A scenic photograph of a beach at sunset. The sun is low on the horizon, casting a golden glow over the water and sky. The beach is sandy, and waves are gently washing onto the shore. In the background, a city skyline is visible, including a prominent blue building and palm trees.

Report on Feasibility of Community Choice Aggregation (CCA)

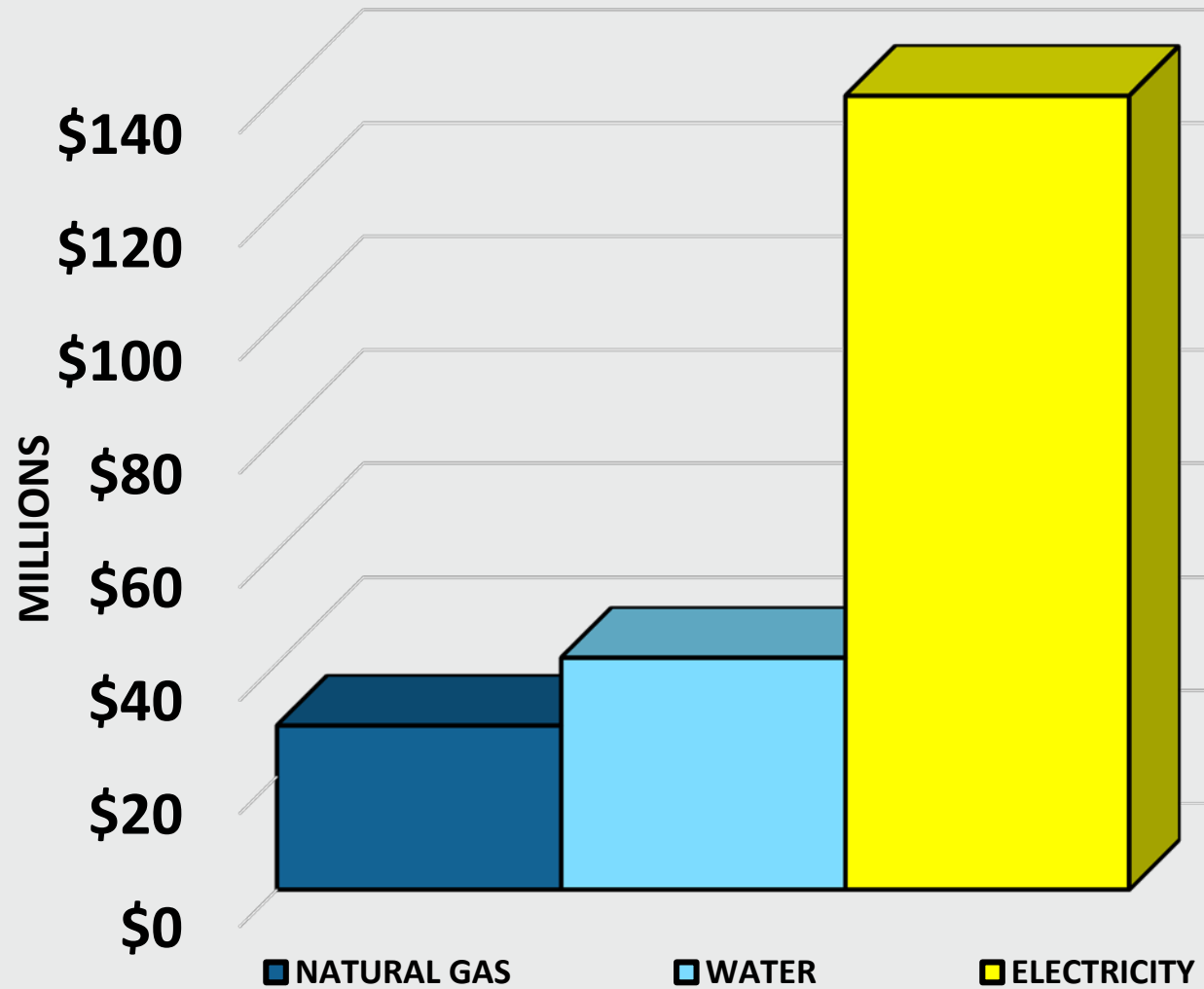
City Council | August 25, 2020

CITY OF
LONG BEACH

What is Community Choice Aggregation?

