City of Solana Beach

City of Solana Beach
Peer Review of Community Choice Aggregation Study

April 6, 2017

Prepared by:

EES Consulting, Inc.

570 Kirkland Way, Suite 100
Kirkland, Washington 98033

A registered professional engineering and management consulting corporation with offices in Kirkland, WA and Portland, OR

Telephone: (425) 889-2700 www.eesconsulting.com

April 6, 2017

Mr. Greg Wade
Mr. Dan King
City of Solana Beach
635 S. Highway 101
Solana Beach, CA 92075

SUBJECT: Peer Review of City's Customer Choice Aggregation Study

Gentlemen:

Please find enclosed EES Consulting, Inc.'s (EES) peer review of the City of Solana Beach's (City) Community Choice Aggregation (CCA) Technical Analysis dated April 22, 2016.

EES appreciates this opportunity to assist the City in its evaluation of the CCA options. Please feel free to contact us if we may be of further assistance on this interesting option.

Very truly yours,

Gary Saleba
President

570 Kirkland Way, Suite 100
Kirkland, Washington 98033

Telephone: 425 889-2700 Facsimile: 425 889-2725

A registered professional engineering corporation with offices in
Kirkland, WA and Portland, OR

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Executive Summary

Introduction

EES Consulting, Inc. (EES) was retained by the City of Solana Beach (the City) to provide a peer review of the Community Choice Aggregation Technical Analysis (CCA Study) dated April 22, 2016. EES is well qualified to provide this peer review based on our extensive work over the past 40 years in the areas of power supply planning and procurement, rates and regulatory analysis, utility formation and merger studies, and more recently with emerging CCA programs in California. EES is currently doing the technical consulting for CCAs in San Bernardino, Riverside, Los Angeles, Alameda and Butte Counties and the City of San Jose.

Our review of the City's CCA Study is focused on examining four factors, which include the following:

1. Whether all of the necessary steps of forming a CCA have been considered;
2. Whether the technical analysis of load data, rate projections, cost comparisons and economic impacts appear to be done correctly;
3. Whether power supply alternatives are appropriate; and
4. Whether environmental and economic development considerations have been adequately considered.

The CCA Study provided a good background on the history and issues regarding the formation of CCAs. However, the CCA Study economic analysis was fairly generic and is almost a year old. Given that the CCA Study was provided very early in the consideration of a CCA, the level of analysis is appropriate.

Below each key component of the CCA study will be critiqued. This critique will be followed by the EES recommendation of how to proceed.

Load Forecast and Power Supply Costs

The CCA Study provided a reasonable estimate of CCA loads using data provided by SDG&E as well as growth rates provided by the California Energy Commission (CEC). The approach used is consistent with other CCAs and appropriate at this stage of analysis.

In terms of power supply costs, the CCA Study used the forward price projections for the Southern California region as provided by the SP Forward Curve Prices from Bloomberg (1-21-16). The CCA Study analysis then added a $25 per MWh adder for renewable projects. While this is a reasonable approach at this stage of evaluation, it is rather generic. The resulting rate is $32.25 for market power and $57.25 for renewable power in 2017.

Prices for renewables used in the CCA Study appear to be based on prices seen in other states as published in 2015. Based on EES's more recent analysis for other southern California CCA projects, we found that municipal utilities in California have purchased output from large-scale solar projects for a range of $37 to $40 per MWh. We have seen wind projects in the range of $50 per MWh. Therefore, EES believes the $57.25 used for full renewable projects (using a $25 per MWh premium) is too high for renewable projects. In addition, we do not believe the price for renewables will have escalation factors as high as for regular market prices. For the most part, the other fees in the CCA Study related to power costs appear reasonable.

Additionally, the City may wish to consider initially, a stepped power supply procurement approach where power contracts of different terms are obtained. After this initial start-up period, power contracts with longer terms should be considered and meet State power procurement requirements.

EES recommends that the renewable and market prices used for the CCA Study be updated to reflect more recent pricing experience.

CCA Costs and Rate Comparisons

While power supply costs are the biggest factor in total CCA costs, it is necessary to include all other costs associated with the CCA and compare the total to the continued costs of bundled service from SDG&E. The CCA Study makes that comparison for a five-year period. EES believes that the City needs to look beyond 5 years.

