



CITY OF SANTA BARBARA
COUNCIL AGENDA REPORT

AGENDA DATE: October 31, 2017

TO: Mayor and Councilmembers

FROM: City Administrator's Office

SUBJECT: Results And Findings Of The Technical Feasibility Study On Community Choice Aggregation

RECOMMENDATION: That Council:

- A. Receive a report from staff on the results and findings of the Community Choice Energy Technical Feasibility Study;
- B. Direct staff to complete remaining due diligence on Community Choice Energy feasibility through Santa Barbara County and with the Advisory Working Group, including a City-specific reexamination of feasibility to be peer-reviewed by a qualified consultant other than that retained by Santa Barbara County; and,
- C. Direct staff to develop a scope of work and determine the cost to develop an Energy Strategic Plan for the City, including funding options, with a specific emphasis on preparing for near-term energy-related development and/or grant funding opportunities.

EXECUTIVE SUMMARY:

City staff, in collaboration with ten other jurisdictions across the Tri-County Region, has worked with a consultant to evaluate the feasibility of a regional community choice energy (CCE) program for Santa Barbara, San Luis Obispo, and Ventura Counties. The feasibility study and subsequent peer review suggest that a newly created tri-county CCE program is likely not a viable venture in terms of the CCE program's ability to provide competitive rates while remaining financially solvent. The feasibility study similarly found that a stand-alone CCE program for the City of Santa Barbara would not produce competitive rates or a long-term financially viable organization. This is especially true since the City of Santa Barbara is wholly served by Southern California Edison, whose electricity generation rates charged to customers are substantially lower than those charged by Pacific Gas and Electric.

On October 3, 2017, the County Board of Supervisors directed County staff to conduct additional due diligence on the largest drivers that influenced the feasibility of CCE such as the cost of renewable energy, financing and available risk mitigations.

Staff recommends that Council direct City staff to work with staff from the participating jurisdictions to complete this final due diligence.

Staff also recommends the development of an Energy Strategic Plan for the City. Such a plan would help the City to achieve the renewable energy goals that Council established in June of 2016 along with many of the benefits that CCE could have yielded. The plan would identify and aggregate critical parcel, financial and technical data as well as develop site-specific conceptual plans that would position the City to nimbly respond to opportunities for funding and development of generation, storage or efficiency opportunities as they arise.

DISCUSSION:

Background

Community Choice Aggregation, also known as Community Choice Energy (CCE), enables local governments to directly purchase energy or to generate power and to set the rates charged to customers. While a CCE would procure energy, the existing investor-owned utility (IOU), which in our region is either Southern California Edison (SCE) or Pacific Gas and Electric (PG&E), would continue to deliver the electricity purchased by the CCE over the IOU's power lines. The IOUs would also provide metering, billing, and other related services.

In 2015, the County Board of Supervisors directed County staff to solicit funds from local governments in the region to explore CCE. In total, ten jurisdictions, along with the Community Environmental Council, contributed funds to study the feasibility of CCE in the Tri-County region (Santa Barbara, Ventura, and San Luis Obispo Counties). The City of Santa Barbara committed \$50,000 to this effort. City Council also appointed a CCE Ad Hoc Committee (Committee) to work with staff during the development of the study. Staff met three times with the Committee between February 2017 and October 2017 to review the consultant's methodology, the financial pro forma and potential customer rate impacts, the project's risk profile, and the findings related to feasibility. In addition to the Ad Hoc Committee, an Advisory Working Group, comprised of staff from the contributing jurisdictions, was formed to help guide and oversee the consultant's work, provide outreach support, and monitor policy and program developments related to CCE.

Study Scope

The County, with input from the Advisory Working Group, commissioned Willdan Financial Services (Willdan) to complete the CCE feasibility study (Feasibility Study).

Willdan previously completed similar studies for the Cities of Lancaster and San Diego. MRW and Associates (MRW), which conducted a peer review of Willdan's feasibility study, performed similar CCE technical evaluations for Alameda County and the City of San Diego.

The study evaluates the feasibility of forming a new CCE program that would be administered by one or multiple local governments in the Tri-County Region. The study does not contemplate one or more jurisdictions joining an existing CCE program.

