings account for college are more likely to attend college.

Implementation

Since this is a new system, it would be prudent for the school board to have the vendor take the full responsibility for operating the system, for the first 10 years. This arrangement would ensure that the vendor would debug the system and continue to look for operational efficiencies, over the 10 year period. A sliding scale of vendor-compensation could be specified in the contract, as follows: The vendor could operate the system for 10% of the revenue, for the first 5 years; 5% of the revenue, for the next 3 years; and 2% of the revenue, for the final 2 years. For example, if it is assumed that, on average, 600 cars are parked for 8 hours, for 200 days per year, at a rate of 50 cents per hour, then the yearly revenue would be $480,000 per year. The vendor would therefore collect $240,000 over the first 5 years, $72,000 over the next 3 years, and $28,800 over the last two years. Figure 2 shows contact information and excerpts of received emails, from a San Diego vendor. This particular vendor has stated that both the design and the installation of a fully-automated system would be easy to perform.

Experience of Other Schools/Organizations

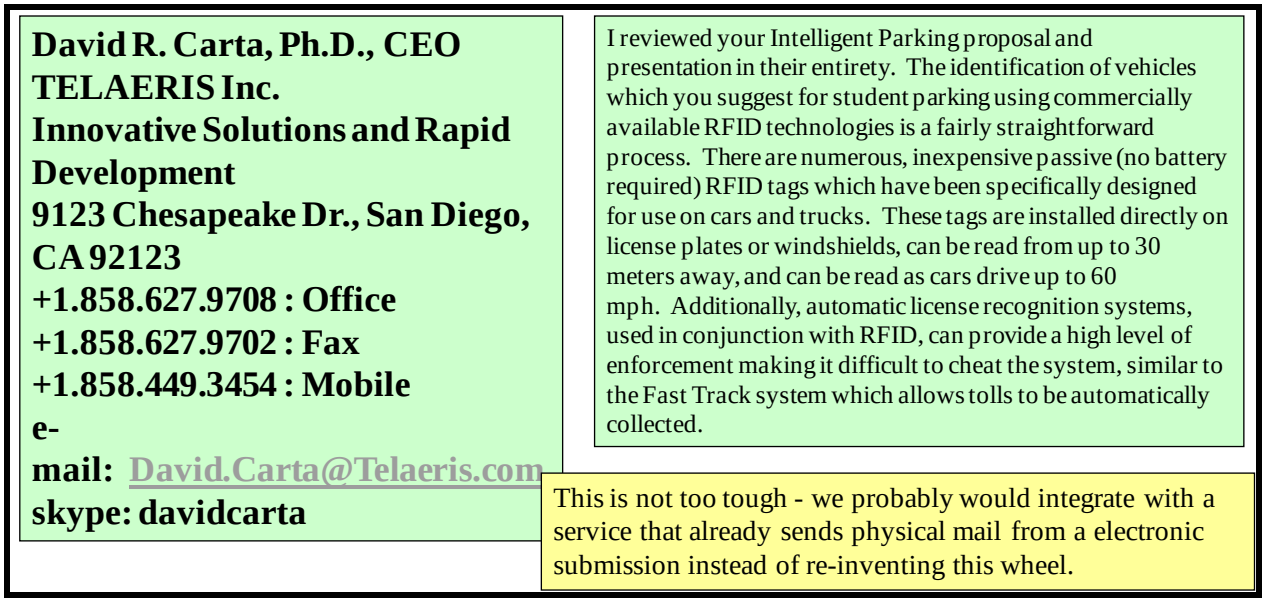
Table 2 shows nine public schools and two private schools that charge for parking. (It should be noted that the method described here is much more than just "charging for parking", because the earnings are given back to the students and employees.) Table 3 shows that introducing a price differential into the choice of how often to drive will decrease the amount of driving.

Other Benefits

Depending on the school's location and the size of its access roads, there could be a substantial decrease in local congestion, improving the health of all students. This

parking policy will show neighbors that the administration is working to be a good citizen. This program will encourage active transportation, meaning modes that provide exercise for the students. It will also teach the students the value of parking. It is recommended that the method of determining the selected rate of charge be shared with both the students and the community at large. This program can be thought of as a demonstration project of a new approach to parking.

Figure 2 One Set of Identified-Vendor Information



Green House Gas Impacts

S-3-05 is a California Governor's Executive Order to drop Year 2020 levels of greenhouse gas (GHG) emissions to the level of 1990 emissions and to drop our Year 2050 level of GHG emissions to 80% *below* 1990 levels. If the world achieves similar reductions, the earth's level of atmospheric C02 will be capped at 450 parts per million (PPM). Figures 3, 4, and 5 show how large 450 PPM is, compared to values over the last 800 thousand years. Reference 3 shows that the goal of S-3-05 is to limit atmospheric C02 to 450 PPM and it also shows that even if this cap is achieved, the risk of a human catastrophe caused by global warming is significant. Reference 4's Figure 1 shows that a significant reduction in driving is critically needed.

Conclusion

Adopting this program will benefit the school in numerous ways. Students will gain an understanding of economics and technology. All members of the school community can

take pride in being part of this pioneering effort to reduce driving and the associated green house gases. It is a demonstration of the fundamental features of Reference 1. It will set an example for other schools and employers.

Table 2 American High Schools that Charge for Parking

Eleven U.S. High Schools that Charge Students to Park						
State	**City**	**County**	**High School**	**Price Per year**	**Link to Price**	**Link to Location**
California	Anaheim	Orange	Servite[1]	$25	http://www.servitehs.org/apps/pages/index.jsp?uREC_ID=86492&type=d	http://en.wikipedia.org/wiki/Anaheim,_California
Illinois	Maple Park	DeKalb	Kaneland	$150	http://www.kaneland.org/khs/	http://en.wikipedia.org/wiki/Maple_Park,_Illinois
Minnesota	Andover	Anoka	Andover	$100	http://www.anoka.k12.mn.us/education/components/docmgr/default.php?sectiondetailid=276465&fileitem=96679&catfilter=24892	http://en.wikipedia.org/wiki/Andover,_Minnesota
Wisconsin	German Town	Wash-ington	German Town	$150	http://www.germantownnow.com/news/92202694.html	http://en.wikipedia.org/wiki/Germantown,_Wisconsin
Virginia	Herndon	Fairfax	Herndon	$200	http://www.fcps.edu/HerndonHS/stud_life/park_reg.htm	http://www.fairfaxcounty.gov/
North Carolina	Holly Springs	Wake	Holly Springs	$153	http://hollyspringshs.wcpss.net/Parking/HSHS%20PARKING%20REGULATIONS%202010-2011.pdf	http://en.wikipedia.org/wiki/Holly_Springs,_North_Carolina
New Jersey	Newton	Sussex	Kittatinny Regional	$50	http://www.krhs.net/new08/ActivityFees.pdf	http://en.wikipedia.org/wiki/Newton,_New_Jersey
Massa-chusetts	Ipswich	Essex	Ipswich[1]	$50	http://www.wickedlocal.com/ipswich/news/x1146471597/Student-parking-fee-set-override-nixed#axzz1Qy0d7dfi	http://en.wikipedia.org/wiki/Ipswich,_Massachusetts
Massa-chusetts	Andover	Essex	Andover	$200	http://www.aps1.net/DocumentView.aspx?DID=1409	http://en.wikipedia.org/wiki/Andover,_Massachusetts
Massa-chusetts	Palmer	Hampden	Palmer	$100	http://www.masslive.com/news/index.ssf/2009/09/school_committee_defends_100_p.html	http://en.wikipedia.org/wiki/Palmer,_Massachusetts
Connec-ticutt	Stoning-ton	New London	Stoning-ton	$100	http://www.thewesterlysun.com/mysticriverpress/news/school-board-plans-parking-fees-reassignment/article_d72199e4-9d9f-11e0-8406-001cc4c03286.html	http://en.wikipedia.org/wiki/Stonington,_Connecticut

[1]These schools are private. The other nine schools are public.

Table 3 **Eleven Cases of Pricing Impact on the Amount of Driving**

Impact of Financial Incentives on Parking Demand			
Location	**Scope**	**1995 dollars per mo.**	**Parking Use Decrease[1]**
Group A: Areas with little or no public transportation			
CenturyCityDistrict, West Los Angeles	3500 employees at 100+ firms	$81	15%
Cornell University, Ithaca, NY	9000 faculty & staff	$34	26%
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Average for Group		**$47**	**23%**
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Bellevue, WA	1 firm with 430 employees	$54	39%[2]
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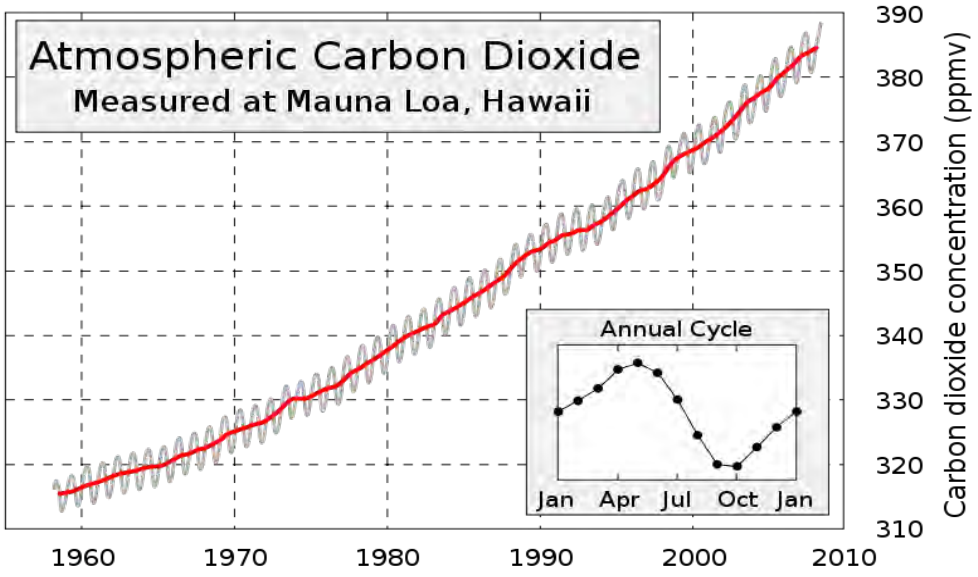


Figure 4 **Atmospheric CO2 and Mean Temperature, 800,000 Years Ago, with 450 PPM C02 Shown**

