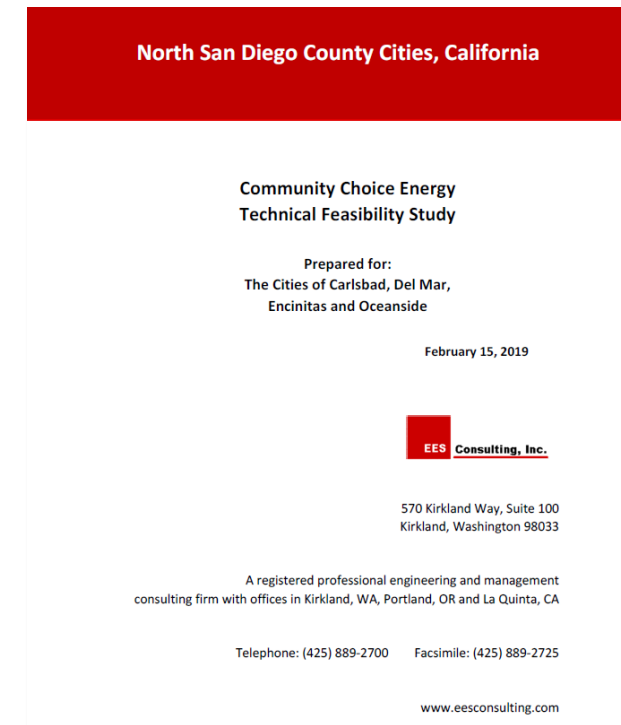


# DRAFT NORTH SAN DIEGO COUNTY CCE TECHNICAL FEASIBILITY STUDY & RESOLUTION AUTHORIZING EVALUATION OF CCE GOVERNANCE OPTIONS

February 26, 2019

- Recommended Action:
  - Receive draft study and provide feedback
  - Direct staff to conduct a public workshop on the draft study in coordination with partner cities
  - Approve a resolution authorizing a cost share agreement allowing participation in an evaluation of CCE program governance options – not to exceed \$35,000



## BACKGROUND

- **July 2017** (Resolution No. 2017-141) – Authorizing participation in a CCE Technical Feasibility Study
  - Approved Carlsbad cost share not to exceed: \$60,000
- **January 2018** – Agreement with Del Mar, Encinitas & Oceanside
  - Encinitas contract with EES Consulting, Inc.
  - Total cost: \$104,515
  - Actual Carlsbad cost share: \$30,775
- **April 2018** - EES received SDG&E energy load data & initiated study
- **February 2019** – Draft study complete

## CITY COUNCIL RESOLUTION

- Qualitative & Quantitative Analysis of potential CCE program governance options
  - Risk / Cost / Control
    - Stand-alone City of Carlsbad
    - Joint Powers Authority (JPA)
      - Partner Cities/North SD County/South Orange County
      - San Diego Regional JPA (City/County of San Diego)
      - Join Existing JPA (Solana Beach, Los Angeles, others?)

## CITY COUNCIL RESOLUTION

- Same partner cities (Del Mar, Encinitas & Oceanside)
- Time and materials contract amount: \$54,500
- City of Carlsbad cost share: \$18,000 (4 participants) or \$35,000 (3 participants)

# COMMUNITY CHOICE ENERGY FEASIBILITY STUDY

## *INITIAL RESULTS*

*FOR THE CITY OF CARLSBAD*

MANAGED BY

JASON HABER, ASSISTANT TO CITY MANAGER, CITY OF CARLSBAD

Presented by:

**EES Consulting, Inc. (EES)**

**Gary Saleba, President/CEO**

**EES Consulting, Inc.**

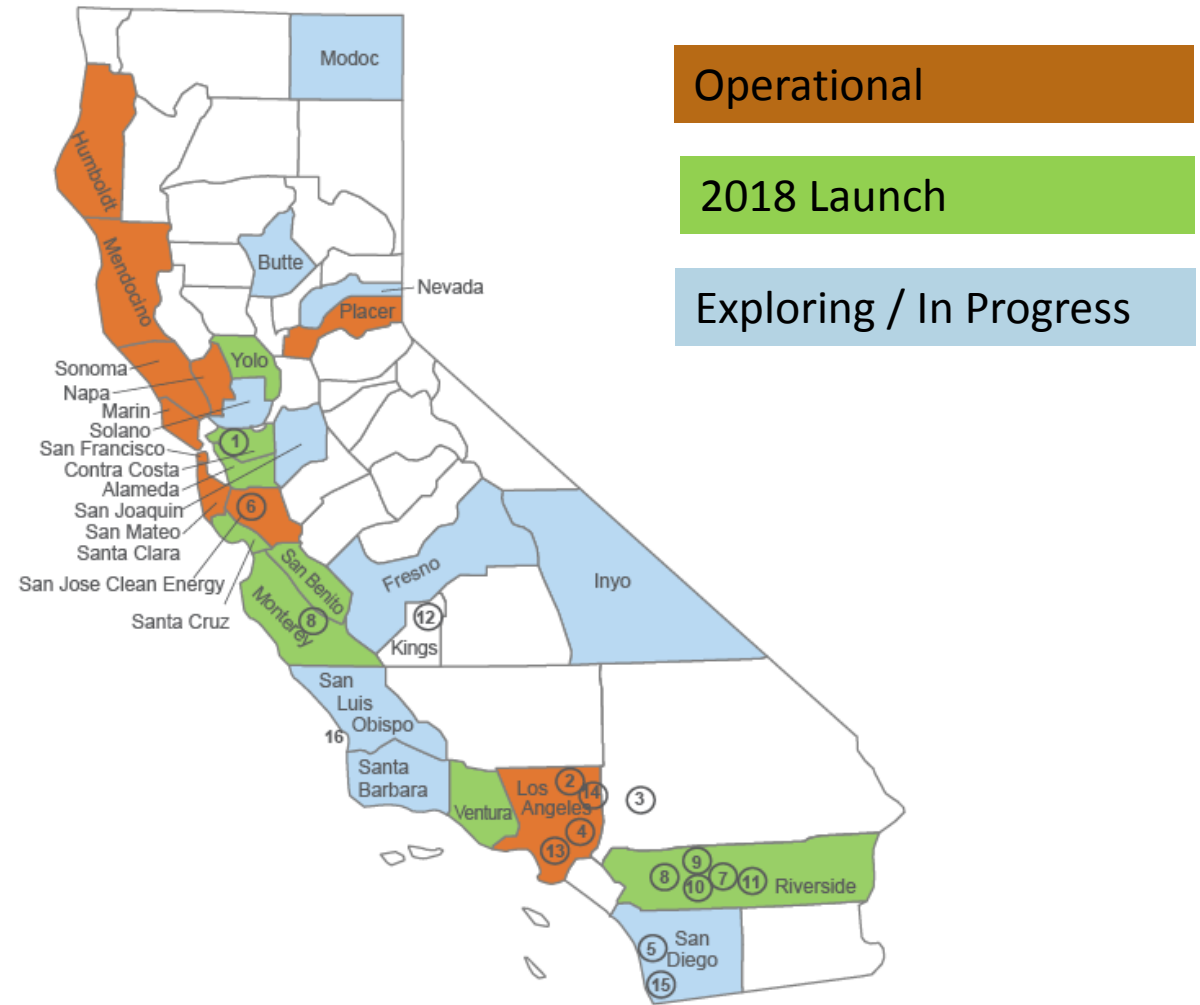
A registered professional engineering and management consulting firm with offices in Kirkland, WA; Portland, OR; and La Quinta, CA  
(425) 889-2700 [www.eesconsulting.com](http://www.eesconsulting.com)