The Advisory Working Group selected eight geographic participation scenarios of different sizes and configurations for the CCE program and the potential effects of customer demographics. The eight participation scenarios included single jurisdictions such as the City of Santa Barbara and the City of San Luis Obispo to all 27 cities and counties in the Tri-County area. The Advisory Working Group (AWG) Scenario, which comprises the main body of the report, includes the 11 jurisdictions that funded the Feasibility Study.

In addition to the eight participation scenarios, three renewable energy content scenarios were considered for each participation scenario, yielding 24 separate geographic and renewable energy scenarios:

1. Renewable Portfolio Standard (RPS) Equivalent: This scenario assumes that the CCE program would follow the California RPS¹. Specifically, the CCE would offer its base electricity product to all customers starting at 33% renewable energy content in 2020, ramping up to 50% renewable energy content by 2030.
2. Middle of the Road: This scenario assumes that the CCE program would offer its base electricity product to all customers using 50% renewable energy content for the entire study period.
3. Aggressive: This scenario assumes that the CCE program would offer its base electricity product to all customers using 75% renewable energy content for the entire study period.

Study Methodology

To evaluate the feasibility of CCE, Willdan employed the following methodology:

1. Determine the amount of energy that customers would use, accounting for seasonal variations and other disrupters such as anticipated penetration of distributed solar generation throughout the region.
2. Determine the amount of revenue required to procure the requisite energy and to operate the CCE entity;

¹ http://www.cpuc.ca.gov/RPS_Homepage/

3. Build CCE customer rates by distributing the revenue requirement across customer classes; and,
4. Compare the resulting CCE rates to the projected SCE and PG&E rates.

Study Pro Forma

In determining the revenue requirement for CCE, Willdan estimated the following cost components (% of cost component in relation to total annual costs):

- Power Purchases (62%): the cost of renewable and non-renewable energy needed to serve customers.
- Departing Load Charges (15%): In addition to generation and distribution charges that an IOU customer pays, a CCE must also pay various departing load charges to the IOU when customers migrate from the IOU to the CCE. One such charge, the Power Cost Indifference Assessment (PCIA), is intended to compensate an IOU for stranded energy assets that the IOU procured on behalf of CCE customers before they joined the CCE. In short, a CCE must not only procure energy, but also compensate the IOU for its stranded assets.
- Contingency Reserve (11%): to cover price spikes, inaccurate forecasts of energy load and structure of power purchase contracts and other contingencies.
- Other (9%): Professional services, including billing and data management, energy procurement consultation, legal services and personnel to operate the CCE entity.
- Debt Service (3%): Both Willdan and MRW, the peer reviewer, agree that a start-up CCE entity faces a multitude of risks posed by a dynamic and volatile energy and regulatory landscape including: pricing volatility, which impacts both the cost of energy and the certainty of PCIA fees; adverse regulatory conditions; and the risk that CCE would be unable to maintain competitive rates with the IOU, causing customers to migrate back to the IOU.

Both Willdan and MRW agree that these risks can be mitigated through extensive working capital and other contingency reserves. For this reason, Willdan assumed that the CCE would issue bonded debt to provide five months of operational working capital and one year of contingency reserve on the first day of operation, prior to any services being provided or revenues being generated.

Willdan Conclusions

CCE program feasibility is typically assessed based on 1) the competitiveness of CCE rates against the existing IOU rates; and 2) the long-term financial viability of the enterprise. According to Willdan's analysis, none of the 24 scenarios studied would be feasible, meaning the CCE rates would not be competitive with PG&E and/or SCE rates,

and the CCE program would be unable to remain financially solvent in most study years (2020-2030).

For the Advisory Working Group Middle of the Road (50% Renewable) Scenario, a typical CCE residential customer in PG&E territory (San Luis Obispo and northern Santa Barbara Counties) would, on average, experience nearly 30% higher rates for the generation portion of their bill, resulting in an extra \$16 charge on the customer's electricity bill. A CCE residential customer in SCE territory (southern Santa Barbara and Ventura Counties) would, on average, experience 50% higher generation rates, resulting in an extra \$20 on its monthly bill. For context, the average bill for a residential customer on the South Coast is \$80 per month. The rate and bill impact is even higher under the Aggressive (75% Renewable) Scenario.