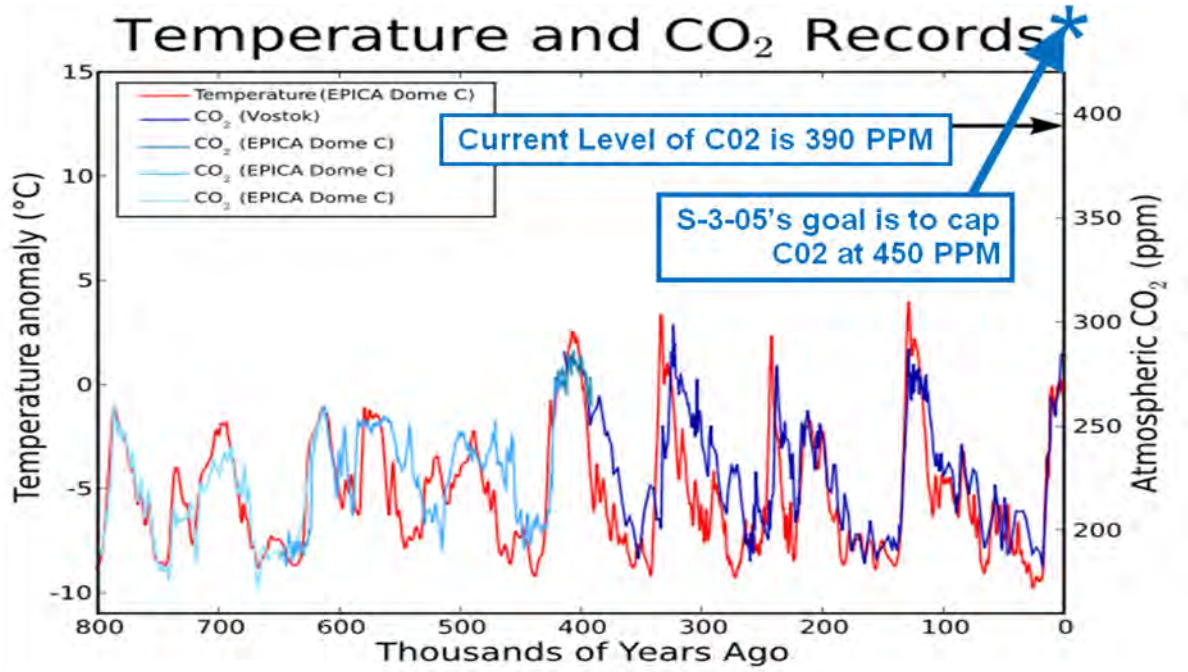
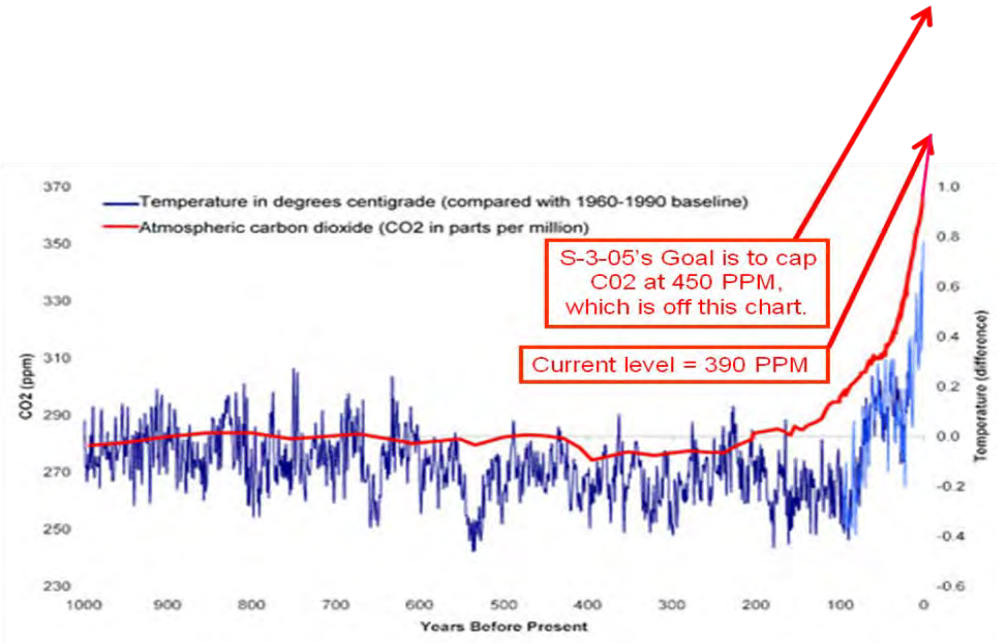


Figure 5 **Atmospheric CO2 and Mean Temperature, Over the Last 1,000 Years**



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The Development of California Light-Duty Vehicle (LDV) Requirements to Support Climate Stabilization: Fleet-Emission Rates & Per-Capita Driving

Paper #30793

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ABSTRACT

An Introduction to the topic is provided, including the importance of cars and light duty trucks (Light Duty Vehicles, LDVs), and an identification of the top-level LDV requirements.

The fundamentals of our climate crisis are presented, including its cause, its potential for harm, and existing mandates: *California's Executive Order S-3-05*, *California's Global Warming Solutions Act of 2006* (AB 32), and *California's Sustainable Communities and Climate Protection Act* (SB 375). An earlier calculation of a driving reduction target is described.

Reference year 2005 is identified. The latest climate-stabilizing greenhouse-gas (GHG) reduction target value, for 2030, is calculated, using unambiguous statements by recognized climate experts and California's expected 2020 emissions. The formula for GHG emissions, as a function of per-capita driving, population, fleet CO2 emissions per mile, and low-carbon fuel standards is given. From that expression, a mathematical relationship between defined factors associated with these variables is derived. These factors are the ratio of the value at the specified later year to the reference year. The factor of car-emission-per-mile driven, for year 2015, with respect to year 2005, is obtained.

Internal Combustion Engine (ICE) mileage values from 2000 to 2030 are identified, as either mandates or assumptions. A table is presented that estimates LDV fleet mileage, for year 2015.

Zero Emission Vehicle (ZEV) values to support a calculation of equivalent-fleet mileage with a significant fraction of ZEVs (ZEV LDVs) are given. A table is shown that uses assumptions about ZEVs, ICEs (ICE LDVs), and the fraction of electricity that comes from renewables, to compute the LDV fleet equivalent mileage, for year 2030. This set of assumptions is dubbed the "Heroic-Measures" (HM) case. It includes having the fraction of ZEVs quickly climb up to significant values, while the ICEs, for the years before significant fractions of ZEVs appear, are, to a significant degree, taken off the road or otherwise caused to be driven less, due to assumed strong governmental policies. The equivalent fleet mileage computed by this table is used, with population and the needed factor of emission reductions, to compute a needed per-capita driving reduction, for 2030, with respect to 2005. Policies to achieve this per-capita reduction are described, with reductions allocated to each policy.

The fleet-equivalent mileage for 2030 that would support a 2005 per-capita driving level is computed. A table is constructed to achieve that equivalent mileage. The assumptions in that table are said to define an "extra-heroic-measures" (EHM) case. They would probably be very difficult to achieve. The electricity required to power the HM case is estimated and compared to current usage.

INTRODUCTION

Humanity's top-level requirement is to reduce greenhouse gas (GHG) emissions enough to support stabilizing our climate at a livable level. This top-level requirement must flow down to LDVs, due to the significance of their emissions. As an example, LDVs emit 41% of the GHG in San Diego County[1].

From a systems engineering perspective, the needed requirements are an upper bound on greenhouse gas (GHG) emissions per mile driven (applicable to the entire fleet of LDVs on the road in the year of interest) and an upper bound on per-capita driving, given population growth. This paper will do a calculation of required driving levels, based on calculations of how clean our cars and fuels could be, predicted population growth, and the latest, science-based, climate-stabilizing target. All three categories of LDV emission-reduction strategies will be considered: cleaner cars, cleaner fuels, and less driving.

BACKGROUND: OUR CLIMATE PREDICAMENT

Basic Cause

Our climate crisis exists primarily because of these two facts[2]: First, our combustion of fossil fuels adds "great quantities" of CO_2 into our atmosphere. Second, atmospheric CO_2 traps heat.

California's First Two Climate Mandates

California's Governor's Executive Order S-3-05[3] is similar to the Kyoto Agreement and is based on the greenhouse gas (GHG) reductions recommended by climate scientists for industrialized nations, back in 2005. In 2005, climate scientists believed that the reduction-targets of S-3-05 would be sufficient to support stabilizing Earth's climate at a livable level, with a reasonably high level of certainty. More specifically, this executive order aims for an average, over-the-year, atmospheric temperature rise of "only" 2 degree Celsius, above the preindustrial temperature. It attempts to do this by limiting atmospheric CO_2_e to 450 PPM by 2050 and then reducing emissions further, so that atmospheric levels would come down to more tolerable levels in subsequent years. The S-3-05 emission targets are as follows: 2000 emission levels by 2010, 1990 levels by 2020, and 80% below 1990 levels by 2050.

It was thought that if the world achieved S-3-05, there might be a 50% chance that the maximum temperature rise will be less than 2 degrees Celsius, thus leaving a 50% chance that it would be larger than 2 degrees Celsius. A 2 degree increase would put over a billion people on the planet into a position described as "water stress" and it would mean a loss of 97% of our coral reefs.

There would also be a 30% chance that the temperature increase would be greater than 3 degrees Celsius. A temperature change of 3 degree Celsius is described in Reference 3 as being "exponentially worse" than a 2 degree Celsius increase.

The second California climate mandate is AB 32, the so-called *Global Warming Solutions Act of 2006*. It includes provisions for a cap and trade program, to ensure meeting S-3-05's 2020 target

of the 1990 level of emissions. It continues after 2020. Over all years, AB 32 requires CARB to implement measures that achieve the maximum *technologically feasible and cost-effective* (words taken from AB 32) greenhouse-gas-emission reductions.

California is on track to achieve its second (2020) target. However, the world emission levels have, for most years, been increasing, contrary to the S-3-05 trajectory. Because the world has effectively failed to achieve S-3-05, California, if it still is interested in leading the way to human survival, must do far better than S-3-05, going forward, as will be shown.

Failing to Achieve these Climate Mandates

What if we fail to achieve S-3-05 and AB 32 or we achieve them but they turn out to be too little too late and other states and countries follow our example?

