Board of Directors Meeting
Wednesday, March 1, 2017
6:00 pm
City of Hayward Council Chambers
777 B Street, Hayward, CA

AGENDA

Meetings are accessible to people with disabilities. Individuals who need special assistance or a disability-related modification or accommodation to participate in this meeting, or who have a disability and wish to request an alternative format for the meeting materials, should contact Bruce Jensen, Senior Planner at the County of Alameda, at least 2 working days before the meeting at (510) 670-5400 or Bruce.jensen@acgov.org.

If you have anything that you wish to be distributed to the Board please hand it to a member of EBCE staff who will distribute the information to the Board members and other staff.

1. **Roll Call & Oath of Office (if required) (**Stephanie Cabrera)

2. **Approval of Agenda (**Chair)

3. **Public Comment**
   This item is reserved for persons wishing to address the Board on any EBCE-related matters that are not otherwise on this meeting agenda. Public comments on matters listed on the agenda shall be heard at the time the matter is called. As with all public comment, members of the public who wish to address the Board are customarily limited to two minutes per speaker, but an extension can be provided at the discretion of the Chair.

CONSENT AGENDA

4. **Approval of Minutes from February 15, 2017 Board Meeting (**Stephanie Cabrera)

REGULAR AGENDA

5. **County Staff update (**Bruce Jensen, Inder Khalsa)

   - Multiservices Bids - Protest / Appeals Status

- Contra Costa County Update
- Launch Timeline Update
- County Cooperative Services Agreement Update
- Board Form 700
- Hayward Council Chambers

6. **Discussion of Program Implementation Budget and Preview of Agency Financing** – (Bruce Jensen)

7. **Provide Direction to Staff on Recruitment Plan and Job Posting for Chief Executive Officer** (Bruce Jensen, Sandra Rivera)

8. **Recommend Contract Award for Local Development Business Plan** - Selection of ALH Economics (Chris Bazar, Albert Lopez, Bruce Jensen)

9. **Approve / Provide Direction to Staff on Community Advisory Committee Scope and Conflict of Interest Provisions** (Bruce Jensen, Inder Khalsa)

   As the Board recalls, nominations for the CAC remain open through March 8. The final self nomination form is attached, and has been sent out to the entire EBCE mailing list of well over 1,000 individuals. Staff will put the names and general qualifications into a matrix for the 5-person CAC Selection Committee appointed by your Board in January.

10. Board Member and Staff Announcements (Chair)

11. Adjournment – March 15, 2017

Attachment 4 – Meeting Minutes:
Board of Directors Meeting
Wednesday, February 15, 2017
6:00 pm
City of Hayward Council Chambers
777 B Street, Hayward, CA

MEETING AGENDA

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If you have anything that you wish to be distributed to the Board please hand it to a member of EBCE staff who will distribute the information to the Board members and other staff.

The live proceedings may viewed remotedly on Youtube at the City of Hayward Live Stream beginning at 6 pm:

https://www.youtube.com/watch?v=fZieTEmz--o

Video programs can also be found the day following the meeting at the following web address: **http://www.acgov.org/cda/planning/meetings/broadcast.htm** *(Scroll down to East Bay Community Energy Meetings and click "Audio.")*

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1. **Roll Call**

2. **Oath of Office**
   For Directors and Alternates not in attendance on January 30, 2017

3. **Approval of Agenda**

   Motion to approve the agenda was made by Member Arreguin. The motion was seconded by Member Mendall and carried 11/1; Excused: Vice-Chair Kalb

4. **Public Comment**
   This item is reserved for persons wishing to address the Board on any EBCE-related matters that are not otherwise on this meeting agenda. Public comments on matters listed on the agenda shall

be heard at the time the matter is called. As with all public comment, members of the public who wish to address the Board are customarily limited to two minutes per speaker, but an extension can be provided at the discretion of the Chair.

CONSENT AGENDA

5. Approval of Minutes from January 30, 2017 Board Meeting

Member Spedowfski motioned to approve the minutes with corrections. The motion was seconded by Member /Biddle and carried 11/0; Excused Vice-Chair Kalb

REGULAR AGENDA

6. County Staff update

- **Bid challenge status**

County staff has received letters of protest for RFP CCA-16-1. Staff will process appeals and report back to Alameda County Board of Supervisors with their findings. Due to the Protest process, a 2017 launch date may be unattainable.

- **Gantt (Timeline) Chart**

In response to a request by the Board, Staff and the consulting team prepared a timeline of events. Staff requested that the timeline be allowed to play out in order to meet the tight schedule.

Consultant Shawn Marshall explained that the timeline had been sectioned into critical path steps and that each step had several parts. The overlap of the bid challenge and the implementation plan development would run from the end of February into March. The implementation plan is the statutory required document stating that the EBCE CCA exists and allowing a number of steps to occur once the CCA is certified.

The California Public Utilities Council (CPUC) has 90 days to certify the plan. If EBCE were to submit a plan by the end of April they may be able to start procurement by June. The Implementation plan must be approved at a hearing before it can be presented to CPUC. The current timeline includes little leeway.

Positive and negative implications were identified if the timeline did not meet the October 2017 deadline.

Positive:

- Issuing Request for Purchase of power in 2017 to launch by Spring 2018
- Allows the CCA to roll in the interested Contra Costa County cities
- The summer tarriff schedule ends in October making revenue higher in the first 6 months of operations

Negative

- Extending the time may drain the implementation budget
- Unsure of what the market will be like in 2018 or how it will affect rates

Community Development Agency (CDA) Director, Chris Bazar stated that if the deadline were pushed back there are local providers that have shown interest and may be an ideal fit for procurement in 2017. The Board would then be engaged and able to award contracts to meet the launch date.

- LDBP bid status

Staff initiated the process and received bids from 5 qualified vendors. There are 3- Small Local and Emerging Business (SLEB) firms and 2 non SLEB firms. The interviews will take place 2/16/17.

- Community Advisory Committee Update

Staff has sent the committee application to the EBCE mailing list of over 1000 individuals, started collecting nominations and identified the 5 person vetting committee who will select nominees. The first meeting could occur in late March or early April.

- Board Committees and Subcommittees

Staff recommends that the Community Advisory Committee be established and running before any other committees or subcommittees are created.

- CEO search/HR support

Staff is working on the CEO recruitment procees with the County's Human Resource Services agency with a goal to hire the CEO by April. Staff is also considering if an Ad Hoc committee should be created to assist in the hiring of other EBCE staff

Consultant Shawn Marshall suggested a hybrid solution with a search firm advertising the position to tap into some of the firm's resources and contacts. Hiring a firm to do the recruitment would add more months to the timeline due to the Request for Proposal process

Jessica Tovar – Requested that the application date be extended to 3/8/17 and if the potential committee members would be allowed an alternate. Ms. Tovar also suggested that the application categories Environmental/Energy Advocate be split into two categories.

The Board saw no issue with extending the Advisory Committee application due date to 3/8/17. The Advisory Committee process has no conflict with the current EBCE deadlines

Member Pilch expressed concern over not allowing the Advisory Committee to have alternates and Vice-Chair Kalb suggested that the Advisory Committee be allowed to run for a few meetings and the need for alternates can be determined at that time.

Chair Haggerty and staff saw no need to separate the Environmental/Energy Advocate and suggested that the box be checked and either Environmental or Energy be circled.

Member Arreguin requested that applicants be able to attach a resume or any supplemental information, including letters of support.

Frank Burton - Requested that the "Rate payer" category be removed due to all applicants being rate payers.

Chair Haggerty stated that someone from the general public may choose to be recognized as only a rate payer.

Barbara Stebbins - Stated she would also like to remove the "Rate Payer" category. Ms. Stebbins also stated that she would like all the applicants to be actual mebers of the stakeholder group and likes the idea of applicants adding letters of recommendation to their applications . She would also like for the Advisory Committee to weigh in on the EBCE CEO hiring process.

Member Arreguin requested that "please attach a resume,or any supplemental information including letters of support regarding qualification be added to the statement box on the application.

Staff will communicate the updates to the applicants that have already submitted their application. .

7. Approve Treasurer/Auditor and Board Secretary

Alameda County Auditor – Controller Steve Manning was selected to serve as the interim Treasurer/Auditor.

Vice-Chair Kalb stated that he had no objection to Mr. Manning serving as both the Treasurer and the Auditor, but would like to see the permanent positions separate from each other to avoid any possible conflicts.

Mr. Manning stated that his intention was to have his office provide the accounting services and would recommend contracting a separate Auditor.

Member Mendall motioned to approve Steve Manning as the Treasurer/Auditor and Stephanie Cabrera as the Board Secretary. Member Biddle seconded the motion which carried 12/0

8. Elements of a CCA Implementation Plan – Informational Item

- Implementation Plan required for CPUC Approval (Slide Show)

Presented

Kevin - Spoke regarding Photon Power's interest to partner with the EBCE, current programs offered and projects that are underway**.**

9. Approve New Member Terms and Response to Contra Costa County

- (Slide Show)

Presented

CDA Director Chris Bazar stated that the County received a formal request for information from Contra Costa County. A response letter to Contra Costa County has been drafted outlining the process, cost (there will be no cost to join) and the proposed 6/30/17 deadline to opt-in.

Contra Costa County communities can be seated after the second reading of their Community Choice Aggregation Ordinances and the Joint Power Authority agreement is approved and signed by each one.

Staff has been in contact with Contra Costa County and the individual cities as well. The Board discussed ways to present to Contra Costa county which included:

- A standard powerpoint that can be presented by any EBCE Board member
- Reaching out to Contra Costa Board of Supervisors
- Internal communications outlining which cities have already been contacted, an information cheatsheet and email follow-up with Board members
- Attending City and County meetings; and
- How to reach out to cities that are already a part of Marin Clean Energy (MCE)

The cities that are already a part of MCE:

- Richmond
- Walnut Creek
- Lafayette
- El Cerito
- San Pablo

Barbara Stebbins – Expressed concern over how Contra Costa County can be added with such a tight schedule and how would it affect the Advisory Council.

Chair Haggerty stated that EBCE would add Contra Costa representatives to the Advisory Council.

Jessica Tovar – Reminded the Board that the Advisory Committee language would need to be updated to include more representatives

Carol Weed – Spoke regarding the need to start presentations in Contra Costa County, requested a definition of what a Local Build out would mean in Contra Costa and gave a summary of the MCE presentation process.

The Board stated the need to be informed of the meetings that have already happened and when the Mayors' conference is scheduled to take place. The Board also discussed the need to present in advance of the 6/30/17 deadline which is later than the MCE deadline,. If Contra Costa County chooses to join, the meetings will them have to rotate between the two countues and the agendas tailored to discuss local topics.

Member Arreguin motioned to approve the response letter to Contra Costa County. Vice-Chair Kalb seconded the motion which carried 12/0

10. Approve Regular Meeting Location, Time and Schedule

- Recommend 1st and 3rd Wednesdays at 6 pm in Hayward, except as noted in Staff memo calendar

Chair Haggerty shared concern over the $700 per meeting cost of the facility.
CDA Director- Chris Bazar informed the Board that he had directed his staff to contact Hayward and work on the cost per meeting. He also suggested other County sites that would be free of charge.

Chair Haggerty expressed interest in other County facilities if the cost for the room was non-negotiable.

The Board discussed different meeting schedule options and agreed to keep the current schedule of 2 meetings per month with the ability to cancel the second meeting if it was unnecessary. The meetings will continue to start at 6:00 p.m.

Member Martinez motioned to approve the Regular Meeting location, time and schedule. Member Mendall seconded the motion which carred 12/0

11. Board Member and Staff Announcements –

Member Arreguin wanted to acknowledge his alternate, Council Member Sophie Hahn in the audience.

12. Adjourned – 8:18pm

Staff Report Item 5

TO: East Bay Community Energy Board of Directors

FROM: Bruce Jensen, Alameda County Community Development Agency (CDA)

SUBJECT: Informational Item – County Staff Updates

DATE: March 1, 2017

Staff Recommendation
Accept Staff Reports on update items below.

Multiservices Bid Challenge Status

As Staff described last month, each of the bids for the three Service Categories described in the RFP No. 16-CCA-1, Multiservices, had been protested or appealed by a non-winning bidder, and County Staff is following the procedure established and described in the RFP to process these protests. The Board may recall that the Service Categories included:

SC-1: Energy and Technical Services
SC-2: Community Outreach, Marketing and Customer Notification
SC-3: Data Management and Call Center Services

Our standard protest process, as described in the RFP, includes adjudication by the Planning Director and / or CDA Director, and additional investigation as necessary to fully understand the issues raised in the protest / appeal. This can include contacts with the bidders and negotiations where necessary.

Staff will process these protest / appeals as expeditiously as possible, and we will report out to your Board as soon as possible; we expect that we will be able to bring at least the first of these appeals to the Alameda County Board of Supervisors by March 28. If any of the protests result in a Staff recommendation that differs from the recommendations of this Board of Directors at its January 30 meeting, Staff will bring those back to your Board at the earliest possible time.

Contra Costa County Update

Staff and certain members of your Board have already begin to visit Contra Costa County jurisdictions at their Board and City Council meetings to provide those bodies with information about EBCE and a possible CCA partnership with those communities. So far, attendance and presentations at six meetings are scheduled for various Cities in Contra Costa County, and Staff anticipates that several more will be added to that schedule in the next month or two.

On February 21 a letter was sent to John Kopchik, Director, Department of Conservation and Development for Contra Costa County, from Chris Bazar, Alameda County CDA Director, indicating EBCE's interest in engaging Contra Costa County jurisdictions as EBCE members. This letter is attached as Attachment 5. The letter also outlined the terms of EBCE membership for prospective Contra Costa County communities. The terms for joining include:

- No cost for Contra Costa County jurisdictions to join the JPA, but a request that new member jurisdictions assign appropriate staff to assist in coordinating the JPA resolution and Agreement, passage of the CCE ordinance and help with local public outreach.

- Prospective members must pass the required CCA ordinance, authorize access to their load data, hold at least two duly noticed public hearings, and pass the JPA resolution in order to become a party to the EBCE Joint Powers Agreement, (the same as required for Alameda County communities). Deciding votes are requested by June 30, 2017, for those who wish to become members under these terms.

- Each Contra Costa County jurisdiction who joins will have a seat on its Board, and voting share would be determined in the same manner as for other Alameda County members. New Board members could be seated once the JPA resolution has been passed, and the first and second readings of the CCE ordinance are complete.

- Contra Costa County member jurisdictions could be enrolled as Phase 2 customers in the Summer or Fall of 2018. Cities that join after the June 30th deadline or in 2018 would be enrolled in Phase 3, likely to be the late Fall of 2018 or Spring of 2019.

The letter contained several informational attachments to help them understand our process, including JPA Agreement, sample ordinance, and load size / voting share comparisons.

Whenever we have definitive information from any Contra Costa County jurisdictions, Staff will bring that to your Board by both e-mail and at upcoming meetings.

Launch Timeline Update

The Board will recall that it approved an initial process timeline that included a program, launch in October 2017. This was predicated on an aggressive process timeline, assuming few or no delays in any specific set of necessary tasks, identifying the most expeditious methods of performing these tasks, and full staffing of the program by the County and subsequently by the EBCEA itself as Agency Staff is hired.

However, a number of task sets are experiencing either delays or are proving to require more time than anticipated.

