

# Pathways to 100% Renewable Energy by 2035

Community Choice Aggregation Feasibility Study



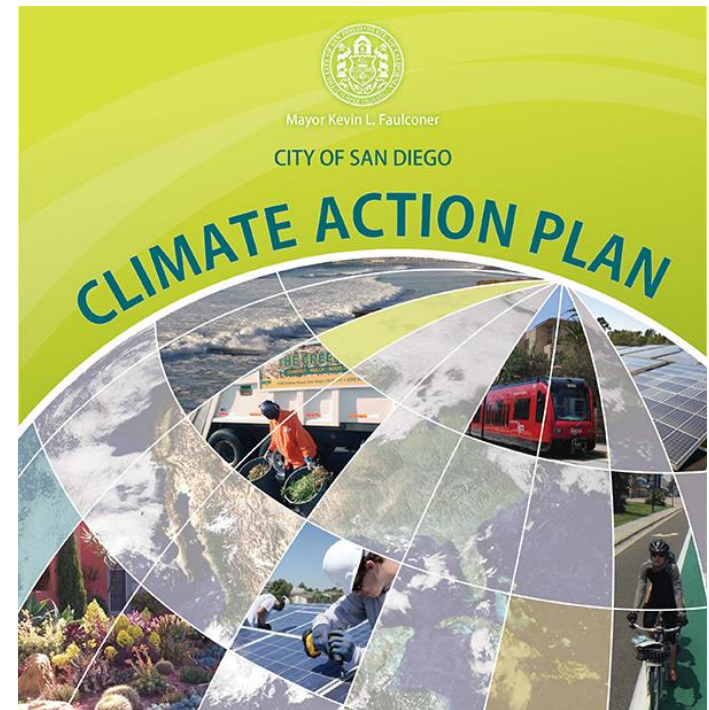
# Strategy 2 - Clean & Renewable Energy

## Goal

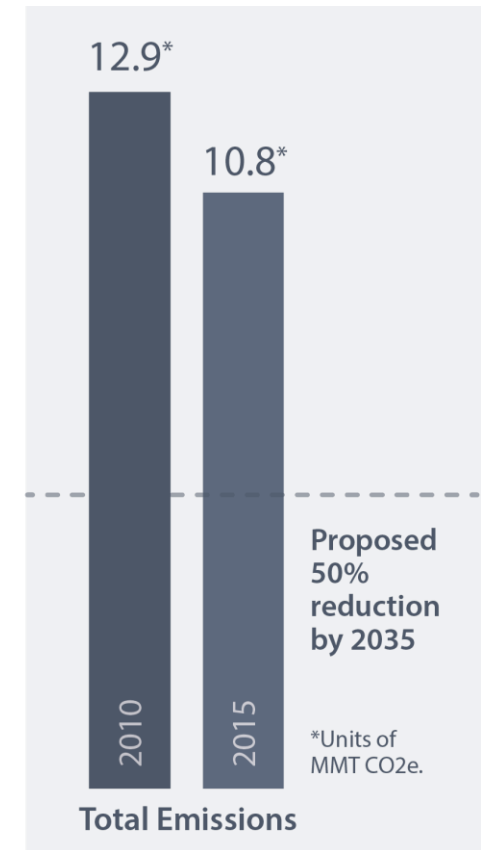
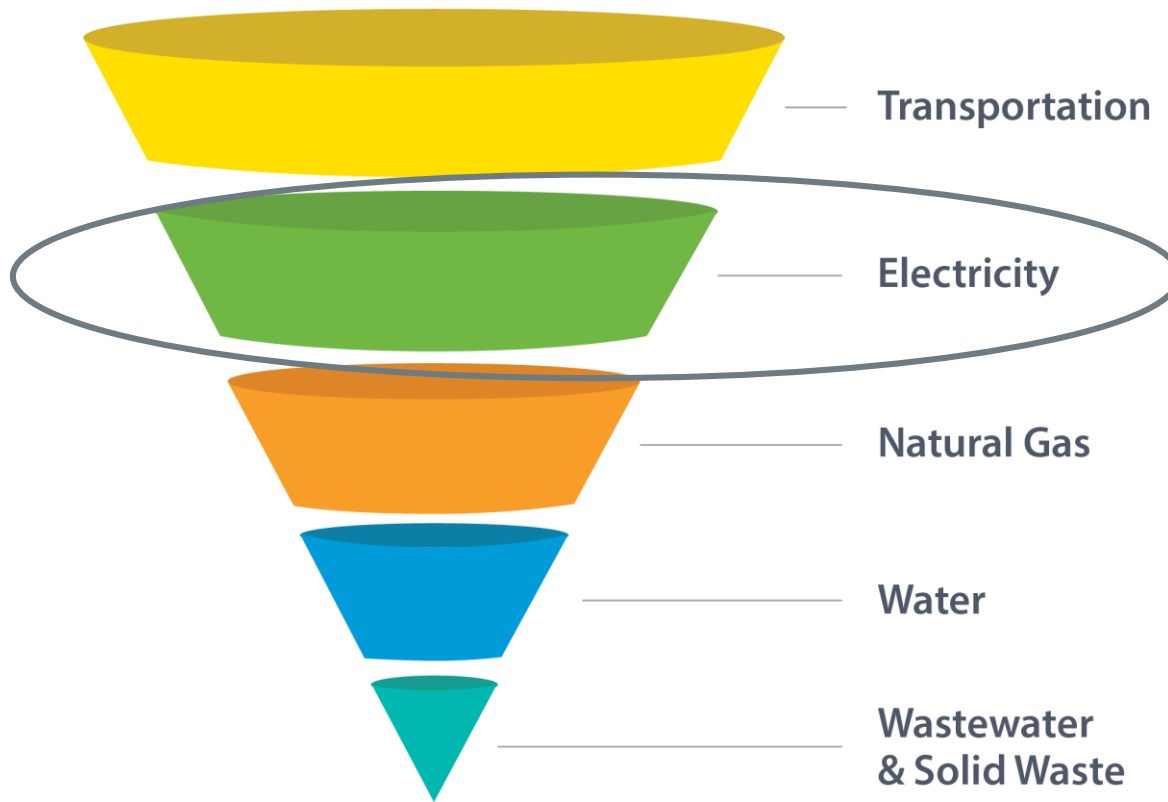
Achieve 100% renewable energy city-wide by 2035.