It has been written[R4] that, "A recent string of reports from impeccable mainstream institutions-the International Energy Agency, the World Bank, the accounting firm of PricewaterhouseCoopers-have warned that the Earth is on a trajectory to warm by at least 4 Degrees Celsius and that this would be incompatible with continued human survival."

It has also been written[R5] that, "Lags in the replacement of fossil-fuel use by clean energy use have put the world on a pace for 6 degree Celsius by the end of this century. Such a large temperature rise occurred 250 million years ago and extinguished 90 percent of the life on Earth. The current rise is of the same magnitude but is occurring faster."

Pictures That Are Worth a Thousand Words

Figure 1 shows (1) atmospheric CO_2 (in blue) and (2) averaged-over-a-year-then-averaged-over-the surface-of-the-earth world atmospheric temperature (in red). This temperature is with respect to a recent preindustrial value. The data starts 800,000 years ago. It shows that the current value of atmospheric CO_2, which is now over 400 PPM, far exceeds the values of the last 800,000 years. It also shows that we should expect the corresponding temperature to eventually be about 12 or 13 degrees above preindustrial temperatures. This would bring about a human disaster[3,4,5].

Figure 2 shows the average yearly temperature with respect to the 1960-to-1990 baseline temperature (in blue). It also shows atmospheric levels of CO_2 (in red). The S-3-05 goal of 450 PPM is literally "off the chart", in Figure 2. Figure 2 shows that, as expected, temperatures are starting to rise along with the increasing levels of CO_2. The large variations in temperature are primarily due to the random nature of the amount of solar energy being received by the earth.

FURTHER BACKGROUND: CALIFORNIA'S SB 375 AND A PREVIOUS CALCULATION OF HOW MUCH WE CAN DRIVE

As shown in the Introduction, LDVs emit significant amounts of CO_2. The question arises: will driving need to be reduced or can cleaner cars and cleaner fuels arrive in time to avoid such behavioral change? Steve Winkelman, of the Center for Clean Air Policy (CCAP), has worked on this problem. Using CCAP data, an S-3-05-supporting driving reduction, for San Diego County, will be estimated.

SB 375, the *Sustainable Communities and Climate Protection Act of 2008*

Under SB 375, the California Air Resources Board (CARB) has given each Metropolitan Planning Organization (MPO) in California driving-reduction targets, for the years 2020 and

Figure 1. Atmospheric CO_2 and Mean Temperature from 800,000 Years Ago

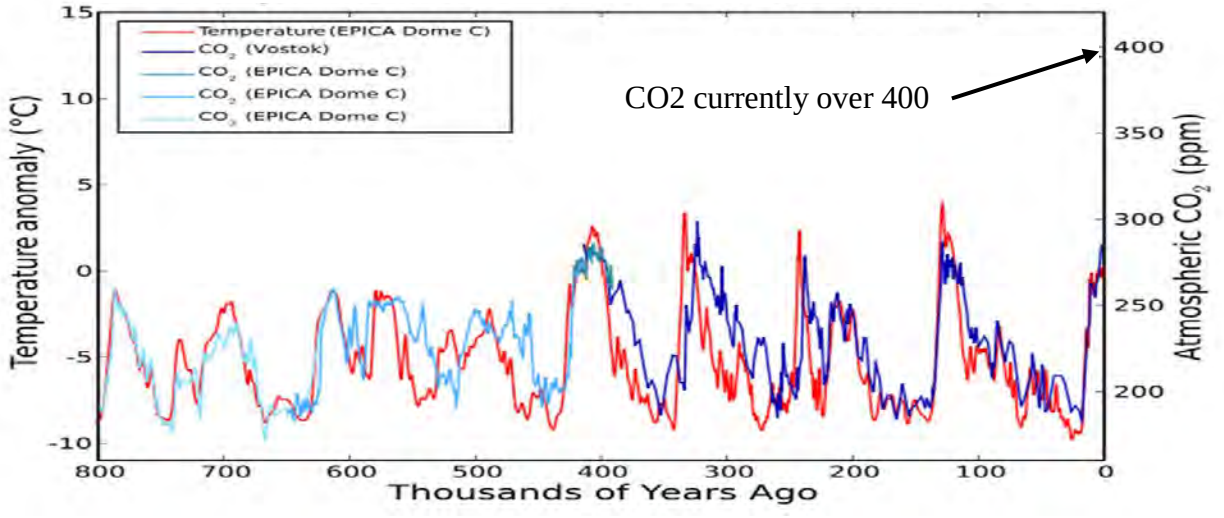
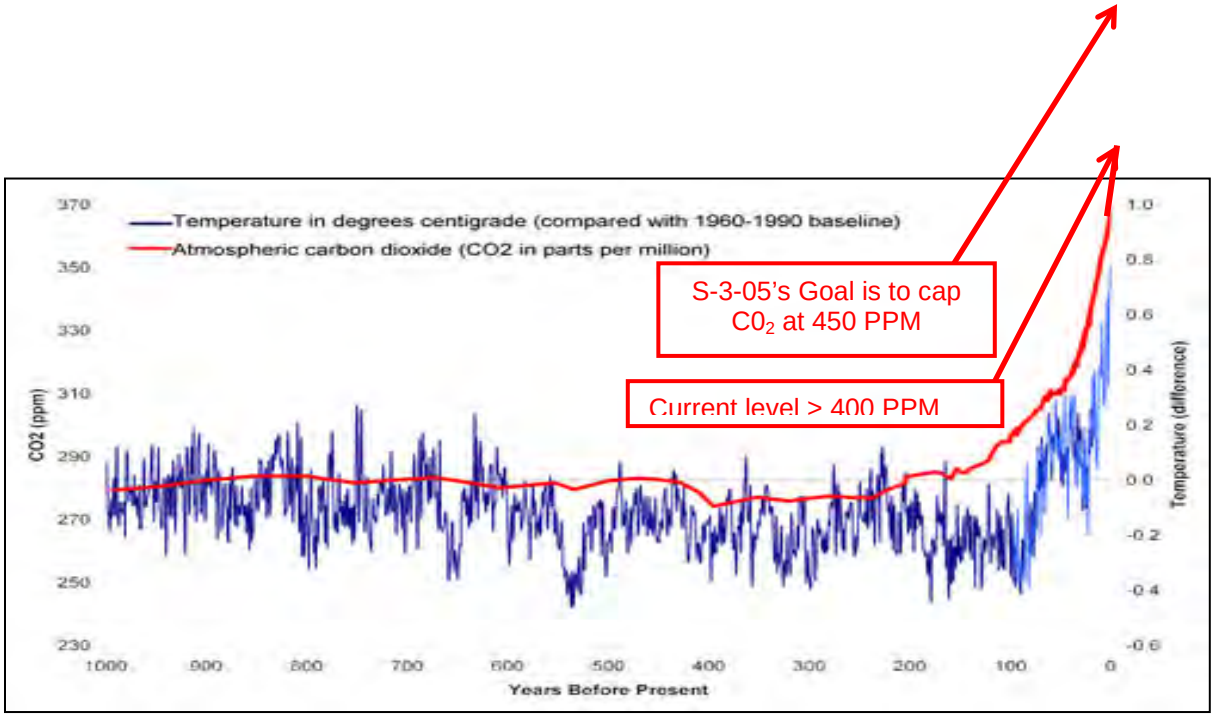


Figure 2. Atmospheric CO_2 and Mean Temperature, Over the Last 1,000 Years



2035. "Driving" means yearly, per capita, vehicle miles travelled (VMT), by LDVs, with respect to 2005. The CARB-provided values are shown at this Wikipedia link, http://en.wikipedia.org/wiki/SB_375.

Under SB 375, every Regional Transportation Plan (RTP) must include a section called a Sustainable Communities Strategy (SCS). The SCS must include driving reduction predictions corresponding to the CARB targets. Each SCS must include only *feasible* transportation, land use, and transportation-related policy data. If the SCS driving-reduction predictions fail to meet the CARB-provided targets, the MPO must prepare an Alternative Planning Strategy (APS), which must also appear in the MPO's RTP. An APS uses *infeasible* transportation, land use, and transportation-related policy assumptions. The total reductions, resulting from both the SCS and the APS, must at least meet the CARB-provided targets.

Factors Used to Compute the Required Driving Reduction

The definitions in Tables 1 and the two conventions in Table 2 will be used to compute the needed driving reductions, with respect to year 2005, from known and estimated variables and the S-3-05 GHG reductions that were thought to support climate stabilization, back in 2005. By SB 375 convention, Year "*i*", the reference year, is 2005.

The fractional reduction in per-capita personal driving, with respect to 2005 driving, needed to achieve any desired level of GHG emission, can be computed using predicted population growth and two of the variables shown in Figure 3[6]. The two needed values are the factor with respect to year 2005 of CO_2 emitted per mile driven (the green line, sometimes referred to as "Pavley", since AB 1493 was authored by Senator Fran Pavley) and the factor with respect to year 2005 of the advantage from achieving the low carbon fuel standards (LCFS, the purple line).

The variables plotted in Figure 3 are the factors which can be used to multiply the 2005 values to get the values for the years shown. For example, in 2030, the CO_2 emitted from the cars and light-duty trucks in California (the dark blue line), can be computed to be 1.12 times as large as it was in 2005. It can also be said that the value will be 12% larger than it was in 2005. Likewise, the green line, which is the average CO_2 emitted per mile driven, for California's fleet of LDVs, is predicted, in 2030, to be .73 times the 2005 value. This means the value is predicted to be reduced 27%, below its 2005 value. Figure 3 also shows that the 1990 value of emissions (on the light blue line) was about 13% less than it was in 2005.

The S-3-05 trajectory is shown as the gold (or dark yellow) line. It is the factors that can be used to convert 2005 values of emissions to values for the years shown. For example in 2030, emissions will need to be 37% lower than they were in 2005, to meet the S-3-05 mandate.