EES recommends that the economic analysis be updated to include a 10-year period.

In the CCA Study, it was assumed that the administration of the CCA would be outsourced for a charge of $5.75 per MWh. In the EES review of existing CCAs, we found that the administrative costs ranged from roughly $3 to $7 per MWh. For our own CCA Business Plans, we estimated administrative costs to be in the range of $3 to $4 per MWh. Note that these cases reflect the inclusion of metering and billing charges. It is difficult to provide an accurate comparison as we do not always know if all of the same costs in each case are included, and there is a wide range in the size of the existing and proposed CCA organizations. It appears that the rate of $5.75 per MWh plus another $3.00 per MWh for meter and billing charges appears to be on the high side when compared to larger CCA groups currently in the formation process. We note, however, that a CCA for the City on a stand-alone basis would require outsourcing of the administrative function due to its small size. The administration proposed would need to include a premium for the risk that would be taken by the provider. Given these circumstances, we believe the assumed rates for CCA administration are appropriate.

The CCA Study assumes a 2.5% escalation in SDG&E bundled rates. This is a rather simplistic assumption and a more detailed analysis needs to be considered in forecasting the separate delivery and power supply charges from SDG&E when the City updates the CCA Study.

A key factor in the analysis is the PCIA that is added by SDG&E to all CCA bills to recover the lost net revenues associated with departing CCA loads. The PCIA used in the CCA Study is the actual 2016 number, which was appropriate at the time of the CCA Study. It does not appear that the CCA Study incorporated increases in the PCIA rate. For 2017, the PCIA estimate increased by 61% to 84% and is likely to increase further. This is an issue to the CCA.

EES recommends that an updated analysis include more recent PCIA estimates for 2017 and beyond.

Based on the CCA Study, savings associated with a CCA for the City are expected to result in savings of 3 percent for customers plus an additional $6.8 million in retained revenue over the initial 5 years for the CCA in the baseline case. In the highest renewable scenario, the savings to customers would be 1% and the retained revenue for the CCA would be $2.3 million.

Based on the review of the assumptions in the CCA Study, EES makes the following observations:

- The cost of renewables and the escalation rate appear to be too high
- The PCIA levels are expected to be higher in 2017 than forecast in the CCA study and beyond
- The SDG&E rate forecast is too simplistic

Because these key factors could impact the final results of the CCA Study, EES recommends that the economic analysis be updated to reflect more recent and in-depth projections of these factors and that the analysis be extended to a 10-year period. This financial update should occur before the City's governing body's formal consideration of forming the CCA.

Finally, the CCA Study provided a limited sensitivity analysis of risks associated with forming a CCA. EES recommends that when the economic analysis is updated, it should include a sensitivity or risk analysis. This analysis would include sensitivities associated with different levels of the PCIA, the level of rates for SDG&E, the regulatory issues related to CCAs, the availability and price of renewable resources, and the issues for a CCA related to financing or credit.

Macroeconomics and Environmental Impacts

The CCA Study discussed macroeconomic benefits associated with the retained revenue for the CCA, which is appropriate. It did not discuss the added benefits associated with the 3% rate reduction to customers that would provide disposable funds that could be spent on other goods and services in the region.

Carbon reductions were estimated for each of the scenarios provided in the CCA Study. Given our experience, the greenhouse gas (GHG) savings appear to be too high. On the other hand, the CCA Study has not quantified any environmental benefits associated with the retained revenues

that may be spent on energy efficiency or distributed energy resources. Because these two factors have offsetting impacts, we would expect to see overall environmental benefits associated with a CCA in keeping with the CCA Study's initial findings.

Conclusions

EES concludes that the CCA Study provided a reasonable, yet generic, approach to looking at the feasibility of forming and operating a CCA for the City. The assumptions related to the load forecast, participation rates and operating costs appear to be in the appropriate range. The cost of renewable power appears to be too high while the forecast PCIA level appears to be too low. These two variables tend to counter-balance each other. As such, the initial findings in the CCA Study are likely sufficiently accurate for the City to proceed with the next step of forming a CCA.