# AGENDA

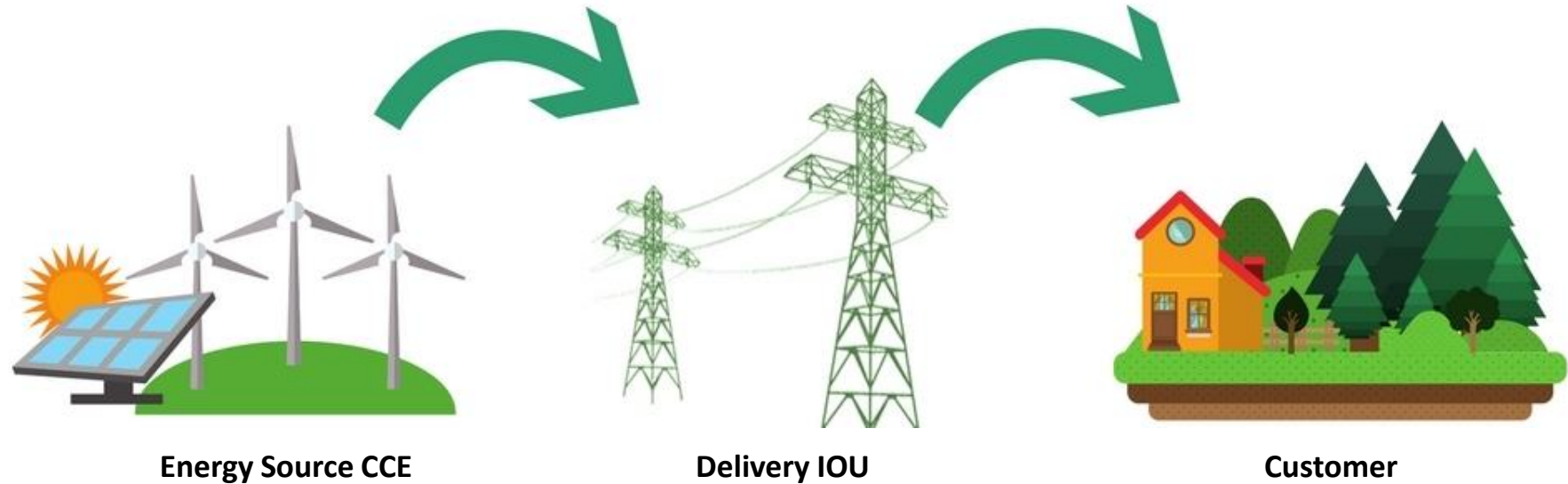
- **Introduction**
  - What is Community Choice Energy and Where are CCEs Being Formed?
  - How Does a CCE Operate?
  - How to Set up a CCE
- **Recap of Final Financial Feasibility Study**
  - Overview of CCE Financial Feasibility Study
  - Key Assumptions
  - Rate Analysis
- **Other Feasibility Study Metrics**
  - Risk Analysis and Mitigation
  - Governance Structures
  - Management Structures
  - GHG Reduction
  - Economic Activity
- **Summary and Recommendations**
- **Schedule**

# WHAT IS COMMUNITY CHOICE ENERGY (CCE OR CCA) AND WHERE ARE CCEs BEING FORMED?

- **History of Electric Utility Deregulation**
- **AB 117 (2002)**
- **Why are CCEs Being Set Up?**
  - Cheaper energy costs
  - Less Green House Gas emissions (GHG)
  - Encourage local economic development
  - Local control over power products, rates and programs
- **Opt-Out Protocol**
- **20% of CA Under CCE Currently**
- **80% of CA Under CCE in 2-3 Years**



# HOW DOES A CCE OPERATE?



## CCE Potential Offerings:

- Energy Efficiency
- Distributed Energy Resources
- Local Renewable Investment
- Electric Vehicle Programs
- Microgrid
- Fuel Switching Programs
- PACE (Property Assessed Clean Energy)
- Bulk Power Portfolio Choices