The SB 375 convention is for CARB to require and for the Metropolitan Planning Organizations (MPOs) to estimate and report their predicted per-capita driving reductions. To compute the per-capita driving reduction, the equation for computing the emissions is used. That equation is the product of the following four factors:

- the Low Carbon Fuel Standard, "*L*" (which reduces the CO2 emitted from each gallon of fuel burned),
- the fleet-average CO2 per mile driven (using the CO2 per gallon burned without accounting for "L"),

Table 1. Variable Definitions

Variable Definitions	
e_k	**LDV Emitted C02, in Year "*k*"**
L_k	**Low Carbon Fuel Standard (LCFS) Factor that reduces the Per-Gallon CO2 emissions, in Year "*k*"**
C_k	**LDV CO2 emitted per mile driven, average, in Year "*k*", not accounting for the Low Carbon Fuel Standard (LCFS) Factor**
c_k	**LDV CO2 emitted per mile driven, average, in Year "*k*", accounting for the Low Carbon Fuel Standard (LCFS) Factor**
p_k	**Population, in Year "*k*"**
d_k	**Per-capita LDV driving, in Year "*k*"**
D_k	**LDV Driving, in Year "*k*"**
M_k	**LDV Mileage, miles per gallon, in Year "*k*"**
m_k	**LDV Equivalent Mileage, miles per gallon, in Year "*k*" accounting for Low Carbon Fuel Standard (LCFS) Factor, so this is M_k/L_k**
N	**Number of pounds of CO2 per gallon of fuel but not accounting for the Low Carbon Fuel Standard (LCFS) Factor**

Table 2. Two Conventions

Two Conventions: Variable in a Given Year and Factors to Compute a Variable's Value in Year "*k*" from it's Value in Year "*i*"	
X_i	**Variable "*X*" in year "*i*"**
$f_{x_{k/i}}$	**Ratio of the value of "*X*" in year "*k*" to the value of "*X*" in Year "*i*", which could also be expressed as x_k/x_i. Note that this is the factor that could be used to multiply the value in Year "*i*" to get the value in Year "*k*".**

- the per-capita driving, and
- the population. (The per-capita driving multiplied by population gives the miles driven.)

$$e = L * C * d * p \quad \textbf{(Eq. 1)}$$

For Year "*k*", this is the following:

$$e_k = L_k * C_k * d_k * p_k \quad \textbf{(Eq. 2)}$$

For Year "*i*", this is the following:

$$e_i = L_i * C_i * d_i * p_i \quad \textbf{(Eq. 3)}$$

Since the two sides of Equation 3 are equal, an equation can be formed by dividing the left side of Equation 2 by the left side of equation 3 and the right side of Equation 2 by the right side of Equation 3. Associating the terms on the right side of this new equation gives Equation 4

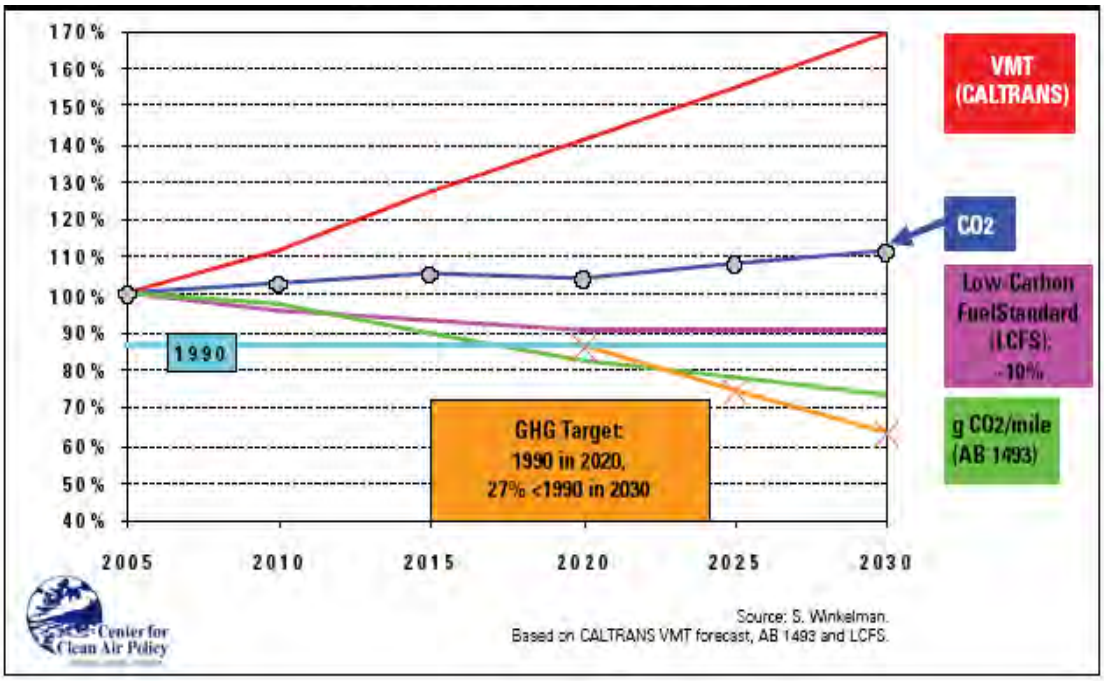
$$\frac{e_k}{e_i} = \frac{L_k}{L_i} * \frac{C_k}{C_i} * \frac{d_k}{d_i} * \frac{p_k}{p_i} \qquad \textbf{(Eq. 4)}$$

The convention of the 2nd row of Table 2 can be used to create Equation 5 from Equation 4.

$$f_{e_{k/i}} = f_{L_{k/i}} \times f_{C_{k/i}} \times f_{d_{k/i}} \times f_{p_{k/i}} \qquad \textbf{(Eq. 5)}$$

The first factor (from left to right) of the right side of Equation 5 is the purple line of Figure 3; the second factor of Equation 5 is the green line of Figure 3; and the product of the last two factors of

Figure 3 **The S-3-05 Trajectory (the Gold Line) AND the CO_2 Emitted from Personal Driving (the Blue Line), where that CO_2 is a Function (the Product) of the California-Fleet-Average CO_2 per Mile (the Green Line), The Predicted Driving (VMT, the Red Line), and the Low-Carbon Fuel Standard (the Purple Line)**



the right side of Equation 5 is the red line of Figure 3. Figure 3's, dark-blue-line values are the product of the purple-line values, the green-line values, and the red -line values. For example, in 2030, the dark-blue value of 1.12 can be computed by multiplying the purple-line value of 0.9 times the green-line value of 0.73, times the red-line value of 1.7, times the red-line value of 1.7. As a check, (0.9)*(0.73)*(1.7) = 1.1169, which is reasonably close to the (eye-ball-estimate) value of the dark-blue line, for year 2030, 1.12.

The Required Driving Reduction for San Diego County, for 2035, Using Winkelman's LDV and Fuel Efficiency Values and S-3-05

As described in Footnote 3 of this report, the CARB-supplied targets are per-capita driving reduction targets. Page 8, of http://arb.ca.gov/cc/sb375/staffreport_sb375080910.pdf, says, "The RTAC recommended that targets be expressed as a percent reduction in per-capita greenhouse gas emissions from a 2005 base year". However, Footnote 3 applies.

The Key Relationship and Derivation of the Needed Formula

They key relationship is Equation 5. Solving for the fractional reduction in per-capita driving, with respect to 2005, results in Equation 6.

$$f_{d_{k/i}} = \frac{f_{e_{k/i}}}{f_{L_{k/i}} \times f_{c_{k/i}} \times f_{p_{k/i}}} \qquad \textbf{(Eq. 6)}$$

This driving reduction is a per-capita value, matching the convention of the CARB-supplied target.

Getting the Values to Use in the Equation

Figure 3 will supply all of the needed values, except for the factor of population. Neither Figure 3's red-line values nor its blue-line values are used.

Getting the Net Factor of the Emissions of GHG, for Year 2035, With Respect to 2005

To get the factor of the emissions of GHG, for year 2035, with respect to year 2005, it is necessary to extrapolate the Governor's Executive Order target values (the gold line of Figure 3), out to year 2035. Figure 3's gold line shows that this factor is 0.87 in 2020 and is 0.64 in 2030. Therefore, in year 2035, the factor will be

$$0.64 + [(.64 - .87) / (2030\text{-}2020)] * (2035\text{-}2030) = 0.525$$

Getting the (Pavley) Factor of the Average CO2 per Mile Driven, in 2035, with Respect to 2005

To get the Pavley reduction factor, for Year 2035, it is necessary to extrapolate the average CO2 per mile driven, which is Figure 3's green line, out to Year 2035. It is 0.82 in 2020 and it is 0.73 in 2030. Therefore, in Year 2035 the statewide mileage factor data will be

$$0.73 + [(.73 - .82) / (2030\text{-}2020)] * (2035\text{-}2030) = 0.685$$

Getting the Factor of the Reduction of GHG Due to Fuels that Burn less Carbon

To get the factor of the reduction of GHG due to fuels that burn less carbon, it is only necessary to observe the purple line of Figure 3. It indicates that the factor will be 0.9 in 2035.

Getting the Factor of the Increase in Population

The factor for population in San Diego County is computed using the populations estimated in CARB's http://arb.ca.gov/cc/sb375/mpo.co2.reduction.calc.pdf, namely 3,034,388 people in 2005 and 3,984,753 people in 2035. So the factor, from 2005 to 2035 is 3,984,753/3,034,388 = 1.313.

Computing the Required Per-Capita Driving Reduction, for 2035

These 4 values are used in Eq. 6, to compute the required factor of per-capita driving (VMT), for 2035, with respect to 2006.

$$f_{d_{k/i}} = .525 \div (.685 \times 0.9 \times 1.313)$$

Therefore, $f_{d_{k/i}} = f_{Per\ Capita\ VMT} = .649.$

This corresponds to a 35.1% reduction in per-capita driving, in year 2035, compared to 2005.

Computing the <u>Net</u> Amount of Driving, in 2035, Compared to 2005 and its Significance

The net factor of driving in 2035, compared to 2005, is the product of the per-capita factor of driving (.649, as just computed) and the factor of population change (1.313, as computed above).

Factor of net driving in 2035 compared to 2005:

$$f_{VMT} = .649 \times 1.313 = 0.8515.$$

Based on this set of assumptions, even though San Diego County's population would grow by 31.3%, from 2005 to 2035, the people would have to drive 15% less than they did in 2005.

THE DEVELOPMENT OF CALIFORNIA'S TOP-LEVEL LDV REQUIREMENTS TO SUPPORT CLIMATE STABILIZATION

The above work is obsolete due to our latest understanding of how fast emissions will need to be reduced. It is also clear that cleaner cars will be needed and can probably be achieved. As will be seen, much cleaner cars will be needed if driving reductions are going to remain within what many people would consider achievable. Mileage and equivalent mileage will need to be specified. Some of the above equations will need to be modified, since a significant fleet-fraction of Zero-Emission Vehicles (ZEVs, either Battery-Electric LDVs or Hydrogen Fuel Cell LDVs) will be needed and mileage and equivalent mileage will be used instead of CO2 per mile driven.