In the next step of CCA development, EES suggests the City update and refine as noted below:

- Narrow and prioritize the objectives of the CCAs to include:
  - Maximize the savings to customers
  - Deliver local renewable energy development and energy efficiency programs at or above current budget levels
  - Reduce GHG emissions
- Ensure City is protected from financial risk at lowest cost
  - The City is planning on minimizing risks by outsourcing major tasks and requiring vendors to provide financing.
  - As the City proceeds with the CCA, it will be important to maintain their competitive advantage by pursuing overhead and administrative costs.
- Determine the level of internal vs. external staffing support
  - Most operating CCAs have started with minimal internal staffing with the remainder of the requirements supported by consultants at early operations, and then transition to additional in-house staff while retaining some consultant support.
  - The City will have to decide when (or if) it will assume operation of the CCA with increasing internal staff.

Overall, the CCA Study provided an adequate level of analysis for decision-making given the early stage of consideration by the City. In the opinion of EES, the CCA Study is a good basis for making policy decisions about proceeding with a CCA for the City. Should the City decide to pursue the

formation of a CCA, the aforementioned updates to the financial proformas should be undertaken.

Introduction and Overview

Introduction

EES Consulting, Inc. (EES) was retained by the City of Solana Beach (the City) to provide a peer review of the Community Choice Aggregation Technical Analysis (CCA Study) dated April 22, 2016. EES is well qualified to provide this peer review based on our extensive work over the past 40 years in the areas of electric utility power supply planning and procurement, rates and regulatory analysis, utility formation and merger studies, and more recently with emerging CCA programs in California. EES is a registered professional engineering and management consulting firm that has been serving the utility industry since 1978. We currently have over 500 utility clients all across North America with our primary focus within the WECC reliability area. We are currently doing the CCA Business Plans for the County of Los Angeles, San Bernardino Associated Governments, Coachella Valley Association of Governments, West Riverside Council of Governments, the City of San Jose, the County of Butte and the County of Alameda. We also performed a similar peer review for Alameda County's East Bay Clean Energy. As such, we are well-versed in utility operations globally and CCA-related issues in California.

Scope of Services for EES

Our review of the City's CCA Study is focused on examining whether all of the necessary steps of forming a CCA have been considered, whether the technical analysis of load data, rate projections, cost comparisons and economic impacts appear to be done correctly, whether power supply alternatives are appropriate, and whether environmental and economic development considerations have been adequately considered. The EES analysis did not duplicate the technical analysis performed to ensure accuracy but it did include a critique of the analysis provided in the CCA Study and accompanying Technical Appendices. Note that the EES review included the CCA Study, the Study's Appendices, and the spreadsheet analysis provided in conjunction with the CCA analysis.

Conflict of Interest

EES has no professional relationship with the author of the CCA Study or any party of interest. Our opinions expressed below are independent, and based upon EES's past and present work for California CCAs and our knowledge of the electric utility industry in California. EES has also not done any prior work for the City or its employees.

Background on CCAs

The CCA Study provided a good background of the history and issues regarding the formation of CCAs. Since the CCA Study was provided in April of 2016, additional CCAs have become operational, including CleanPowerSF (serving the City and County of San Francisco) and Peninsula

Clean Energy (serving San Mateo County). Other local municipalities and Counties nearby the City are looking at CCAs, including the City of San Diego, San Diego County, and the City of Encinitas. Many Cities and Counties in the SCE and PG&E service areas are also at various points of CCA exploration and formation.

Policy Issues

The CCA Study talked about options for using electric bill savings from the CCA and provides a good discussion of options. However, in our experience it is important to establish the City goals at the onset so that the CCA programs can be structured appropriately. Given the preliminary nature of the CCA Study, this level of policy discussion is appropriate. Going forward, the City will need to develop clear objectives related to forming a CCA. Lower rates for customers, lower GHG emissions and greater economic development in the City are all potential benefits of a CCA. It is not clear if these three benefits are all equally important to the City or if one is the primary objective. By making the objectives clearer upfront, it is possible to better tailor the alternatives to meet the objectives of the City. This will be important in making decisions if the City decides to proceed with a CCA.

