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MEMORANDUM

TO: BOS Transportation and Planning Committee

FROM: Chris Bazar, CDA Director CB

DATE: March 12, 2014

SUBJECT: Community Choice Aggregation

Today's agenda item on Community Choice Aggregation (CCA) incorporates three separate documents: 1) this memorandum from CDA, which provides background on the CCA concept and some context for the potential of such a program in Alameda County; 2) a memorandum from GSA providing an overview of Community Choice Aggregation; and 3) a white paper entitled *East Bay Community Choice: from concept to implementation*, prepared by the Berkeley Climate Action Coalition, Community Choice Working Group, in collaboration with the Oakland Climate Action Coalition and the Clean Energy & Jobs Oakland Campaign. Representatives of the latter groups will be present at your committee's hearing on March 20 as part of their efforts to educate policymakers and other stakeholders about the potential for a Community Choice energy program in the East Bay.

Staff has not prepared a specific recommendation for your Committee at this time, but based on your input today you may want to direct staff to forward some sort of resolution to the Board of Supervisors. Such a resolution could entail conferring with other jurisdictions in Alameda County to assess the level of interest in participating in an Alameda County CCA program, and/or undertaking a feasibility study for the formation of a CCA in the County. It should be noted that the feasibility study option would necessitate a very substantial initial investment on the part of the County, even if other jurisdictions within the County were willing to contribute financially as well. Staff can provide more information on these options if your committee is interested in exploring them at the hearing.

Background:

California State Assembly Bill 117 (AB 117), passed and signed into law in 2002, gave California cities and counties the ability to aggregate the electric loads of residents, businesses and public facilities to facilitate the purchase and sale of electrical energy in a more competitive market. It was passed in partial response to and as a result of the California energy crisis of 2000-2001. As a result of the crisis, many concerns other than the simple price of electricity became of high priority for consumers and policymakers. Issues such as reliability and energy independenee moved to the forefront, along with price stability. Many communities had already expressed support

for increased reliance on renewable and alternative sources of energy. Given the high fossil fuel content of much of the energy on the market during the energy crisis, demand for green sources of power increased. (The Goldman School of Public Policy, University of California, Berkeley, Community Choice Aggregation: The Viability of AB 117 and its Role in California's Energy Markets, June 13, 2005)

Community Aggregators or CCAs have the options of supplying power through wholesale purchase contracts and spomarket purchases and/or through ownership and operation of generating plants. However, the responsibility for all aspects of power delivery (transmission, distribution, metering, billing, and customer service) remains with the utility (Bay Area Economic Forum, The Economics of Community Choice Aggregation: The Municipalization of Local Power Acquisition and Production, June 2007).

Existing Community Choice Aggregation programs in other states, as well as studies performed specifically for local California communities, indicate substantial beuefits for consumers and communities. For example, customers of the Cape Light Compact in Massachusetts saved between 11 and 22% on the generation portion of their bill, while estimated savings in San Francisco range from a Net Present Value (NPV) of $266 million over 30 years to $1.47 billion over 20 years. CCAs can also offer energy independence, price stability and more efficient Energy Efficiency programs. Increased reliance on renewable and alternative energies and boosts to local employment are gains that may also reflect local values. CCAs would also incur known costs, such as costs for feasibility studies, political opportunity costs, and administrative costs. (Goldman School of Public Policy, 2005). The Goldman School of Public Policy at University of California, Berkeley, concluded in its 2005 study that CCAs hold the potential for a substantial improvement in the energy market and increased efficiency.

The California Public Utilities Commission (CPUC) is the main approval body at the State level for jurisdictions or JPAs that propose formation of CCAs. In 2004 and 2005, the CPUC formally addressed issues on pricing and costs attributable to CCAs and the implementation of CCAs, paving the way for interested entities to begin studies of feasibility and formation of CCAs (California Puhlic Utilities Commission, CPUC Phase 1 Decision Implementing Portions of AB 117 Concerning Community Choice Aggregation, December 2004; and CPUC, CPUC Phase 2 Decision on Community Choice Aggregation, December 2005) . Since then, numerous entities around the state have begun CCAs; in the Bay Area, Marina and Sonoma Counties have begun their own CCAs, and San Francisco, despite some delays, continues to work toward that goal. The CPUC continues to refine its rules for CCAs statewide.

General Function of the CCA:

A CCA would allow an entity, either a jurisdiction or a JPA, to become an energy purveyor and to purchase electrical energy on the wholesale market from any source, including fossil fuel, nuclear or renewable sources. The CCA would then compete with traditional private utilities such as PG&E to provide electrical power to the end users within its boundaries. Upon formation of the CCA and approval by the CPUC, all users within the boundary would be enrolled as customers, with the voluntary option to opt-out and return as a customer to the prior

energy provider. A customer of the CCA would then get a combined bill from the owner of the utility (PG&E) for 'transmission costs' and the CCA for usage as 'generation costs' (in the case of Alameda County CCA and PG&E). Ideally, under a CCA, the combined bills would be competitive with those of the private utility company and under the best conditions could be lower from time to time.