Since the SB-375 work used 2005 as the reference year, it will remain the reference year here.

GHG Target to Support Climate Stabilization

The primary problem with S-3-05 is that California's resolve and actions have been largely ignored by other states, our federal government, and many countries. Therefore, rather than achieving 2000 levels by 2010 and being on a track to achieve 1990 levels by 2020, world emission have been increasing. Reference 7 states on Page 14 that the required rate of reduction, if commenced in 2020, would be 15%. That rate means that the factor of 0.85 must be achieved, year after year. If this were done for 10 years, the factor would be $(0.85)^{10} = 0.2$. We don't know where world emissions will be in 2020. However, it is fairly safe to assume that California will be emitting at its 1990 level in 2020, in accordance with S-3-05. This situation shows that the correct target for California is to achieve emissions that are reduced to 80% below California's 1990 value by 2030. Note that if the reductions start sooner, the rate of reduction of emissions can be less than 15% and the 2030 target could be relaxed somewhat. However, it is doubtful that the world will get the reduction rate anywhere near the needed 15% by 2020. Therefore, the target, of 80% below 1990 levels by 2030 is considered to be correct for California. Reference 7 also calls into question the advisability of aiming for a 2 degree Celsius increase, given the possibilities of positive feedbacks that would increase warming. This concern for positive feedbacks is another reason that this paper will work towards identifying LDV requirement sets that will support achieving 80% below 1990 values by 2030.

Using the top-row definition in Table 1, and this requirement, results in the following equation.

$$\frac{e_{2030}}{e_{1990}} = \mathbf{0.2} \qquad \textbf{(Eq. 7)}$$

From Figure 3,

$$\frac{e_{1990}}{e_{2005}} = \mathbf{0.87} \qquad \textbf{(Eq. 8)}$$

Multiplying the equations together give the following:

$$\frac{e_{2030}}{e_{2005}} = 0.87\ x\ 0.2 = .174 \quad \textbf{(Eq. 9)}$$

Using the convention shown in Table 2 gives this equation:

$$f_{e_{2030/2005}} = .174 \quad \textbf{(Eq. 10)}$$

How Miles-Per-Gallon (MPG) Updates the LDV Efficiency Estimates

The number of pounds of CO2 per mile driven, defined as "C" in Table 1, is equal to the number of pounds of CO2, per gallon of fuel, divided by the number of miles travelled on that gallon of fuel. However, in different years, this amount can change from the standard value of "N" as defined in the last line of Table 1, because of the Low Carbon Fuel Standard. Therefore, using the definitions in Table 1, the following equation can be written:

$$c_k = \frac{NxL_k}{M_k} \quad \textbf{(Eq. 11)}$$

For the baseline year "*i*", this is the following:

$$c_i = \frac{NxL_i}{M_i} \quad \textbf{(Eq. 12)}$$

Using Table 1's definition of mileage that accounts for the Low Carbon Fuel Standard gives these equations, since m = M/L:

$$c_k = \frac{N}{m_k} \quad \textbf{(Eq. 13)}$$

$$c_i = \frac{N}{m_i} \quad \textbf{(Eq. 14)}$$

Using Table 2's second convention and dividing Equation 13 by Equation 14 gives:

$$f_{c_{k/i}} = \frac{c_k}{c_i} = \frac{m_i}{m_k} \quad \textbf{(Eq. 15)}$$

This shows that to get the factor to convert CO2-emission-per-mile from the baseline value to a future-time value, the new value is divided by the baseline value. However, if the mileage values are used, the baseline value must be divided by the newer value.

It is also useful to use an intermediate year to get the factor from the baseline year to the year of interest. This can be done by using Equation 13 for different years to result in Equation 14 and Equation 15, where "j" denotes the intermediate year.

$$f_{c_{j/i}} = \frac{m_i}{m_j} \quad \textbf{(Eq. 14)}$$

$$f_{c_{k/j}} = \frac{m_j}{m_k} \quad \textbf{(Eq. 15)}$$

Multiplying these equations together results in Equation 16.

$$f_{c_{j/i}} \times f_{c_{k/j}} = \frac{m_i}{m_j} \times \frac{m_j}{m_k} = \frac{m_i}{m_k} \quad \textbf{(Eq. 16)}$$

Recognizing the right side of Equation 16 shows that these factors can be strung together, as shown by Equation 17, which is a direct result of Equation 16.

$$\boldsymbol{f_{c_{k/i}} = f_{c_{j/i}} \times f_{c_{k/j}}} \quad \textbf{(Eq. 17)}$$

Since the low carbon fuel standard has been incorporated into the carbon emission per mile parameter, "c", the following equations result, using the definitions of Table 1.

For Year "*k*", this is the following:

$$\boldsymbol{e_k} = c_k * d_k * p_k \quad \textbf{(Eq. 18)}$$

For Year "*i*", this is the following:

$$e_i = c_i * d_i * p_i \quad \textbf{(Eq. 19)}$$

Since the two sides of Equation 19 are equal, an equation can be formed by dividing the left side of Equation 18 by the left side of equation 19 and the right side of Equation 18 by the right side of Equation 19. Associating the terms on the right side of this new equation gives Equation 4

$$\frac{\boldsymbol{e_k}}{\boldsymbol{e_i}} = \frac{\boldsymbol{c_k}}{\boldsymbol{c_i}} * \frac{\boldsymbol{d_k}}{\boldsymbol{d_i}} * \frac{\boldsymbol{p_k}}{\boldsymbol{p_i}} \quad \textbf{(Eq. 20)}$$

The convention of the 2nd row of Table 2 can be used to create Equation 5 from Equation 4.

$$\boldsymbol{f_{e_{k/i}} = f_{c_{k/i}} \times f_{d_{k/i}} \times f_{p_{k/i}}} \quad \textbf{(Eq. 21)}$$

This can be expanded by using Equation 17 to give the following.

$$\boldsymbol{f_{e_{k/i}} = f_{c_{j/i}} \times f_{c_{k/j}} \times f_{d_{k/i}} \times f_{p_{k/i}}} \quad \textbf{(Eq. 22)}$$

For the purposes here, the intermediate year "j" is 2015 and, recalling that "c" takes into account the Low Carbon Fuel Standard, Figure 3 shows that the following is true, where 0.9 is taken (eyeballed) from the green line at 2015 and the .93 is taken (eyeballed) from the purple line.

$$\boldsymbol{f_{c_{j/i}} = 0.9\ x\ 0.93 = 0.837} \quad \textbf{(Eq. 23)}$$

Using Equation 22, to solve for the per-capita driving-reduction factor, results in Equation 24.

$$\boldsymbol{f_{d_{k/i}} = \frac{f_{e_{k/i}}}{f_{c_{j/i}} \times f_{c_{k/j}} \times f_{P_{k/i}}}} \quad \textbf{(Eq. 24)}$$

Reference 8 shows that California's population in 2005 was 35,985,582. Reference 9 shows that California's population in 2030 is predicted to be 44,279,354. Therefore,

$$\boldsymbol{f_{P_{k/i}} = 44279354 \div 35985582 = 1.2305} \quad \textbf{(Eq. 25)}$$

Using the values in Equation 10, 23, and 25 gives Equation 26, where "j" is the intermediate year of 2015 and Equation 15 is also used.

$$\boldsymbol{f_{d_{k/i}} = \frac{0.174}{0.837 \times \frac{m_j}{m_k} \times 1.2305}} \quad \textbf{(Eq. 26)}$$

Evaluating the values shown and with j = 2015 and k = 2030 gives Equation 27.

$$\boldsymbol{f_{d_{k/i}} = 0.1689\ x\ \frac{m_{2030}}{m_{2015}}} \quad \textbf{(Eq. 27)}$$

If the per-capita driving factor was 1 (no per-capita driving reduction needed from 2005 to 2030), the 2030 fleet (all LDVs on the road) mileage would need to exceed the 2015 fleet mileage by a factor of 1 divided by 0.1689, which is 5.92. For example, if the mileage for the 2015 fleet is 25 MPG, then the 2030 value would need to be 148 MPG. Clearly, most LDVs in 2030 will need to be ZEVs.

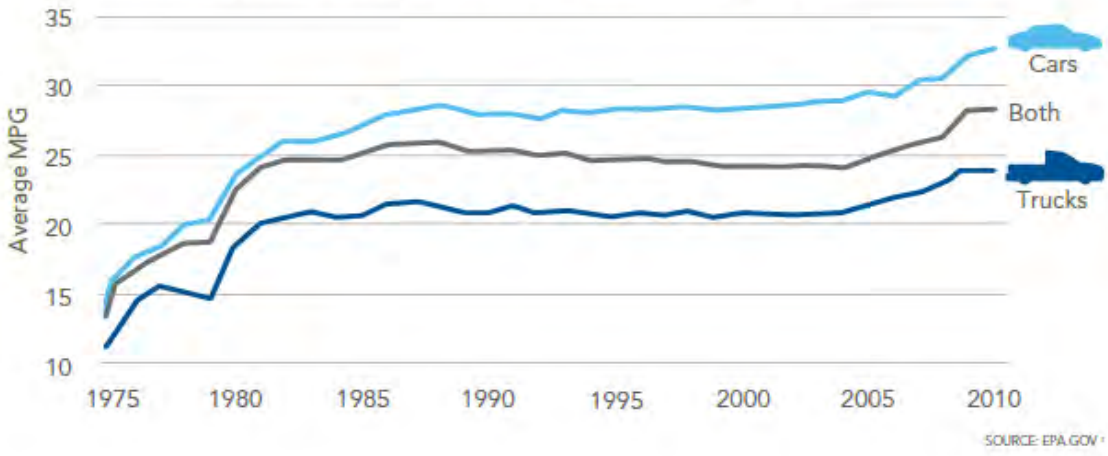
Internal Combustion Engine (ICE) Mileage, from Year 2000 to Year 2030

The years from 2000 to 2011 are taken from a plot produced by the PEW Environment Group,

http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2011/04/20/driving-to-545-mpg-the-history-of-fuel-economy

The plot is shown here as Figure 6. The "Both" values are used.

Figure 6 **Mileage Values From the PEW Environment Group**



The values from 2012 to 2025 are taken from the US Energy Information Agency (EIA) as shown on their website, http://www.c2es.org/federal/executive/vehicle-standards#ldv_2012_to_2025. They are the LDV Corporate Average Fleet Efficiency (CAFÉ) values enacted into law in the first term of President Obama. From 2025 to 2030, it is assumed that the yearly ICE improvement in CAFÉ will be 2.5 MPG.