The following are some of the policy issues that need to be considered or addressed if the City proceeds with a CCA:

- Narrow the objectives of the resource portfolio
  - Maximize the savings to customers
  - Deliver local renewable energy development and energy-efficiency programs at or above current budget levels
  - Reduce GHG emissions
- Determine the split between savings passed on to customers through lower rates and revenues retained by the City for local projects
- Ensure City is protected from financial risk at lowest cost

Summary of EES Review

In summary, the EES peer review shows that the City has done a good job of looking at the CCA options and EES agrees that the results of the CCA Study can be relied upon in making a choice on whether or not to proceed with the formation of a CCA. We do, however, have some specific areas where we recommend the CCA financial analysis be updated to reflect more recent estimates, particularly related to the SDG&E retail rates, renewable and market prices, and the SDG&E PCIA. This analysis will help to confirm the results of the CCA Study and provide some additional risk analysis for the City to consider. The following sections provide EES's detailed comments related to the various sections of the CCA Study.

Load Forecast and Power Supply Costs

Load Forecast

One of the first steps in evaluating a CCA is the forecast of the electric loads for the City. The CCA Study prepared the load forecast using load data provided by SDG&E by rate class. While EES did not review the actual data provided by SDG&E, the approach used in the CCA Study is appropriate and consistent with studies completed by other jurisdictions. The City loads were forecast to increase at a rate of 1.3 percent per year, which is based on the CEC forecast for the southern California region.

Two items related to the load forecast that require some caution are in the areas of load shape and load growth. Because the City loads are unusually weighted to residential and smaller commercial loads, the power costs may tend to be higher than for some of the larger, more diverse communities forming CCAs. This is due to the fact that the load shape for smaller customers is more differentiated within a day and on a seasonal basis. The other issue with the City's load forecast is the growth rate, which is higher than for some of the other jurisdictions in southern California. Using a percent growth rate is appropriate for a 5-year period. When a longer study period is considered, the City should be cautious in using a consistent percent growth rate as it would lead to unwarranted exponential growth.

Based on the loads, the next step is to determine the participation rate for the CCA. The CCA Study assumes an 80 percent participation rate. While this is an acceptable level for analysis, it should be noted that participation rates for the operating CCAs range from 86 percent for Marin Clean Energy to 95 percent. The average level is 90 percent. Based on this information, the 80 percent assumption contained in the CCA Study is on the conservative side.

Power Supply Costs

Given the amount of load to be served by the CCA, the next step is to forecast the power supply costs for the CCA. The CCA Study uses the forward price projections for the southern California region as provided by the SP Forward Curve Prices from Bloomberg (1-21-16). Bloomberg then adds a $25 per MWh adder for renewable projects. While this is a reasonable approach at this stage of evaluation, it is rather generic. The resulting rates are $32.25 for market power and $57.25 for renewable power in 2017. Another $14 is added to cover load shaping, resource adequacy and other fees. For the baseline case with renewable power costs are $54.50 per MWh in 2017.

Prices for renewables used in the CCA Study appear to be based on prices seen in other States as published in 2015. Based on EES's more recent work with other California CCA projects, we found that municipal utilities in California have purchased the output from utility scale solar projects for a range of $37 to $40 per MWh. We have seen wind projects in the range of $50 per MWh.

Therefore, the $57.25 used for full renewable projects (using a $25 per MWh premium) is too high for large-scale renewable projects.

In addition, for the CCA Study the trend in renewable pricing follows the upward trend in market prices. In the EES analysis of other California CCAs, we have found that the price for renewables will remain static in nominal terms to balance the influence of two trends. First, renewable energy capital prices are being driven down by the rapidly declining cost of solar projects. This trend has persisted over the past five years and is expected to continue in the future. However, this trend could be balanced out, in part, by the impact of increasing Statewide demand for renewables as a result of California's Renewable Portfolio Standard (RPS) laws and the potential loss of the investment tax credit (ITC) currently enjoyed by renewable project developers.

Based on what we have seen, the CCA Study assumptions are conservative. EES recommends that the feasibility analysis be updated to reflect both a lower renewable price and a lower escalation factor. A range of prices could be included in further sensitivity analysis associated with the suggested update. While the other power supply fees used in the CCA Study appear reasonable, they have used a cost of $3 per MWh for the Scheduling Coordinator. Based on EES's experience, this cost is closer to the range of $1 to $2 per MWh. However, given the small size of the City, the higher number might be appropriate as there are fixed costs associated with acquiring this service and there may be added risk for the Scheduling Coordinator.