- A CCA would replace SCE as the default buyer of electricity for resale to all residents and businesses
- The intention is that a CCA might possibly purchase lower priced, cleaner power than does SCE
- SCE would continue the delivery of the electricity over its poles and wires, billing customers for SCE's transmission delivery costs as well as all CCA commodity costs
- A typical residential monthly electric bill is roughly split 50% electricity commodity costs and 50% transmission delivery costs

Electricity Purchasing is Costly



Comparison of the annual commodity purchases by the City's gas and water utilities and by a possible Long Beach CCA for electricity purchases

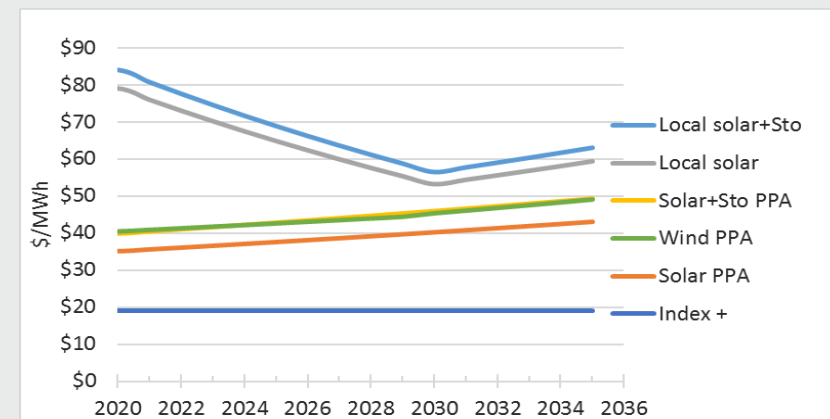
Feasibility Study Conducted

- As requested by City Council, a feasibility study on the possibility of creating a Long Beach CCA was prepared by team of expert consultants
- A peer review expert was engaged to review the study and assist with confirming the summary and recommendations
- An update was conducted in July 2020 to determine subsequent market changes impacting CCAs
- Three City department heads with decades of experience in energy, utilities and finance have reviewed and summarized the 138 page study and update

Potential Long Beach CCA Customers and Associated Load

	Customers	Annual Load (MWh)
Residential	158,480	746,292
Small Commercial	16,512	591,646
Medium Commercial	2,638	456,615
Large Commercial & Industrial		
On TOU-8 Sub-transmission	28	<u>853,323</u>
On other Tariffs	<u>78</u>	<u>366,780</u>
Total Large C & I	106	1,220,104
Other*	1,967	67,636
Total	179,703	3,082,293