## Action

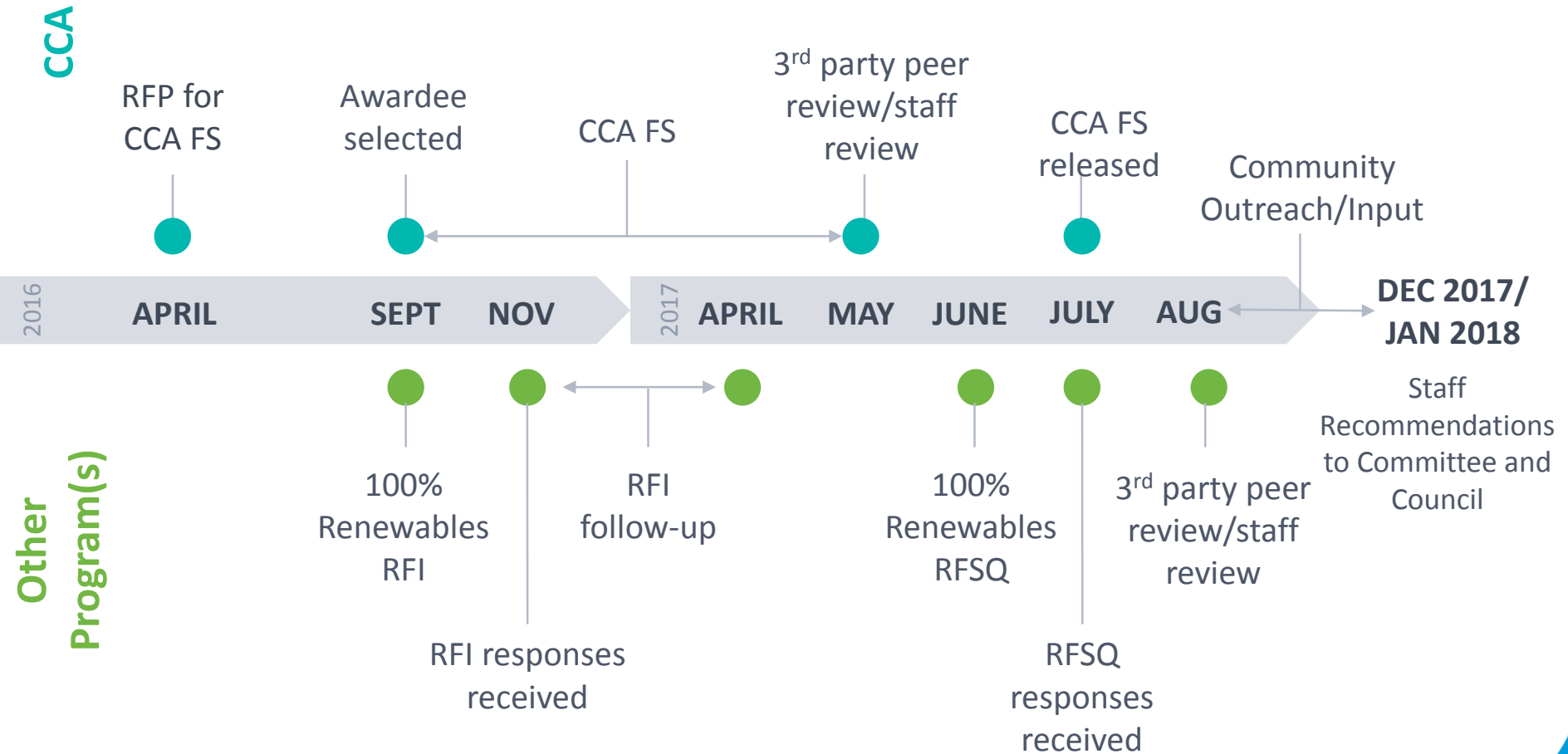
Present to City Council for consideration a Community Choice Aggregation (CCA) or another program that increases the renewable energy supply.