# HOW TO SET UP A CCE

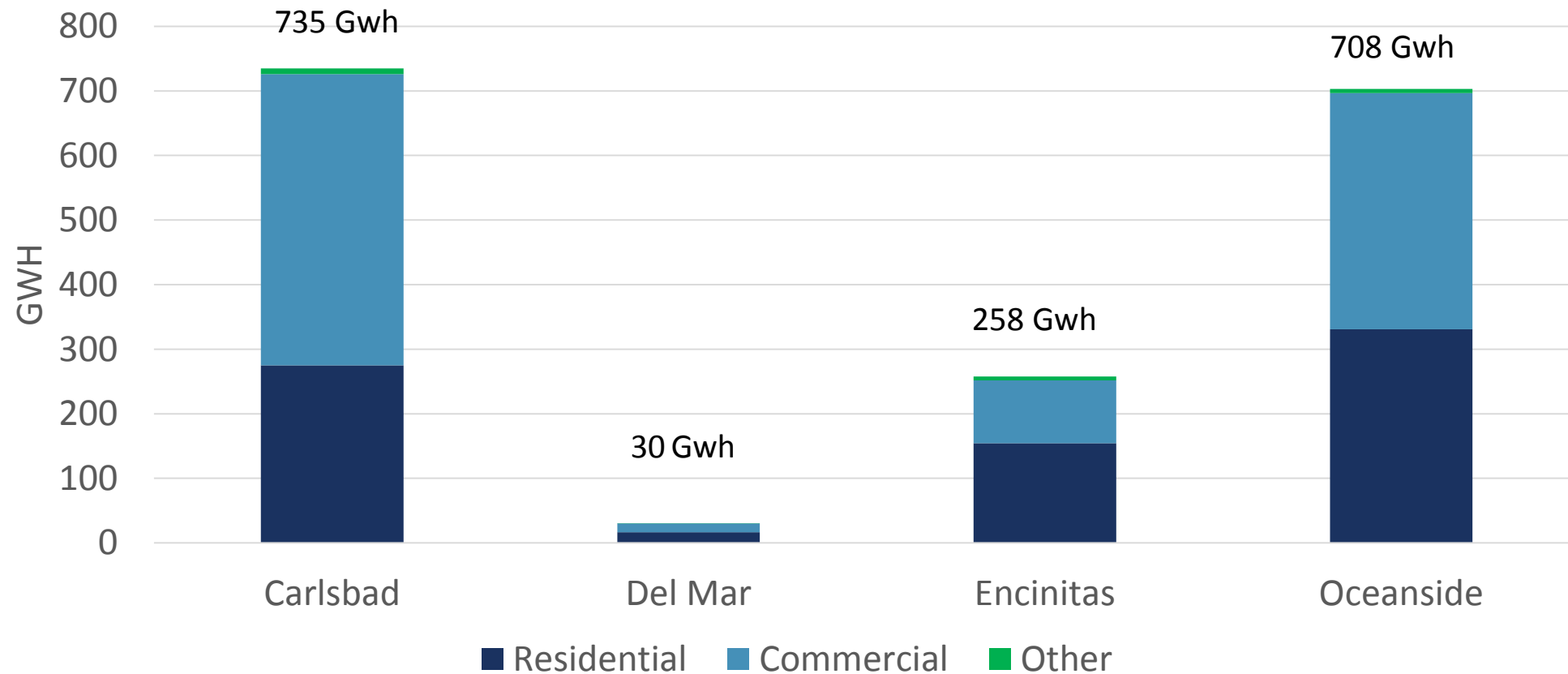
- **Load Data from Incumbent Utility Investor-Owned Utility (IOU)**
- **Feasibility Study/Business Plan**
- **Pass Ordinance then Form JPA or Enterprise Fund**
- **File Implementation Plan with California Public Utilities Commission (CPUC)**
- **Secure Start-Up Financing**
- **Hire Schedule Coordinator, Data Management and Technical Consultants plus Internal CCE Staff**
- **Arrange Billing/Payment Activities with IOU**
- **Issue RFP for Power Supply**
- **Enroll Customers**
- **Launch**
- **Usually Takes 12 – 18 Months to File Implementation Plan and Then Another 12 Months to Launch**

# OVERVIEW OF CCE FINANCIAL FEASIBILITY STUDY

- **Can the North San Diego County Cities and Specifically Carlsbad, Form a CCE that is Financially Feasible Under a Range of Likely Future Conditions?**
- **Methodology: Conservatively Estimate CCE Revenues and Costs and Compare to Comparable Rates of SDG&E**
- **Also Review Options for Operational Structures and Governance Choices**
- **Identify Risks of Forming a CCE**