The results for the Advisory Working Group participation scenario under all three renewable energy content scenarios are presented in the main body of the Feasibility Study and in greater detail in Appendix D. Results for the remaining scenarios are included in Appendices C and E-J. Appendix J includes the results for the City of Santa Barbara Scenario. The report and appendices are available at: <http://www.centralcoastpower.org/resources.nrg>. A copy of the Feasibility Study is also available in the Council Reading File.

Challenges Specific to the Tri-County Study Area

Evaluating the feasibility of CCE is a difficult, complex, and time-consuming exercise involving numerous variables and assumptions that are predicated on long-term forecasts of conditions and costs within a dynamic energy procurement and regulatory landscape. While the existence of nine CCE programs throughout California provides some verification of proof of concept, the procurement and management of energy by local governments remains a complicated and multi-faceted venture.

Two IOUs currently serve Santa Barbara County: PG&E in North County and SCE in South County. There are no other operational CCE programs that span multiple utility service areas, and there is presently no way to legally offer a CCE program for the unincorporated area of Santa Barbara County without operating in both IOU territories. PG&E and SCE have differing rate structures and actual customer rates, which present some unique challenges to the CCE program that would need to be considered when setting electricity rates. This dynamic is made more challenging by the discrepancy in customer rates between SCE and PG&E, with SCE's rates being substantially lower than PG&E's across most rate classes.

In addition, a potential regional CCE program would be substantially larger in terms of customers served, the amount of electricity provided, and geographic reach than any of the existing CCE programs when they launched. While some of the existing CCE programs have grown over time, the absence of a similar sized start-up CCE model proved to be challenging when conducting a feasibility assessment for our region.

MRW Peer Review

Willdan completed its preliminary draft feasibility study in May 2017. Given the complexities described above, staff, with input from the Advisory Working Group, took the additional prudent steps of 1) contacting existing CCE program staff to gather additional data related to the costs of operating a CCE program and 2) commissioning MRW to conduct a third-party review of the Willdan draft study.

The purpose of the peer review was to evaluate the assumptions and conclusions of the Willdan draft study. MRW suggested several revisions to the study inputs and the pro forma that, in the opinion of MRW, improve the reasonableness and efficacy of those assumptions. MRW's findings and recommendations, along with Willdan's response to the MRW analysis, are included in Appendix L of the Feasibility Study.

The following variables had the largest influence on the Willdan Feasibility Study and MRW peer review:

1. Cost of Renewable Energy: To forecast renewable energy costs, Willdan relied on the average prices that PG&E and SCE have paid for renewable energy to comply with the State RPS. Some of this pricing is based on long-term contracts that the IOUs executed more than a decade ago. By contrast, MRW relied on renewable energy prices from contracts executed in 2016, which it believes is more reflective of the marketplace in which the CCE program would procure renewable energy. MRW's assumed renewable energy costs were approximately 30 percent lower than those assumed by Willdan and in line with pricing reported by operational CCE programs.
2. Escalation of PG&E and SCE Rates: Electricity rates include two primary components: the charges assessed for the cost of: 1) the electricity provided to the customer ("generation charge"); and 2) the delivery of the electricity over the IOUs' power lines and related infrastructure ("delivery charge"). While the delivery charge is the same for CCE and non-CCE customers, the generation charge can vary between IOUs and CCE providers. Therefore, the rate competitiveness of a CCE program is dependent, in part, on the behavior of future PG&E and SCE generation rates against which the CCE generation rates must compete.

Willdan and MRW take different approaches in forecasting future IOU generation rates. Willdan adjusts PG&E's and SCE's rates by 0% – 0.5% annually based on current IOU rates that have already been approved by the California Public Utilities Commission (CPUC) and market prices for renewable energy. By contrast, MRW, citing pending rate cases before the CPUC and accounting for factors other than renewable energy prices, forecasts more robust growth rates for the IOUs' generation rates over the study period.

3. Financing: As stated above, Willdan assumed that the CCE start-up costs, working capital, and contributions to a contingency reserve would be financed through a 30-year bond issuance. According to Willdan, the sheer size of a potential CCE program serving the Tri-County Region precludes the cost-effective use of other, more traditional financing models (e.g., General Fund contributions/loans or bank loans) commonly used by smaller existing CCE programs. MRW noted the use of long-term bond financing was unusual and the amount financed was high relative to other CCE programs.

