

Sector		<b>GHG Emissions</b> 1 – Low 2 – Medium 3 - High	<b>Jurisdiction</b> 1 – Other 2 – Community-wide 3 – Municipal Operations/ Policies	<b>Steps toward Implementation</b>
<b>ENERGY</b>				
	<b>SHORT TERM</b> 2011-2014			
	Adopt an Energy Conservation Ordinance focused on reducing energy consumption in existing buildings <ul style="list-style-type: none"> <li>Retrofit existing buildings not currently meeting Title 24 energy code standards</li> </ul>	3	3	Establish an aggressive residential and commercial retrofit policy targeting all pre-1978 (Title24) construction with the intent of reducing energy consumption through energy efficiency of existing buildings by 75% of existing residential reduce usage to 30% below 2008 levels by 2020, 25% of residential to near net zero - 70% reduction - by 2020 (we should be w net zero), 50% of existing commercial to net zero by 2030. We should establish 25% to net zero by 2020), 25% reduction in overall energy usage compared to 2008 baseline for industrial by 2020, All new construction net zero from now on.  By year 2014: all pre-1950 buildings to meet current Title 24 Energy Code By year 2018: all pre-1970 buildings to meet current Title 24 Energy Code
	Adopt an Energy consumption data sharing ordinance focused on developing a local database of building performance <ul style="list-style-type: none"> <li>Retrofit existing buildings performing in the lowest percentile of performance</li> </ul>	3	3	Establish an energy consumption disclosure program through a third party national database with the intent of developing a market for high efficiency buildings and to eventually retrofit buildings not performing to baseline standards.  Immediate: All commercial spaces larger than 5Ksf to enroll and report energy consumption information By year 2014: Require retrofits for all commercial spaces performing in the lowest 25% of the local database By year 2018: Require retrofits for all commercial spaces performing in the lowest 50% of the local database

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<b>ENERGY</b>				
	Adopt a building Energy Performance disclosure program focused on developing a market for high efficiency buildings <ul style="list-style-type: none"> <li>• Require the disclosure of current energy consumption and energy performance data be available during all real estate transactions</li> </ul>	2	3	Establish an energy consumption disclosure policy with the intent of providing building/home buyers with energy consumption data for both residential and commercial buildings at the point of sale.  Increase public education about energy INVESTMENTS and ROI AECOM - The City can work to extend and improve on utility and other federal and State <b>incentive efficiency programs, through, for example: (1) Creating “one-stop” centers for information on energy conservation; (2) Organize workshops with information from utilities and agencies; or (3) Work to target marketing and free energy audits to owners of older homes, landlords, new homeowners, and owners undertaking renovations.</b> 30-minute consultation for all bldg development CV Building license renewal—do it for free  By year 2014: Require energy audits and disclosure of energy consumption performance data at point of sale for all residential and commercial transactions  1. CITY- Municipal Retrofit Program EECBG <ul style="list-style-type: none"> <li>a. Currently perform lighting, HVAC, and 1 large boiler retrofits on City facilities</li> <li>b. Looking to save 10-20% in energy use</li> </ul> 2. City- Residential Retrofit Program (EECBG expires June 2012) <ul style="list-style-type: none"> <li>a. Retrofitting 2000 low and moderate income dwellings</li> <li>b. Looking to save 10-20% in energy use</li> </ul> 3. City- Loan Loss Reserve Program <ul style="list-style-type: none"> <li>a. Will deploy \$10-20 million in financing for residential energy efficiency retrofits</li> </ul>

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				for about 2,000 homes b. Partnership with bank to offer financing to homeowners undertaking energy upgrades. Target is up to 15 years at rates from 4-8%, \$2-20,000, and \$10-20 million in total loans. 4. City- Smart Energy Management Monitoring System (SEMMS) –will control energy consumption at municipal buildings. A 10% to 30% reduction is anticipated in energy consumption on the buildings that employ the SEMMS system and additional automated demand response on the buildings with larger peak electrical consumption. 5. City- Retrocommissioning and Building Management- Fully implement all appropriate LEED-EB principles into City operations and maintenance.
	Adopt an Energy Conservation Ordinance focused on reducing energy consumption in new construction <ul style="list-style-type: none"> <li>• Require higher standards than current Title 24 Code</li> <li>• Require schools and universities to comply with green construction policies (900-14 or higher)</li> </ul>	1	3	Establish higher standards for new construction that apply to new construction and also for all school/university construction and renovation in order to ensure all new building stock performs above established minimum standards  By year 2014: Require all schools/universities comply with energy and green building standards By year 2018: Require all new construction perform at 12% above current Title 24 baseline
	Retrofit government buildings	1	3	EPIC - Audit city buildings to determine building energy use and to benchmark Implement energy budgets – <b>using the federal Energy Star Program, the Mayor’s Office of Sustainability</b> will set energy targets that reduce consumption by 5% by 2014. If a department