Projected Average Renewable Power Costs



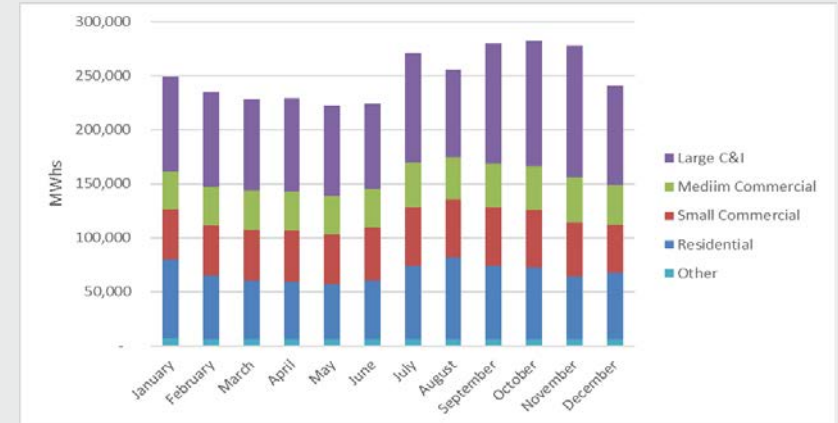
Feasibility Study Contents

- **Main topics**

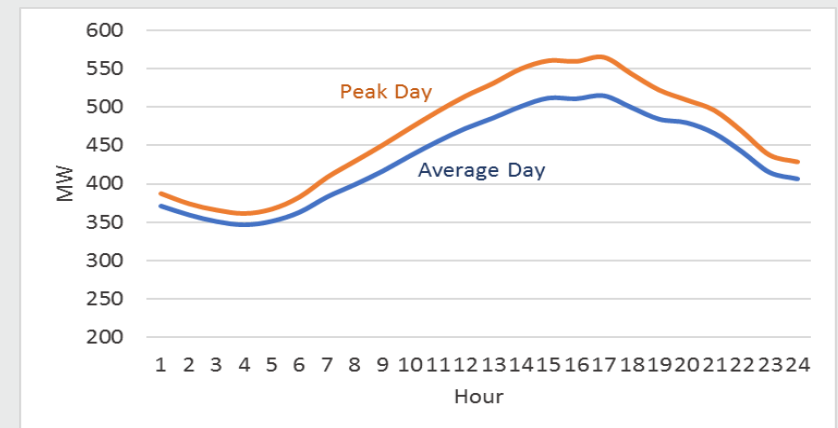
- Economic Study – methodology and inputs
- Cost and benefit analysis
- Sensitivity of results to key inputs
- Hypothetical 5-year cash flow and financial strategy
- Risks and mitigating strategies
- Macroeconomic inputs
- Overview of power agency design and implementation process options
- Start-up schedule and milestones

- **Staff's presentation and recommendations are consistent with the feasibility study**

Long Beach CCA Load (Monthly, 2020)



Long Beach CCA Load Shape (September)



Main Goals for a CCA

REDUCTION IN GREENHOUSE GAS EMISSIONS

Will a CCA's power purchases have lower GHG emissions than SCE's power?

LOWER ELECTRIC BILLS TO CUSTOMERS

Will a CCA save customers money on their electric bills compared with SCE ?

CREATE LOCAL JOBS

Will a CCA directly result in the creation of new local jobs?

Will customers' electricity savings translate to new jobs in the community?

GHG Emission Reduction - Likely Minor

- SCE and a CCA are on the same path to achieve 60%, 80% and 100% clean energy, with possible differences in timing, risks, and costs
- Both the CCA and SCE would be subject to the same requirements for meeting the State's renewable and carbon-free energy targets
- SCE's electricity is already 51% GHG free, including 35% renewable, going to 80% clean energy by 2030, and 100% by the 2045 target
- Today, Long Beach customers can voluntarily opt to have SCE provide them with 50% or 100% renewable electricity (but few do)