MRW also made three suggestions regarding contingency reserves and working capital. First, the consultant suggested that rather than fully funding contingency reserves in the initial financing, reserves could instead be built up gradually in the first years of operation. Second, that funding and subsequently spending rate stability funds as assumed by Willdan provided no stability at all. Rather, a CCE may consider setting a rate stability target (e.g. 15% of power purchase costs) and cease contributions when the target is met. The fund would be replenished if funds were depleted. Third, MRW highlighted the more common practice by other CCE programs to finance three, rather than five months of working capital.

4. Power Cost Indifference Adjustment: As stated above, procuring energy on behalf of CCE customers while compensating the IOU for its stranded energy costs in the form of PCIA fees make it difficult for a CCE to compete with the IOU.

In its peer review, MRW analyzed the feasibility of a CCE program under the Advisory Working Group Middle of the Road (50% Renewable) Scenario. MRW's adjustments to the Willdan pro forma lowered CCE costs by approximately 23 percent. MRW also assumed slightly higher IOU rates as described above. For the Advisory Working Group Middle of the Road (50% Renewable) Scenario, MRW's analysis yields CCE rates that exceed the weighted average of SCE and PG&E rates for at least the first five or six years of the CCE program's operation, as shown in Figure 1 on Attachment 1.

In SCE territory alone, in which the City of Santa Barbara is located, CCE rates are even less competitive as illustrated in Figure 2 on Attachment 1. This is due SCE's substantially lower rates when compared to PG&E. This additional "rate headroom" provided by PG&E likely contributed to the success of CCE in Northern California.

Final Outcome of the Feasibility Study and Peer Review

The Feasibility Study and Peer Review highlight a number of risks faced by CCEs including:

- Difficulty maintaining competitive rates, especially in SCE territory. SCE not only has substantially lower rates than PG&E, but has also aggressively shifted generation-related costs to the fixed delivery charges paid by CCE and IOU customers alike, further limiting the ability of CCEs to compete with SCE generation rates.

- Uncertainty of a shifting market and policy landscape, related to PCIA fees, energy price volatility, and regulatory risks. The CPUC is grappling with how to manage the growth of CCE and level the playing field for all types of electricity providers. Significant regulatory and potential legislative changes are expected in the next couple of years for CCE programs.

Both Willdan and MRW agree that these risks can be mitigated through extensive working capital and other contingency reserves. However, a CCE, especially in SCE territory, would have difficulty building and maintaining these cash reserves without the ability to undercut the IOU's rates.

In short, the Feasibility Study and peer review results suggest a regional CCE program with higher 50% renewable energy content would result in substantial customer rate increases. These non-competitive rates, coupled with the inability of the CCE entity, to cover costs and maintain adequate working capital, in turn, threaten the long-term solvency of the CCE enterprise.

Given this risk profile, it is important to note that any participating jurisdiction, including the City of Santa Barbara, will achieve 50% renewable energy by 2030 (similar to the Middle of the Road Scenario), by default, as both SCE and PG&E comply with the RPS requirements set for 2030.

Additional Recommended Due Diligence

On October 3, 2017, the County Board of Supervisors directed County staff to conduct additional due diligence on the largest drivers of infeasibility as noted by Willdan and MRW. Staff recommends that Council direct staff to further investigate the cost of renewable power, alternate debt financing schemes, and mechanisms to mitigate risk, such as power purchase guarantees. County staff is researching potential consultants to help complete this due diligence. The ideal candidate is one that 1) routinely advises existing CCEs in power purchases and other financial and operational decisions; and 2) has developed pro formas that have resulted in successful CCE financing. At its October 18, 2017 meeting, the CCE Ad Hoc Committee voted 3-0 to direct staff to: 1) complete this due diligence through Santa Barbara County and with the Advisory Working Group, including a City-specific reexamination of feasibility; and, 2) to retain the services of another qualified firm to peer review the results of the Advisory Working Group's selected consultant.

Options to Achieve Energy-Related Goals Without CCE

While the Feasibility Study found CCE to be infeasible, there are means to achieve some of the goals often associated with CCE as outlined in Table 1 in Attachment 2.

Need for Energy Strategic Plan

In June of 2016, Council adopted renewable energy goals for both City infrastructure and for the community at large. There are efforts currently underway to identify energy efficiency and renewable energy opportunities for City infrastructure.