- The bid protest procedures described earlier will permit hiring of the Multiservice RFP consultants no sooner than March 28, 2017, which is a delay of approximately 1.5 months. As these contracts will include essential tasks for program start-up, each with its own timeline that may not be compressible, this likely shifts the timeline forward by roughly 1.5 months.
- The CEO hiring process, described below, in order to attract the best possible candidates for the job, may also take a bit more time beyond that originally hoped for. While this task can run parallel to the bid protest procedures, it is another essential component of the process that will require more time and result in a necessary lengthening of the timeline.
- In order to make the program as attractive as possible to Contra Costa County, the overall timeline for Contra Costa County cities to join the JPA and for Phase 1 and 2 launch dates requires extension by a few months. The Board has indicated that it feels this accommodation is highly desirable, and well worth the additional time and effort required.

Given these factors and others, an October 2017 launch date appears to be very unlikely. A Spring 2018 launch date should be readily workable, however, and easily achieved.

County Cooperative Services Agreement Update

Counsel for the EBCE and County Counsel are currently negotiating a Cooperation Agreement, under which the County will be reimbursed for County services provided to the EBCE. Such services include, but are not limited to: (1) fiscal management and financial services, including the services of the Treasurer and Auditor; (2) CEO recruitment and human resources support; (3) staff support and secretarial support at meetings; (4) general counsel/legal services; (5) any other services authorized by the Board. These services may be provided directly by County staff and officers, or through contract by consultants.

At this time, several terms are still being to negotiated, including the "not to exceed amount" and the interest to be charged. Staff anticipates bringing the agreement to the County Board of Supervisors for their approval before bringing it to the EBCE Board. The Agreement applies retroactively to provide reimbursement for County services provided before the finalization of the Cooperation Agreement.

Board Form 700

Each Director and Alternate is required to fill out and sign a "Form 700," a form required by the State of California in which the official declares his or her financial and economic interests that occur within the area of jurisdiction for the governing body. These interests may include business interests, sources of income, investments, and real properties owned within the jurisdiction of the EBCE, and others described in the Form itself. In this case, each Director would need to fill this form out and return by April 15 of the year for economic interests within the EBCE Service Area (the unincorporated County and eleven participating Cities). This form should be familiar to all Board members, as it is required for all public officials in their own communities as well.

The Board Secretary has the files for these forms; she will send blank forms via e-mail to each Director and Alternate, and once they are filled out she will collect them back from the Members as part of the EBCEA records. These forms should be made available in the few days following this meeting.

Hayward City Council Chambers

At prior meetings, the EBCE Board decided that for now, the City Council Chambers at Hayward City Hall are a suitable meeting place, and that normal meeting schedules would include the first and third Wednesdays of each month except as required for special circumstances (notably in the event of unavailability of the meeting space). Staff suggests for future reference that once the Board agrees to make the schedule once monthly instead of twice as it is now, the normal meeting date should be the third Wednesday evening of the month, as this would allow participation by appointed Board Directors who may have conflicts on the first Wednesday.

The City of Hayward initially advised Staff that the costs of each meeting to the EBCEA would be approximately $700 per meeting; however, after inquiry by County CDA Staff, City of Hayward Staff has volunteered a reduction on this rate to $450 per meeting. If the EBCE Board finds this fee appropriate, Staff will continue to work with the City of Hayward to make this so.

/Attachment: Attachment 5, Invitation and Terms Letter to Mr. John Kopchik, Contra Costa County

February 21, 2017

John Kopchik
Director, Department of Conservation and Development
Contra Costa County
30 Muir Street
Martinez, CA 94553

Dear Mr. Kopchik:

This letter is in response to your request for East Bay Community Energy (EBCE) to indicate its desire to expand beyond Alameda County and its willingness to engage interested Contra Costa County jurisdictions as EBCE members. This letter also outlines the terms of EBCE membership.

As you may know, the EBCE Board of Directors met for the first time on January 30, 2017. During that meeting, the Board had a robust discussion on this topic and was strongly in favor of formally inviting Contra Costa County and its Cities to join EBCE. The general sense was that it would be an exciting and positive development to have a more regionally focused East Bay Community Choice Energy (CCE) program. Some EBCE Board members expressed a willingness to present at your upcoming Board of Supervisors and City Council meetings as Contra Costa County officials deliberate on which CCE option would be in the best interests of their constituents.

With regards to the terms of membership, the EBCE Board discussed each of the points your letter raised, and we can provide you the following feedback:

- ***Cost to Join:*** The Board agreed that there would be no cost for Contra Costa County jurisdictions to join the JPA. EBCE will absorb all of the initial launch expenses, including load data analysis, communications costs and noticing requirements. The Board believes these one-time costs are offset by the longer-term value of including Contra Costa County communities in order to form a larger, regional program. We do request, however, that new member jurisdictions identify appropriate municipal staff to assist in coordinating the JPA resolution and Agreement, passage of the CCE ordinance and help with local public outreach, such as organizing workshops and having a presence at community events.

- ***Required actions and steps in the membership process:*** The Board agreed that the steps for joining EBCE would be the same as for the Alameda County jurisdictions, namely that the prospective members must pass the required CCA ordinance, authorize access to their load data, hold at least two duly noticed public hearings, and pass the JPA resolution in order to become a party to the EBCE Joint Powers Agreement. A copy of the CCE ordinance, JPA Agreement and JPA resolution are attached for your reference. For the purposes of completing EBCE's implementation plan, conducting public outreach, and procuring power for customers in new member jurisdictions, we request that interested jurisdictions cast deciding votes by June 30, 2017. It should be noted that there will be additional opportunities to join EBCE in 2018, if that is preferred. See below for more information regarding timimg.

Letter to John Kopchik, Director
Department of Conservation and Development
Contra Costa County
February 21, 2017

- ***Representation on EBCE Board:*** Each Contra Costa County jurisdiction choosing to join EBCE will have a seat on its Board, which is the same manner of representation as other Alameda County members. As you may know, EBCE has a two-tiered voting structure, the first being one-city/one-vote with simple majority to carry the vote. In this case, every jurisdiction will have one equal vote, and it is anticipated that most votes will proceed in this fashion. However, if at least three members call for a weighted vote, then each city's voting share would be determined by its electrical load; weighted votes may only be used to overturn an affirmative vote and may not be used to resurrect or overturn a negative vote. Please see Attachment 4 for a comparision of EBCE and CCCo jurisdictional loads. New Board members can be seated once the JPA resolution has been passed, and the first and second readings of the CCE ordinance are complete.

- ***Estimated date of service commencement:*** Your letter asked for a date when electric service could begin. As of this writing, it is likely that EBCE will begin serving Phase 1 customers (a subset of the total number of accounts) in Spring of 2018. Phase 2 customers, including additional Contra Costa County accounts, would be enrolled in the Summer or Fall of 2018. Cities that join after the June 30th deadline or in 2018 will be enrolled in Phase 3, likely to be the late Fall of 2018 or Spring of 2019.

The EBCE Board is excited about the prospect of creating a regional East Bay Community Energy program. A member of our Board and Alameda County interim staff will attempt to attend as many of your upcoming presentations as possible, including the Board of Supervisors meeting on March 21. If possible, we would very much like the opportunity to make a more formal presentation at that meeting if the Contra Costa County Board of Supervisors and staff are agreeable.

Finally, for the purposes of planning, it would be helpful to know how many Contra Costa County jurisdictions would be interested in joining EBCE. As noted above, we are requesting that the County and any interested cities complete their decision-making and passage of the required resolution and ordinance by June 30, 2017 if they are interested in a Spring/Summer 2018 enrollment period.

We hope this addresses your questions on behalf of Contra Costa County and interested cities. Please don't hesitate to contact us if you'd like to discuss any of these matters further.

Sincerely Yours,

Chris Bazar
Director, Alameda County Community Development Agency

Cc: EBCE Board of Directors

Attachments:

1) EBCE JPA Agreement and sample resolution
2) Copy of CCE ordinance
3) PG&E Attestation form for load data authorization
4) Load size / voting shares comparision by jurisdiction

Staff Report Item 6

TO: East Bay Community Energy Board of Directors

FROM: Bruce Jensen, Alameda County Community Development Agency

SUBJECT: Approval of EBCE Budget for Program Launch

DATE: March 1, 2017

Recommendations

1) Review and approve budget allocations for EBCE's pre-launch budget.

   Direct County finance staff to establish an 'EBCE Fund' within the County Treasury, and develop a EBCE chart of accounts to track external/hard costs (per the implementation budget) and internal/staff and soft costs incurred by County and City staff working on behalf of EBCE.

   Authorize CDA staff to forward billings to County finance staff as authorized officials to approve payments and costs until a CEO is hired; and

2) Direct staff to develop and issue an RFP for EBCE Banking and Credit Services

Analysis and Discussion

A. Program Implementation Budget/Allocation of City and County Contributions

In June of 2014, the Alameda County Board of Supervisors approved the Phase 1 funding of developing a Community Choice Energy program. That funding totaled $1.325 million, which was followed up by a second tranche of $2.41 million for a total of $3.735 million. This amount includes the funding for the local development business plan (LDBP). As of late January, about $560,000 had been spent, meaning that about $3,193,000 remains available.

As the implementation budget in Attachment A below indicates, CDA staff and the consultants estimate a total cost of $2.4 million to get through the launch period and enrollment of Phase One customers, and thus there would appear to be more than enough resources available to launch. However, these expenses cover only the identified external/hard costs associated with the next stages of EBCE start up. They do not cover internal staff time or other soft costs incurred by the County on behalf of EBCE nor the pre-launch expenses associated with power procurement, related security deposits, and any additional costs for customer noticing. These

Spending to Date

Category	Cost
MRW technical study and peer review	$210,105
Sequoia Foundation	$283,045
MIG (website, brochure)	$24,725
Other (load data, honorarium, audio, mtgs)	$41,016
Total	$558,891

costs can be covered by a line of credit to be provided by a third-party lender as discussed below. This budget was also prepared based on the assumption of a Fall 2017 launch. Assuming the launch takes place in early 2018, these numbers would be adjusted upward to take into account six additional months of spending on, for example, initial EBCE staffing costs.

The EBCE Board is asked to approve the implementation budget, which will be integrated into the County's chart of accounts. Integration into the County's chart of accounts will allow both revenues and expenses to be tracked throughout the start-up period, and budget reports will be generated and shared with the Board at regular intervals.

B. **Fiscal Management Services Provided by the County**

Staff will be recommending approval of a Cooperation Agreement between Alameda County and EBCE, whereby the County will be reimbursed for the costs associated with providing, among other services, County finance staff to assist with the fiscal management services until such time the EBCE Board authorizes its Executive Officer, or other EBCE finance staff to assume financial management responsibilities for the Agency. These services include the following:

1) Establish a EBCE Fund and chart of accounts within the County accounting system and coordinate with interim EBCE staff for the transfer funds as necessary;
2) Cut warrants and pay authorized invoices
3) Track expenses and produce monthly financial statements for Board review
4) Assist with development of initial pro forma and longer-term Agency operating budgets (to be approved in June for FY 2017-2018)
5) Assist with development of Banking and Credit Services RFP and credit negotiations
6) Assist with requirements for an anticipated credit guarantee to be provided by member jurisdictions (described below)
7) Assist in supporting an independent audit when time appropriate

Staff is seeking Board direction for County finance staff, working in conjunction with CDA staff, to have authority to authorize EBCE expenditures and payments as per approved contracts until permanent staff are hired.

Planning for Agency Financing

Financing for new, multi-jurisdictional CCE programs generally falls into three capital categories:

1) Start-Up Capital – Provided by Alameda County for planning and implementation
2) Initial Line of Credit – For power contract(s) and early operations
3) Working Capital/Term Debt – for longer term operations, power projects, etc.

Start-Up Capital: As noted above, $3,735,000 in start-up capital for EBCE planning and implementation expenses has been provided by the County of Alameda as a loan to EBCE until such time that EBCE is operational and the loan can be repaid. This number does not include costs for staff time, and estimates for this will be forthcoming.

Line of Credit/Credit Guarantee: Once the Agency is formed and moving toward operations, it will need to establish an independent, long-term banking and credit relationship to move from initial start-up into full operations. A line of credit obtained from a third-party lender will cover pre-revenue, negative cash flow in the early stages of program launch and operations and, importantly, provides the capital necessary to sign contracts in the wholesale power market. EBCE cannot launch and begin serving customers until those contracts are signed and executed.

The amount of early working capital that is needed will be dependent on EBCE's early staffing and Agency expenses, and the size and cost of the initial energy contract(s). Lines of credit can range from a low of $3M to a high of $10M or more depending on the program size at initial launch. The amount of credit required by EBCE will be clarified once the pro-forma operating budget is updated with new market pricing and revenue assumptions.

The agency line of credit is usually established approximately 4- 6 months prior to program launch, is short-term (e.g., a 1-2 year line of credit), and will require a credit guarantee to cover some portion of the loan. An important question to be answered is which jurisdiction(s) will provide that guarantee. While most CCE programs have launched with only a guarantee by the County (eg: San Mateo), Silicon Valley Clean Energy's guarantee was provided by several cities and the County together. If EBCE were to take this route, the Board will need to discuss in the near future which cities might join the County in providing a share of the guarantee requirement. This guarantee would come in the form of cash collateral or letter of credit, and this authorization will likely include a requirement for approval from a jurisdiction's governing body to authorize the credit guarantee. It is anticipated that this credit backing, analogous to a co-sign on a mortgage loan, would remain in place until revenues commence and the Agency is operationally stable, approximately 12 months post launch.

Working Capital/Term Debt: Once the program is revenue-positive, fully independent, and operationally mature, EBCE will want to consider longer-term debt, lines of credit and perhaps bond financing to support an expanded portfolio of energy contracts, local energy programs, and local power development.

Typically, this type of longer-term debt is used to refinance early working capital and, because it is supported by Agency revenues, does not have a credit guaranty requirement. This type of debt is generally offered at a stable, fixed rate that can be repaid over time and may be accompanied by a separate line of credit to serve as backing for power contracts. Existing CCE programs have found it important to focus on building early program reserves in order to secure better credit terms and receive a credit rating which is required for bond financing.

Financing Next Steps: Once the operating pro-forma in the technical study is updated with new market pricing and revenue projections, Staff will finalize a Request for Proposals (RFP) for Banking and Credit Services. This approach has been used successfully by a few recent CCAs including Silicon Valley Clean Energy and Monterey Bay Community Power. From whatever date the RFP is sent out, Staff would

anticipate negotiating terms and selecting a banking partner within a few months of that date. As noted previously, established credit will be required in order to sign wholesale power contracts, the terms of which must be known in order to set rates.

During the time that EBCE is seeking its initial line of credit, it will also want to consider other banking services such as deposit accounts, secured account ("lockbox") services and the like. If these services are provided by the lender as a bundled package with the loan, interest rates and terms are generally more favorable.

Finally, it should be noted that EBCE may grow and have significant capital requirements as the program matures in the future. Thus, it is important to make sure its banking partner is large enough to finance its program over the long term. Banks need to live within their loan-deposit caps, so it is essential to understand the bank's credit capacity for the program's long-term capital needs.