# San Diego Citywide Emissions



# Research Pathways

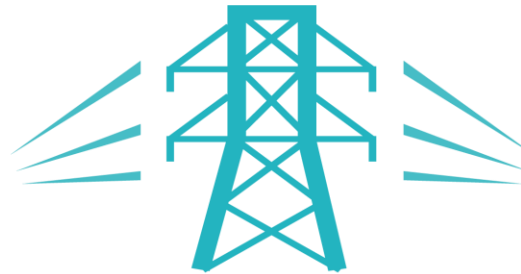


# Energy Source Options

Utility



ENERGY SOURCE  
SDG&E



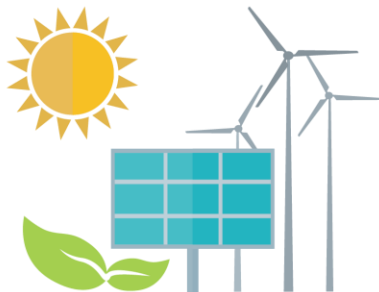
ELECTRIC DELIVERY  
SDG&E Utility Service



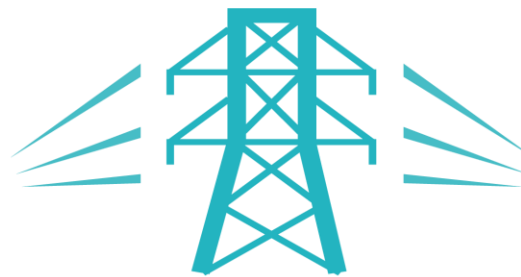
CUSTOMER

OR

CCA



ENERGY SOURCE  
CCA



ELECTRIC DELIVERY  
SDG&E Utility Service

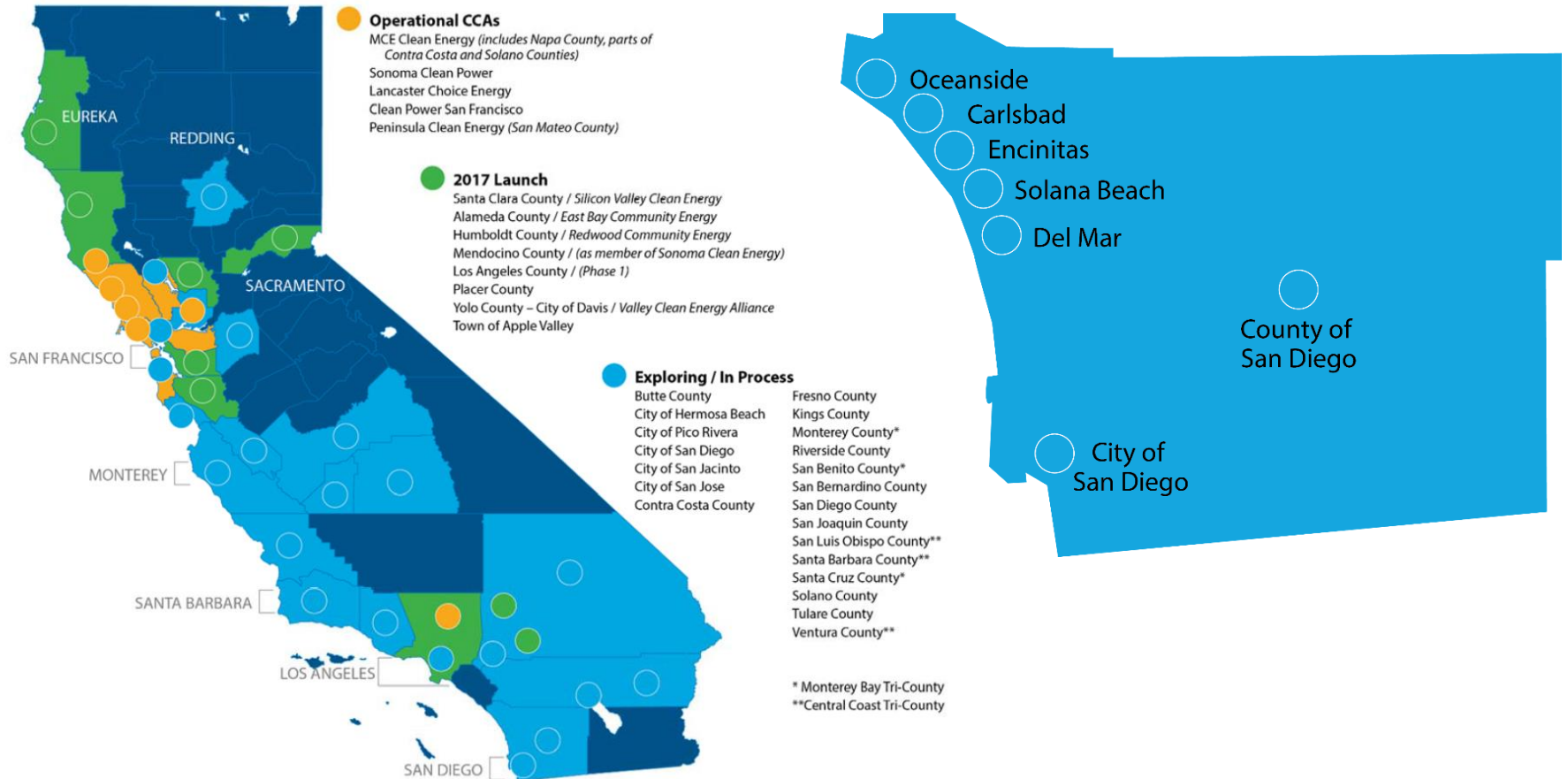


CUSTOMER  
Community Choice

# Why Explore a CCA?

- Increase use of renewable generation and achieve GHG emission reductions
- Achieve local control over rate setting and energy services offerings
- Stimulate economic growth
- Consumer choice
- Competitive rates

# Current CCA Landscape



Apple Valley Choice Energy and Silicon Valley Clean Energy became operational in April 2017. Redwood Coast Energy