Mileage of California's LDV Fleet in 2015

Table 3 uses these values of ICE mileage to compute the mileage of the LDV fleet in 2015. It assumes that the fraction of ZEVs being used over these years is small enough to be ignored. The 100 miles driven, nominally, by each set of cars, is an arbitrary value and inconsequential in the final calculation, because it will divide out. It is never-the-less used, so that it is possible to compare the gallons of fuel used for the different years. The "f" factor could be used to account for a set of cars being driven less. It was decided to not use this option by setting all of the values to 1. The Low Carbon Fuel Standard (LCFS) values are taken from Figure 3. The gallons of fuel are computed as shown in Equation 28, using the definition for L_k that is shown in Table 1.

$$\textbf{Gallons Used per } f * \textbf{100 miles} = \frac{f x 100}{(\textbf{CAFE MPG})/L_k} \qquad \textbf{(Eq. 28)}$$

How ICE Mileage Values Will Be Used with ZEV Equivalent Mileage Values

As will be seen, after 2015, the net (computed using both ICEs and ZEVs) mileage values for each year are assumed to greatly improve by having a significant fraction of ZEVs. The ICE CAFÉ standards are used in this report as just the ICE contribution to fleet MPG. The ICE MPG values are inadequate by themselves and will therefore need to become less important because ZEVs will need to quickly take over the highways.

Federal requirements will need to change dramatically. Currently, federally-mandated corporate average fuel efficiency (CAFÉ) standards have been implemented, from 2000 to 2025. These standards require that each corporation produce and sell their fleet of cars and light-duty trucks in the needed proportions, so that the combined mileage of the cars they sell, at least meet the specified mileage.

Table 3.Calculation of the Fleet MPG for 2015

LDV Set	Years Old	Model Year	CAFE MPG	LCFS Factor L_{Year}	Factor Driven f	Gallons Used Per f*100 Miles
1	14-15	2001	24.0	1.0	1.0	4.17
2	13-14	2002	24.0	1.0	1.0	4.17
3	12-13	2003	24.0	1.0	1.0	4.17
4	11-12	2004	24.0	1.0	1.0	4.17
5	10-11	2005	25.0	1.0	1.0	4.00
6	9-10	2006	25.7	.9933	1.0	3.87
7	8-9	2007	26.3	.9867	1.0	3.75
8	7-8	2008	27.0	.9800	1.0	3.63
9	6-7	2009	28.0	.9733	1.0	3.48
10	5-6	2010	28.0	.9667	1.0	3.45
11	4-5	2011	29.1	.9600	1.0	3.30
12	3-4	2012	29.8	.9533	1.0	3.20
13	2-3	2013	30.6	.9467	1.0	3.09
14	1-2	2014	31.4	.9400	1.0	2.99
15	0-1	2015	32.6	.9333	1.0	2.86
					Sum of Gallons:	54.29
					Miles = 100*Sum(f's):	1500
					MPG = Miles/(Sum of Gallons):	27.63

The car companies want to maximize their profits while achieving the required CAFÉ standard. In California, the car companies will already be required to sell a specified number of electric vehicles, which have a particularly-high, equivalent-value of miles-per-gallon. If the laws are not changed,

this will allow these companies to sell more low-mileage, high profit cars and light-duty trucks, and still achieve the federal CAFÉ standard.

It will be better to apply the CAFÉ standards to only the ICEs and then require that the fleet of LDVs sold achieve some mandated fraction of ZEVs. The ZEVs will get better and better equivalent mileage, as our electrical grid is powered by more renewables. Therefore, their equivalent mileage is not fixed, but will improve over the years. Requirements developed here are for 2030. Therefore a high percentage of all the electricity generated in the state, including both the "in front of the meter" (known as the "Renewable Portfolio Standard" or "RPS") portion and the "behind the meter" portion is assumed to come from sources that do not emit CO2. The value of 80% is assumed.

ZEV Equivalent Mileage Values

To calculate the mileage of the 2030 fleet of LDVs, it is necessary to derive a formula to compute the equivalent mileage of ZEVs, as a function of the percent of electricity generated without emitting CO2, the equivalent ZEV mileage if the electricity is from 100% fossil fuel, and the equivalent ZEV mileage if the electricity is from 100% non-C02 sources. The variables defined in Table 4 are used.

Table 4. Variables Used in the Calculation of ZEV Equivalent Mileage

Variable	Definition
m_z	ZEV Equivalent mileage
m_{zr}	ZEV Equivalent mileage if the electricity is from renewables
m_{zf}	ZEV Equivalent mileage if the electricity is from fossil fuels
r	fraction of electricity generated from sources not emitting CO2
G	Gallons of equivalent fuel used
D	Arbitrary distance travelled
Num	$m_{zr} \times m_{zf}$
Den	$r \times m_{zf} + (1 - r) \times m_{zr}$

The derivation of the equation for equivalent ZEV mileage is based on the notion that the ZEV can be imagined to travel "r" fraction of the time on electricity generated from renewables and "(1-r)" fraction of the time on fossil fuel. If the vehicle travels "D" miles, then, using the definitions shown in Table 4, the following equation can be written.

$$G = \frac{r \times D}{m_{zr}} + \frac{(1-r) \times D}{m_{zf}} \quad \textbf{(Eq. 29)}$$

$$m_z = D/G = D/\left(\frac{r \times D}{m_{zr}} + \frac{(1-r) \times D}{m_{zf}}\right) \quad \textbf{(Eq. 30)}$$

Dividing the numerator and the denominator by D and multiplying them both by the product of the two equivalent mileage values results in Equations 31.

$$m_z = m_{zr} \times m_{zf} / \left(r \times m_{zf} + (1 - r) \times m_{zr}\right) \quad \textbf{(Eq. 31)}$$

Again, using the definitions in Table 4 results in the following.

$$m_z = Num/(Den) \quad \textbf{(Eq. 32)}$$

Table 5 shows an assignment of assumed values and the result of a calculation, using Equations 31 and 32, to produce a ZEV equivalent mileage.

Table 5. Variable Assignment and the Resulting ZEV Mileage

m_{zr}	m_{zf}	r	1-r	Num	Den	m_z
5000	70	0.8	0.2	350000.00	1056.00	331.44

Computing an LDV Fleet Mileage Assuming Heroic Measures (HM)

Table 6 shows the additional definitions that will be used in this calculation. Table 7 computes the 2030 LDV mileage, assuming "Heroic Measures" to reduce the miles driven in poor-mileage ICE's, in building and selling a significant fraction of ZEVs, and in getting the Low Carbon Fuel Standards to continue to improve beyond the Table 3 minimum of 0.90.

Table 6. Additional Variables Used in the Calculation of 2030 LDV Mileage

Variable	Definition
D_i	Distance travelled by ICE vehicles
D_z	Distance travelled by ZEVs
G_i	Gallons of Equivalent fuel used by ICE vehicles
G_z	Gallons of Equivalent fuel used by ZEVs

As shown by the values for "f", government policies must be adopted to reduce the miles driven by the ICE's, from 2016 to 2023. The 2016 model ICE's are driven only 30% as much as the nominal amount. The 2017 year ICE's can be driving 10% more. This rate of change continues up to 2023, when the ICE's are doing less damage, due to the large fraction of ZEVs on the road.

As shown, the ZEV fraction of the fleet assumes the value of 5%, just 4 years from now. It then proceeds upward, to 10% in 2019, 25% in 2020, 40% in 2021, and so on, until it reaches 95%.

Achieving these fractions of ZEVs might be compared to what was done during World War II, when automobile productions lines were rapidly converted to produce tanks. This reduced the new cars that could be purchased. Besides this, rationing gasoline made it difficult to drive at times and, due to shortages of leather, which was being used to produce boots for soldiers, some citizens found it hard to even buy shoes. These rapid and inconvenient changes were tolerated, because most people agreed that the war needed to be won. The heroic measures assumed here may not be possible unless citizens and the political leaders they elect understand the dire consequences of climate destabilization and therefore accept, and even demand, the measures that are needed to support climate stabilization.

The equivalent miles per gallon of the LDV fleet in 2030, specifically 111.12 miles per gallon, will be considered as a potential 2030 LDV requirement.

Computing the Heroic-Measures (HM) Case Per-Capita and Net Driving Factor Requirements, Based on the Result Shown in Table 7

Plugging the

- equivalent MPG of the LDV fleet in Year 2030, taken from the bottom of Table 7, which is 111.12 MPG, and
- the MPG of the LDV fleet in Year 2015, taken from the bottom of Table 3, which is 27.63 MPG,

into Equation 27, gives the following result:

$$f_{d_{k/i}} = 0.1689\,x\ \frac{m_{2030}}{m_{2015}} = .1689 \times \frac{111.12}{27.63} = .6795 \qquad \textbf{(Eq. 31)}$$

This means that the per-capita driving will need to be about 32% less than in year 2005. The net driving can be computed by multiplying the per-capita driving, 0.6795, by the population factor of 1.2305, computed in Equation 25, resulting in 0.8361. This means that, even with the 23% increase in California's population, the net driving will have to drop by about 16%. If this LDV requirement set is selected, all of California's transportation money can be used to improve transit, improve active transportation (mainly walking and biking), and maintain, but not expand, roads.

Computing LDV Requirements that Support 2005 Per-Capita Driving

The first step is to use Equation 27 and the value of the mileage in 2015 to compute the needed LDV equivalent fleet mileage for 2030 so that $f_{d_{k/i}}$ is equal to 1.0.