Attachment A: Proposed EBCE Implementation Budget

Note: This budget assumes a October 2017 launch and may have to be updated based on a Spring 2018 launch

East Bay Community Energy Proposed Implementation Budget	
Technical Services	
Expert Resources (Miscellaneous consulting and management)	$80,000
Finalize Power Supply Mix/Draft RFP, assist in evaluating bids	$25,000
Develop Master PPA with ESP/assist negotiations	$25,000
Customer Phase-In Schedule	$5,000
Refine Operating Budget	$90,000
Prepare Implementation Plan for CPUC (and respond to CPUC questions)	$35,000
Assist with Program Financing, prepare banking services RFP	$25,000
Prepare Rate Schedules, develop related energy programs including FIT, NEM	$35,000
Registrations and Regulatory Agreements	$15,000
Draft Integrated Resource Plan	$75,000
TOTAL:	**$410,000**
Communications/Outreach/Marketing (By External Marketing Firm)	
Task A and Task 1. Kick-off meetings, outreach plan, program branding, design, identity	$260,000
Task 2. Community Outreach/Stakeholder Engagement (public outreach, e-newsletters, advocate training)	$190,000
Task 3. Pre-Launch Marketing Campaign (social media, outreach, advertising campaign)	$280,000
Task 4. Customer Notification (opt out notices and call center script)	$270,000
TOTAL:	**$1,000,000**
Sequoia (or other), Legal and Other/Misc.	
General consulting assistance from Sequoia (or successor) consultant(s)	$90,000
Legal Review of Banking, Lockbox and Energy Supply Agreements	$60,000
Executive salaries paid prior to program revenues commencing	$150,000
Start up administrative costs (office rent, equipment, insurance, etc.)	$60,000
Gain party status/register at CPUC; legislative participation, CCA Bond	$130,000

TOTAL:	**$490,000**
Local Development Business Plan	
Overall Tasks	$500,000
TOTAL:	**$500,000**
GRAND TOTAL:	**$2,400,000**

Staff Report Item 7

TO: East Bay Community Energy Board of Directors

FROM: Bruce Jensen, Alameda County Community Development Agency (CDA)

SUBJECT: Action Item – Chief Executive Officer Job Description and Recruitment and Appointment of Board Ad Hoc Committee for Interim CEO Interviews

DATE: March 1, 2017

Staff Recommendation

1. Review and Approve Recruitment Plan and Draft Job Description for EBCE Interim Chief Executive Officer (Attachment 7)
2. Appoint a Board Ad Hoc Committee to conduct Interim CEO interview and recommend the selection of and a services contract with an Interim Chief Executive Officer for approval at a May Board of Meeting.

Background

The EBCE Authority became effective December 1, 2016, and its staff is currently composed of a combination of Alameda County staff and consultant support under the direction of its Board. At the EBCE's first meeting on January 30, 2017, the Board directed staff to begin the task of hiring EBCE staff to perform the work as part of its development of its operational capacity. Staff has begun the task of planning the recruitment of the Chief Executive Officer (CEO) to conduct the business of EBCE.

Discussion

Recruitment of Chief Executive Officer and Proposed Job Description

To ensure that EBCE is well-positioned to advance its ambitious timeline and achieve the key milestones required to enable a fall 2017 or a spring 2018 launch, Alameda County staff is proposing to conduct a streamlined recruitment of a qualified six to eight month contract CEO to lead the EBCE by directing the Authority's operations, resource procurement and planning, organizational development, finance, regulatory affairs, external communications, and strategic planning. This approach is similar to the recruitments of operational CCEs, where the CEO is appointed or contracted directly with the EBCE for an interim management role. The on-boarding of a seasoned executive at this stage will allow the Board to retain the current momentum and meet program launch objectives.

The Alameda County Community Development Agency will conduct the recruitment similar to the County's executive recruitment outreach, but with a distribution augmented with direct referrals from

industry professionals and associates connected with relevant industry groups to expand the qualified applicant pool.

Submitted applications will be reviewed for qualifications by County staff who will recommend candidates for advancement to the first-round interview with 5-7 executive leaders and experts, which can consist of Board members, County staff/consultant, CEO of an operational CCA program, and Chair of the CAC (if seated by then), who will recommend candidates for advancement to the next-phase interview. The interview panel will recommend 2-3 candidates to advance to a final-round interview with the proposed appointed Board of Directors Ad Hoc Committee (information below). The proposed approach is to finalize a contract with the Interim CEO for a 6 to 8 month startup function for Board authorization and approval in mid-May. This approach provides salary options that are competitive in the industry and can be negotiated with your Board during the recruitment and negotiation process.

Proposed timeline

March 1 – Board approval to begin recruitment of CEO position

March 8 – Request for Qualifications Announced and Distributed

April 5 – Application Deadline to Respond (4 weeks)

April 6 – April 20 – Initial screening (by County staff/consultant team)

Week of May 1 – first-round interviews (6-9 candidates)

Week of May 15 – second-round interviews with Ad Hoc Board subcommittee (2-3 candidates)

Late May – Closed session negotiations with full Board and finalist

Mid-May – Board Approval

Early June – CEO begins work

The draft job description is attached for your review and approval.

Ad-hoc Subcommittee of the Board

Staff is recommending formation of an ad-hoc Board subcommittee to assist with the executive selection process to interview candidates and discuss contract provisions. The proposed streamlined hiring process to hire the Interim CEO is important for the EBCE to have an executive officer in place as soon as feasible to direct the day-to-day administration of EBCE, particularly in light of the desire to launch the CCE program in fall 2017 or spring 2018. If the Board agrees with the hiring approach described above, then an ad hoc Committee should be selected consisting of three to five Board members. As an ad hoc Board member committee made up of less than a quorum of the Board, the meetings of this committee are not open to the public.

Temporary Office Location for Interim Chief Executive Officer and other 'start-up' staff

Staff proposes to provide temporary office space for the Interim CEO and other 'start-up' EBCE staff at the Alameda County Community Development Agency (CDA) offices at 224 W. Winton Avenue in Hayward. With an anticipated initial EBCE staff of 5-6 personnel, the CDA offices can accommodate these staff until the EBCE office space needs are determined and a permanent office space can found.

Hire Outside Human Resources Firm – Request for Proposal

Staff will issue a Request for Proposal for an outside human resource firm to recruit future EBCE staff that will be hired after the CEO is in place. This firm would also advise and develop initial employee compensation and benefits, and be responsible for the management of human resource operations until permanent EBCE staff are hired. Staff will bring back additional information at the next Board meeting on March 15, 2017.

Fiscal Impact

Reimbursement of County costs will be through a Cooperative Agreement, currently being drafted by staff.

/Attachments: Attachment 7 - Draft Job Description for Chief Executive Officer

DRAFT: Attachment 7 - Job Description
Chief Executive Officer

Background

Alameda County and 11 of its cities have agreed to form the East Bay Community Energy Authority (EBCE), a non-profit public Agency formed in 2016 that will operate a Community Choice Energy program within its service territory. EBCE's purpose is to provide cleaner, greener and more locally produced electricity at competitive rates for the residents, businesses, and municipal facilities in Alameda County.[1]

EBCE's program will allow participating local governments to pool the electricity demands of their communities in order to increase their purchasing power for higher renewable power content, and invest in local energy infrastructure and energy efficiency programs. EBCE will be locally controlled and ratepayer supported, with no taxpayer subsidies. By law, as a Joint Powers Authority, EBCE can only be funded through program revenues. Its budget is completely separate from the general funds of participating local governments. There will be a dedicated staff to run day-to-day operations of the Agency and provide customer support. Monthly Board meetings are open to the public.

Summary

The Chief Executive Officer (CEO) will report to the Board of Directors of East Bay Community Energy and will provide strategic leadership and direct all activities within the organization. The CEO will coordinate all aspects of launching and operating the CCA program, and building it into an innovative enterprise that benefits Alameda County residents and businesses. The CEO will have responsibility over the functional areas of power procurement and resource planning, internal operations, marketing and community affairs, finance, regulatory and legislative affairs. The CEO will utilize a combination of internal staff and contractor support as may be needed to perform the required functions of EBCE.

Essential Duties and Responsibilities

- Directs the daily operations of EBCE and supports the Board of Directors in setting the strategic direction of the Agency
- Plans, organizes, directs and evaluates the activities of Agency staff and the establishment of employment policies and procedures. Selects and trains professional and management staff; assigns and reviews work of department heads or other direct reports; establishes employee performance standards; trains and counsels employees; takes or approves disciplinary actions
- Negotiates and administers Agency contracts with energy service providers and other outside consultants or contractors

[1] EBCE service territory may expand in the future to include additional counties and cities.

- Plans and recommends program and policy direction for EBCE; directs the development of Agency operational and program policies; explains, advises and recommends action on policy matters to the Board of Directors and relevant Board committees; advises the Board of problems and potential problems, and recommends appropriate course of action
- Consults with and solicits the cooperation of the EBCE Community Advisory Committee and various business, labor, community groups and government agencies in assessing, identifying and analyzing energy program goals and objectives in Alameda County; develops responsive programs to meet those goals and objectives
- Develops agreements, methods and procedures to implement, administer and evaluate the EBCE's programs; oversees and directs regulatory compliance reviews and analyzes performance outcome measures to determine program effectiveness; develops process improvement plans and strategies to enhance service delivery; reviews project metrics and related records in order to assess the progress of key initiatives and to assure effectiveness and compliance.
- In coordination with the Board of Directors, general counsel and relevant committees of the Board, engages in developing strategic, operational, and power resource plans and policies, and implementing adopted plans and policies
- Analyzes the impact of newly-enacted State and Federal legislation and regulatory decisions on EBCE policies and operations; addresses legislative and regulatory bodies to influence or persuade them to take supportive actions related to protecting and advancing EBCE program goals; makes recommendations and decisions regarding EBCE legislative and regulatory positions; tracks, reviews and critiques CPUC proceedings, rulemakings and proposed legislation, initiates studies of technical problems and recommends necessary actions.
- Prepares and administers an annual operating budget anticipated to be in excess of $500M; establishes, revises and maintains Agency fiscal policies including operating reserves and debt/credit limits; negotiates and monitors Agency debt and works with Treasurer and Finance Director to oversee financing of Agency operations and projects, establishment of accounting systems and procedures to efficiently and accurately monitor income sources and expenses, provide internal accounting controls and financial reports; oversees annual independent audit for EBCE.
- Develops and implements data and management information systems in order to track and analyze customer programs, customer relationship management, grid-related data systems, and performance measures
- Directs the preparation, review and approval of technical reports and proposals; researches, identifies, develops and negotiates public and private funding opportunities in order to support Agency goals and programs; identifies grant funding opportunities and submits grant applications for funding; issues directives related to fund distribution, and policy and procedural constraints of grant requirements
- Coordinates program planning with jurisdictions participating in EBCE, other relevant jurisdictions, federal funding agencies and community and business groups; stays abreast of community, social, and political issues and their relevance to and impact upon EBCE's programs;
- Directs the development of a public affairs program to inform the public about operations, services, programs, goals and objectives; provides consultation to individuals, citizen groups, business organizations, consultants and governmental agencies on all matters related to Authority operations

- Represents EBCE at governmental hearings, in front of administrative bodies, and at public meetings
- Performs related duties as assigned by the Board of Directors

Minimum Qualifications

- Strong leadership, decision-making and executive level management skills; must be knowledgeable of the energy process, California energy market, and the role and function of a community choice energy program.
- Ability to design and implement programs that enhance the EBCE jurisdiction's economic and environmental health, including local renewable energy facilities, local energy programs, energy efficiency and demand management programs, and adoption of cost-effective energy technologies.
- Experience tracking, engaging in and responding to community and industry developments, anticipating and addressing challenges, and seizing emerging opportunities.
- Experience building and managing a multidisciplinary team of staff and contractors with expertise in the operational aspects of power procurement and power planning, regulatory and legislative affairs, the economics of retail and wholesale electricity markets, renewable power development, emerging technological advances in the energy industry, and state and federal compliance requirements and procedures.
- Experience working with external stakeholder groups including labor unions, energy services and power suppliers, local advocacy organizations, the California Public Utilities Commission (CPUC) and investor owned utilities, including but not limited to Pacific Gas & Electric Co.
- A continual record of career advancement with quantifiable successes that include executive management of multiple functions within a utility or related organization and a track record of successful board management and relationships.

Education

Any combination of educational course work and training, which would provide the necessary knowledge and abilities for the position such as: degree from accredited university with emphasis in energy, environment, engineering, natural sciences, public administration, public policy, business administration, economics, finance or a closely related field. A Master's Degree is desirable but not required commensurate with experience.

Experience

Any combination of experience and training that complement and expand competencies beyond educational credentials such as ten years of full-time administration/senior management experience supervising professional staff engaged in energy-related fields, including specific experience in financial, program and organizational operations, analysis and planning. Experience launching and managing a complex organization with a 12-member Board of Directors, 25-50 employees, and an annual budget approximating $500M is highly desirable.

Knowledge Of:

- Energy principles, California energy market functions, and electric generation procurement, development and service delivery functions
- Current issues in demand-side management, renewable energy, climate change, and energy policy
- Municipal operations and public agency protocols including board and governance management, public procurement procedures, and the Brown Act
- Programs, functions and operations of investor-owned utilities, California Independent System Operator, California Energy Commission, California Air Resources Board, and the California Public Utility Commission

Ability To:

- Lead long-range strategic and fiscal planning for Agency development and program design process, including needs assessments, project design, proposal development, budgeting, marketing strategy, customer relations evaluation components of each
- Identify and direct grant opportunities and negotiate complex contracts
- Prepare, administer, and monitor program budgets to meet contractual and statutory requirements
- Provide program management guidance for staff and the public
- Assure compliance with program goals, policies and procedures and lead a continuous improvement process
- Develop risk management policies and contingency plans to address changing program needs
- Coordinate the preparation of professional reports as required by the EBCE Board, funding agencies and other interested parties
- Handle multiple projects simultaneously within stringent time constraints
- Manage staff and contractors to ensure that deliverables are received within contracted time, quality, quantity and cost requirements
- Exercise discretion and independent judgment
- Maintain a good working relationship with members of the Board and Committees, EBCE staff, external stakeholders, contractors and clients

Compensation

This CEO will be retained by EBCE as an independent contractor until EBCE has established permanent employee benefits and polices. At that time, estimated to be within 6-8 months of the initial contract, the position will convert to a full-time salaried employee of the Agency. Salary for this position is negotiable depending upon an individual's qualifications and experience. A competitive benefits package will also be offered and made available after the independent contractor is converted to an employee of the EBCE.

How To Apply:

The materials listed below must be electronically submitted in PDF format to _____ . All applicants must submit required materials no later than _____ .

1. Current Resume

2. Cover letter with responses to the following topics:

- A summary of your qualifications, specifically your executive leadership, budget/finance, governance and personnel management, and energy market or utility experience
- A description of your experience establishing, growing and leading an organization with regional impact
- An example of a time when you successfully managed competing political interests among parties, including the skills and techniques you utilized, and the outcome.
- An example of a complex contract negotiation that you were directly involved in and its outcome

3. Three professional references

All applicants must submit the above referenced materials no later than 5:00 p.m. on _____, 2017 to:

The East Bay Community Energy Authority
c/o Alameda County Community Development Agency
Attention: Lucy Romo
224 W. Winton Avenue, Rm 110
Hayward, CA 94544

For questions or more information about this position, please contact XX at (510)… For questions regarding the application and selection process, you may contact XX, at (510) or by e-mail at XXX

Staff Report Item 8

TO: East Bay Community Energy Board of Directors

FROM: Bruce Jensen, Alameda County Community Development Agency (CDA)

SUBJECT: Action Item – Local Development Business Plan (LDBP) – Recommendation of the County Selection Committee (CSC) to award contract to ALH Urban and Regional Economics

DATE: March 1, 2017

Staff Recommendation

- That the EBCE Board of Directors recommend ALH Urban and Regional Economics as the vendor to receive the contract for the LDBP analysis. The ALH vendor application packet is attached (Attachment 8).

Discussion

Local Development Business Plan (LDBP) Bid Status

The Board will recall from last month that County Staff had initiated the procurement process for the LDBP vendor teams. Staff received bids from five (5) qualified vendors, and assembled a County Selection Committee (CSC) consisting of four interested persons.

The CSC interviewed the following qualified bidder teams:

- ALH Urban and Regional Economics
- Raimi & Associates
- Strategen Consulting
- Energy Resources Integration (ERI)
- DNV-GL (KEMA, Inc.)