Authority became operational in May 2017. Mendocino County became part of Sonoma Clean Power in June 2017. The remaining CCAs scheduled to launch in 2017 appear to be delayed until 2018 as of the date of this report.

# Goals of CCA Feasibility Study

1. Determine to what extent a CCA will help achieve the City's renewable energy policy,
2. Identify and provide actionable solutions to any potential barriers to CCA implementation, and
3. Provide option(s) as to how a City CCA could be successfully implemented.



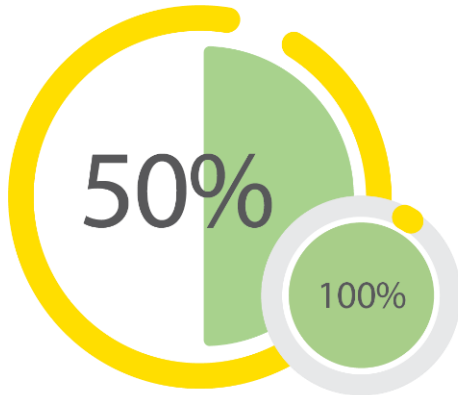
# Scope of CCA Feasibility Study

- Assumptions
- Results
- Benefits
- Risks
- CCA Implementation
- Study Conclusions and Recommendations

# Assumptions

- **No** unbundled Renewable Energy Credits
- Load Forecast
- Cost of Power Procurement
- Revenue Requirement