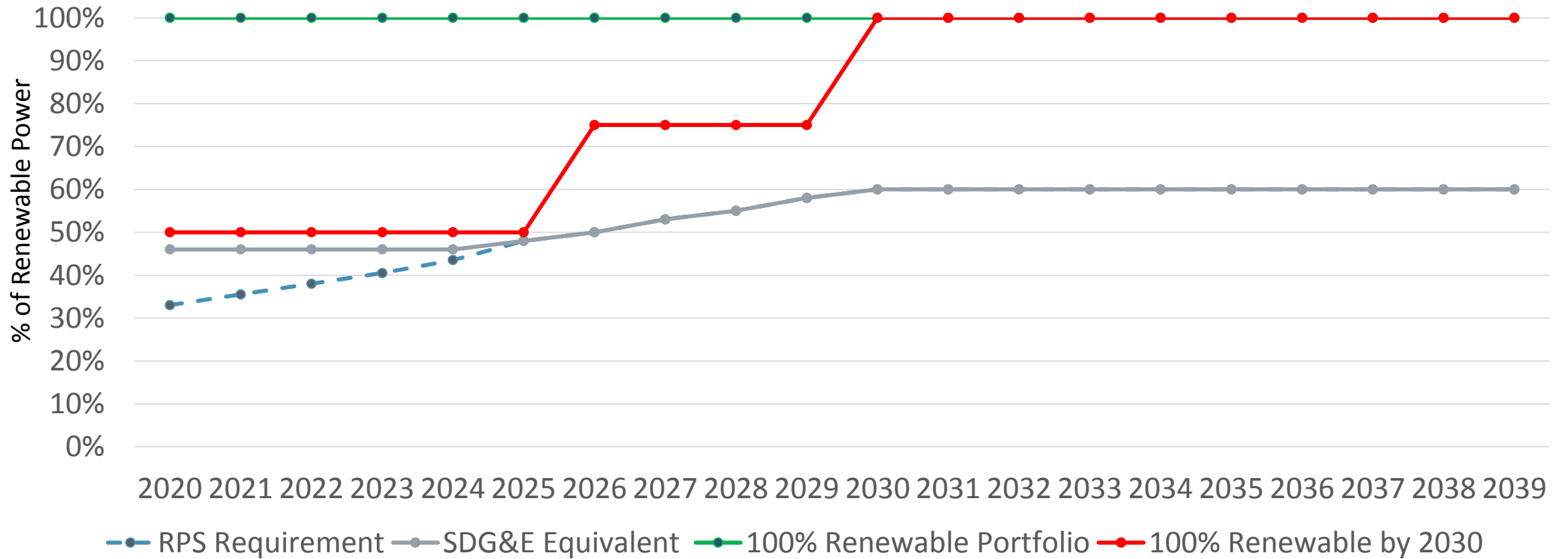
# KEY ASSUMPTIONS

## LOAD BY JURISDICTION



# KEY ASSUMPTIONS

## RESOURCE PORTFOLIO OPTIONS



Note: Minimum 80% greenhouse gas free in all scenarios

# KEY ASSUMPTIONS

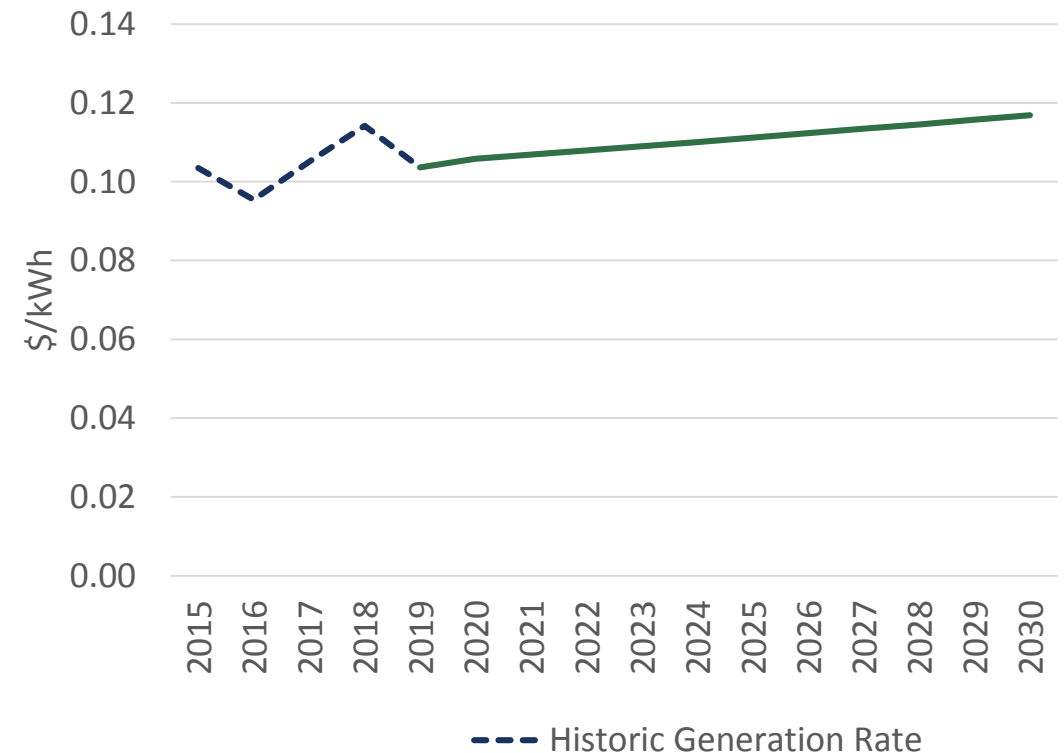
## FINANCIAL ANALYSIS CONSTRUCT

- **Forecast SDG&E Rates**
- **Forecast CCE Rates**
  - Power Supply + PCIA
  - Operations
    - Billing Data Management
    - SDG&E Fees
    - Consulting
    - Staff
    - General/Admin
    - Debt Service
  - Total Cost of Operations
  - Funding of Reserves
  - CCE Comparable Rate
- **Compare SDG&E Rates to CCE Rate**
- **Is the CCE Cost Competitive?**

# KEY ASSUMPTIONS

## PRELIMINARY SDG&E GENERATION RATE FORECAST, \$/MWH (2019)

- SDG&E Rate has Two Components: Generation/Power Supply and Wires
- SDG&E has Procured Renewable Resources to Meet 44%-46% of Supplies at Relatively High Prices
- Remaining Portfolio Consists of 40%-50% of Natural Gas Resources and 10%-15% of Market Power
- 2019 Generation Rate Based on Recent SDG&E Rate Case Filing
- Escalation in Generation Rate Follows Power Market Price Escalation Forecast Offset by Expected Reduction in Renewable Resource Costs – Results in 1% Annual Growth Rate in Generation Rate Component; 2% Escalation in Wires