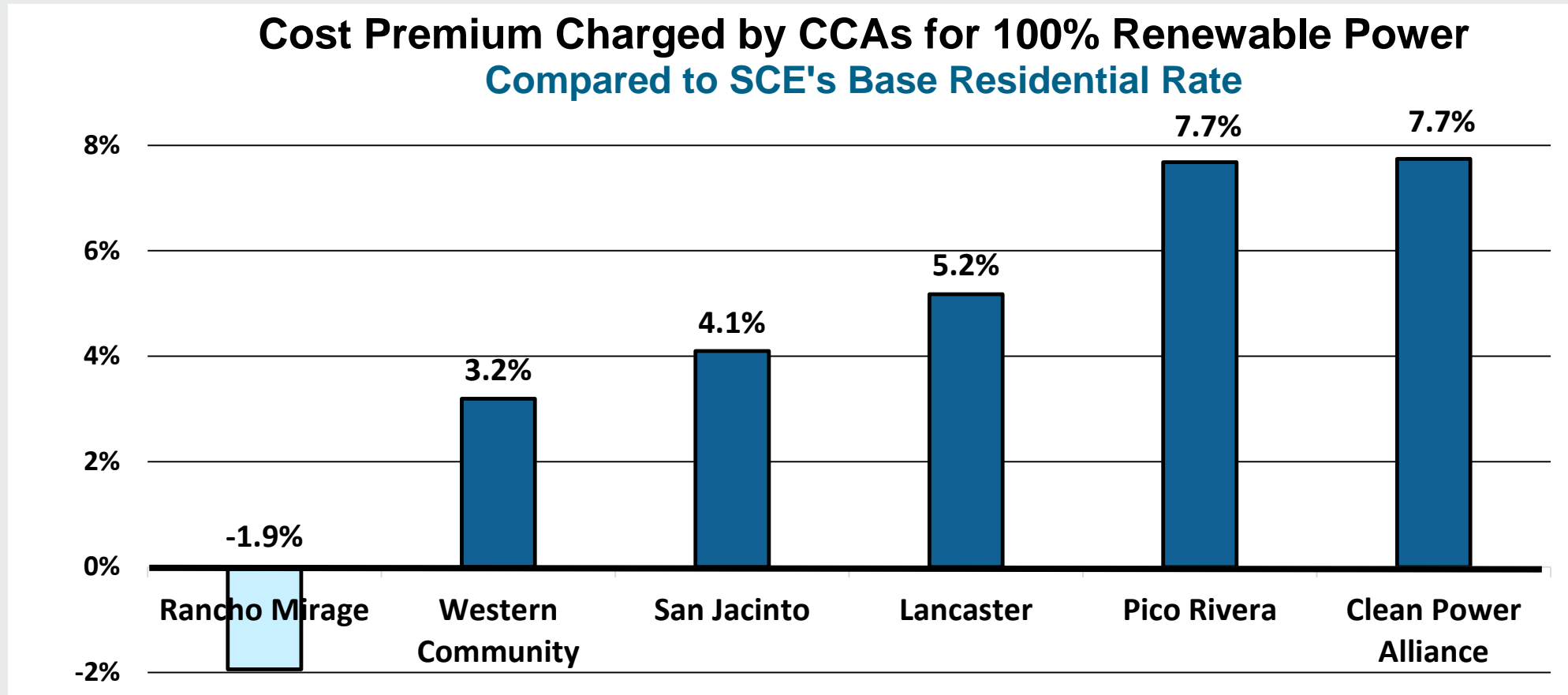
California CCA Rate Experiences

Over time, California CCAs have transitioned from generally offering lower rates to customers, to today when established CCAs are charging customers higher rates than the original utility

	Premium Charged by CCA to Residents	
	Lowest Cost Option	100% Renewable
Marin Clean Energy	1.2%	5.6%
Sonoma Clean Power	2.5%	12.1%
Clean Power Alliance	-0.9%	4.1%

Residents Pay a Premium for 100% Renewable

CCA's tend to charge residential customers a significant cost premium for providing 100% renewable power as compared with SCE's base rate







Lower Electric Bills - Possible, But Could Be Higher

- Long Beach residents could see an almost 8% cost increase with the 100% renewable regional CCA option, compared to SCE's current base rates
- Residents' savings could be 1% to 2% (about \$1 to \$2 monthly) with the lowest priced regional CCA option, compared to SCE
- Small and medium sized businesses would see similar savings or increases
- Long Beach CCA rates would not be competitive for large industrial users (25% of the load in the city) so those customers would remain with SCE
- The City's electricity costs at the 100% renewable option would increase by about 16% or \$1.7 million annually





Comparison of CPA **Lean** Option (lowest price)

CPA Lean Energy option compared to SCE base (current status)




-  • Residents/businesses save about 1%
-  • Large businesses see a cost increase of about 9%
-  • Renewable energy content increase of 1 point (SCE 35%, CPA 36%)
-  • GHG emissions are 75% higher