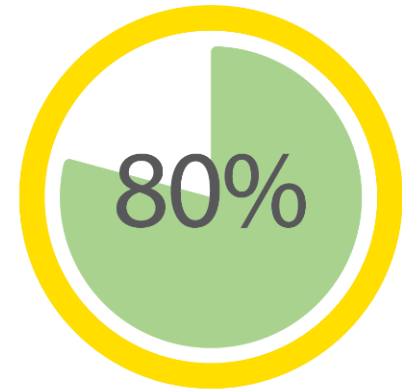
# Study Scenarios



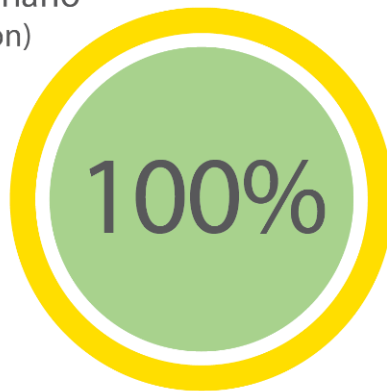
Base Case Scenario  
(2 rate option)



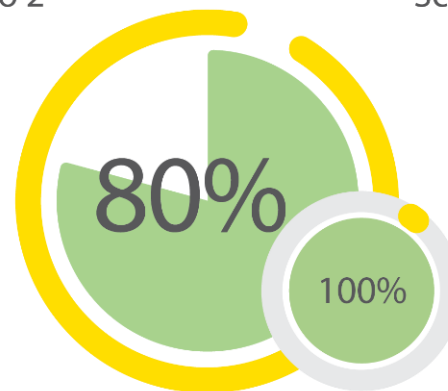
Scenario 2



Scenario 3



Scenario 4

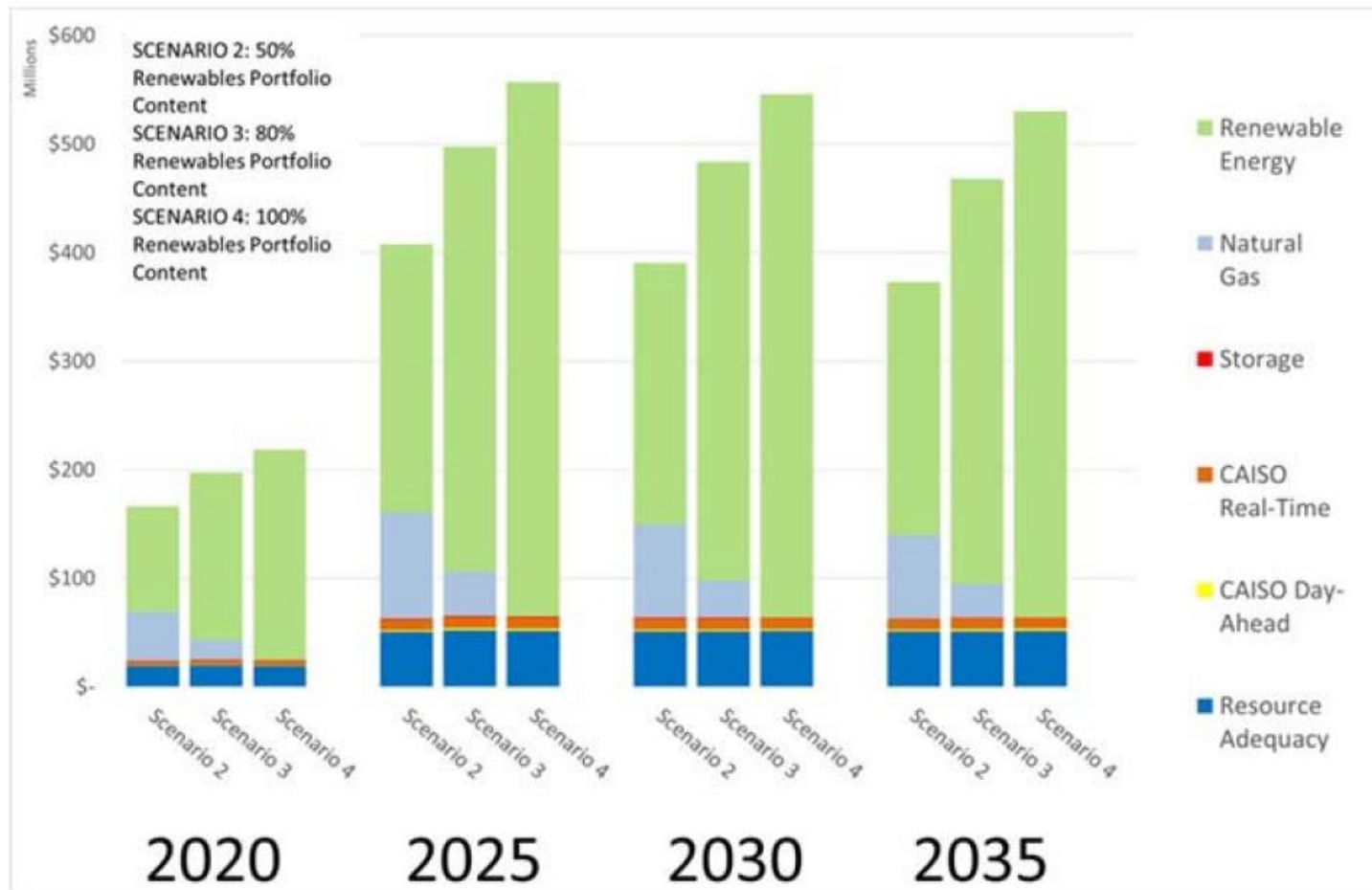


Scenario 5  
(2 rate option)