# KEY ASSUMPTIONS

## PRICING FOR POWER SUPPLY

- **Power Costs = Market Power + Renewable + Resource Adequacy + CAISO Charges + Schedule Coordinator**
- **Power Costs = 80% – 90% of CCE Budget**
- **Scenarios Analyzed**
  - Scenario A
    - ✓ Conservative, assumed only short-term and more expensive for renewables
    - ✓ Avoided making presumption of how CCE Board would manage risk
    - ✓ Use market power + renewable energy credits predominantly
  - Scenario B
    - ✓ Most likely, assumed CCE would start layering in longer-term and cheaper renewable contracts after year 2
    - ✓ Option B is standard in CCE community
    - ✓ Actual participation in renewable projects for majority of renewables

# KEY ASSUMPTIONS

## PRICING FOR POWER SUPPLY (CONT'D)

### ■ Detailed Assumptions for Power Supply Pricing

Common to Options A and B	
• Market power forecast from CPUC/outside forecasting services	• PCC 1 and PCC 2 RECs based on recent RFP responses
• GHG premium = \$4/MWh	• Resource Adequacy (RA) from recent bids and CPUC data
• Schedule coordinator charges based on recent bids	• CAISO charges based on tariffs
• All options comply with SB 100 and SB 350	

### ■ Option A – Conservative

- Short-term renewables pricing \$54/MWh in 2021 escalating to \$70/MWh in 2030
- All short-term pricing except
 

Year	% Long-Term
0 – 3	0%
4	10
5	20
6 – 10	25
- Long-term pricing at \$42/MWh

### ■ Option B – Most Likely

- Short-term renewables pricing \$54/MWh in 2021 escalating to \$70/MWh in 2030
- Long-term renewables layered in earlier
 

Year	% Long-Term
0 – 2	0%
3	50
4	55
5	60
6 – 10	65
- Long-term pricing at \$35/MWh
- Current long-term renewable market < \$30/MWh

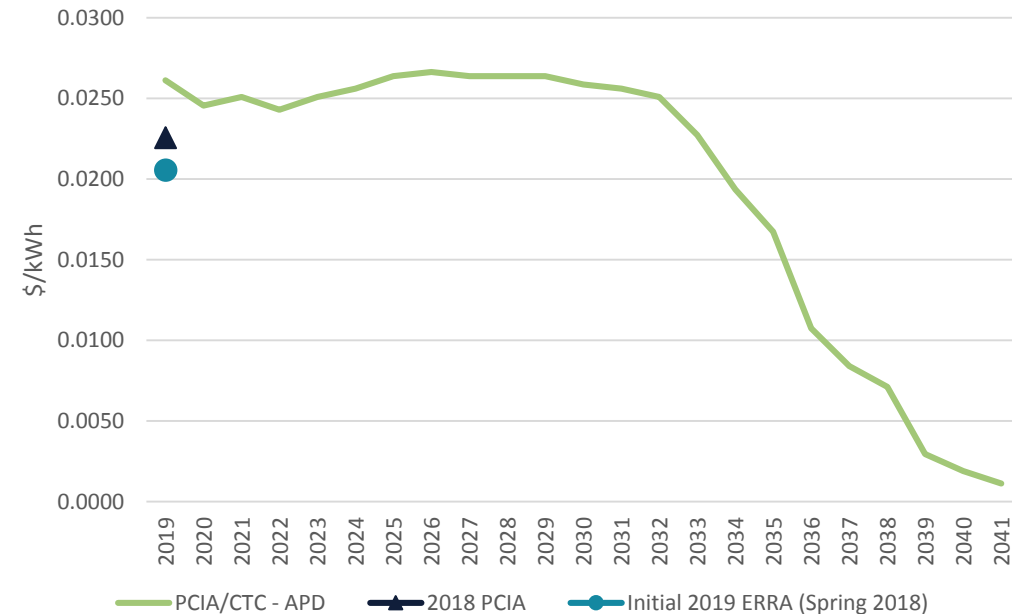
- All Options Comport with Requirements of SB 100 and SB 350
- Final Power Prices Subject to RFP Solicitation Closer to Launch