Of these, ALH Urban and Regional Economics was the clear highest scorer of the interview process, and is the vendor selected to carry the LDBP analysis forward. The ALH proposal brought together a team of five exceptionally well qualified experts in the field of DER assessment (both grid and customer side), energy policy development and analysis, as well as a firm dedicated to community outreach and stakeholder engagement. The budget proposed ($485,000) is reasonable and within the amount budgeted for this exercise, and their references were exemplary of a highly qualified candidate.

The Board will recall that the goal is to have this document completed by October 30, 2017. The Board of Supervisors may be able to approve this contract as early as March 14th, 2017 and get the process underway. The LDBP Vendor would be expected to work concurrently with the analysts selected through the Multiservices RFP Contract process after the bid protest process has concluded.

/Attachment: Attachment 8 - ALH Vendor Application Packet

ALH | ECON

ALH Urban & Regional Economics

A Proposal for Alameda County and East Bay Community Energy: Local Development Business Plan

Alameda County Community Development Agency
RFP # 16-CCA-02

February 1, 2017

Regarding This Proposal:
This proposal is submitted by ALH Urban and Regional Economics for Alameda County's RFP #16-CCA-02, and it is valid for 90 days.

ALH | ECON

ALH Urban & Regional Economics

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SECTION 2: LETTER OF TRANSMITTAL

Attn: Mr. Bruce Jensen, Senior Planner
Alameda County Planning Department
224 W. Winton Avenue, Room 111
Hayward, California 94544
Cc: Review and Selection Committee (for RFP #16-CCA-02)

ALH Economics
2239 Oregon Street
Berkeley, California 94705
aherman@alhecon.com
510.704.1599

Re: Preparation of a Local Development Business Plan (LDBP) for East Bay Community Energy

Dear Mr. Jensen:

The success of East Bay Community Energy (EBCE) will be determined by its program design and implementation. We commend EBCE for aspiring to achieve a "platinum-rated" Community Choice Aggregation (CCA) in Alameda County, and we understand the challenges and opportunities that lie ahead for EBCE. Our community desires to accelerate the reduction of greenhouse gas emissions while increasing investment in local clean energy, stimulating an equitable green economy, and creating good jobs. As it strives to deliver these benefits, EBCE will be in ongoing competition with Pacific Gas and Electric to deliver competitive rates while adhering to stringent state policy mandates.

A Local Development Business Plan (LDBP) will help EBCE determine how to best secure and allocate resources to deliver on these aspirational objectives. In addition, the LDBP we propose will go beyond identifying tradeoffs to determine an optimal phased rollout of beneficial local energy programs over a long-term time horizon based on smart scenario planning. Internal policies will shape how EBCE procures power, provides value-added services to its customers, and how it creates opportunities for local businesses and residents. A comprehensive, innovative and strategic LDBP will help EBCE deliver on those promises, and our proposed project is designed to provide the insights needed to take full advantage of the many unique features and capabilities of the CCA mechanism and unlock the program's true potential.

ALH Urban & Regional Economics ("ALH Economics") is pleased to submit this proposal to prepare a Local Development Business Plan for Alameda County's East Bay Community Energy program. The ALH Economics Project Team is uniquely qualified to provide top caliber comprehensive, inter-disciplinary services requested in RFP #16-CCA-02. Each member of our Project Team is a respected leader within their field of practice and was selected specifically for their leading expertise on specific tasks.

The following proposal contains the requested information, detailing our Project Team's proposed economic, business, and energy planning services in response to the RFP. Our position is that only our integrated, interdisciplinary team can provide the exhaustive research and modeling needed to realize the County's vision for the EBCE LDBP. Nearly all key staff for this project live and work in the Bay Area or Alameda County proper, and we are leaders in clean energy economic development in this region. We know you take great pride in the region that EBCE will serve, and we share the desire to create an LDBP that incorporates the wealth of resources available locally, especially the human capital embodied in the innovative and dedicated hands and minds of Alameda County's diverse population.

PROJECT TEAM

Ms. Amy L. Herman, Principal of ALH Economics, has been a practicing urban and regional economist for approximately 35 years. She has strong and longstanding experience conducting economic impact studies for a wide range of complex projects in the built environment. Previous economic impact studies conducted by Ms. Herman include studies for world-renowned laboratories, arts districts and museums, sports and recreational facilities, and other unprecedented urban development projects such as the EBCE LDBP. Ms. Herman and her team of experienced consultants further provide financial feasibility, due diligence financial modeling, and fiscal impact analysis for a number of large-scale urban development projects throughout the San Francisco Bay Area region, such as redevelopment of the

Concord Naval Weapons Station, Candlestick Point, and Hunters Point Shipyard, providing these services for many years as well as ongoing.

The world-class Project Team assembled for this proposal, including consulting firms, nonprofit partners, and two project advisors are presented below:

(1) **ALH Urban and Regional Economics** (prime): Lead the Project Team, serve as primary point of contact for EBCE, directly manage financial and economic modeling and delivery of the LDBP.

(2) **The Offset Project** (nonprofit partner): Project management and coordination of integral stakeholder engagement activities.

(3) **The Clean Coalition** (nonprofit partner): Grid-side DER assessment, utility planning, tariff design.

(4) **EcoShift** (consultant): Customer-side DER assessment, overall scenario modelling and sensitivities.

(5) **Optony Inc.** (consultant): Energy and policy analysis, integrated resource planning.

An organizational chart showing Team ties responsibilities and communication roles with outside stakeholder groups is provided in Section 4: Key Personnel. The project will also benefit from two advisors: **Betony Jones**, labor and workforce specialist, will provide guidance on labor relations, proof and review work products relating to workforce issues and economic impact. **Gary Calderon**, energy storage and demand response (DR) specialist, will provide guidance on storage and DR strategies, and will review related work products.

PROJECT APPROACH

A fundamental element of our proposed approach is community outreach and stakeholder engagement, which is embedded in each of the seven project tasks. To provide the full measure of benefits to EBCE and the community it serves, the LDBP will be built on a solid foundation of community involvement, and this requires a robust stakeholder engagement process from top to bottom. Therefore, our project relies upon the tried and true strategy of a) securing input and feedback from stakeholder groups with survey instruments and direct engagement, and b) developing and disseminating targeted informational materials and workshops designed to address critical stakeholder feedback and provide crucial insights into the LDBP to the community.

The Project Team will incorporate this approach throughout each step of the project, providing meaningful opportunities to engage in the LDBP development process to the widest range of stakeholders possible, and we will work with EBCE to develop and refine a list of stakeholders for each task. That list will include stakeholders such as organized labor and workforce development groups, vocational and higher education providers, community organizations, municipal planning and public works departments, local business organizations and associations, clean energy technology and service providers, residents, and the incumbent utility. By engaging these stakeholders and others throughout the process we can ensure that the Business Plan we put forth will be one that provides the maximum value and benefit to the community served by the EBCE CCA program.

A primary goal of the project is to implement a streamlined stakeholder participation model and decision flow process that identifies and addresses regulatory barriers and other issues such as land leasing and/or acquisition strategies for project development, siting and environmental permitting, interconnection and right-of-way conflicts. Our project will include stakeholder surveys, focus groups and workshops and other community engagement activities that allow for a bidirectional flow of knowledge and insight, which is particularly important in a diverse and engaged community like Alameda County. Our Project Team includes individuals with deep connections to this community, who understand local businesses and residents, the County's sustainability and economic development initiatives, and impressive track record of success with clean energy projects in the community.

The project's rigorous assessments of local clean energy resources has a strong focus on opportunities to deploy new generation capacity within the EBCE service territory using clean, renewable technologies

such as solar photovoltaic, fuel cell, wind energy and biogas conversion. Our project will highlight opportunities for deploying advanced, dispatchable energy technologies, such as grid-enabled EV charging, energy storage, and microgrids, which open up new opportunities for CCA revenue and risk mitigation strategies using demand response and virtual power plant capabilities. Our Project Team has unsurpassed qualifications to assist EBCE in understanding these local opportunities, and quantifying the benefits they present to the CCA business model and the Alameda County community.

The Project Team will provide a quantitative analysis of the estimated costs and benefits for select representative supply scenarios. Key evaluation criteria will be identified, and ratepayer costs and benefits will be evaluated based on energy rates paid by consumers under CCA service versus PG&E service costs. This will include consideration of a phase-in strategy for the CCA customer base, as well as changes in PG&E's operations. Pro forma analysis will be prepared to analyze supply scenarios, taking into consideration all key variables and assumptions, such as: customer account projections; estimated load requirements; estimated CCA operating costs; comparative revenue projections; reserve contributions; customer surcharges; and change in customer charges. The specific cost and revenue categories to be included in the pro format analysis will be structured to build upon the results and findings of the existing CCA Technical Study.

All scenarios defined for the LDBP will be evaluated in terms of their potential impacts to the EBCE CCA's Cost of Service, providing actionable insights regarding their relative costs and benefits. This feasibility analysis will be prepared for the requested time period, reflecting at least a 10-year time period. The results will provide comparative findings regarding ratepayer costs and savings pursuant to the representative supply scenarios. A sensitivity analysis will also be prepared, examining the impacts of potential changes in select cost and revenue variables. Our project will also incorporate a robust economic impact analysis component to help EBCE understand the potential benefits to the local economy, including job creation and retention, cost savings, new investments in local clean energy development, and the related economic multipliers. This will be accomplished through our industry-leading approach, which will incorporate a dual input-output economic impact model approach that utilizes 1) a customized IMPLAN model, and 2) the DOE JEDI model. This unique approach will enhance the accuracy of economic impact assessment, and will yield far more actionable insights into how the LDBP can benefit the Alameda County economy.

The final LDBP document and supporting work products will be reviewed for best practices in labor and workforce development by Ms. Betony Jones, who is the Associate Director of the UC Berkeley Labor Center's Climate and Green Economy Program. The LDBP will also benefit from expert review with respect to a long-range energy storage, demand response and microgrid technology roadmap provided by Mr. Gary Calderon former Principal Consultant with DNV-GL Energy Advisory, and Co-founder and VP of Fremont-based microgrid and EV integration innovator Gridscape Solutions.

Thank you very much for the opportunity to submit this proposal. Our Project Team believes that this project is an exciting opportunity to demonstrate the true value and potential for Community Choice Aggregation to benefit the greater Alameda County community, and we would be thrilled to lend our insights and expertise to this important effort. We welcome any questions or requests for additional information you may have. I can be reached at 510-704-1599 or aherman@alhecon.com.

Sincerely,

Amy L. Herman- Principal, ALH Economics

SECTION 3: BIDDER RESPONSE PACKET

EXHIBIT A
BID RESPONSE PACKET

RFP No. 16-CCA-2:
Alameda County Community Choice Aggregation / East Bay Community Energy: Local Development Business Plan

To: The County of Alameda

From: ALH Urban and Regional Economics
(Official Name of Bidder)

- **AS DESCRIBED IN THE SUBMITTAL OF BIDS SECTION OF THIS RFP, BIDDERS ARE TO SUBMIT ONE ORIGINAL HARDCOPY BID (EXHIBIT A – BID RESPONSE PACKET), INCLUDING ADDITIONAL REQUIRED DOCUMENTATION), WITH ORIGINAL INK SIGNATURES, PLUS TEN (10) COPIES AND ONE ELECTRONIC COPY OF THE BID IN PDF (with OCR preferred)**

- **ALL PAGES OF THE BID RESPONSE PACKET (EXHIBIT A) MUST BE SUBMITTED IN TOTAL WITH ALL REQUIRED DOCUMENTS ATTACHED THERETO; ALL INFORMATION REQUESTED MUST BE SUPPLIED; ANY PAGES OF EXHIBIT A (OR ITEMS THEREIN) NOT APPLICABLE TO THE BIDDER MUST STILL BE SUBMITTED AS PART OF A COMPLETE BID RESPONSE, WITH SUCH PAGES OR ITEMS CLEARLY MARKED "N/A"**

- **BIDDERS SHALL NOT SUBMIT TO THE COUNTY A RE-TYPED, WORD-PROCESSED, OR OTHERWISE RECREATED VERSION OF EXHIBIT A – BID RESPONSE PACKET OR ANY OTHER COUNTY-PROVIDED DOCUMENT**

- **ALL PRICES AND NOTATIONS MUST BE PRINTED IN INK OR TYPEWRITTEN; NO ERASURES ARE PERMITTED; ERRORS MAY BE CROSSED OUT AND CORRECTIONS PRINTED IN INK OR TYPEWRITTEN ADJACENT, AND MUST BE INITIALED IN INK BY PERSON SIGNING BID**

- **BIDDER MUST QUOTE PRICE(S) AS SPECIFIED IN RFP.**

- **BIDDERS THAT DO NOT COMPLY WITH THE REQUIREMENTS, AND/OR SUBMIT INCOMPLETE BID PACKAGES, SHALL BE SUBJECT TO DISQUALIFICATION AND THEIR BIDS REJECTED IN TOTAL**

- **IF BIDDERS ARE MAKING ANY CLARIFICATIONS AND/OR AMENDMENTS, OR TAKING EXCEPTION TO POLICIES OR SPECIFICATIONS OF THIS RFP, INCLUDING THOSE TO THE COUNTY SLEB POLICY, THESE MUST BE SUBMITTED IN THE EXCEPTIONS, CLARIFICATIONS, AMENDMENTS SECTION OF THIS EXHIBIT A – BID RESPONSE PACKET IN ORDER FOR THE BID RESPONSE TO BE CONSIDERED COMPLETE**

BIDDER INFORMATION AND ACCEPTANCE

1. The undersigned declares that the Bid Documents, including, without limitation, the RFP, Addenda, and Exhibits have been read.
2. The undersigned is authorized, offers, and agrees to furnish the articles and/or services specified in accordance with the Specifications, Terms & Conditions of the Bid Documents of RFP No. 16-CCA-2 - Alameda County Community Choice Aggregation / East Bay Community Energy: Local Development Business Plan.
3. .The undersigned has reviewed the Bid Documents and fully understands the requirements in this Bid including, but not limited to, the requirements under the County Provisions, and that each Bidder who is awarded a contract shall be, in fact, a prime Contractor, not a subcontractor, to County, and agrees that its Bid, if accepted by County, will be the basis for the Bidder to enter into a contract with County in accordance with the intent of the Bid Documents.
4. The undersigned acknowledges receipt and acceptance of all addenda.
5. The undersigned agrees to the following terms, conditions, certifications, and requirements found on the County's website:

   - **Debarment / Suspension Policy**
     [http://www.acgov.org/gsa/departments/purchasing/policy/debar.htm]
   - **Iran Contracting Act (ICA) of 2010**
     [http://www.acgov.org/gsa/departments/purchasing/policy/ica.htm]
   - **General Environmental Requirements**
     [http://www.acgov.org/gsa/departments/purchasing/policy/environ.htm]
   - **Small Local Emerging Business Program**
     [http://acgov.org/auditor/sleb/overview.htm]
   - **First Source**
     [http://acgov.org/auditor/sleb/sourceProgram.htm]
   - **Online Contract Compliance System**
     [http://acgov.org/auditor/sleb/elation.htm]
   - **General Requirements**
     [http://www.acgov.org/gsa/departments/purchasing/policy/genreqs.htm]
   - **Proprietary and Confidential Information**
     [http://www.acgov.org/gsa/departments/purchasing/policy/proprietary.htm]

6. The undersigned acknowledges that Bidder will be in good standing in the State of California, with all the necessary licenses, permits, certifications, approvals, and authorizations necessary to perform all obligations in connection with this RFP and associated Bid Documents.
7. It is the responsibility of each bidder to be familiar with all of the specifications, terms and conditions and, if applicable, the site condition. By the submission of a Bid, the Bidder certifies that if awarded a contract they will make no claim against the County based upon ignorance of conditions or misunderstanding of the specifications.