# Sensitivities

Sensitivity	Description	Assumption
Sensitivity 1:	High SDG&E Rates	6% increase in SDG&E rates starting in 2020
Sensitivity 2:	Low SDG&E Rates	2% decrease in SDG&E rates starting in 2020
Sensitivity 3:	High PCIA	10% increase in Power Charge Indifference Adjustment starting in 2020
Sensitivity 4:	Low PCIA	2.5% decrease in Power Charge Indifference Adjustment starting in 2020
Sensitivity 5:	High Opt Out	25% Opt Out Rate
Sensitivity 6:	Low Opt Out	15% Opt Out Rate

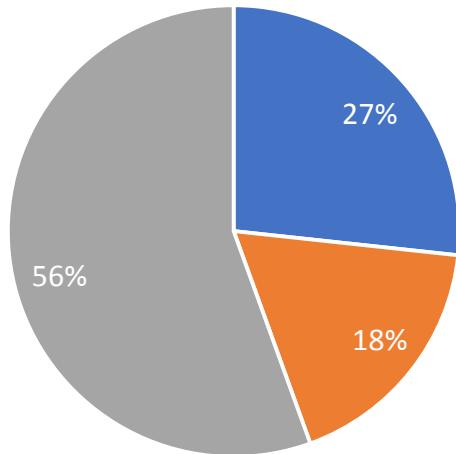
# Power Procurement Costs (\$)