Portfolios

The CCA Study considers three different portfolios with various amounts of renewable resources ranging from SDG&E's RPS requirements to a 100% renewable portfolio. This approach is appropriate at this stage of analysis. Going forward, the City should further refine its goals and objectives to narrow down the amount of renewable resources that are desirable. In many cases, CCAs plan to offer one product that is at or slightly above the incumbent utility's RPS requirements and another product that is 100 percent renewable, with customers having the ability to choose between the two options or "opt-up". The type of portfolio to pursue and whether customers are given more than one option will need to be considered further by the Governing Board if the City proceeds with the formation of a CCA. These decisions would need to be made prior to or at the time the CCA has actual power supply offers to evaluate.

One point made in the CCA Study is that the greater savings associated with a smaller renewable portfolio allows the City to actually enhance the GHG and other benefits by having greater funds to apply towards local renewables and energy efficiency projects. We agree that this is a factor to consider in selecting the appropriate portfolio.

CCA Costs and Comparison to SDG&E Rates

While power supply costs are the biggest factor in total CCA costs, it is necessary to include all other costs associated with the CCA and compare the total to the costs of bundled service from SDG&E. The CCA Study makes that comparison for a five-year period. While a five-year period has greater certainty than a longer time period, it is necessary to look at a longer time frame to determine the full impact of establishing a CCA. EES recommends that the financial feasibility analysis be updated to include a 10-year time period.

In developing costs for the CCA, the CCA Study included the cost of CCA power, the CCA management cost, the SDG&E transmission and distribution charges, the SDG&E meter and billing fees and the SDG&E PCIA charges. These costs were then compared to the bundled SDG&E rates to determine the potential savings or costs associated with a CCA. This is an appropriate approach. Going forward, the City will also need to consider how it wants to use those savings (i.e., whether to further decrease rates for customers, promote energy efficiency for customers, or pay a higher cost to include local renewable projects).

CCA Administration Costs

In the CCA Study, it was assumed that the administration of the CCA will be outsourced to an administrator for a charge of $5.75 per MWh. This reflects annual costs of about $370,000 per year. The CCA Study is not entirely explicit about what is included for this charge but it is the only added charge to power costs and SDG&E charges. Therefore, EES assumes that it includes start-up costs, the cost of day-to-day administration, managing contracts, customer outreach, power resource planning, accounting, customer service, key account representation, regulatory compliance, regulatory intervention in SDG&E charges, budgeting, rate-setting and data management coordination with SDG&E. If any of these functions are not included in the fixed administration charge, then there would be additional costs to the CCA. Note that the CCA Study also includes an additional $3 per MWh for meter and billing fees from SDG&E.

In our review of existing CCAs, EES found that the administrative costs ranged from roughly $3 to $7 per MWh. For the EES CCA evaluations performed over the past year, we estimated administrative costs to be in the range of $3 to $4 per MWh. Note that in both cases, these ranges reflect the inclusion of the incumbent utility's metering and billing charges. It appears that the rate of $5.75 per MWh plus another $3.00 per MWh for meter and billing charges is on the high side when compared to larger CCA groups currently in the formation process. We note, however, that given the size of the City CCA on a stand-alone basis requires outsourcing of the administrative function, which would include a premium for the risk that will be taken by the provider.

One issue not specifically discussed in the CCA Study is cash flow and working capital. There is a lag between the payments associated with paying operating expenses and the revenue associated with customer billing. EES generally expects a 60-day lag in payments. The City must have funds available to provide for this needed working capital on a regular basis. Given that bundled charges at SDG&E rates are nearly $1 million per month, this could be a significant cost to the City. The City has indicated that this will be a requirement from the key consultants.

SDG&E Delivery and PCIA Rates

The CCA Study applied a 2.5% escalation of SDG&E bundled rates. While the spreadsheet provides the SDG&E rates split between the distribution and power supply components for 2016, the spreadsheet does not show the cost comparison for later years so it is unclear how the 2.5% increase was applied. We assumed it was applied equally to both components.