Comparison of CPA **Clean** Option (50% renewable)

CPA Clean Energy option compared to SCE base (current status)





-  Residents/businesses have no cost difference
-  Large businesses see a cost increase of about 11%
-  Renewable energy content increase of 15 points (SCE 35%, CPA 50%)
-  GHG emissions are 20% lower

CPA Clean Energy option compared to SCE alternative 50% option

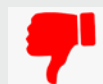


-  Residents save 1.6%
-  Renewable energy content is 17.5 points less (SCE 67.5%, CPA 50%)
-  GHG emissions are 60% higher

Comparison of CPA **Green** Option (100% renewable)

CPA Green Energy option compared to SCE base

-  • Residents/businesses bills increase 8% to 9%
-  • Large businesses see a bill increase of about 17%
-  • Renewable Energy content increase 65 points (SCE 35%, CPA 100%)
-  • GHG emissions are reduced to zero

CPA Green Energy option compared to SCE alternative 100% option

-  • Residents' bills increase 4%
-  • Renewable Energy both at 100%
-  • GHG emissions both at zero

Job Creation - Very Modest at Best

- For a stand-alone City CCA, only 10-27 direct jobs. Economic impact similar to that of any small company
- If the City joins an existing Joint Power Authority (JPA) CCA, there would likely be no jobs created in Long Beach. No direct economic benefit
- CCA customer rates may be lower or higher than SCE's; if rates are lower, the local economic impact will be positive - which indirectly creates jobs, or, if rates are higher, a negative impact - which indirectly reduces jobs
- A CCA may dedicate some funding to subsidize renewable projects, e.g., solar installations, but could result in higher CCA rates than otherwise

Governance Model and Public Awareness

- To move forward, City Council must determine the CCA governance model: a stand-alone City CCA, join an existing JPA CCA, or create a new JPA CCA with another government entity(ies)
- The governance model impacts the level of local control, the assumption of risk, start-up costs, ongoing costs, and other factors
- More detailed analysis is needed to properly develop a governance recommendation, including the pros/cons of the various options
- Start-up costs could be up to \$15 million, but likely recoverable
- Residents are likely unaware of how they may be impacted by a CCA; public outreach is suggested before consideration of a CCA

Risks and Uncertainties

➤ Increased Resource Adequacy (RA) Requirements

RA requirements ensure grid reliability – suppliers must be able to meet their customers' power demands. Beginning in 2023, SCE will become the central buyer of all local RA requirements on behalf of itself as well as CCAs

Risk: Potentially significant cost implications for CCAs as regulations continue to develop

A key uncertainty that is evolving

Risks and Uncertainties

➤ Increased Exit Fee (PCIA)

CCA customers must pay an exit fee to SCE to ensure that remaining SCE customers do not unfairly bear the long term generation costs incurred by SCE before the customer transitioned to a CCA

Risk: The methodology behind the PCIA charges is evolving and may increase and impact a CCA's ongoing ability to offer competitive customer rates

A key uncertainty that is evolving

Risks and Uncertainties

➤ Rates Charged Higher than SCE's Rates

A CCA cannot guarantee that CCA customers will have lower monthly electric bills. Several of the most established California CCAs currently charge higher residential rates than the alternative utility

Risk: Long Beach residents and businesses may experience higher monthly electric bills with a CCA

Risks and Uncertainties

➤ Lack of Public Engagement

If Long Beach residents and businesses receive higher electric bills than they would with SCE, they may be unhappy with the City's decision to form or join a CCA without much (or any) understanding of the reasoning behind the City's decision

Risk: This concern may be magnified if the perception is that the City did not adequately engage with the community prior to the City's decision to form or join a CCA

A key uncertainty

Risks and Uncertainties

➤ Volatility of Electricity Market

Electricity is the most volatile utility commodity, with much more volatile/risky pricing than gas or water