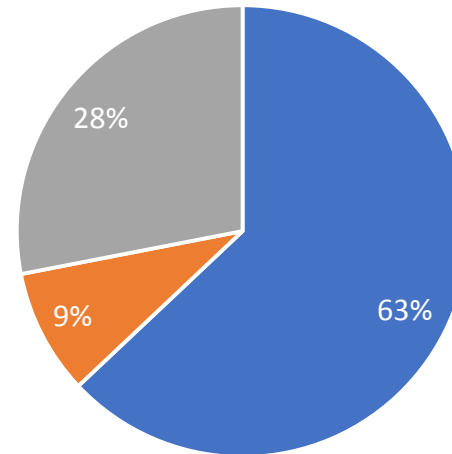
# Results

# Components of Total Residential Rate

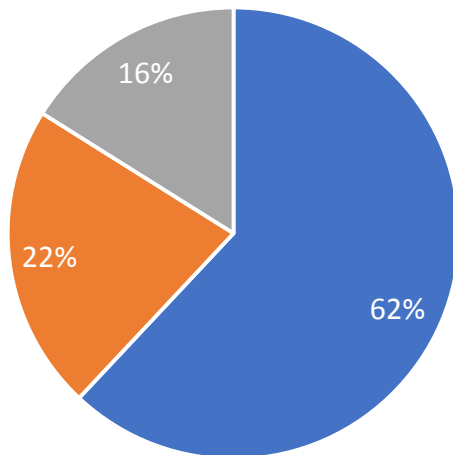
Summer Baseline



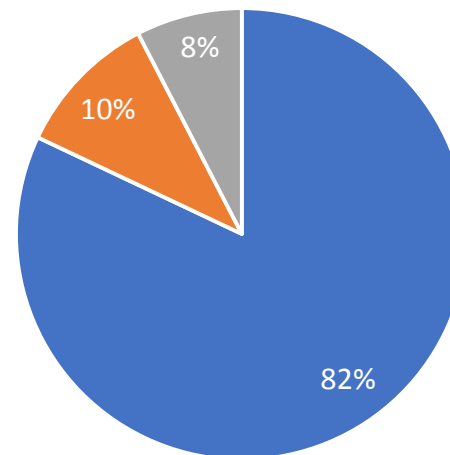
Summer Above 130% Baseline



Winter Baseline



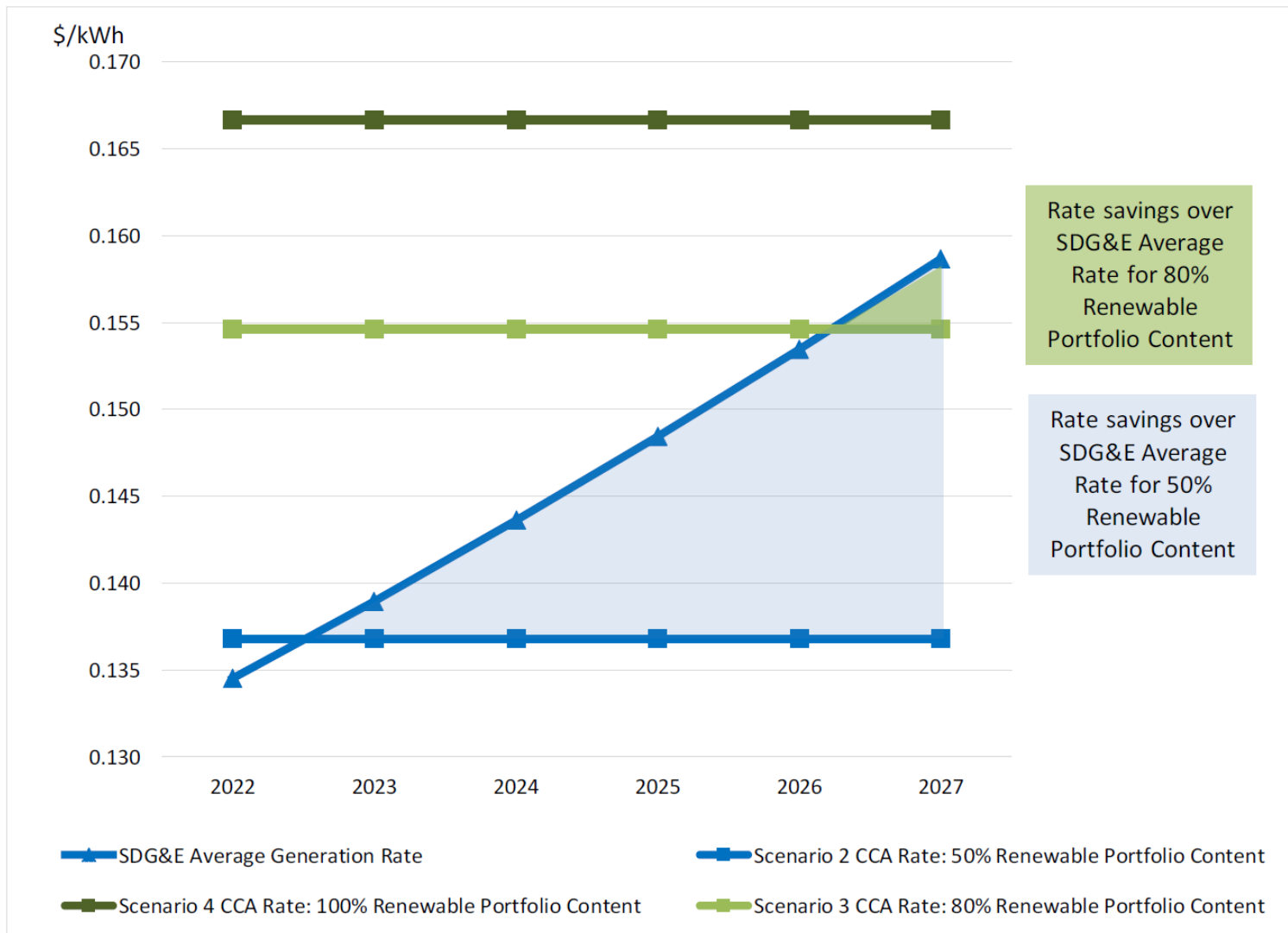
Winter Above 130% Baseline



- SDG&E Delivery Charges
- Exit Fee
- CCA Charge

# SD Pathway to 100% Renewable Energy

Illustrative CCA Renewable Portfolio Content Progression Based on Rate Comparisons





# Generation Rate Comparisons (Base Case Scenario)

Indicative Base Rate Comparison for 50% RPC					
	2022	2023	2024	2025	2026
Average CCA Premiums/(Savings)	1.72%	-1.55%	-4.73%	-7.83%	-10.85%
Average Difference (\$/kWh)	0.0023	-0.0022	-0.0068	-0.0116	-0.0167