A CCA entity could operate with some variations compared to traditional utility companies. For example, where a utility such as PG&E would return some of its profits to stockholders, a nonprofit CCA would have the options of taking any "black-ink" funds and either using them to reduce overall electric bills, invest in energy efficiency programs to reduce demand, develop local renewable energy sources and installations, or provide grants to lower-income homeowners and businesses to install renewable energy on their properties.

A CCA could also purchase small-producer energy (such as home solar energy) from its customers. Unlike a private utility, which by its own choosing normally only purchases a very small amount of excess home solar energy via the net-zero metering concept, a CCA could purchase all of the excess energy produced by a small producer, which in turn would encourage homeowners to install renewable energy at maximum permissible scale for their homes when they can sell it back to the CCA at wholesale rates.

A CCA with its own generation facility could realize substantial net black ink funding, which could then be used to underwrite the CCA programs and accelerate the installation of additional renewable energy in suitable urbanized and brownfield areas. CDA staff has developed a proposal for just such a program that could work in conjunction with a CCA at the Martinelli Center in South Livermore. CDA and GSA have been discussing the potential of such a program at the Martinelli Center, and how such a program could fit into GSA's ongoing Renewable Regional Energy project.

Like all utility companies, a CCA would be required to meet State Renewable (Energy) Portfolio Standards (RPS), which is basically the minimum fraction of a purveyor's overall energy portfolio that must come from renewable sources. Right now, the RPS for California is set at minimum 33% renewable by the year 2020 and for each year after that (CPUC website, http://www.cpuc.ca.gov/PUC/energy/Renewables/hot/33RPSProcurementRules.htm, modified June 17, 2013). Under the right conditions, a CCA could economically exceed this RPS requirement. At the present time, Marin County's CCA has a renewable energy option of 50% up to 100% for those willing to pay small premiums for cleaner energy (Marin Clean Energy website, (http://marincleanenergy.org/, 2014.)

The CCA also has the option to purchase power as locally as possible, and to support renewable energy jobs in its jurisdiction and those of the participating entities.

Starting up a CCA Program:

CCAs are created by County Ordinance and meet requirements set by the CPUC. Preliminary tasks involved in starting a CCA program and their associated costs are listed below. These are

(taken mostly from Carbonomics and Local Clean Energy Alliance, East Bay Community Choice Energy from concept to implementation, February 2014):

1. Feasibility Study - the study must be detailed enough to describe how the program is to meet its stated goals, while also demonstrating the economic feasibility of providing the benefits the program is to achieve. The study would use PG&E load data and renewable resource assessments to identify potential projects. It would assess the potential size of the program in terms of number of customers and electricity sales, develop an initial financial and cash-flow model, predict the overall return on investment, quantify the jobs created under various procurement scenarios, evaluate organizational and governance strategies and outline how the start-up costs would be financed (more on this below). Cost undetermined, but on the order of $1 - 2 million dollars.

2. Raising Initial Set-Up Costs - Setting up a program requires up-front investments. In addition to the costs involved in developiug the business/feasibility study referred to in the preceding section, there would also he legal fees associated with setting up the Joint Powers Authority (JPA) (discussed in the source document). The cost for legal fees can be minimized because model JPA agreements now exist.

   An administrative organization is required, with consultants, the initial staffing and creation of this agency would probably cost about $1 – 2 million. These costs could all be repaid quickly once the Community Choice program is launched, but typically they are borne initially by the initial set of government jurisdictions. In some cases these are funded by short-term loans taken by the CCA guaranteed by the jurisdictions. Having the CCA as an organization separate from thc County or a jurisdiction removes a liability of the CCA becoming a risk to the County and the General Fund.

3. The Carbonomics / LCEA report (2014) estimates that the total set-up costs would be no more than $1.5 million in legal, consulting, and other expenses associated with developing the business/feasibility study, establishing thc JPA, and setting up a Community Choice administrative agency. This estimate differs greatly from other studies and staff believes the cost would he higher and estimates $2.5 million+.

4. Implementation Plan - The CPUC, which ultimately has to approve the Community Choice program, requires that the Community Choice entity submit an Implementation Plan that covers all aspects of the set-up and operation. However, the Implementation Plan need not describe the integrated resource plan, financial plan, or other aspects of the business plan. Cost of plan unknown at this time.