Risk: A Long Beach CCA will purchase as much as \$140 million of electricity annually, with longer term contracts potentially being in the hundreds of million dollars. Purchasing decisions that misjudge either the market or demand may result in higher costs and result in higher customer's bills

Risks and Uncertainties

➤ Customers Opting Out of CCA, Returning to SCE

Long Beach CCA customers have the ability to opt out of being a customer of the CCA and return to SCE, and may do so if they do not perceive the CCA's pricing as fair and appropriate

Risk: Loss of customers could negatively impact a CCA's net revenues and its ability to cost-effectively commit to or manage longer term electricity purchases. This could adversely impact a customer's bill

Risks and Uncertainties

➤ Unfavorable Legislative/Regulatory Changes

Over the next two years, key regulations will be under substantive review which will directly impact the competitive balance between CCAs and their competing utilities

Risk: Legislative and regulatory changes that are unfavorable to a Long Beach CCA could drastically alter the viability of the CCA to procure power at rates competitive to those charged by SCE

A key uncertainty that is evolving

Risks and Uncertainties

➤ Increased Cost for City's Own Electricity Costs

The City's annual electric bill is well over \$10 million

Risk: If the City switched its electricity purchases to CPA, it is estimated that the City would incur increased costs of \$900,000 to \$1.7 million annually

Risks and Uncertainties

➤ **Withdrawal from Clean Power Alliance**

If the City Council did decide to formally join a CCA such as CPA by the end of 2020, CPA would begin incurring costs on behalf of Long Beach

Risk: If, for whatever reason, the City subsequently decided not to proceed any further with CPA, the City could be liable to CPA for those costs, potentially in the millions of dollars

Risks and Uncertainties

➤ **Non-Performance of Counterparties**

A Long Beach CCA's individual longer term power purchase contracts would potentially be in the hundreds of millions of dollars for electricity supplies expected to be delivered over a multi-year term

Risk: A failure of a counterparty to provide the electricity supplies as contracted may impact the CCA's net revenues as well as its ability to meet reliability and renewable energy targets

Risks and Uncertainties

➤ Increased Opportunity of Direct Access

Direct Access (DA) allows customers to purchase their electricity from a third party supplier of their choice.

Risk: There is the likelihood that the DA program will be expanded to accept additional large customers, possibly eroding the CCA's customer base and negatively impacting its net revenues and supply commitments

A key uncertainty that is evolving

Risks and Uncertainties

➤ Changes to Operation of Statewide Electrical Grid

California's electrical transmission grid is outdated and will need to evolve

Risk: These future changes to the transmission grid could negatively effect the CCA's ability to efficiently move its power supplies, potentially impacting the CCA's competitiveness and possibly forcing an adjustment in the CCA's sources of power

A key uncertainty that is evolving

Risks and Uncertainties

California Public Utility Commission statement on the uncertain and changing electricity market (November 19, 2019)

“...impending *potential electricity shortages* in California...current electricity supplies are tight...creating *uncertainty in electricity supply*”

“...tight supply is driven by several market trends ... including *shifts of system peak loads*; growing penetration of levels of wind and solar resources that require integration into the grid; *retirement of aging natural gas plants*; and a *decline in reliable imported electricity* to meet peak demands as other states increase their renewable generation”

A key uncertainty that is evolving

Benefits today may not be available tomorrow

➤ **Uncertain and evolving market and regulatory environment**

- Rate savings/costs and environmental benefits will be changing over the next two years
- Changes will impact the future benefits, costs and risks of a CCA in unknown ways. The key risks that are most likely to change in the short term have been noted on the previous slides

The uncertain, evolving situation and associated risks along with the large commodity costs involved, and the potential impacts to customers are the key reasons why staff is recommending caution and deferral of any immediate decision to form or join a CCA