Beyond these efforts, City staff are constantly approached by third parties looking to partner with the City on energy-related projects. Similarly, opportunities frequently arise for low-cost capital and partnerships to develop community-scale renewables through initiatives such as SCE's periodic Requests for Offers. However, these funding and development opportunities are complex and have tight deadlines to deliver applications, making them difficult to obtain. Many of these opportunities have the potential to help the City achieve not only the goals set forth in Table 2, but Council's renewable energy goals as well.

To this end, staff is recommending the development of an Energy Strategic Plan. Such a plan would be implemented in phases and would include such elements as:

- 1) Siting surveys of both City infrastructure and the community at large to identify opportunities to develop generation, storage, demand response and microgrid clusters.
- 2) Development of "pitch ready" projects located on both public and private properties that would help the City to achieve its renewable energy and resiliency goals. Specifically, the Plan would aggregate site-specific parcel and load data, conceptual plans, financial information, sequencing, and critical partners necessary for the City and private parties to pursue feasible energy generation, storage, demand response and efficiency projects. Developing "pitch ready" projects will have the added benefit of allowing the City to nimbly respond to opportunities for funding, such as Cap and Trade funds, energy-related grant solicitations as well as generation opportunities such as SCE's Goleta Request for Offers that is rumored to be forthcoming early next year.
- 3) Recommended policies and education tools to foster the development of renewable energy generation, storage, demand response and even microgrids within the community.

In November, Public Works staff will bring to Council a grant-funded contract with a consultant to assist staff in preparing a Zero Net Energy (ZNE) Roadmap and Implementation Plan for City facilities. The Roadmap will recommend energy efficiency and renewable upgrade measures for each of the targeted City-owned buildings. This report can serve as an implementation plan with clear milestones and action items for achieving ZNE goals and will help the City strategically identify and implement energy projects.

The Energy Strategic Plan would build on this effort by addressing resiliency goals related to City infrastructure and by developing pitch ready projects for City infrastructure to help defray the cost to implement them. It would also look beyond City infrastructure into community opportunities as discussed above.

In summary, an Energy Strategic Plan would identify energy-related opportunities on both City infrastructure and throughout the community that would further Council's renewable energy goals and Council and the community's desire for grid resiliency during natural disasters or other catastrophic power losses. The development of site-specific plans would also help the City to nimbly respond to grants and other no or low cost funding opportunities.

BUDGET/FINANCIAL INFORMATION:

While quotes from potential consultants have not yet been received, staff believes that the County has sufficient remaining funds to answer the remaining due diligence questions on CCE described above. However, staff estimates that the City-specific reexamination of feasibility to be conducted by the Advisory Working Group's selected consultant would cost approximately \$15,000 to complete. The cost to procure the services of another peer reviewer is unknown at this time, but could range from \$25,000 - \$50,000 depending upon whether the peer reviewer is able to use the "scrubbed" energy load data that the County procured from SCE for the original Willdan study or if the peer reviewer will have to perform this work itself. Moreover, standardizing the load data for the initial Willdan study took approximately one year to complete. Gathering load data from SCE would cost an estimated \$10,000 and would take several months to obtain.

Once final costs are known, staff will return to Council with a request to consider funding options and potential need for additional appropriations.

The specific cost of the Energy Strategic Plan is unknown at this time, but could be implemented and paid for in phases. Staff recommends that Council direct staff to develop a scope of work and to determine the cost and to bring the item back to Council for consideration of funding.

SUSTAINABILITY IMPACT:

The Feasibility Study found that both the "Middle of the Road" (50% renewable) and "Aggressive" (75% renewable) scenarios would result in fewer greenhouse gas emissions compared to those generated by the IOUs.

The Energy Strategic Plan, with its focus on development of renewable energy resources, storage, and energy efficiency, has the potential to dramatically lower greenhouse gas emissions throughout the City organization and communitywide, in direct support of the City's Climate Action Plan goals.

ATTACHMENTS: 1. Figures 1 & 2
2. Table 1 – Options to Achieve CCE Goals

PREPARED BY: Matthew R. Fore, Senior Assistant to the City Administrator

SUBMITTED BY: Paul Casey, City Administrator

APPROVED BY: City Administrator's Office