5. An Alameda County Community Choice program could be established to implement the aforementioned business plan. The program could be organized under a Joint Powers Authority (JPA) that would register with the CPUC and be responsible for managing the program. As in Marin and Sonoma counties, Alameda County and participating city officials would conduct an education campaign at the community level to educate the community and local leaders about the benefits of establishing a Community Choice

program. The local jurisdictions would agree to become parties to the CCA, which would govern all of the procedures of the Community Choice program – from Board composition, to voting rights, to procedures should a jurisdiction want to withdraw from the program.
A model of a Community Choice JPA is available from the Marin and Sonoma experience and can be adapted to Alameda County. It should be expected that creating a CCA would incur up-front legal fees that the jurisdictions would have to bear.

6. Community Choice Agency - An initial task of the Board of Directors would be to create a Community Choice agency under the direction of a Chief Executive Officer or Executive Director to be appointed by the Board, with legal and regulatory support provided by legal counsel. Then agency would also have a management staff to oversee agency functions, such as Energy Procurement and Longer-Term Resource Planning, Rate Setting, New Program Development, including Net-Metering and Feed-In Tariffs, Regulatory Affairs and Public Relations and Customer Service. At this time, cost unknown.

7. Program Roll-Out: Once all of the above steps are completed, the agency will need to undertake a series of start-up activities that will likely begin 6-12 months prior to the first power sales. These activities include hiring staff; setting renewable and local portfolio goals (percentage of power from renewable and local sources), planning of market procurement as a bridge source of energy until the most desirable local and renewable sources can be contracted, planning for local build-out and phasing in of customers, satisfying capital requirements, setting initial rates, customer outreach, marketing and information. General Costs on the order of millions of dollars.

Benefits and Risks:

The Carbonomics / LCEA report (2014) proposes a scenario in which an Alameda County CCA would set a ten-year program to acquire 100% of its customers in four years with 80% retention, a starting 33% renewable portfolio to match state requirements (building form that point), and a 30% local renewable energy goal by Year Ten. The report proposes:

• Total demand reduction through energy efficiency, conservation, and demand response over ten years would be 1,790 GWh, equivalent to a medium-large sized power plant.
• Total production from local resource development (solar PV, wind, etc.) over ten years could be 10,000 GWh, reaching an equivalent of 1,150 MW in solar PV capacity alone.
• The Carbonomics / LCEA report (2014)proposes the building and installation of energy generation sources to achieve the 30% local renewable energy over ten years would require about 24,000 job-years, equivalent to an average yearly employment of about 2,400 jobs, plus some value of indirect and induced employment; some substantial fraction of this employment would be East Bay employment. Staff sees the opportunities for community benefit from a renewable energy based CCA to be in the Programs funded by the 'black ink' and has not viewed the CCA as a Jobs Program or Economic Development Program as might be suggested.

• The CCA program could cut up to 6.3 million tons of GHG emissions over ten years, surpassing the reductions targeted by the state's RPS. This result is based on the scenario's reduced demand and new, zero-emitting, renewable energy production. Staff sees the Carbonomics / LCEA report (2014) identified project sites as overstated, not necessarily feasible and not all in Alameda County.
• The program could stabilize electricity rates and over a few years could result in average residential electricity bills lower than PG&E's. This comparison assumes an average residential monthly usage of about 600 kWh and a PG&E projected rate increases of about 4.5% per year (representing the overall yearly residential electricity rate increase from 2004-2013). The current PG&E three-year general electricity rate increase request averages about 8.5% per year.

CCA establishment is not without risk. The most salient risks are known. Studies reviewed by staff agree that good management and experience can identify and mitigate most of the risks. Jurisdictions considering whether to take part in a Community Choice program often ask if they would be liable for the debts or other liabilities taken on by the Community Choice agency. The CCA JPAs that staff has reviewed have stated that the general funds of participating cities would not be at risk, which is typically a requirement for a jurisdiction to join.

CCA programs have the following risks, and mitigation techniques, at their disposal:

• ***Competitive Rates***: Can the program provide power with the desired renewables mix at a competitive price? Can demand reduction and local renewables be developed at an overall system cost that provides electricity prices competitive with the incumbent utility? Given that the current cost of renewables continues to trend downward, that renewables are not subject to volatile or rising fuel costs, and that a major emphasis of CCA is peak demand reduction, this risk does not seem to be a major one. But because price is so central to the success of the program, staff should continuously evaluate the overall trends of power prices in the market while working to assure rate stability through locally-sourced renewables or facilities directly contracted to, or owned by, the CCA. Staff notes the potential Martinelli Center Solar Project would contribute to the CCA's offering low-cost renewable energy sooner in the Program lifecycle, increasing the likelihood of Rate and Percentage Renewable goal success. Peak Demand Reduction, while a strategy employed to reduce the total amount of energy the CCA might purchase when solar is 'dark', includes energy efficiency and weatherization programs but also requires a base of subscribers who can shift their energy usage to non peak times. The Carbonomics / LCEA report (2014) proposes Demand Reduction as a major emphasis of the CCA. This important factor in development of the proposed feasibility may or may not be achievable based the actual mix of industrial, commercial and residential customer energy needs.