# KEY ASSUMPTIONS

## PCIA FORECAST, \$/MWH

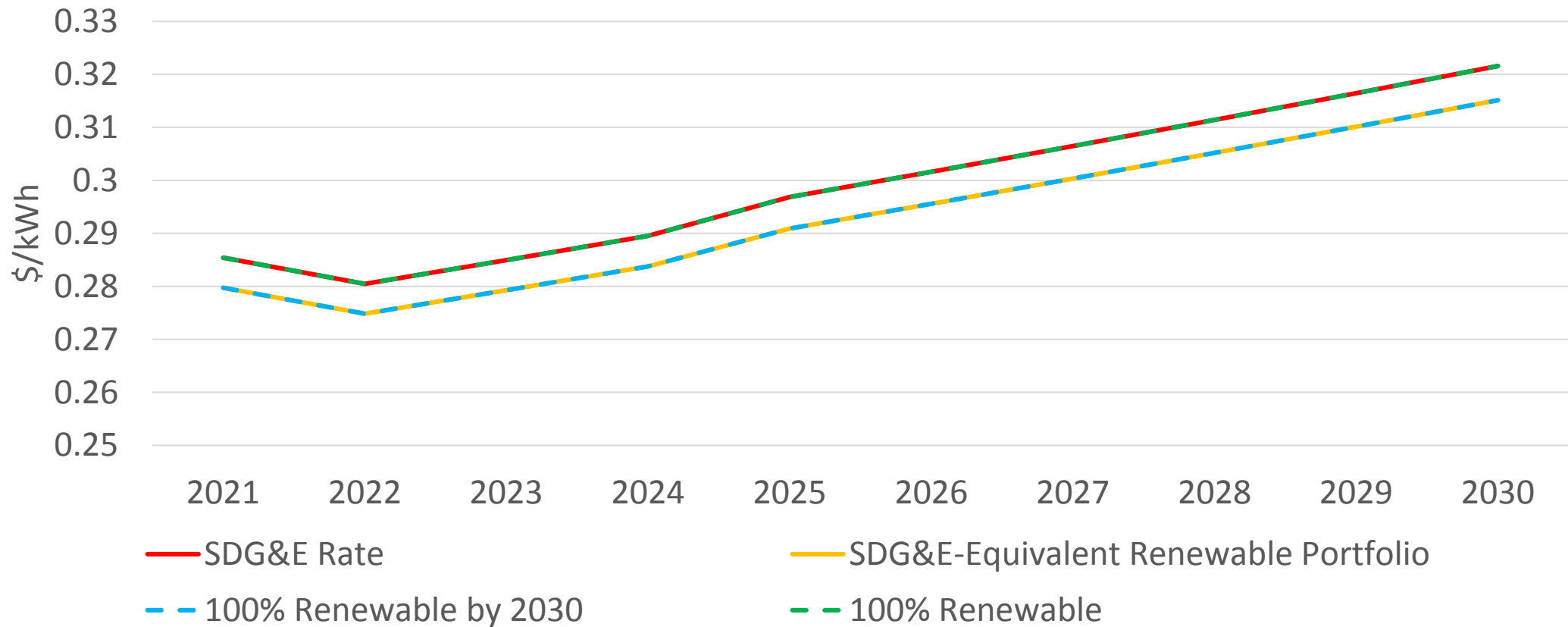
- Reflects the Recent Alternative Proposed Decision (APD) and the 2019 ERRA Filing by SDG&E
- Longer Term PCIA Decreases Due to Terminating SDG&E Contracts
- Phase II PCIA Hearings Underway
- SDG&E has Not Provided a Forecast of Power Costs
- Impacts on PCIA of IOU's Selling Off Generation Assets and PG&E Bankruptcy Unclear at this Point



# OTHER OPERATING COST ASSUMPTIONS

- **Transmission and Distribution Charges a Pass-Through**
- **Billing and Data Management from RFP Responses**
- **SDG&E Fees Per Tariff**
- **Consulting/Staffing**
  - Assume conservatively full staffing model
  - 11-12 FTEs at full operations
  - Lower cost options may be available
- **Administrative and General – From Other CCE Budgets**
- **Reserve Accumulation – 4 Months of Expenses**
- **Financing Costs**
  - \$1M - \$2M start-up then \$14 - \$15M cash working capital at launch
  - 5-year term at 5.5% interest
  - Pay back in 2 – 3 years

# RATE ANALYSIS OPTIONS A AND B



Note: SDG&E Equivalent and 100% Renewable by 2030 = 2% discount off current total bill  
100% Renewable = current total bill

# SUMMARY OF FINANCIAL FEASIBILITY ANALYSIS FOR FOUR PARTNER CCE

- CCE is Financially Feasible Under Scenarios A and B
- Both Scenarios Can Offer a 2% Discount Off Total SDG&E Bill for Equivalent and 100% Renewable by 2030
- Assuming 2% Discount, Cash Balances Follow:

Year	Scenario A		Scenario B	
	Rate Stabilization Fund (\$/M)	Available for Additional Programs (\$/M)	Rate Stabilization Fund (\$/M)	Available for Additional Programs (\$/M)
2021	\$36.4	\$--	\$26.0	\$11.5
2022	\$35.4	\$15.6	\$35.4	\$5.1
2023	\$35.5	\$15.7	\$35.4	\$12.1
2024	\$36.9	\$11.2	\$35.4	\$17.4
2025	\$38.6	\$4.5	\$36.8	\$17.3
2026	\$39.9	\$9.4	\$37.5	\$17.1
2027	\$41.3	\$7.1	\$38.2	\$17.1
2028	\$42.7	\$5.6	\$39.2	\$16.8
2029	\$44.1	\$3.2	\$39.9	\$17.1
2030	\$45.6	\$.8	\$40.5	\$17.3