8. Patent indemnity: Vendors who do business with the County shall hold the County of Alameda, its officers, agents and employees, harmless from liability of an nature or kind, including cost and expenses, for infringement or use of any patent, copyright or other proprietary right, secret process, patented or unpatented invention, article or appliance furnished or used in connection with the contract or purchase order.

9. Insurance certificates are not required at the time of submission. However, by signing Exhibit A – Bid Response Packet, the Contractor agrees to meet the minimum insurance requirements stated in the RFP. This documentation must be provided to the County, prior to award, and shall include an insurance certificate and additional insured certificate, naming the County of Alameda, which meets the minimum insurance requirements, as stated in the RFP.

10. The undersigned acknowledges ***ONE*** of the following (please check only one box):

- ☐ Bidder is not local to Alameda County and is ineligible for any bid preference; **OR**
- ☑ Bidder is a certified SLEB and is requesting 10% bid preference; (Bidder must check the first box and provide its SLEB Certification Number in the SLEB PARTNERING INFORMATION SHEET); **OR**
- ☐ Bidder is LOCAL to Alameda County and is requesting 5% bid preference, and has attached the following documentation to this Exhibit:
  - Copy of a verifiable business license, issued by the County of Alameda or a City within the County; and
  - Proof of six months business residency, identifying the name of the vendor and the local address. Utility bills, deed of trusts or lease agreements, etc., are acceptable verification documents to prove residency.

Official Name of Bidder: ALH Urban and Regional Economics

Street Address Line 1: 2239 Oregon Street

Street Address Line 2:

City: Berkeley State: CA Zip Code: 94705

Webpage: none

Type of Entity / Organizational Structure (check one):

- ☐ Corporation
- ☐ Limited Liability Partnership
- ☐ Limited Liability Corporation
- ☑ Other: Sole Proprietorship
- ☐ Joint Venture
- ☐ Partnership
- ☐ Non-Profit / Church

Jurisdiction of Organization Structure: Alameda County, California

Date of Organization Structure: dba, formed 6/11

Federal Tax Identification Number: 283-44-0632

Primary Contact Information:

Name / Title: Amy L. Herman/ Principal

Telephone Number: 510-704-1599 Fax Number: none

E-mail Address: Aherman@alhecon.com

SIGNATURE: Amy L Herman

Name and Title of Signer: Amy L. Herman, Principal

Dated this 31 day of January 2017

BID FORM(S)

Respondents are not required to use the Bid Form in Attachment A for their proposed budget(s). **However, budgets should include all the relevant cost components for each of the service categories outlined in the RFP.** The cost quoted below shall include all taxes and all other charges, including travel expenses, and is the cost the County will pay for the three-year term of any contract that is a result of this bid.

Bidder hereby certifies to County that all representations, certifications, and statements made by Bidder, as set forth in this Bid Form and attachments are true and correct and are made under penalty of perjury pursuant to the laws of California.

Bid responses that do not comply will be subject to rejection in total.

Sample Bid Form for professional services:

	Company A		Subcontractor		
Description of Tasks/Activities	**Employee Name & Role (Hours)**	**Subtotal (Cost of all employees)**	**Employee Name & Role (Hours)**	**Subtotal**	**Total**
Task 1. Grid-Side DER Analysis	2	$ 200			$
Task 2. Cust-Side DER/ EE Analysis	3	$ 300			$
Task 3. Development Models / Strats	2	$ 200			$
Task 4. EBCE Development Issues	5	$ 500			
Task 5. Imp'n/ Other Policy Issues	4	$ 400			
Task 6. Integrated Resource Planning	10	$1,000			
Task 7. Preliminary Plan Scenarios	4	$ 400			
Total Hours	40	$ 4,000			$
Billing rates	$100		$		
Sub total	$4,000	$ 4,000	$		$
Direct Expenses	$		$		
GRAND TOTAL	$		$		$

REQUIRED DOCUMENTATION AND SUBMITTALS

All of the specific documentation listed below is required to be submitted with the Exhibit A – Bid Response Packet in order for a bid to be deemed complete. Bidders shall submit all documentation, in the order listed below and clearly label each section with the appropriate title (i.e. Table of Contents, Letter of Transmittal, Key Personnel, etc.).

☑ 1. **Table of Contents:** Bid responses shall include a table of contents listing the individual sections of the proposal/quotation and their corresponding page numbers. Tabs should separate each of the individual sections.

☑ 2. **Letter of Transmittal:** Bid responses shall include a description of Bidder's capabilities and approach in providing its services to the County, and provide a brief synopsis of the highlights of the Proposal and overall benefits of the Proposal to the County. This synopsis should not exceed three pages in length and should be easily understood.

3. **Exhibit A – Bid Response Packet:** Every bidder must fill out and submit the complete Exhibit A – Bid Response Packet.

☑ **(a) Bidder Information and Acceptance:**

(1) Every Bidder must select one choice under Item 10 of page 3 of Exhibit A and must fill out, submit a signed page 4 of Exhibit A.

☑ **(b) SLEB Partnering Information Sheet:**

(1) Every bidder must fill out and submit a signed SLEB Partnering Information Sheet, (found on page 11 of Exhibit A) indicating their SLEB certification status. If bidder is not certified, the name, identification information, and goods/services to be provided by the named CERTIFIED SLEB partner(s) with whom the bidder will subcontract to meet the County SLEB participation requirement must be stated. Any CERTIFIED SLEB subcontractor(s) named, the Exhibit must be signed by the CERTIFIED SLEB(s) according to the instructions. All named SLEB subcontractor(s) must be certified by the time of bid submittal.

☑ **(c) References:**

(1) Bidders must use the templates on pages 12 & 13 of this Exhibit A – Bid Response Packet to provide references.

(2) Bidders are to provide a list of current and former clients. References must be satisfactory as deemed solely by County. References should have similar scope, volume and requirements to those outlined in these specifications, terms and conditions.

- Bidders must verify the contact information for all references provided is current and valid.
- Bidders are strongly encouraged to notify all references that the County may be contacting them to obtain a reference.

☑ (3) The County may contact some or all of the references provided in order to determine Bidder's performance record on work similar to that described in this request. The County reserves the right to contact references other

than those provided in the Response and to use the information gained from them in the evaluation process.

☑ **(d) Exceptions, Clarifications, Amendments:**

(1) This shall include clarifications, exceptions and amendments, if any, to the RFP and associated Bid Documents, and shall be submitted with your bid response using the template on page 14 of this Exhibit A – Bid Response Packet.

(2) **THE COUNTY IS UNDER NO OBLIGATION TO ACCEPT ANY EXCEPTIONS, AND SUCH EXCEPTIONS MAY BE A BASIS FOR BID DISQUALIFICATION.**

☑ 4. **Key Personnel**: Bid responses shall include a complete list of all key personnel associated with the RFP. This list must include all key personnel who will provide services/training to County staff and all key personnel who will provide maintenance and support services. For each person on the list, the following information shall be included:

(a) The person's relationship with Bidder, including job title and years of employment with Bidder;
(b) The role that the person will play in connection with the RFP;
(c) Address, telephone, fax numbers, and e-mail address;
(d) Person's educational background; and
(e) Person's relevant experience, certifications, and/or merits.

☑ 5. **Description of the Proposed Services**: Bid response shall include a description of the terms and conditions of services to be provided during the contract term including response times. The description shall contain a basis of estimate for services including its scheduled start and completion dates, the number of Bidder's and County personnel involved, and the number of hours scheduled for such personnel. Finally, the description must: (1) specify how the services in the bid response will meet or exceed the requirements of the County; (2) explain any special resources, procedures or approaches that make the services of Bidder particularly advantageous to the County; and (3) identify any limitations or restrictions of Bidder in providing the services that the County should be aware of in evaluating its Response to this RFP.

☑ 6. **Implementation Plan and Schedule**: The bid response shall include an implementation plan and schedule. In addition, the plan shall include a detailed schedule indicating how Bidder will ensure adherence to the timetables set forth herein for the services.

☑ 7. **Credentials**: Copies of any licenses, certifications, or other third party verification of credentials stated as BIDDER QUALIFICATIONS in the RFP must be submitted with the bid response; Documents must be clearly identified as to which requirement they are responsive.

☑ 8. **Performance Bond/ Performance Requirements:** N/A.

SMALL LOCAL EMERGING BUSINESS (SLEB)
PARTNERING INFORMATION SHEET

RFP No. 16-CCA-2
Alameda County Community Choice Aggregation /
East Bay Community Energy: Local Development Business Plan

In order to meet the Small Local Emerging Business (SLEB) requirements of this RFP, all bidders must complete this form as required below.

Bidders not meeting the definition of a SLEB (http://acgov.org/auditor/sleb/overview.htm) are required to subcontract with a SLEB for at least 20% of the total estimated bid amount in order to be considered for contract award. SLEB subcontractors must be independently owned and operated from the prime Contractor with no employees of either entity working for the other. This form must be submitted for each business that bidders will work with, as evidence of a firm contractual commitment to meeting the SLEB participation goal. (Copy this form as needed.)

Bidders are encouraged to form a partnership with a SLEB that can participate directly with this contract. One of the benefits of the partnership will be economic, but this partnership will also assist the SLEB to grow and build the capacity to eventually bid as a prime on their own.

Once a contract has been awarded, bidders will not be able to substitute named subcontractors without prior written approval from the Auditor-Controller, Office of Contract Compliance (OCC).

County departments and the OCC will use the web-based Elation Systems to monitor contract compliance with the SLEB program (Elation Systems: http://www.elationsys.com/elationsys/).

☑ **BIDDER IS A CERTIFIED SLEB (sign at bottom of page)**

SLEB BIDDER Business Name: ALH Urban and Regional Economics

SLEB Certification #: 12-00134 **SLEB Certification Expiration Date:** 9/30/17

NAICS Codes Included in Certification: 531390, 541690, 541720

☐ **BIDDER IS NOT A CERTIFIED SLEB AND WILL SUBCONTRACT % WITH THE SLEB NAMED BELOW FOR THE FOLLOWING GOODS/SERVICES:** _____

SLEB Subcontractor Business Name: _____

SLEB Certification #: _____ **SLEB Certification Expiration Date:** _____

SLEB Certification Status: ☐ **Small /** ☐ **Emerging**

NAICS Codes Included in Certification: _____

SLEB Subcontractor Principal Name: _____

SLEB Subcontractor Principal Signature: _____ **Date:** _____

Upon award, prime Contractor and all SLEB subcontractors that receive contracts as a result of this bid process agree to register and use the secure web-based ELATION SYSTEMS. ELATION SYSTEMS will be used to submit SLEB subcontractor participation including, but not limited to, subcontractor contract amounts, payments made, and confirmation of payments received.

Bidder Printed Name/Title: Amy L Herman / Principal

Street Address: 2239 Oregon Street City Berkeley State CA Zip Code 94705

Bidder Signature: Amy L Herman Date: 1/31/17

CURRENT REFERENCES

RFP No. 16-CCA-2

Alameda County Community Choice Aggregation /
East Bay Community Energy: Local Development Business Plan

Bidder Name: ALH Urban and Regional Economics

Company Name: County of Alameda Community Development Agency	**Contact Person:** Eileen Dalton, Director
Address: 224 W. Winton Avenue, Room 110	**Telephone Number:** 510.670.6509
City, State, Zip: Hayward, CA 94544	**E-mail Address:** Eileen.Dalton@acgov.org
Services Provided / Date(s) of Service: Surplus Site Disposition Assistance, including developer solicitation, developer evaluation, due diligence analysis, pro forma review, and retail site analysis / June 2015 - present	

Company Name: Office of Community Investment and Infrastructure (formerly the San Francisco Redevelopment Agency)	**Contact Person:** Sally Oerth, Deputy Director
Address: One South Van Ness Avenue, 5th Floor	**Telephone Number:** 415.749.2580
City, State, Zip: San Francisco, CA 94103	**E-mail Address:** Sally.Oerth@sfgov.org
Services Provided / Date(s) of Service: Real Estate Financial Advisory Services, Candlestick Point and Hunters Shipyard Phase 2/ September 2016 to present	

Company Name: City of Concord, Local Reuse Authority	**Contact Person:** Guy Bjerke, Director of Community Reuse Planning
Address: 1950 Parkside Drive, M/S 56	**Telephone Number:** 925.671.3076
City, State, Zip: Concord, CA 94519	**E-mail Address:** Guy.Bjerke@cityofconcord.org
Services Provided / Date(s) of Service: Pro Forma Modeling, Master Developer Evaluation, Fiscal Impact Analysis of Concord Reuse Project Area Plan for the former Concord Naval Weapons Station (CNWS) / 2009 – Present	

FORMER REFERENCES

RFP No. 16-CCA-2

Alameda County Community Choice Aggregation /
East Bay Community Energy: Local Development Business Plan

Bidder Name: ALH Urban and Regional Economics

Company Name: Hospital Council of Northern and Central California	**Contact Person:** Jo Coffaro, Regional Vice President of the South Bay
Address: 360 Dardanelli Lane, Suite 1B	**Telephone Number:** 408.412.8882
City, State, Zip: Los Gatos, CA 95032	**E-mail Address:** jcoffaro@hospitalcouncil.net
Services Provided / Date(s) of Service: Economic Impact Analysis of Santa Clara County Hospitals, 2012; Economic Impact Analysis of Monterey Area Hospitals, 2014	

Company Name: Bay Area Rapid Transit District	**Contact Person:** Abigail Thorne-Lyman Manager of Planning, BART Planning, Development & Construction
Address: 300 Lakeside Drive, 22nd Floor	**Telephone Number:** 510.464.6140
City, State, Zip: Oakland, CA 94612	**E-mail Address:** athorne@bart.gov
Services Provided / Date(s) of Service: Economic Impact Analysis of BART's Operations / September 2014 – November 2015	

Company Name: University of California, Riverside	**Contact Person:** Virginia Odien, Strategic Communications
Address: 1156 Hinderaker Hall	**Telephone Number:** 951.827-5185
City, State, Zip: Riverside, CA 92521	**E-mail Address:** Virginia.Odien@ucr.edu
Services Provided / Date(s) of Service: University of California at Riverside, Economic Impact Analysis/ 2010-2011	

EXCEPTIONS, CLARIFICATIONS, AMENDMENTS

RFP No. 16-CCA-2

Alameda County Community Choice Aggregation /
East Bay Community Energy: Local Development Business Plan

Bidder Name: ALH Urban and Regional Economics

List below requests for clarifications, exceptions and amendments, if any, to the RFP and associated Bid Documents, and submit with your bid response.

The County is under no obligation to accept any exceptions and such exceptions may be a basis for bid disqualification.

Reference to:			Description
Page No.	Section	Item No.	
p. 23	**D**	**1.c.**	***Vendor takes exception to...***
			No Exceptions

*Print additional pages as necessary

EXHIBIT B
INSURANCE REQUIREMENTS

Insurance certificates are not required at the time of submission; however, by signing Exhibit A – Bid Packet, the bidder agrees to meet the minimum insurance requirements stated in the RFP, prior to award. This documentation must be provided to the County, prior to award, and shall include an insurance certificate and additional insured certificate, naming the County of Alameda, which meets the minimum insurance requirements, as stated in this Exhibit B – Insurance Requirements.

The following page contains the minimum insurance limits, required by the County of Alameda, to be held by the Contractor performing on this RFP.