Table 7. Calculation of 2030 LDV Mileage Assuming Heroic Measures

Year	ICE Parameters and Calculations						ZEVs			Yearly Totals		
	CAFÉ MPG	LCFS	Eq. MPG	f	D_i	G_i	z	D_z	G_z	Total Miles	Total Gallons	2030 MPG
2016	34.3	.9267	37.01	.3	30.0	.8105	0	0	.000	30.0	.8105	37.01
2017	35.1	.9200	38.15	.4	40.0	1.0484	0	0	.000	40.0	1.0484	38.15
2018	36.1	.9133	39.53	.5	47.5	1.2018	.05	5	.015	52.5	1.2168	43.14
2019	37.1	.9000	40.92	.6	54.0	1.3197	.10	10	.030	64.0	1.3498	47.41
2020	38.3	.8500	42.56	.7	52.5	1.2337	.25	25	.075	77.5	1.3091	59.20
2021	40.3	.8000	47.41	.8	48.0	1.0124	.40	40	.121	88.0	1.1331	77.66
2022	42.3	.8000	52.88	.9	40.5	.7660	.55	55	.166	95.5	.9319	102.48
2023	44.3	.8000	55.38	1.0	30.0	.5418	.70	70	.211	100.0	.7530	132.81
2024	46.5	.8000	58.13	1.0	15.0	.2581	.85	85	.257	100.0	.5145	194.36
2025	48.7	.8000	60.88	1.0	5.0	.0821	.95	95	.287	100.0	.3688	271.18
2026	51.2	.8000	64.00	1.0	5.0	.0781	.95	95	.287	100.0	.3648	274.16
2027	53.7	.8000	67.13	1.0	5.0	.0745	.95	95	.287	100.0	.3611	276.92
2028	56.2	.8000	70.25	1.0	5.0	.0712	.95	95	.287	100.0	.3578	279.48
2029	58.7	.8000	73.38	1.0	5.0	.0681	.95	95	.287	100.0	.3548	281.87
2030	61.2	.8000	76.50	1.0	5.0	.0654	.95	95	.287	100.0	.3520	284.10
Sum of Miles and then Gallons of Equivalent Fuel:										1247.5	11.23	
Equivalent MPG of LDV Fleet in 2030:										***111.12***		

Sum of ZEV Miles = **860**. Fraction of Miles Driven by ZEVs = **68.9%**

$$m_{2030} = f_{d_{k/j}} \times \frac{m_{2015}}{0.1689} = 1.0 \times \frac{27.63}{0.1689} = 163.54 \text{ MPG} \qquad \text{(Eq. 32)}$$

Table 8 is constructed, with the fraction of ZEVs selected to achieve the needed equivalent fleet mileage of about 163.54 MPG. Since its ZEV fractions are larger and sooner than in the "Heroic Measures table, Table 8 is the "Extra-Heroic Measures" (EHM) case. The ICE "f" values are unchanged; as are the LCFS values. The EHM ZEV differences from the HM case are the highlighted "z" values.

This means that with the 23% increase in California's population, computed in Equation 25, the net driving would also increase by 23%. If this LDV requirement set were to be implemented, a lot of California's transportation money will be needed to expand the highway system, leaving less to improve transit, improve active transportation (mainly walking and biking), and maintain roads.

Comparing the ZEV Fraction Values of the "Heroic-Measures" (HM) Case to the "Extra-Heroic Measures" (EHM) Case

Table 9 shows the direct comparison of the ZEV fractions that are ZEV requirements for the HM Case and the EHM Case. The differences are highlighted.

ACHIEVING THE REQUIRED DRIVING REDUCTION OF THE HEROIC-MEASURES (HM) CASE

As shown in Equation 31, in 2030, the per-capita driving will need to at least 32% below the 2005 value. As shown in this link, http://en.wikipedia.org/wiki/SB_375, California's Metropolitan Planning Organizations (MPOs) are adopting Region Transportation Plans (RTPs) that will achieve reductions in year 2020 and 2035. As also shown there, the targets, for year 2035, range from 0% for Shasta to 16% for Sacramento Area Council of Governments Since this is for 2030 instead of 2035, and to be reasonably conservative, it is assumed here that the state will achieve a 10% reduction in per-capita driving, in 2030, compared to 2005. This leaves 22% to be achieved by new programs.

The title of each of the following subsections contains the estimated per-capita driving reduction each strategy will achieve, by 2030.

Reallocate Funds Earmarked for Highway Expansion to Transit and Consider Transit-Design Upgrades (3%)

San Diego County has a sales tax measure called "TransNet", which allocates one-third for highway expansion, one-third for transit, and one-third for road maintenance. It has a provision that allows for a reallocation of funds, if supported by at least two-thirds of SANDAG Board members, including a so-called weighted vote, where governments are given a portion of 100 votes, proportional to their population. It is hereby proposed to reallocate the TransNet amount, earmarked for highway expansion, to transit and to do similar reallocations throughout California.

This money could be used to fund additional transit systems; improve transit operations; and/or the redesign and implementation of the redesign of existing transit systems. The redesign could include electrification and automation or even upgrading to a different technology.

A Comprehensive Road-Use Fee Pricing and Payout System to Unbundle the Cost of Operating Roads (7.5%)

Comprehensive means that pricing would be set to cover all costs (including road maintenance and externalities such as harm to the environment and health); that privacy and the interests of low-income drivers doing necessary driving would be protected; that the incentive to drive fuel-efficient cars would be at least as large as it is under the current fuels excise tax; and, as good technology becomes available, that congestion pricing is used to protect critical driving from congestion.

The words *payout* and *unbundle* mean that some of the money collected would go to people that are losing money under the current system.

User fees (gas taxes and tolls) are not enough to cover road costs[10] and California is not properly maintaining its roads. Reference 10 shows that in California user fees amount to only 24.1% of what is spent on roads. Besides this, the improved mileage of the ICEs and the large number of ZEVs needed mean that gas tax revenues will drop precipitously.

Table 8. Calculation of 2030 LDV Mileage Assuming Extra-Heroic Measures

Year	ICE Parameters and Calculations						ZEVs			Yearly Totals		
	CAFÉ MPG	LCFS	Eq. MPG	f	D_i	G_i	z	D_z	G_z	Total Miles	Total Gallons	2030 MPG
2016	34.3	.9267	37.01	.3	30.0	.8105	.00	0	.000	30.0	.8105	37.01
2017	35.1	.9200	38.15	.4	36.0	.9436	.10	10	.030	46.0	.9738	47.24
2018	36.1	.9133	39.53	.5	35.0	.8855	.30	30	.091	65.0	.9760	66.60
2019	37.1	.9000	40.92	.6	30.0	.7332	.50	50	.151	80.0	.8840	90.50
2020	38.3	.8500	42.56	.7	21.0	.4935	.70	70	.211	91.0	.7047	129.14
2021	40.3	.8000	47.41	.8	8.0	.1687	.90	90	.272	98.0	.4403	222.59
2022	42.3	.8000	52.88	.9	4.5	.0851	.95	95	.287	95.5	.3717	267.66
2023	44.3	.8000	55.38	1.0	5.0	.0903	.95	95	.287	100.0	.3769	265.31
2024	46.5	.8000	58.13	1.0	5.0	.0860	.95	95	.287	100.0	.3727	268.35
2025	48.7	.8000	60.88	1.0	5.0	.0821	.95	95	.287	100.0	.3688	271.18
2026	51.2	.8000	64.00	1.0	5.0	.0781	.95	95	.287	100.0	.3648	274.16
2027	53.7	.8000	67.13	1.0	5.0	.0745	.95	95	.287	100.0	.3611	276.92
2028	56.2	.8000	70.25	1.0	5.0	.0712	.95	95	.287	100.0	.3578	279.48
2029	58.7	.8000	73.38	1.0	5.0	.0681	.95	95	.287	100.0	.3548	281.87
2030	61.2	.8000	76.50	1.0	5.0	.0654	.95	95	.287	100.0	.3520	284.10
Sum of Miles and then Gallons of Equivalent Fuel:										1309.5	8.07	
Equivalent MPG of LDV Fleet in 2030:										*162.27*		

Table 9. HM Case and the EHM Case Which Supports 2005 Per-Capita Driving

Cases	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
HM	.00	**.00**	**.00**	**.05**	**.10**	**.25**	**.40**	**.55**	**.70**	**.85**	.95	.95	.95	.95	.95	.95
EHM	.00	**.10**	**.30**	**.50**	**.70**	**.90**	**.95**	**.95**	**.95**	**.95**	.95	.95	.95	.95	.95	.95

This system could be used to help reduce the ICE LDV miles driven in 2016 to 2022, as shown in the "f" column of Tables 7 and 8. This system could probably be implemented in less than 5 years.

Unbundling the Cost of Car Parking (7.5%)

Unbundling the cost of car parking[R11] throughout California is conservatively estimated to decrease driving by 7.5%, based on Table 1 of Reference 11. That table shows driving reductions due to introducing a price, for 10 cases. Its average reduction in driving is 25% and its smallest reduction is 15%.

Good Bicycle Projects and Bicycle Traffic Skills Education (3%)

The best criterion for spending money for bicycle transportation is the estimated reduction in driving per the amount spent. The following strategies may come close to maximizing this parameter.

Projects to Improve Bicycle Access

All of the smart-growth neighborhoods, central business districts, and other high trip destinations or origins, both existing and planned, should be checked to see if bicycle access could be substantially improved with either a traffic calming project, a "complete streets" project, more shoulder width, or a project to overcome some natural or made-made obstacle.

League of American Bicyclist Certified Instruction of "Traffic Skills 101"

Most serious injuries to bike riders occur in accidents that do not involve a motor vehicle[12]. Most car-bike accidents are caused by wrong-way riding and errors in intersections; the clear-cut-hit-from-behind accident is rare[12].

After attending *Traffic Skills 101*, students that pass a rigorous written test and demonstrate proficiency in riding in traffic and other challenging conditions could be paid for their time and effort.

As an example of what could be done in San Diego County, if the average class size was 3 riders per instructor and each rider passes both tests and earns $100 and if the instructor, with overhead, costs $500 dollars, for a total of $800 for each 3 students, that would mean that $160M could teach $160M/$800 = 200,000 classes of 3 students, for a total of 600,000 students. The population of San Diego County is around 3 million.

Eliminate or Greatly Increase the Maximum Height and Density Limits Close to Transit Stops that Meet Appropriate Service Standards (2%)

As sprawl is reduced, more compact, transit-oriented development (TOD) will need to be built. This strategy will incentivize a consideration of what level of transit service will be needed, how it can be achieved, and what levels of maximum height and density are appropriate. Having no limits at all is reasonable if models show that the development can function without harming the existing adjacent neighborhoods, given the level of transit service and other supporting transportation policies (such as car parking that unbundles the cost and supports the full sharing of parking[12]) that can be assumed.

Net Driving Reduction from All Identified Strategies

By 2030, the sum of these strategies should be realized. They total 23%, resulting in a 1% margin over the needed 22% (which is added to the existing 10% to get the needed 32%).