- Same Metrics for Carlsbad Only CCE Would be 35% of Each Number Above

# RATE ANALYSIS

## SENSITIVITY ASSUMPTIONS

### ■ Market Prices

- High/Low power cost

### ■ PCIA

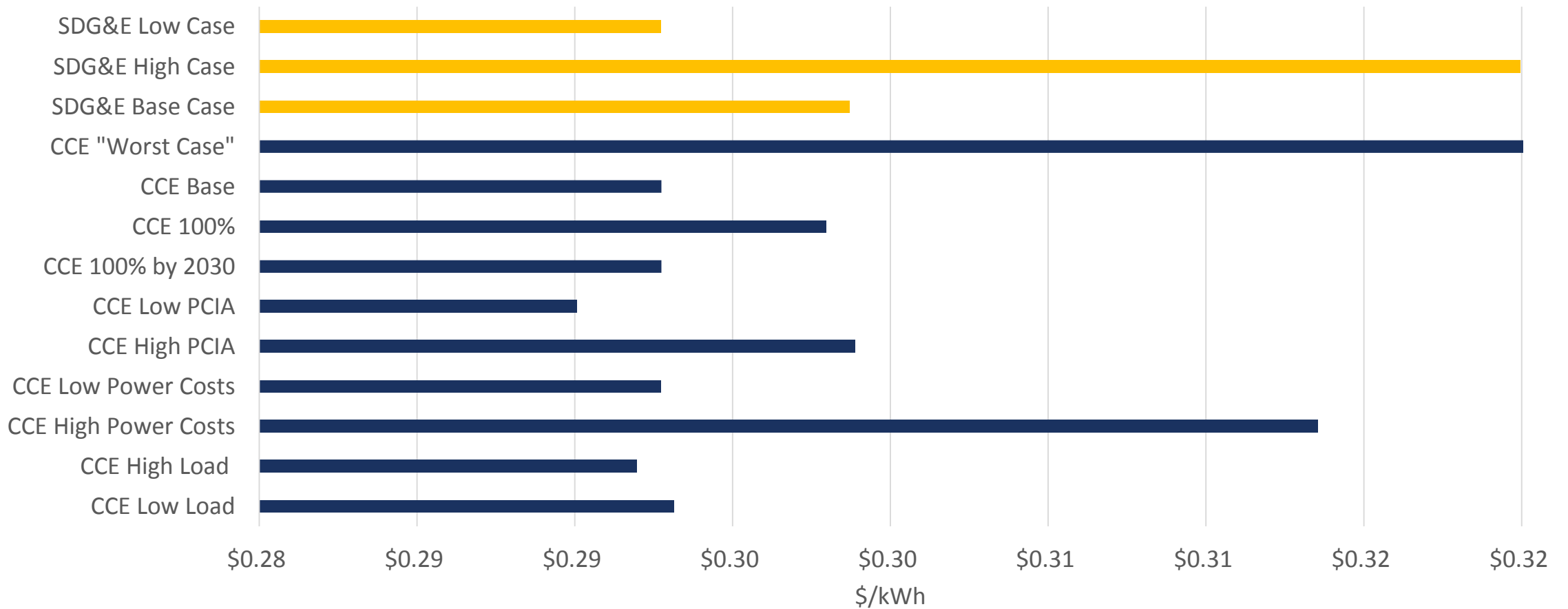
- *High PCIA*: Assumed to be 10% higher than base forecast
- *Low PCIA*: Assumed to be 10% lower than base forecast

### ■ Load

- *High Load*: +0.79%
- *Low Load*: -0.5%

# RATE ANALYSIS

## SENSITIVITY ANALYSIS, BASE CASE RENEWABLE PRICES



# OTHER CONSIDERATIONS

## RISK ANALYSIS AND MITIGATION

Risk Category and Description	Mitigation Strategies
<p><b>Customer Participation</b></p> <ul style="list-style-type: none"> <li>• Customers can choose to opt-out</li> <li>• High opt-out rates reduce sales, increase fixed cost per customer</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain competitive rates</li> <li>• Tailor programs to local customer priorities</li> <li>• Provide customers with a high-level of service and communication</li> </ul>
<p><b>SDG&amp;E Rate Competition</b></p> <ul style="list-style-type: none"> <li>• Low customer participation rates</li> <li>• Unfavorable future power market conditions</li> <li>• Regulated charges could increase in the future</li> </ul>	<ul style="list-style-type: none"> <li>• Diversify power contract portfolio</li> <li>• Maintain financial reserves and a rate stabilization plan</li> <li>• Monitor SDG&amp;E rates and CCE charges</li> <li>• Ensure relatively low CCE overhead</li> <li>• Leverage CCE’s tax-exempt borrowing advantage to reduce long-term power supply costs</li> </ul>
<p><b>Local, Agency, and State Policy</b></p> <ul style="list-style-type: none"> <li>• PCIA and other regulated charges may reduce CCE competitiveness</li> <li>• State energy policy could create burdensome energy procurement requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Track and participate in relevant CPUC/CEC proceedings and legislation</li> <li>• Develop bi-partisan support with emphasis on both environmental/equity and financial/economic benefits associated with a CCE</li> <li>• Lobby for the same government-imposed charges on all CA utilities</li> </ul>

# OTHER CONSIDERATIONS

## GOVERNANCE STRUCTURES

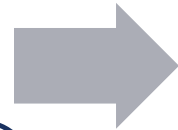
<i>Form a New City Department (Enterprise)</i>	<i>Join Existing JPA (SEA, City of San Diego, CPA, LCE, etc.)</i>
<ul style="list-style-type: none"> <li>▪ Easy to set up</li> </ul>	<ul style="list-style-type: none"> <li>▪ JPA completes the work without much effort from the Cities</li> </ul>
<ul style="list-style-type: none"> <li>▪ Total control of operations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Potential cost savings due to shared services</li> </ul>
<ul style="list-style-type: none"> <li>▪ General fund may be liable for CCE risks depending on governance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cities may have less control over the process and operations</li> </ul>
<i>Create Joint Power Authority (JPA)</i>	<ul style="list-style-type: none"> <li>▪ Less ability to customize for each City's residents</li> </ul>
<ul style="list-style-type: none"> <li>▪ Provides Cities with some local control</li> </ul>	<ul style="list-style-type: none"> <li>▪ Less ability to influence power supply options and choices</li> </ul>
<ul style="list-style-type: none"> <li>▪ Allows Cities to target programs specifically for residents</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ability for JPA to have more influence in regulatory issues</li> </ul>
<ul style="list-style-type: none"> <li>▪ Greater effort associated with formation of CCE</li> </ul>	<ul style="list-style-type: none"> <li>▪ Greater process in reaching agreement on decisions</li> </ul>
<ul style="list-style-type: none"> <li>▪ More decision-making required by the Cities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Less liability likely</li> </ul>
<ul style="list-style-type: none"> <li>▪ More flexibility and timeliness in formation</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Liability shield likely</li> </ul>	<i>Turnkey Operator</i>
	<ul style="list-style-type: none"> <li>▪ No cash up-front/going forward</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Easier for City staff</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Little control over operations/decision making</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Less liability likely</li> </ul>