***** SEE NEXT PAGE FOR COUNTY OF ALAMEDA MINIMUM INSURANCE REQUIREMENTS *****

EXHIBIT C

COUNTY OF ALAMEDA MINIMUM INSURANCE REQUIREMENTS

Without limiting any other obligation or liability under this Agreement, the Contractor, at its sole cost and expense, shall secure and keep in force during the entire term of the Agreement or longer, as may be specified below, the following minimum insurance coverage, limits and endorsements:

	TYPE OF INSURANCE COVERAGES	MINIMUM LIMITS
A	**Commercial General Liability** Premises Liability; Products and Completed Operations; Contractual Liability; Personal Injury and Advertising Liability	$1,000,000 per occurrence (CSL) Bodily Injury and Property Damage
B	**Commercial or Business Automobile Liability** All owned vehicles, hired or leased vehicles, non-owned, borrowed and permissive uses. Personal Automobile Liability is acceptable for individual contractors with no transportation or hauling related activities	$1,000,000 per occurrence (CSL) Any Auto Bodily Injury and Property Damage
C	**Workers' Compensation (WC) and Employers Liability (EL)** Required for all contractors with employees	WC: Statutory Limits EL: $1,000,000 per accident for bodily injury or disease
D	**Endorsements and Conditions:** 1. **ADDITIONAL INSURED:** All insurance required above with the exception of Commercial or Business Automobile Liability, Workers' Compensation and Employers Liability, shall be endorsed to name as additional insured: County of Alameda, its Board of Supervisors, the individual members thereof, and all County officers, agents, employees, volunteers, and representatives. The Additional Insured endorsement shall be at least as broad as ISO Form Number CG 20 38 04 13. 2. **DURATION OF COVERAGE:** All required insurance shall be maintained during the entire term of the Agreement. In addition, insurance policies and coverage(s) written on a claims-made basis shall be maintained during the entire term of the Agreement and until 3 years following the later of termination of the Agreement and acceptance of all work provided under the Agreement, with the retroactive date of said insurance (as may be applicable) concurrent with the commencement of activities pursuant to this Agreement. 3. **REDUCTION OR LIMIT OF OBLIGATION:** All insurance policies, including excess and umbrella insurance policies, shall include an endorsement and be primary and non-contributory and will not seek contribution from any other insurance (or self-insurance) available to the County. The primary and non-contributory endorsement shall be at least as broad as ISO Form 20 01 04 13. Pursuant to the provisions of this Agreement insurance effected or procured by the Contractor shall not reduce or limit Contractor's contractual obligation to indemnify and defend the Indemnified Parties. 4. **INSURER FINANCIAL RATING:** Insurance shall be maintained through an insurer with a A.M. Best Rating of no less than A:VII or equivalent, shall be admitted to the State of California unless otherwise waived by Risk Management, and with deductible amounts acceptable to the County. Acceptance of Contractor's insurance by County shall not relieve or decrease the liability of Contractor hereunder. Any deductible or self-insured retention amount or other similar obligation under the policies shall be the sole responsibility of the Contractor. 5. **SUBCONTRACTORS:** Contractor shall include all subcontractors as an insured (covered party) under its policies or shall verify that the subcontractor, under its own policies and endorsements, has complied with the insurance requirements in this Agreement, including this Exhibit. The additional insured endorsement shall be at least as broad as ISO Form Number CG 20 38 04 13. 6. **JOINT VENTURES:** If Contractor is an association, partnership or other joint business venture, required insurance shall be provided by one of the following methods: – Separate insurance policies issued for each individual entity, with each entity included as a "Named Insured" (covered party), or at minimum named as an "Additional Insured" on the other's policies. Coverage shall be at least as broad as in the ISO Forms named above. – Joint insurance program with the association, partnership or other joint business venture included as a "Named Insured". 7. **CANCELLATION OF INSURANCE:** All insurance shall be required to provide thirty (30) days advance written notice to the County of cancellation. 8. **CERTIFICATE OF INSURANCE:** Before commencing operations under this Agreement, Contractor shall provide Certificate(s) of Insurance and applicable insurance endorsements, in form and satisfactory to County, evidencing that all required insurance coverage is in effect. The County reserves the rights to require the Contractor to provide complete, certified copies of all required insurance policies. The required certificate(s) and endorsements must be sent as set forth in the Notices provision.	

ALH Urban & Regional Economics

2239 Oregon Street
Berkeley, CA 94705
510-704-1599

February 1, 2017

Mr. Bruce Jensen, Senior Planner
Alameda County Planning Department
224 W. Winton Avenue, Room 111
Hayward, California 94544

Re: ALH Urban and Regional Economics City of Berkeley Business License

Dear Mr. Jensen:

Below please find a copy of the most recent Business License issued by the City of Berkeley for ALH Urban and Regional Economics. This license is effective through December 31, 2016. On December 30, 2016, ALH Economics made payment to the City of Berkeley for a 2017 business license (check number 1641). Payment was made at this time as the cost of the license is dependent upon gross revenues for the prior year. In all the years I have done business in the City of Berkeley the City always sends the new business license well into the new year. For example, I do not expect to receive my license for 2017 until approximately March. This is just how the City of Berkeley operates. Please note, however, that I have made payment and completed and submitted the required forms for business license renewal.

Thank you for your consideration.

Sincerely,

ALH Urban & Regional Economics

Amy L. Herman
Principal

City of Berkeley, California **2016** **BUSINESS LICENSE**

This license must be conspicuously posted. Business owner is responsible for renewing this Business License by 28th of February each year.

Business Type	URBAN AND REGIONAL ECONOMIC CO
Location	2239 OREGON ST

HERMAN AMY
AMY HERMAN
2239 OREGON ST
BERKELEY CA 94705

License Number
BL-050583

Expires On
12/31/16

Nbr of Tags:

This license is issued without verification that the license is subject to an exemption from licensing by the state. It shall not be construed as authorizing the conduct or continuance of any illegal or unlawful business.

EAST BAY MUNICIPAL UTILITY DISTRICT

EBMUD 1-866-40-EBMUD

YOUR ACCOUNT NO. IS: 11246600001

Next Read Date is 03/06/2017
Your Payment is Due by 01/25/2017

Delivering reliable, high quality water takes financial stewardship.
Learn how EBMUD reinvests in our water and wastewater systems to better serve you.
Visit ebmud.com/stewardship.

EBMUD Home Page
View Newsletter
Bill FAQs
Rates & Charges
Contact Info

Amy Herman
2239 OREGON ST
BERKELEY, CA 94705-1023

Bill Date: 01/10/17

Billing Period
From 10/31/16 To 1/4/17

For: 2239 Oregon St
Private Residence

	AMOUNT	TOTAL
PREVIOUS CHARGES AND CREDITS		
PREVIOUS AMOUNT DUE	196.73	
FULL PAYMENT - 12/06/16	-196.73	0.00
WATER CHARGES - EBMUD		
WATER SERVICE CHARGE	41.38	
WATER FLOW CHARGE 15 UNITS @3.16	47.40	
SEISMIC IMPROVEMENT PROGRAM SURCHARGE	0.00	88.78
WASTEWATER CHARGES - EBMUD		
WASTEWATER TREATMENT CHARGE	42.73	
SF BAY POLLUTION PREVENTION FEE	0.40	43.13

CITY OF BERKELEY SEWER SERVICE	84.60

PLEASE SEE REVERSE SIDE
FOR BILLING EXPLANATION

216.51

METER SIZE	ELEV. Band	METER READINGS Current	Previous	UNITS	CONSUMPTION INFORMATION Gallons	Days	Gal/Day
5/8 inch	1	215	200	15	11,220	65	173
		LAST	YEAR	9	6,732	67	100

PLEASE DETACH AND RETURN THIS PAYMENT STUB WITH CHECK OR MONEY ORDER PAYABLE TO EBMUD
2239 Oregon St, Berkeley, CA 947051023 10/31/16 1/4/17 ACCOUNT NO.: 11246600001

Pay by credit/ATM/e-check for a fee.
Call 1-888-963-0909

Mail payment to:

EBMUD PAYMENT CENTER
PO BOX 1000
OAKLAND CA 94649-0001

TOTAL PREVIOUS 0.00
TOTAL CURRENT 216.51

216.51

1124660000180000216510000000000008

Budget

Overall Project Budget Allocation and Hours by Organization						
Organization	Budget Allocation	% of Total Budget	Estimated Billable Hours	Estimated In-kind Hours	% In-kind	Estimated Total Hours
ALH Economics (Prime)	$ 114,975.00	24%	533	53	9%	587
The Clean Coalition	$ 115,200.00	24%	567	57	9%	624
EcoShift Consulting	$ 70,725.00	14%	454	45	9%	500
Optony	$ 70,850.00	14%	432	100	19%	532
The Offset Project	$ 60,750.00	12%	721	288	29%	1010
Betony Jones	$ 20,000.00	4%	133	7	5%	139
Gary Calderon	$ 10,000.00	2%	67	13	16%	80
Events/Supplies	$ 10,000.00	2%	*n/a*	*n/a*	*n/a*	*n/a*
Contingency	$ 12,500.00	3%	*n/a*	*n/a*	*n/a*	*n/a*
TOTALS	**$485,000.00**	**100%**	**2908**	**564**	**16%**	**3464**

Services Provided at No-Cost to EBCE	
In-kind Hours Contribution Value	$ 70,578.00
Total Advanced Practice Costs Value*	$ 75,141.00
TOTAL VALUE OF NON-BILLED SERVICES	**$145,719.00**

**Note- As per CEC: "Advanced Practice Costs means costs not charged to the [client] representing the incremental cost difference between standard and advanced practices, meosures, and products used to implement the proposed project."*

Budget Allocation by Task								
Organization	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Total Budget Allocation
ALH Budget	$ 9,000.00	$ 13,500.00	$ 6,000.00	$ 33,000.00	$ 18,450.00	$ 4,050.00	$ 30,975.00	$ 114,975.00
Clean Coalition Budget	$ 71,000.00	$ 7,200.00	$ 25,000.00	$ -	$ 3,150.00	$ 6,750.00	$ 2,100.00	$ 115,200.00
EcoShift Budget	$ 6,000.00	$ 37,800.00	$ 6,000.00	$ 1,500.00	$ 3,600.00	$ 2,700.00	$ 13,125.00	$ 70,725.00
Optony Budget	$ 10,000.00	$ 14,400.00	$ 7,500.00	$ 4,000.00	$ 8,550.00	$ 24,300.00	$ 2,100.00	$ 70,850.00
Offset Project Budget	$ 4,000.00	$ 17,100.00	$ 5,500.00	$ 11,500.00	$ 11,250.00	$ 7,200.00	$ 4,200.00	$ 60,750.00
Betony Jones Budget								$ 20,000.00
Gary Calderon Budget								$ 10,000.00
Events/Supplies Budget								$ 10,000.00
Contingency Budget								$ 12,500.00
Total Budget by Task	$100,000.00	$90,000.00	$50,000.00	$50,000.00	$45,000.00	$45,000.00	$52,500.00	$485,000.00

Billable and In-kind Hours by Task								
Organization	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Total Hours
ALH Billable Hours	42	63	28	153	86	19	144	533
ALH In-kind Hours	4	6	3	15	9	2	14	53
Clean Coalition Billable Hours	349	35	123	0	16	33	10	567
Clean Coalition In-kind Hours	35	4	12	0	2	3	1	57
EcoShift Billable Hours	39	243	39	10	23	17	84	454
EcoShift In-kind Hours	4	24	4	1	2	2	8	45
Optony Billable Hours	61	88	46	24	52	148	13	432
Optony In-kind Hours	12	18	9	5	10	30	3	86
Offset Project Billable Hours	47	203	65	137	134	85	50	721
Offset Project In-kind Hours	19	81	26	55	53	34	20	288
Betony Jones Billable Hours								133
Betony Jones In-kind Hours								7
Gary Calderon Billable Hours								67
Gary Calderon In-kind Hours								13
Total Hours by Task	612	764	355	399	386	374	347	3,458

**Note- The Hourly Billing Rate for Betony Jones and Gary Calderon is $150.00 per hour.*

Budget Detail by Organization

ALH Economics	Hourly Rate	Hours on Task #1	Hours on Task #2	Hours on Task #3	Hours on Task #4	Hours on Task #5	Hours on Task #6	Hours on Task #7	*Billable Hours*	*In-Kind Hours*	*TOTAL PROJECT HOURS*
Amy Herman	$250.00	25	38	17	92	52	11	87	*322*	*32*	*354*
Analyst I	$230.00	6	9	4	22	12	3	20	*75*	*7*	*82*
Analyst II	$130.00	7	10	5	25	14	3	24	*88*	*9*	*97*
Associate	$120.00	4	6	3	14	8	2	13	*48*	*5*	*53*
TOTALS		42	63	28	153	86	19	144	*533*	*53*	*587*

Task 1 Budget for ALH	Task 2 Budget for ALH	Task 3 Budget for ALH	Task 4 Budget for ALH	Task 5 Budget for ALH	Task 6 Budget for ALH	Task 7 Budget for ALH	Total Budget for ALH Economics
$9,000.00	$13,500.00	$6,000.00	$33,000.00	$18,450.00	$4,050.00	$30,975.00	$114,975.00

The Clean Coalition	Hourly Rate	Hours on Task #1	Hours on Task #2	Hours on Task #3	Hours on Task #4	Hours on Task #5	Hours on Task #6	Hours on Task #7	*Billable Hours*	*In-Kind Hours*	*TOTAL PROJECT HOURS*
Executive Director (Craig Lewis)	$220.00	258	26	91	0	11	25	8	*419*	*42*	*461*
Program Engineer (Robert O'Hagan)	$150.00	71	7	25	0	3	7	2	115	*12*	*127*
Support Staff	$175.00	20	2	7	0	1	2	1	33	*3*	*36*
TOTALS		349	35	123	0	16	33	10	*567*	*57*	*624*

Task 1 Budget for CC	Task 2 Budget for CC	Task 3 Budget for CC	Task 4 Budget for CC	Task 5 Budget for CC	Task 6 Budget for CC	Task 7 Budget for CC	Total Budget for The Clean Coalition
$71,000.00	$7,200.00	$25,000.00	$0.00	$3,150.00	$6,750.00	$2,100.00	$115,200.00

EcoShift Consulting	Hourly Rate	Hours on Task #1	Hours on Task #2	Hours on Task #3	Hours on Task #4	Hours on Task #5	Hours on Task #6	Hours on Task #7	*Billable Hours*	*In-Kind Hours*	*TOTAL PROJECT HOURS*
Principal (James Barsimantov)	$220.00	5	34	5	1	3	2	12	*64*	*6*	*71*
Principal (Tiffany Wise-West)	$220.00	4	26	4	1	2	2	9	*48*	*5*	*53*
Senior Energy Consultant (Rick Betita)	$150.00	20	126	20	5	12	9	44	*236*	*24*	*259*
Administrative Assistant	$100.00	9	57	9	2	5	4	20	*106*	*11*	*117*
TOTALS		39	243	39	10	23	17	84	*454*	*45*	*500*

Task 1 Budget for ECO	Task 2 Budget for ECO	Task 3 Budget for ECO	Task 4 Budget for ECO	Task 5 Budget for ECO	Task 6 Budget for ECO	Task 7 Budget for ECO	Total Budget for EcoShift Consulting
$6,000.00	$37,800.00	$6,000.00	$1,500.00	$3,600.00	$2,700.00	$13,125.00	$70,725.00