EES recommends that the economic analysis be updated to include a more thorough analysis of SDG&E power supply and PCIA rates. This would include looking at their public financial statements, integrated resource plans, load forecasts and rate filings. With that information, rates can be forecasted separately for the power supply and delivery rate components.

For the delivery charges from SDG&E, the charges will apply to both a CCA and SDG&E's bundled service. Escalation in these rates may be higher than for power supply as energy efficiency and distributed energy resources (i.e., customer-owned solar panels) reduce the sales per customer. The impact will be the same with or without a CCA.

For power costs, it is necessary to look at the utility's resource mix, integrated resource planning in the future, and the impact of RPS requirements on the utility. Market prices for power will have an impact on the power costs to the extent there are market transactions included in the resource mix. The power cost is also linked to the PCIA amounts charged by SDG&E.

According to the official 2015 power label report, SDG&E had 35% renewable, 54% natural gas and 11% market resources. While SDG&E is not actively seeking additional resources, the IOU may have to invest in storage and renewable resources based on CPUC direction. SDG&E's power supply costs consist of costs associated with SDG&E owned resources, generating resources under contract, contracts to meet Resource Adequacy requirements, renewable resource contracts and costs associated with SONGS. The variable costs of these resources are tracked and recorded in the Energy Resource Recovery Account ("ERRA").

In the annual ERRA filing, SDG&E also calculates the PCIA for Direct Access Customers and CCA customers. The PCIA is highly dependent on the assumed market benchmark used in the calculation as well as the assumption about departing load. SDG&E does not have CCA customers at this time, therefore, it is likely that the current PCIA estimate does not include any lost CCA loads. SDG&E has estimated the 2017 PCIA, but it will be updated later in 2017. If any of the CCAs that have provided their Notice of Intent (NOI) before that time, that should act to impact the PCIA calculations.

For both the PCIA set for 2016 and estimated for 2017, the PCIA continues to increase for later vintages. For example, the PCIA set for the 2015 vintage is lower than the PCIA set for the 2016 vintage. Similarly, the estimated 2017 PCIA is higher than the 2016 vintage. This may be an impact of new resources, implying that SDG&E is continuing to add more expensive contracts to their resource portfolio, or it may be due to the impact of estimated departing load or low market prices.

Comparing the PCIA for 2016 with the estimated PCIA for 2017 shows a significant increase. Table 1 provides this comparison:

Table 1
PCIA Comparison

Customer Class	2016 PCIA	Estimated 2017 PCIA	% Increase
Residential	0.01278	0.02347	84%
Small Commercial	0.01451	0.02438	68%
Med. And Large Commercial	0.01114	0.01983	78%
Agriculture	0.00819	0.01322	61%
Lighting	0	0	0%

In addition, it is important to note that the 2017 PCIA includes almost $75 million in an insurance settlement discount which results in a reduction in the overall PCIA level. The loss of this settlement discount in subsequent years should be considered when evaluating the future level of the PCIA. This settlement was received by SDG&E in conjunction with a one-time insurance settlement associated with the SONGS nuclear plant closure.

The CCA Study used 2016 PCIA charges from SDG&E and those charges are applied to the CCA. This was appropriate as no 2017 PCIA was available at the time of the CCA Study. The estimated 2017 PCIA will be updated later in 2017. There is no specific discussion of trends in the PCIA in the CCA Study and so we assume the CCA Study does not include an increase in the PCIA charges. Based on EES's experience, we expect these charges to increase significantly in the short-term due to reduction in power supply market prices and the ultimate loss of the settlement discount, then decrease as the higher priced contracts expire and market prices increase.

We recommend that the economic analysis be updated to reflect more recent PCIA levels as well as expectations for the 2nd half of 2017 rate increase and beyond.

Results of Cost Comparisons

Based on the CCA Study, savings associated with a CCA for the City are expected to result in savings of 3 percent for customers plus an additional $6.8 million in retained revenue over 5 years for the CCA in the baseline case. In the highest renewable scenario, the savings to customers would be 1 percent and the retained revenue for the CCA would be $2.3 million.