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				reduces by more than the target, the additional monetary savings will be granted back to the program budget in the next fiscal year. Explore potential role of revolving energy fund or energy performance contract. EXAMPLE- Balboa Park
	Group Energy- Lease	2	2	EXPLORE-- The new norm in New York City over the next five years. The lease entails the law firm sharing the costs to make sustainability improvements to the space, by counting its utility savings over the length of a projected payback period instead of the useful life of the improvements. The <b>idea is to shorten the amount of time it takes for the property's owner to recoup the costs</b> , thus removing a disincentive that Bloomberg said 60% of building owners identified as major obstacle toward their making retrofits.
	Broad Spectrum Street Lighting Retrofit	1	3	Retrofitting all the Cities ~38k street light to broad spectrum lighting EECBG Program
	<b>Green Assessment Districts, etc...</b>			Landry Watson – Establish a green project fund to assist in financing citizens willing to assess themselves: <ul style="list-style-type: none"> <li>• Allow for the establishment of assessment districts specifically for green upgrades</li> <li>• Leverage non-profits and federal funding to match or increase funding</li> </ul> Assess or allow in-lieu fees for news projects not meeting the enhanced standards
renewable	2,000 MW local PV by 2020 (preliminary May 9 allocation) 300 MW CHP by 2020, 500 MW by 2030 (~7% of 6,500 MW 2030 target)			(Bill Powers) Governor Jerry Brown Solar Initiative [the CHP can be fueled w biogas from WWT or dairy per UCSD and City of San Diego fuel cells that just started-up]
renewable	Facilitate power purchase agreements (PPAs) within Solar Power Districts to			A solar PPA is a financial arrangement in which a third-party developer owns, operates, and maintains the solar PV system, and a host customer agrees to site the system on its roof or

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	promote installation of solar PV systems.			<b>elsewhere on its property and purchases the system’s electric output from the solar services provider for a predetermined period.</b>
renewable	Commercial PACE (Property Accessed Clean Energy)	1	2	Market financed program Mechanism to allow third party financiers to fund EE, RE and water saving retrofits of commercial buildings whereby city collects repayment via special assessment on property.
renewable	Set targets for residential/ multifamily Solar Water Heating (SWH) retrofits	1	2	CSI Thermal incentive for multi-family combined with Mayoral challenge/promotion program for widespread adoption. Target Housing Commission Properties
	<b>MIDTERM</b> 2015-2020			

	<b>LONGTERM</b> 2021-2035			

Additional comments from me (NSS):

- It is difficult to assign GHG reductions because we do not have specific targets and no details- if for example, solar water heaters were installed on every housing unit and every commercial entity, we could get large reductions. But if only on municipal facilities, we have v little reductions overall.

Additional comments from Scott:

-Where not sufficient detail like measures with no numerical targets (retrofits for example), measure gets a relatively low rating. High levels of emissions reductions happen when retrofits occur at high levels. Also, there were several related to the CSI program. I also assumed that the program ends in 2016 and that the overall impact is relatively small.

- The overall plan goals should drive selection of the measures. That is, if the overall goal is to reduce emissions to 1990 levels, then it would require XX% reduction from buildings, XX% reduction from transport, and so on. And within each of those categories, each measure should be selected to get a certain amount of emission reductions. So it might look like this;

Overall goal: reduce emissions by 25%

Building sector goal: reduce emissions by 15%

To accomplish this we would have the following measures...

1. Retrofit 20% of all residential units reducing overall energy use by 20% on average by 2020. (XX% in GHG Reductions)
2. Efficiency Retrofit Loan program to finance above retrofits.
3. Retrofit 20% of all commercial square footage reducing overall energy use by 20% on average by 2020. (XX% GHG Reduction)
4. Etc.

**COMMENT FROM BOTH:**

**-the fewer the goals the better**

**-limited number of concrete, measurable measures is preferred.**