Optony, Inc.	Hourly Rate	Hours on Task #1	Hours on Task #2	Hours on Task #3	Hours on Task #4	Hours on Task #5	Hours on Task #6	Hours on Task #7	*Billable Hours*	*In-Kind Hours*	*TOTAL PROJECT HOURS*
Director of Operations (Jonathan Whelan)	$198.00	15	22	11	6	13	37	3	*107*	*10*	*117*
Senior Program Manager (Byron Pakter)	$190.00	21	30	16	8	18	51	4	*149*	*30*	*179*
Project Manager	$156.00	11	16	8	4	10	27	2	*79*	*10*	*89*
Associate Project Manager	$98.00	10	15	8	4	9	25	2	*72*	*10*	*82*
Administrative Assistant	$75.00	3	5	3	1	3	8	1	*24*	*40*	*64*
TOTALS		61	88	46	24	52	148	13	*432*	*100*	*532*

Task 1 Budget for OPT	Task 2 Budget for OPT	Task 3 Budget for OPT	Task 4 Budget for OPT	Task 5 Budget for OPT	Task 6 Budget for OPT	Task 7 Budget for OPT	Total Budget for Optony, Inc.
$10,000.00	$14,400.00	$7,500.00	$4,000.00	$8,550.00	$24,300.00	$2,100.00	$70,850.00

The Offset Project	Hourly Rate	Hours on Task #1	Hours on Task #2	Hours on Task #3	Hours on Task #4	Hours on Task #5	Hours on Task #6	Hours on Task #7	*Billable Hours*	*In-Kind Hours*	*TOTAL PROJECT HOURS*
Executive Director (Kristin Cushman)	$115.00	3	15	5	10	10	6	4	*53*	*21*	*74*
Project Manager (Chris Sentieri)	$90.00	33	143	46	96	94	60	35	*506*	*203*	*709*
Senior Staff	$75.00	3	11	4	8	8	5	3	*41*	*16*	*57*
Administrative Assistant	$50.00	8	34	11	23	23	14	8	*122*	*49*	*170*
TOTALS		47	203	65	137	134	85	50	*721*	*288*	*1010*

Task 1 Budget for TOP	Task 2 Budget for TOP	Task 3 Budget for TOP	Task 4 Budget for TOP	Task 5 Budget for TOP	Task 6 Budget for TOP	Task 7 Budget for TOP	Total Budget for The Offset Project
$4,000.00	$17,100.00	$5,500.00	$11,500.00	$11,250.00	$7,200.00	$4,200.00	$60,750.00

SECTION 4: KEY PERSONNEL

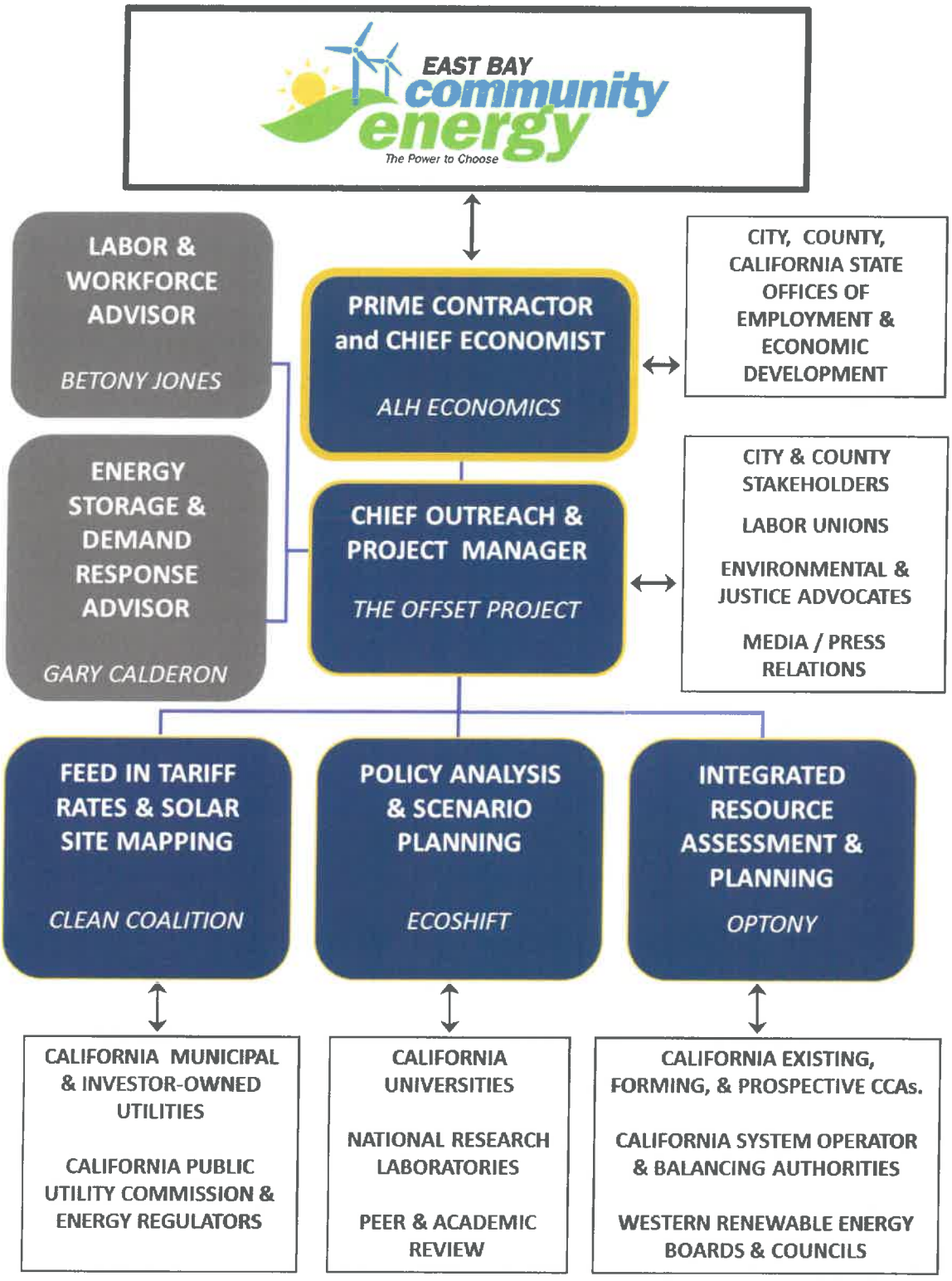

Figure 1- Project Team Organizational Chart

SUMMARY OF THE PROJECT TEAM

(1) ALH Urban and Regional Economics *(Prime – Economic and Fiscal Impacts, Financial Feasibility)*

ALH Urban & Regional Economics (ALH Economics) is a Registered SLEB with the County of Alameda, that is devoted to providing high-caliber economic consulting services to clients throughout California. ALH Economics provides comprehensive policy analysis and economic consulting services focused on scenario modeling in support of targeted objective plans, with a specific concentration on long-range fiscal and economic impact analysis. Previous economic impact studies conducted by Ms. Herman include studies for world-renowned laboratories, arts districts and museums, sports and recreational facilities, and other unprecedented urban development projects such as the EBCE LDBP. ALH Economics and its professionals have a rich history working in Alameda County, with current and past real estate and development projects throughout the County, including most cities such as Oakland, Pleasanton, Dublin, Alameda, San Leandro, Union City, and Fremont, as well as unincorporated areas such as Cherryland and Ashland, and additional volunteer work in Albany and Berkeley as well. Through these work and volunteer experiences the firm understands the workings of the Alameda County economy, local permitting processes, and the special and unique characteristics that abound by location, and can enrich the preparation and specificity of the EBCE LDFP with this knowledge.

(2) The Offset Project *(Nonprofit Subcontractor – Stakeholder Engagement)*

The Offset Project (TOP) is a 501-c3 nonprofit community benefit organization working to reduce greenhouse gas emissions and accelerate the adoption of cost-effective renewable energy, sustainability, and climate protection initiatives. The organization has set the pace for collaborative community action in Northern California, through professional stakeholder engagement, event production, outreach coordination, and project management services. The Offset Project has effectively assembled and managed interdisciplinary teams effectively, playing an integral role in the successful delivery of multifaceted, multi-year projects for the California Department of Resource, Recycling and Recovery (CalRecycle), Rancho Cielo Youth Campus, the City of Monterey, the County of Monterey, and many others. TOP has an impeccable record for calculating, tracking and reporting a wide range of sustainability metrics in electricity consumption, fuel consumption, and greenhouse gas emissions. TOP has proven leadership in extensive strategic planning, clear and effective communication, community engagement and coordination of thousands of volunteers. TOP's efficient management of complex inter-disciplinary projects at a low-cost has empowered the organization to maximize the social, environmental and economic benefits of all the communities and clients they have served.

(3) The Clean Coalition *(Nonprofit Subcontractor – Distributed Energy Resources)*

The Clean Coalition mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The organization has driven policy innovation to remove barriers to procurement and interconnection of distributed energy resources (DER)—such as local renewables, advanced inverters, demand response, and energy storage. The Clean Coalition collaborates with utilities and municipalities to enable market mechanisms that fully realize the potential of integrating DER as a local clean energy solution. The

group is a leader in financially viable solutions to the expansion of local renewables and other DER. The organization has consulted electric utilities across the country evaluating, designing, and implementing customer-sited solar programs. Their work has identified innovative utility program designs – including self-generation, net energy metering (NEM), and a hybrid NEM / feed-in tariff (FIT) – that enable the growth of cost-effective wholesale local solar, while ensuring that utility concerns are addressed. They have been a leading intervener at the CPUC, most notably in California's recent NEM 2.0 and Rule 21 proceedings. Few entities have such strong experience consulting with utilities and CPUC regulators regarding the future of distributed generation program design.

(4) EcoShift Consulting *(Subcontractor – Policy Analysis, Scenario Development)*

EcoShift provides climate and energy consulting services to both public and private clients throughout the greater Bay Area and beyond. EcoShift consultants are distinguished by their capability to address linkages between policy, economics, and engineering to enable creative solutions to evolving challenges in energy and climate change. Their unique background and connection to the University of California at Santa Cruz offers many EBCE project opportunities to draw on the benefits of academic resources and capitalize on close ties to internal stakeholders and overlapping research on the UCSC campus. EcoShift has a proven interdisciplinary team of engineers, investigators, and thought leaders working on local, state, and national levels with government agencies and non-profit partners. EcoShift has shaped energy policy, including rate design and green tariffs; and has worked with numerous local agencies and organizations on related projects to jumpstart regional energy planning. A recent energy and climate scenario planning project with UCSC won a California-wide innovation award, and its work on fossil fuel GHG potential of U.S. Federal lands forms the technical backbone of the national *Keep It In the Group* Campaign. EcoShift's technical knowledge is augmented by their professional independence, objectivity, and integrity, with a long record of peer-reviewed publications providing economic analysis of energy policies, programs, and rate design for clients such as the Sierra Club and Environmental Defense Fund.

(5) Optony Inc. *(Subcontractor – Integrated Resource Planning)*

Optony's focuses on electricity program research, assessment, design, and management support for local governments and quasi-governmental organizations. The firm has helped hundreds of city, county, and special district authorities worldwide with clean energy program design and strategy. As local government partners, Optony has identified nearly 3 gigawatts of local clean energy generation projects by providing assistance either in program planning, procurement, contracting, development, quality management, or some combination of several of these tasks. As chief project manager and planner of a multi-year federal energy program, Optony has driven progress in clean energy regulation, planning, financing, permitting, and interconnection for over 300 local and regional agencies in states from Hawaii to New York. Optony not only provides financial, engineering, and project management support for their clients' current projects, but also brings the understanding needed to identify state and federally funded or subsidized investment capital, as well as to build public participation and education engagement opportunities on behalf of our clients. The company was recognized by the Silicon Valley Business Journal in 2011 as one of the very best energy service companies in the region and their projects have won awards from the

Interstate Renewable Energy Council, Acterra Business Environment Awards, and the Governor of California. Optony has employees globally with regional offices in Chicago and Beijing. The company's headquarters is in Silicon Valley where local staff has worked closely with County of Alameda for many years. Optony played a critical part in the success of the County's last Regional Renewable Energy Procurement (RREP); at that time working closely alongside Victor Uno of IBEW, Byron Benton of Alameda County Electrical JATC, Darien Louie of East Bay Economic Development Alliance, Patti Castro of Alameda County Workforce Investment Board, and other labor groups on the RREP workforce committee.

SUMMARY OF ADVISORS TO THE PROJECT TEAM

Our core Project Team, who will be responsible for the day-to-day implementation of our proposed project, is further enhanced by the inclusion of two industry leading subject matter experts, who will provide guidance and council pertaining to the implementation of tasks relating to Labor and Workforce Policy, and Energy Storage and Demand Response. The Special Advisors will review and comment on work products in their core areas of expertise, to ensure the highest caliber deliverables in these critical areas of this project. These Special Advisors were engaged by our Project Team due to their extensive experience in these key subject areas of the projects, as well as their long-standing involvement with these issues and impeccable reputations in the surrounding community.

(1) Ms. Betony Jones *(Advisor – Labor and Workforce Development)*

Ms. Jones is the founder and principal at Fourth Sector Strategies. Her work seeks out clean energy and climate policy opportunities that yield gains for vulnerable communities and frontline workers. Ms. Jones is also associate director of the Climate and Green Economy Program at UC Berkeley Labor Center, where she directs a policy research group working at the nexus of climate and labor policy. She has been actively engaged in community choice energy since 2013.

(2) Mr. Gary Calderon *(Advisor – Energy Storage and Demand Response)*

Mr. Calderon is an independent consultant focused in the area of microgrid, automated demand response, voluntary demand response, and energy storage. Mr. Calderon leads research and consulting in the implementation of novel technology applications to improve and enhance viability of distributed energy resources. Mr. Calderon holds advanced degrees in business planning and energy storage technology.

CONTACT INFORMATION FOR PROJECT TEAM MEMBERS

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KEY STAFF BIOS: PROJECT TEAM AND ADVISORS

ALH Economics

Amy Herman

Relevant Experience Summary

"What excites me most about this project is working with a dynamic team to ensure the highest economic benefits of EBCE and enhancing clean energy access in Alameda County."

Role: Project Administrator and Chief Economist

Amy Herman has directed assignments for corporate, institutional, non-profit, and governmental clients in key service areas, including fiscal and economic impact analysis, commercial market analysis, economic development and redevelopment, location analysis, strategic planning, and policy analysis. During her career spanning almost 35 years, Ms. Herman has supported client goals in many ways, such as to demonstrate public project benefits, assess public policy implications, and evaluate and maximize the value of land use assets.

In addition, her award-winning economic development work has been recognized by the American Planning Association, the California Redevelopment Association, and the League of California Cities. Ms. Herman's clients have included a range of cities and former redevelopment agencies throughout California, medical and educational institutions, commercial and residential developers, and many top Fortune 100 companies.

Prior to forming ALH Economics, Ms. Herman worked for 20 years as an urban economist with Sedway Group and then CBRE Consulting's Land Use and Economics practice. Her prior professional work experience included 5 years in the Real Estate Consulting Group of Laventhol & Horwath (L&H), preceded by several years with the real estate consulting firm Land Economics Group, which was acquired. During the course of her career, Ms. Herman has established a strong professional network and client base providing access to contacts and experts across a wide spectrum of real estate and urban development resources. She holds a Master of Community Planning degree from the University of Cincinnati and a Bachelor of Arts degree in urban policy studies from Syracuse University.

The Clean Coalition

Craig Lewis

Relevant Experience Summary

"What excites me most about this project is the chance to prove a concrete business case for cities worldwide; and to showcase the true leadership and problem solving innovation developed by Alameda County."

Role: Project Lead- DER Assessment and Tariff Design

Craig has 30 years of experience in the renewables, wireless, semiconductor, banking, and electrical engineering industries. Previously VP of Government Relations at GreenVolts, a solar technology company, Craig was the first to successfully navigate a solar project through California's Renewable Portfolio Standard (RPS) solicitation process. He was also the energy policy lead on Steve Westly's California gubernatorial campaign.