• ***External Risks***: It is possible that third-party energy suppliers could default or for some reason not provide the renewable energy that was originally contracted for, forcing the CCA agency to enter the potentially expensive and volatile short-term market to meet customer needs. If prices increase when the program is going to the market for new contracts (or to replace old contracts), it could require the CCA governing board to raise rates. Conversely, if the program locks in a number of long-term contracts and the overall price for power subsequently falls, it could be holding a higher-cost portfolio. Improperly hedging against electricity price volatility is certainly

a possible risk, although all market participants face this issue to a certain extent. The risk can be mitigated through careful integration and scheduling of local renewable resources (demand reduction and new generation) with market purchases.

• ***Contracting for Power at the Right Levels***: It is possible for the CCA to buy too much or too little electricity, requiring either excess sales into the market or more spot-market purchases from the market. Both carry risks as the program might sell excess power for a loss or buy additional needed power at a premium. Detailed and exhaustive resource planning for several years out should reduce this risk because annual load growth has been relatively predictable. One unknown factor would be if more or fewer customers opt out of the program than expected. Marin's opt-out rate has hovered around 20%, so while this is a useful benchmark, what would actually happen in Alameda County is uncertain. The best mitigation against higher opt-out rates is a program that provides the local economic, job, and price benefits possible under CCA, along with an on-going public relations effort to highlight these benefits to the community. That said, staff also believes that it is important not to overstate the potential benefits of an Alameda County CCA as a jobs program and/or economic development program.

• ***Unfavorable Regulatory Changes***: It is always possible that the CPUC could institute policies that are unfavorable to an Alameda County program. These could range from higher bonding or PCIA charge calculations to additional reporting requirements. The PCIA surcharge itself – an extra fee that CCA customers pay – could vary from year to year, and while it is expected to decline, regulatory action could change that.

While all of these risks can be mitigated, they cannot be eliminated completely. It is imperative, therefore, for a CCA to have a professional staff with operational experience in offering retail electricity service, strong familiarity with the dynamics of California's power market, and expertise in integrating renewable resource development with market purchase. The program would have to initially contract with third-party providers who have significant operational experience in the market. It should also be noted that many municipal utilities in California, including in the City of Alameda, have operated for decades and successfully managed commodity, credit and operational risks.

Financing:

Once a CCA program is successfully established and operating, it would become self-sustaining and able to provide all the electrical needs of the CCA community at a reasonable price and with a large portion of renewable energy. However, start-up financing would be necessary to begin the process. It is difficult to say with high precision what those costs would be pending the feasibility study, but millions of dollars would be required, which the CCA Agency would need to recoup and use to pay back any financing. Staff notes the start-up funds are those required after the CCA has been established. The funds required prior to and the initial CCA relate to due diligence, investigation and development, including the Feasibility Study, Business Plan, and applicable staff/consultants.

The start-up and rolling out of the program would incur costs in the six to twelve months prior to starting operations and generating revenue. In the case of other Community Choice programs, start-up costs were covered either through public funds or through short-term bank financing. These costs can be quickly recovered, however, once revenues to the program are generated (although this is not without some risk).

One such start-up cost would be related to posting the Community Choice program bond. This is a CPUC requirement and is meant to cover the potential costs in case a program fails and the customers are returned to PG&E bundled service. The estimated bond for Sonoma was $700,000; with a much higher population, it is reasonable to expect an Alameda County CCA bond to be higher.

Also, working capital would be required to cover the costs – primarily buying power – that are incurred between the start of operation and the generation of revenues. Operating revenues from sales of electricity would be remitted to the CCA agency beginning approximately 60 days after the initial customer enrollments. This lag is due to the distribution utility's standard meter reading cycle of 30 days and a 30-day payment/collections cycle. Potential funding sources for these costs include short-term bank financing, such as a credit line that can be drawn upon as needed to cover expenditures, or in-kind services provided by the third-party energy supplier (specifically a delay in the first payments). The program would recover the principal and interest costs associated with the start-up funding via retail sales.

In the case of Sonoma, the First Community Bank provided startup financing for Sonoma Clean Power's operations in two separate tranches. The first tranche consisted of a $2.5 million line of credit, which was guaranteed by Sonoma County. Subsequently, First Community Bank extended a $7.5 million line of credit, for which it requires no guaranty from Sonoma Clean Power or its member jurisdictions.