# Benefits



Increase use of renewable generation and achieve GHG emission reductions



Stimulate economic growth



Competitive choice



Achieve local control over rate setting and energy services offerings



Competitive rates

# Energy Program Opportunities



## Control Over Customer Programs' Incentives

- Net Energy Metering
- Electric Vehicles



## Locally Targeted Demand Side Programs

- Energy Efficiency
- Demand Response
- Conservation and Behavior



## Innovation, Piloting, and Education/Training Programs

# Risks



Power  
Procurement



Credit



Regulatory



Opt out



Exit Fees



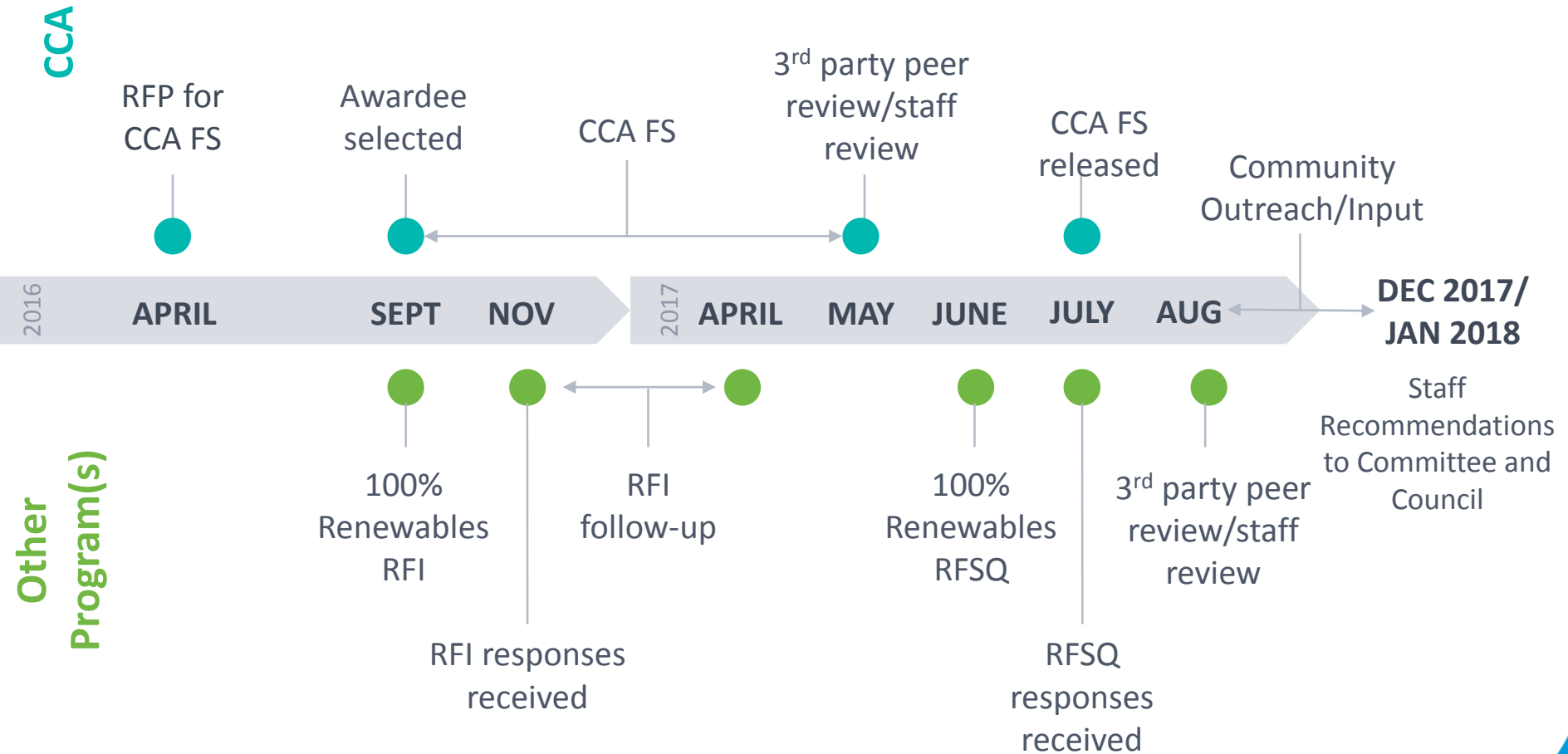
Renewable  
Generation

Possible risk mitigation strategies are provided in detail in the Study.

# Study Conclusions

- Meet the SEAB's recommended minimum performance criteria
- Have electric rates that are competitive with the incumbent utility
- Be reliably solvent and financially feasible
- Generate enough net margins to make substantial investments in high priority energy initiatives and/or increase renewable portfolio content of procured power
- Have positive economic impact

# Policy Next Steps



Thank You!