ADDITIONAL ELECTRICITY REQUIRED

The URL http://www.energy.ca.gov/2013_energypolicy/documents/2013-06-26_workshop/presentations/09_VMT-Bob_RAS_21Jun2013.pdf shows that Californians drove about 325 Billion miles per year, from 2002 to 2011. This value can be multiplied by the 0.8361 factor reduction of driving, computed right after the calculation shown in Equation 31, and the fraction of miles driven by ZEVs, shown at the bottom of Table 7, of 0.689 (from 68.9%), to give the 2030 miles driven by ZEVs = 325 Billion x 0.831 x 0.689 = 187 Billion miles per year.

Using the Tesla information here http://en.wikipedia.org/wiki/Tesla_Roadster, it is assumed that 21.7 kW-h is used per 100 miles, or 0.217 kW-h per mile. The total energy used per year is therefore 187 Billion miles x 0.217 kW-h = 40,648 GW-h.

http://www.cpuc.ca.gov/cfaqs/howhighiscaliforniaselectricitydemandandwheredoesthepowercomefrom.htm, shows that California is using about 265,000 GW-h per year. Therefore the electricity needed to power California's HM ZEV LDF fleet in 2030 is 100% x 40,648/265,000 = 15.34% of the amount of electricity California is currently using.

CONCLUSION

A requirement set named "Heroic Measures" (HM) is quantified. Table 9 shows that the HM LDV efficiency requirements are much easier to achieve than those needed to allow per-capita driving to remain close to its 2005 level. Strategies to achieve the required HM driving reductions are also allocated and described. They are perhaps about as difficult as achieving the HM LDV fleet efficiency. It is computed that the 2030 fleet of LDV HM ZEVs would require an amount of electricity which is equal to about 15% of what California is using today.

ABREVIATIONS AND ACRONYMS

AB 1493	California's Assembly Bill 1493	**ICE**	Internal Combustion Engine LDV
AB 32	California's Assembly Bill 32	**kW-h**	Kilo Watt-hour
APS	Alternative Planning Strategy	**LCFS**	Low Carbon Fuel Standard

CAFE	Corporate Average Fleet Efficiency	**LDV**	Light-Duty Vehicle
CARB	California Air Resources Board	**MPO**	Metropolitan Planning Organization
CBD	Center for Biological Diversity	**Pavley**	Senator Pavley's AB 1493
CEQA	California Environmental Quality Act	**PPM**	Parts per Million
CCAP	Center for Clean Air Policy	**RPS**	Renewable Portfolio Standard
CNFF	Cleveland National Forest Foundation	**RTP**	Regional Transportation Plan
SB 375	California's Senate Bill 375	**S-3-05**	Governor's Executive Order S-3-05
CO_2	Carbon Dioxide	**SANDAG**	San Diego Association of Governments
CO_2_e	Carbon Dioxide Equivalent GHG		
EHM	"Extra Heroic Measures" LDV Case	**SCS**	Sustainable Community Strategy
GEO	Governor's Executive Order	**TransNe**t	San Diego County sales tax
GHG	Greenhouse gas	**URL**	Universal Resource Locator
GW-h	Giga Watt-Hours	**VMT**	Vehicle Miles Travelled
HM	"Heroic Measures" LDV Case	**ZEV**	Zero Emission Vehicle LDV

ACKNOWLEGEMENTS

Darrell Clarke, Lead Volunteer for the Sierra Club's "Beyond Oil Campaign"; Dr. Dennis Martinek, Oceanside Planning Commissioner; Sandra Goldberg, formerly California Deputy Attorney General; Dr. Nilmini Silva-Send, Senior Policy Analyst of the Energy Policy Initiative Center; Diane Nygaard, Director of Preserve Calavera and founder of *Nelson Nygaard Consulting Associates*; Jack Shu, CNFF President; Joan Bullock; San Diego Sierra Club Executive Committee Chairs: Caroline Chase, John Stump, and (former Assembly Member) Lori Saldaña; Malinda Dickenson, *Law Offices of Malinda R. Dickenson*; Conservation Committee Chair Mollie Biggers; Ed Mainland and Jim Stewart, Co-Chairs, Energy-Climate Committee, Sierra Club California; Bern Grush, Chief Scientist, *Skymeter Corporation*; and SANDAG Staff: Susan Baldwin, Senior Regional Planner; Charles Stoll, Director of Land Use and Transportation Planning; and Stephan Vance, Senior Regional Planner.

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KEYWORDS

Driving, climate, mandates, S-3-05, SB 375, RTP, CEQA, Unbundled, GHG, CAFÉ, ZEVs

Ideas and Proposals for San Diego CAP Improvement

Overview Road Map, based on the idea that breakthrough transportation strategies will lead to reductions even larger than what is predicted today. Also, that advocacy on the part of San Diego will result in the changes needed at the state and regional level.

- Commit money to seek grants to fund demonstration-projects that will reduce emissions, where such demonstration projects can be replicated, if successful.
- Establish a community-based Climate Action Plan stakeholder working group, including representatives from the Sierra Club, the Chamber of Commerce, the Environmental Health Coalition, the Cleveland National Forest Foundation, CirculateSD, fath-based organizations, the bicycle advocacy groups and/or others.
- Get an ***Action Plan***, which could be divided into three categories
    - Capital Improvement and Expenditure Plan in sync with the CAP- for example, get bicycle/pedestrian projects, such as an aggressive program to offer "Traffic Skills 101" classes, taught by League-of-American-Bicyclist-Certified Instructors, on a fast track; also, projects to support bicycle short cuts and safety improvements into locations with a high number of trips.
    - A demonstration project to unbundle the cost of car parking
    - Advocacy actions, backed by Council resolutions, directed towards SANDAG and the State

Action Plan Ideas

1. **<u>Demonstration Project to Unbundle the Cost of Parking</u>**

San Diego would develop a Demonstration Project to Unbundle the Cost of Parking ("Demonstration Project") at a city employee location ("Proposed Location").

San Diego would (assuming the demonstration project was successful) unbundle the cost of the parking at all City buildings.

BACKGROUND: Currently, city employees do not have the ability to choose between earnings and driving – employees effectively pay for parking out of their salary, whether or not they use the parking. The Demonstration Project will provide the opportunity for employees to choose between earnings and driving.

PROJECT: Parking would be charged at a given rate (for example $0.02/min – roughly $9.60/day). Funds generated from these parking charges would be distributed as earnings to all employees working at the proposed location in proportion to each employee's time spent at work, at the proposed location. Those who decide not to drive will not be charged for parking but will still make earnings based on time spent at work at the location. Implemented correctly, this free market approach will substantially reduce vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions, by reducing the drive-alone mode.

For employees whose parking charges are greater than parking lot earnings, an “add-in” may be included so that no employee loses money, compared to “free parking”. With such “add-in” payments, there could be an “Opt in/Opt out” feature, meaning that those that “Opt out” will see no changes on their pay check, relative to “free parking” and will not get a monthly parking statement mailed to their home.

This project may be contingent on receiving a grant to pay the development and installation cost, as well as the “add in” payments, for some specified number of years. San Diego would need to apply for such a grant.

2. **Community Choice Aggregation**

The stakeholder group would help San Diego, as it moves forward, to fund a Community Choice Aggregation technical feasibility study. Community Choice Aggregation is a public power alternative that allows aggregation and purchase of electricity from an alternative to the incumbent utility.

3. **Fuel-Efficient Vehicle Purchase Incentives**

San Diego would agrees to seek public/private partnerships between City, employees, and car manufacturers to incentivize fuel-efficient vehicle purchases.

4. **Policy Adoption/Advocacy Ideas**

a. San Diego would agree to adopt a resolution directing its SANDAG delegate to take all reasonably available steps to get SANDAG to compute the driving-reduction trajectory required to support a science-based climate stabilization trajectory and to adopt a Regional Transportation Plan, with a Sustainable Communities Strategy (feasible strategies, as described in SB 375) and an Alternative Planning Strategy (infeasible strategies, as described in SB 375) that will achieve the needed driving-reduction trajectory.

b. San Diego would agree to adopt a resolution directing its SANDAG delegate to take all reasonably available steps to get SANDAG to reprioritize transit projects over highway projects to the maximum extent legally feasible, including reallocation of TransNet funds as needed.

c. San Diego would agree to adopt a resolution directing its SANDAG delegate to take all reasonably available steps to get the appropriate persons and entities to move toward full electrification and automation of local rail.

d. San Diego would agree to adopt a resolution directing its SANDAG delegate to take all reasonably available steps to get SANDAG to adopt programs to unbundle the cost of parking and encourage local governments to do the same, including giving priority to projects in municipalities that include unbundled-cost parking, over those that do not.

e. San Diego would agree to adopt a resolution requesting that statewide leaders work to develop a comprehensive road-use fee pricing and payout system.

Note that unbundling the cost of parking and a comprehensive road-use fee pricing and payout system have been discussed in the Sierra Club comment letters to San Diego.

5. **Presentation.**

If the San Diego City Council members and staff would agree to participate, we would offer a public workshop on the need for climate stabilization. This public workshop could include, at a minimum, a 45 minute presentation by Sierra Club or other representatives on this topic.

From: Colin Parent - Circulate San Diego
To: DSD EAS
Subject: REPORT: New Climate for Transportation
Date: Wednesday, September 23, 2015 11:39:44 AM

Friend:

Circulate San Diego and the Climate Action Campaign published a report "New Climate for Transportation," detailing the transportation outcomes compelled by the City of San Diego's Climate Action Plan.

Read the report online here.

The City of San Diego's proposed Climate Action Plan commits the City to change the way people get to work. Not only is transportation important for economic development, lifestyle, and social equity, it is a crucial component to reducing the risks from climate change.

Some of the mobility strategies outlined in the CAP must be implemented at the regional level by SANDAG—not by the City alone. However, San Diego Forward: The Regional Plan, SANDAG's long range transportation plan, projects transit, walking, and bicycling levels far smaller in the City of San Diego than what is called for by the CAP.

The City of San Diego's climate goals call for 50 percent of commuters living near transit to bicycle, walk, or take transit to work. However, according to SANDAG's own data, their plans will result in less than 15 percent for those same areas in the City of San Diego.

SANDAG's own projections show that it is mathematically impossible for the City of San Diego to achieve its transit and active transportation goals with the transportation network SANDAG is currently planning.

The City of San Diego must use the influence of its SANDAG Board members to ensure the region prioritizes sufficient funding to meet the transit and active transportation goals of the CAP.

Read the report online here.

Thank you,

Colin Parent - Circulate San Diego
www.circulatesd.org