General Timeline and Key Steps for a LB CCA

- **By end of a year – public support, make major decisions and file with State**
 - Determine that market and regulatory stability is sufficient to move forward
 - Develop and conduct public outreach and education and determine support
 - Decide on governance structure (and contract with JPA if that is route chosen)
 - Take related Council actions and submit mandated implementation plan to State
- **Following year – enter into contracts**
 - Begin hiring key staff, reaching full staff size of 10-27 employees
 - RFP issuance and contract awards for power providers, management, financing, etc.
 - CPUC provides exit fee (PCIA) costs that CCA customers will be required to pay
 - Submit required initial, updated, and final Resource Adequacy forecasts
 - Public roll-out of CCA and allow customers the opportunity to remain with SCE
- **2nd year – begin operations**
 - Final verifications with State and SCE that City's CCA is fully prepared to proceed
 - Transfer of accounts and begin operations

Joining CPA in 2020 – Not Recommended

- **By end of 2020 – study governance option, decide on a CPA**
 - City files a Letter of Interest with CPA and pays \$35,000 (from General Fund) to allow CPA to study feasibility of Long Beach joining CPA
 - CPA Board extends to Long Beach an invitation to join CPA's JPA (or rejects Long Beach)
 - City Council selects default option/rate (e.g., 100% Green Power) and, after two readings, passes a resolution for City to join CPA
 - CPA submits implementation plan to State including Long Beach (at this point, Long Beach presumably becomes liable for associated RA costs and energy costs)
- **In 2021– enter into contracts**
 - CPA begins working with SCE on the onboarding transition of Long Beach customers
 - Public roll-out of CCA and allow customers the opportunity to remain with SCE
- **In 2022 – begin operations**
 - Begin CCA operations and power purchases

Conclusions

- A CCA is feasible but it is uncertain that desired benefits would be achieved and brings economic risk
- Residents and businesses would see significantly higher electric bills if maximum GHG emission reductions are sought. Otherwise, likely to see savings of no more than 1%-2%, if any savings at all
- GHG emission reductions will ultimately not be much different than remaining with SCE, and could initially be less
- Financial projections are too uncertain to develop firm business plans or to predict job or economic impact, positive or negative
- A CCA decision made at a later date will allow a decision with less uncertainty as to benefits and costs, and will have less risk as to saving or costs that residents and businesses will incur, and would provide an opportunity to inform the public and gauge the level of support

Recommended Actions

1. Defer consideration of a creation of a CCA - a major financial and operational decision - for two years, or sooner if stability occurs, in order to minimize financial risk to residents and businesses
2. Continue to monitor the California energy market and regulatory environment
3. Report to City Council any material market and regulatory changes, particularly those conducive to creation of a successful CCA
4. Conduct a study on pros and cons of the CCA governance models and provide a recommendation to City Council
5. Conduct balanced community outreach to increase CCA awareness
6. Partner with SCE to better promote the green energy options that are currently available for residents and businesses and report back to the City Council


Available on Today's Call

- **Mark Fulmer** – A Principal with MRW and Associates and the author of the feasibility study

Mr. Fulmer has over twenty years in the energy industry, primarily advising regulators, utilities, and end-use clients on energy resource planning involving renewable energy and self-generation, ratemaking, and electric industry restructuring. Mr. Fulmer has a Masters in Mechanical and Aerospace Engineering from Princeton University

- **Mike Marelli** – V.P., Southern California Edison, heading up the Business Customer Division,

Mr. Marelli has more than twenty-five years of experience in the energy industry in a variety of leadership roles in engineering, marketing, business development, wholesale energy markets and regulatory affairs. He has also served in various Power Procurement roles at SCE, overseeing the negotiation of both renewable power purchase agreements and conventional power products. Mr. Marelli has a Bachelor of Science degree in Mechanical and Aeronautical engineering from UC Davis

A scenic photograph of a beach at sunset. The sun is low on the horizon, casting a golden glow over the water and sky. The beach is sandy and curves along the water's edge. In the background, a city skyline is visible under the twilight sky.

Report on Feasibility of Community Choice Aggregation (CCA)

City Council | August 25, 2020

CITY OF
LONG BEACH