# MANAGEMENT STRUCTURES

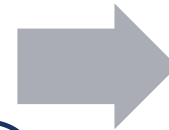
## Full Staffing

- Most CCE functions staffed internally
- CCE acquires its own financing
- **Pros:**
  - ✓ Maximum control over quality of service and long-term decision making
- **Cons:**
  - ✓ Full department needed/costs
  - ✓ Hiring qualified people



## Minimal Staffing

- CCE employs program managers to manage contractors
- CCE acquires its own financing
- **Pros:**
  - ✓ Flexible staffing levels
  - ✓ Less problem staffing
- **Cons:**
  - ✓ Less control



## Third-Party Turnkey

- CCE employs program managers to manage contractors
- CCE financing provided by third-party
- **Pros:**
  - ✓ Relatively easy
  - ✓ No up-front cash/cash working capital
- **Cons:**
  - ✓ Possibility of third party abandoning venture
  - ✓ Reduced control
  - ✓ Higher rates due to higher 3<sup>rd</sup> party borrowing rate

# GHG REDUCTION

**Comparison of Average Annual GHG Emissions from Electricity, by Resource Portfolio (2021-2030)**

	<b>SDG&amp;E Equivalent Renewable Portfolio</b>	<b>100% Renewable by 2030</b>	<b>100% Renewable</b>	<b>SDG&amp;E</b>
GHG Share %	80%	89%	100%	60%
Average Emissions (Metric Tons CO2)	109,000	61,000		218,000
Difference SDG&E 50% Portfolio for Four Partners (Metric Tons CO2)	109,000	157,000	218,000	
For Carlsbad Only	46,000	67,000	93,000	

# ECONOMIC ACTIVITY

## \$9 Million Rate Savings Effects on the San Diego County Economy

Impact Type	Employment Jobs	Labor Income	Total Value Added	Output
Direct Effect	50.7	\$2,473,000	\$2,508,000	\$ 4,613,000
Indirect Effect	10.7	\$ 641,000	\$1,039,000	\$ 1,740,000
Induced Effect	47.4	\$2,273,000	\$4,146,000	\$ 6,712,000
<b>Total Effect</b>	<b>108.8</b>	<b>\$5,387,000</b>	<b>\$7,694,000</b>	<b>\$13,065,000</b>

# SCHEDULE

		2019												2020												2021					
	Task	Due Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Feasibility Report	Final Draft Report	2/1/2019		■																											
	CCA Ad Hoc Council Subcommittee Meeting	2/15/2019		■																											
	Council Presentations			■	■																										
	Carlsbad	2/15/2019		■	■																										
	Del Mar	2/15/2019		■																											
	Encinitas	2/15/2019		■																											
Ordinance	Oceanside	2/15/2019		■																											
	Public Workshops	4/15/2019				■	■	■	■																						
	Approval of Ordinance and Resolution to Create CCA	7/15/2019							■																						
Organizational Setup	Form JPA	9/1/2019								■	■	■																			
	Hire Executive Director	1/1/2020											■	■																	
	Hire Staff	6/1/2020															■	■	■	■	■										
CPUC Registration	Prepare Implementation Plan	1/1/2020									■	■	■																		
	File Implementation Plan with CPUC	1/1/2020												■																	
	CPUC completes review of IP	4/1/2020												■	■	■	■	■													
	Register with CPUC and submit Bond	4/1/2020												■	■	■	■	■													
Resource Adequacy	CPUC confirms registration	5/1/2020														■	■														
	File Historic Load Data with CPUC/CEC	3/17/2020														■	■														
	File Year-Ahead Load Forecast	4/20/2020															■	■													
	Revised Year-Ahead RA Load Forecast	8/16/2020																				■	■								
Power Procurement	January Month-Ahead RA Load Forecast Due	10/15/2020																						■	■						
	RFP & Contract for Scheduling Coordinator/Portfolio Mng	7/1/2020															■	■	■	■											
	Develop risk management and procurement plan	9/1/2020																■	■	■	■										
Banking & Credit	Power Purchase and Contracting	1/1/2021																							■	■	■	■	■	■	
	RFP & Contract for Line of Credit	8/1/2020																■	■	■	■										
	Finalize financial Plan and Rates	10/1/2020																							■	■	■	■	■	■	
Customer Noticing	Transaction Testing with SDG&E	12/1/2020																								■	■	■	■	■	
	RFP & Contract for Data Mgmt, Billing, Call Cntr, and Mrkt	8/1/2020																■	■	■	■										
	Systems Testing with SDG&E	10/1/2020																								■	■	■	■	■	
	CCA Website Finalized	11/1/2020																								■	■	■	■	■	
	Call Center and CRM Operational	12/1/2020																										■	■	■	
	Pre-Enrollment Notice 1	1/1/2021																										■	■	■	
	Pre-Enrollment Notice 2	2/1/2021																											■	■	
	Customer Program Transitions Notice	3/1/2021																											■	■	
	Program Launch	4/1/2021																												■	■
	Post-Enrollment Notice 1	4/8/2021																												■	■
Post-Enrollment Notice 2	5/10/2021																													■	■

# DRAFT NORTH SAN DIEGO COUNTY CCE TECHNICAL FEASIBILITY STUDY & RESOLUTION AUTHORIZING EVALUATION OF CCE GOVERNANCE OPTIONS

- Recommended Action:
  - Receive draft study and provide feedback
  - Direct staff to conduct a public workshop on the draft study in coordination with partner cities, solicit community feedback and return to City Council with the final study & recommendations
  - Approve a resolution authorizing the City Manager to negotiate, execute and fund a cost share agreement allowing participation in an evaluation of CCE program governance options – not to exceed \$35,000