Based on the review of the assumptions in the CCA Study, we make the following observations:

- The cost of renewables and their escalation rates appear to be too high
- Estimated PCIA levels will be higher in 2017 and beyond
- The SDG&E rate forecast is too simplistic

We recommend that these assumptions be updated in a subsequent study. However, on balance, the results of the CCA Study are accurate enough to make policy decisions on whether or not the City should pursue the CCA option further.

Sensitivity Analysis

The CCA Study provided a limited sensitivity analysis of risks associated with forming a CCA. In future analysis, we would suggest that a greater analysis of risk be included.

The first risk mentioned is the participation rate. We do not see this as a great risk given the participation rate of existing CCAs and the conservative estimate contained in the CCA Study.

The second risk is the risk associated with energy price variability. This is a great risk for a CCA but it is also a risk for SDG&E. Higher market and renewable prices will increase costs for both the CCA and SDG&E. But at the same time it would lower the PCIA rate because SDG&E would be able to sell surplus power at a higher rate.

In summary, an updated financial analysis should include:

- *PCIA* – The uncertainty related to the PCIA should be analyzed in detail. The biggest uncertainty is related to the initial PCIA level and the subsequent growth rate. Based on the experience seen in other IOU service areas, the PCIA can jump up to 300% from year to year based on market benchmarks and the level of departing loads.

- *Retail Rate Forecasts* – The CCA Study should include retail rate uncertainty for SDG&E over the study period. This should consider SDG&E's portfolio costs compared to changes in the market and renewable prices. Because SDG&E has existing resources, the impacts of changes in the market may affect SDG&E's rates differently than the CCA's rates.

- *Regulatory Risks* – Unforeseen changes in legislation (California Public Utility Commission, State legislation and Federal legislation) may impact the results of the CCA Study. The CCA Study should provide a discussion of the potential regulatory risks and the impact on SDG&E rates as well as the potential impacts on the CCA.

- *Administrative Cost* – Because the City is planning to outsource administrative and financing costs, a sensitivity should be modeled to determine the sensitivity of CCA feasibility to these overhead costs.

Macroeconomic and Environmental Factors

The CCA Study estimates that 17 to 20 jobs would be created for every $1 million spent locally. This is roughly the annual retained revenues that could be spent on local energy efficiency or distributed energy resources. This is a very simplistic estimate but is reasonable at this stage in the CCA analysis.

Another source for potential macroeconomic benefits is the savings passed on to customers. The 3 percent rate reduction to customers assumed in the CCA Study would provide more disposable income that could be spent on other goods and services in the region.

Carbon reductions were estimated for each of the scenarios provided in the CCA Study and numbers reflect the additional savings beyond the SDG&E renewable portfolio requirements. The assumed carbon savings on a per GWh basis is not explicitly stated but appears to be in the range of 850 tons per GWh. In our experience, the savings are reported to be in the range of 400 to 700 tons per GWh. Therefore, the initial estimate of GHG savings may be too high. On the other hand, the CCA Study has not quantified any environmental benefits associated with the retained revenues that may be spent on energy efficiency or distributed energy resources.

We also agree with the CCA Study's statement that the scenarios with lower renewable percentages may achieve higher environmental benefits overall if energy efficiency and distributed energy resources are accounted for.

Conclusions

EES concludes that the CCA Study provided a reasonable approach to looking at the feasibility of forming and operating a CCA for the City. The CCA Study's assumptions related to the load forecast, participation rates and operating costs appear to be in the appropriate or conservative range. However, the cost of renewable power appears to be too high while the PCIA level appear to be too low.

The CCA Study adequately looked at different portfolios, however, the City will likely need to fine-tune its goals and objectives in order to narrow down the range of options to consider if it moves forward. The CCA Study examined some of the risks of CCA formation but does not provide analysis on other key risk factors.

Overall, the CCA Study provided an adequate level of analysis given the early stage of consideration by the City. In the opinion of EES, the CCA Study is a good basis for making policy decisions about further consideration of a CCA for the City. However, because the CCA Study in nearly a year old and some changes have occurred with renewable costs and the PCIA, we recommend the economic analysis be updated to confirm results at some point in the future before finalizing the CCA formation question. Furthermore, additional sensitivity analysis will provide more information to the City about the potential risks of forming a CCA. We understand that the City is already embarking on this economic update which is appropriate and timely.