His resume includes senior government relations, corporate development, marketing, and engineering positions at leading wireless, semiconductor, banking, and technology companies. His corporate experience includes leadership roles at Qualcomm, Ericsson, Barclays Bank, and Hughes Aircraft Company. He is recognized for his industry leadership and public speaking engagements on topics such as Community Microgrids, transmission cost allocation, optimized community choice energy, best practices in grid planning, and the role of utilities in the new energy economy.

Craig understands the policy and financial implications of the energy industry from all sides, having worked for a potential California governor, as well as a solar project developer and banker. He is well recognized for his technical publications on resilient electricity systems, smart energy systems, energy storage, and commercial-scale solar policy and programs. He is also a published author on policy matters including equitable renewable energy costs recovery, and proper distributed energy resource benefits compensation. Craig received an MBA and MSEE from the University of Southern California and a BSEE from the University of California, Berkeley.

The Clean Coalition

Robert O'Hagan

Relevant Experience Summary

"What excites me most about this project is the chance to bring the discipline of engineering and high-tech program management to the growing field of public power and local renewable energy."

Role: Chief Project Engineer

Robert oversees the development of tools and processes that allow high penetrations of distributed generation while maintaining or improving distribution grid reliability. He started his career designing telecommunications and test equipment then transitioned into operations management for both public companies and startups.

His previous employers include JTS Strategic Partners, KACE Networks, Innovation Engines, Excellent Data, and Artmetropolis. Robert holds patent publications with the US Patent Office as well as Product Realization Certificates under ISO standards 14971, 62304, and 9001. Robert has held leadership roles as a program engineer, operations director, management director, and consultant. He is a long-standing member of the Institute of Electrical and Electronics Engineers and now focuses his background in electrical engineering on clean energy and power systems.

He is known for his publication on power flow analysis methodology of the Hunters Point Community Microgrid Project, as well as industry presentations on community microgrids at the Grid of the Future Summit. Robert has an MS from Stanford in Electrical Engineering and an MBA from Santa Clara University. He received his Bachelors of Science Summa Cum Laude in Electrical Engineering from Southern Methodist University.

EcoShift Consulting

James Barsimantov, PhD

Relevant Experience Summary

"What excites me most about this project is bringing together all the information generated into digestible, smart scenarios that can lead EBCE into the future."

Role: Managing Consultant

James Barsimantov manages a team of climate change, energy, water, and sustainability experts who work with leading organizations to develop and implement value-creating strategies.

He has led a range of projects focused on regulatory analysis for climate and energy projects and programs at the local, state and national level. His professional projects include development of offset protocols that were included in AB32 rules, regulatory analysis of legality of California's Low Carbon Fuel Standard, and an innovative carbon impact fee that was designed to comply with green building codes and California Energy Commission.

Drawing the linkages between regulations and economic analysis, Dr. Barsimantov has been called upon to provide expert witness testimony at the California Public Utilities Commission in proceedings over the last five years; and he has been invited as an expert speaker to talks at US Green Building Council, Sustainable Brands, US Department of Agriculture, and the TechCrunch conferences.

His peer-reviewed article publications include topics under land use policy as applied to geography and human ecology in the Journal of Environment and Development. Dr. Barsimantov received his Ph.D. in Environmental Studies at the University of California, Santa Cruz, with a focus on environmental economics and resource management. He also holds a Bachelor of Arts in Psychology from the University of California Berkeley.

EcoShift Consulting

Tiffany Wise-West, PhD, P.E.

Relevant Experience Summary

"What excites me most about this project is combining strong load reduction targets with customer-side DER potential, and what that will mean for GHG reductions and local job creation."

Role: Senior Consultant

Tiffany is a licensed professional civil engineer with 20 years of experience in municipal infrastructure planning, design and project management. Dr. Wise-West specializes in negotiating and managing public-private-academic partnerships aimed at advancing green infrastructure, policy and programming.

For five years, she led the award-winning Santa Cruz GreenWharf initiative and currently works on national, state and regional climate and energy issues in her roles at EcoShift Consulting and the District 2 Commissioner on the Santa Cruz County Commission on the Environment.

Her academic research has focused on the techno-economic and policy elements of sustainability, energy efficiency, renewable energy and issues at the water and energy nexus. She is an active Member of the American Water Works Association, and the Institute for Sustainable Infrastructure. Dr. Wise-West is a LEED Associate Professional in Building Design and Construction.

She received her Master of Art and PhD in Environmental Studies from the University of California Santa Cruz. She also holds a Bachelor of Science in Civil and Environmental Engineering from Purdue University specializing in water, wastewater and solid waste systems.

Optony Inc.

Jonathan Whelan

Relevant Experience Summary

"As a financial and technical guide through the complexity of public clean energy program design and deployment, what excites me most about this project is the chance to see our partners turning their goals from ideas into solid, real projects."

Role: Senior Liaison

Jonathan Whelan is the Director of Operations at Optony Inc. and has eleven years of experience in clean energy project planning, program evaluation, renewable energy financial assessment, and independent engineering. Mr. Whelan's current core work is in providing financial analysis, contract review, and negotiations between public clients and private suppliers. Mr. Whelan also oversees Optony's activates in project management and energy procurement support for local governments and special district jurisdictions.

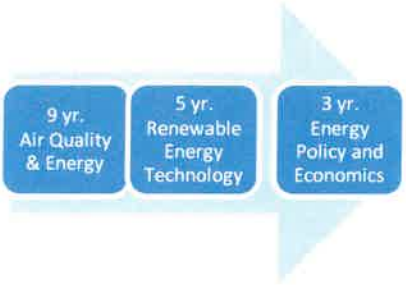
Mr. Whelan has helped many Bay Area cities identify and implement their clean energy strategies. Mr. Whelan is outstanding in the field of cost reductions through collaborative renewable energy purchasing and helped guide both the Silicon Valley Renewable Energy Procurement (SVREP) and Regional Renewable Energy Procurement (RREP) processes—the largest multi-agency solar procurements in the country.

Mr. Whelan manages daily operations and strategic planning for Optony Inc. He is a seasoned leader with more than eleven years of comprehensive clean energy experience at multiple firms. Mr. Whelan successfully navigates the challenges of planning, data management, and legal negotiations in multiple stakeholder process. He specializes in renewable generation modeling, financial analysis, and procurement for systems ranging from megawatt utility-scale installations to distributed generation on schools, community centers, libraries, fire stations, and medical facilities. His record shows that he turns project concepts into delivered products. He holds a Bachler of Science in Business Administration and Biology with a Minor in Environmental Studies from Trinity University, and was recognized for his industry leadership by the U.S. Department of Energy as a member of the evaluation committee and independent renewable energy project reviewer.

Optony Inc.

Byron Pakter

Relevant Experience Summary



"What excites me most about this project is that the core nature of energy systems is changing, it's so exciting to see a future of clean energy cities around the corner; where all buildings strive to be energy neutral and many buildings are zero emissions net energy producers."

Role: Senior Project Manager

Byron Pakter is experienced in the entire range of clean energy policy, sustainability, data acquisition, finance, and modeling. Mr. Pakter is coauthor to local clean energy economic and job development research and reports on wind, solar, and advanced energy technologies, prepared for the Governors' offices in the State of Colorado, State of Iowa, and State of Virginia.

He currently serves as the program manager for high penetration urban renewables research and implementation at Optony. Mr. Pakter has a deep understanding of the role and importance of local energy authorities, community-scale energy and microgrid projects, and collaborative purchasing.

Mr. Pakter is experienced in complex municipal energy planning and statistical aggregation, and has used his experience in computer programming to developed proprietary modeling tools to estimate financial performance scenarios, energy storage sizing and performance tools, EV charger analysis, and sustainability policy impacts.

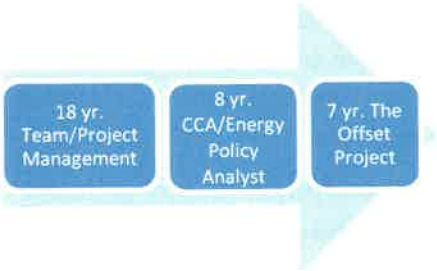
He led research of local energy feasibility, policy, and implementation for the City of Berkeley Energy Commission and is author to the Berkeley citywide solar energy resource plan. The Berkeley resource plan was a collaborative effort between Optony, the City's Office of Energy and Sustainable Development, the University of California Berkeley, and the City's Energy Commission. Mr. Pakter enabled close stakeholder engagement from California Energy Commission staff, SF Bay Chapter Director of the Sierra Club, Alameda County sustainability managers, Lawrence Berkeley National Labs staff, California Energy Storage Alliance, and leaders in property assessed clean energy.

Mr. Pakter is experienced in research and forecasting of load and resource planning, rate modeling, and rate-setting. He can provide studies and modeling of local energy resource economic targets and rules design to stimulate and enable local development buildout. He will drive Integrated Resource Plan content creation and quality assurance, as well as rate and regulatory updates, market research, IRP specific existing policy advisement, economic impacts advisement, and potential implications of upcoming CPUC/CAISO proceedings on the success of the LDBP. He earned a Master of Engineering, with a focus on Advanced Energy Technologies, and holds a Bachelor of Science in Mechanical Engineering, both from the University of California Berkeley.

The Offset Project

Chris Sentieri

Relevant Experience Summary



"What excites me most about this project is the potential for our Project Team to demonstrate the significant benefits and overall viability of a DER-focused Community Choice Aggregation model in Alameda County."

Role: Chief Project and Outreach Manager

Our Chief Project Manager, Mr. Sentieri, played a central role in the development of this proposal and the concepts and objectives presented here, and he assembled the project team and coalition of support leveraging his professional relationships with staff in each of our partner organizations and subcontractors. The proposed project has roots in Mr. Sentieri's graduate research and Master's thesis, which demonstrated that the Community Choice Aggregation (CCA) mechanism could provide a reliable source of funding for the development of clean energy infrastructure and advanced renewable energy facilities.

He has since focused much of his professional work on the advancement of CCA and clean energy policies and initiatives, and has worked very closely with government agencies, nonprofit organizations, and businesses and labor leaders throughout California. His knowledge and insights relating to CCA, green building, energy efficiency and the development of renewable energy and distributed energy assets, his connection and dedication to this important project, as well as his vast network of professional relationships provide an excellent foundation for success for this project.

Mr. Sentieri is well-versed in strategic planning, project development, and interdisciplinary project management, and he uses industry standard project management tools and techniques. Mr. Sentieri led and managed the Association of Monterey Bay Area Governments (AMBAG) Energy and Climate Action Planning services for the Monterey Bay region, where he developed draft Energy Action Strategies and Greenhouse Gas Inventories for all 21 jurisdictions in the tri- county AMBAG territory. He has also developed and led several community-wide, multi-stakeholder renewable energy initiatives, including the Monterey County Wind Turbine Roundtable and a successful Solar PV Permit Streamlining effort at the County of Monterey. He has been a core member of The Offset Project management team since 2010, and has helped the organization develop and manage many complex projects and inter-agency coalitions relating to clean energy and greenhouse gas reduction initiatives.

Independent Advisor

Betony Jones

Relevant Experience Summary

"What excites me most about this project is the potential for this all-star team to deliver a Local Development Business Plan that lets EBCE create a new gold standard for CCA that maximizes local benefits through DER deployment."

Role: Labor and Workforce Development Advisor

Betony Jones is the Associate Director at the UC Berkeley Labor Center Climate and Green Economy Program. She is also the Founder and Principal of Fourth Sector Strategies. Betony currently manages a policy research center at UC Berkeley working at the nexus of climate and labor policy. She identifies ways in which clean energy and climate policy can yield wins for workers and frontline and vulnerable communities, and she has been actively engaged in California's emerging CCA industry since 2013. Betony has secured and managed grants and contracts, developed strategic partnerships, fostered cross-campus collaboration with other research centers, and overseen policy research projects including economic analyses of policy scenarios.

Betony has researched and published extensively on the links between the transition to a low-carbon economy and good jobs. She also consults with national organizations on public policy and implementation metrics related to good jobs and equity in the green economy. She has developed policy proposals for the BlueGreen Alliance, a coalition of labor, environment, and industry groups, with parts of her energy efficiency proposal being adopted by the Clinton Campaign. She also finished a project in 2016 for the national Sierra Club, quantifying the job loss and job creation of a transition to 100% renewable energy. She also was hired by the Sierra Club to develop metrics on economic justice related to deep greenhouse gas emissions cuts.

Betony lived and worked in the Sierra Nevada region for 9 years, where she established a $5 million energy efficiency program that pioneered a new model of comprehensive small commercial energy efficiency retrofits with high-road workforce standards. Prior to joining the Labor Center, Betony focused on workforce issues in energy efficiency and clean energy policy as a consultant to California's cities and investor-owned utilities. In 2004, Betony earned an MESc. in social ecology of conservation and development from the Yale School of Forestry and Environmental Studies, where she also developed a passion for labor issues.

She has worked with several cities in Alameda County and StopWaste.org on a research project to identify better outreach strategies for engaging small and medium businesses in energy efficiency efforts and benchmarking programs.

Independent Advisor

Gary Calderon

Relevant Experience Summary

"What excites me about this project is the new beginning for future Community Choice Aggregation programs; by introducing DER stacked value and reliable capacity the local community will benefit from competitive energy rates as well as increased local employment opportunities."

Role: Energy Storage and Demand Response Advisor

Gary Calderon is a highly successful chief executive officer, vice president, and consultant with more than 25 years of experience within the high tech, renewables, electric vehicle (EV) manufacturing, software security, and clean technology industries while focusing on consulting, engineering, direct sales, and account management.

Gary utilizes his deep understanding of the technology behind the products to communicate effectively with clients and creatively adapt solutions to meet their needs. He has a strong background in business as an entrepreneur and has consulted on a global scale. His areas of expertise include: distributed energy resources, microgrids, energy storage technology, electrical engineering, grid modeling and load forecasting, government contracting, contract negotiation, power purchase agreements, Internet of Things (IoT), virtual power plants (VPP), electric transportation, autonomous transportation, and strategic partnerships.

Currently, Gary is an independent Principal Consultant for clients interested in Utility Scale Energy Storage, Distributed Energy Resources, and Microgrid projects. Gary leads research on consulting assignments and assists in the implementation of technology relating to distributed energy resources, battery energy storage systems, and microgrids. Gary is certified by both the U.S Green Building Council and the North American Board of Certified Energy Practitioners. As a Principal Consultant with DNV GL, Gary worked closely with Chris Sentieri and The Offset Project on new service offerings in Community Choice Aggregation and Community-scale Microgrids. Gary received his Master of Science in Engineering with a focus on Energy Storage and Battery Technologies from the San Jose State University and Lawrence Berkeley National Labs. He received his MBA with a focus on Business Management, Marketing, and Related Support Services from Golden Gate University, San Francisco. He also holds a Bachelor of Science in Electrical Engineering and Computer Science from the University of California, Berkeley.

Additional Support Staff

Supporting Staff			
To	**Name**	**Project Role**	**Relevant Qualification** *(Note- see Section 7 for details)*
ALH Economics	Mary Smitheram	Financial Feasibility Analysis	Concord Naval Weapons Station, Concord, CA
ALH Economics	Thomas Jirovsky	Financial Feasibility Analysis	Candlestick Point and Hunters Point Phase II
ALH Economics	Sarah Murley	IMPLAN Implementation	BART and major University economic impact studies
The Clean Coalition	Frank Wasko	Project Management Support	Regional Manager Southern California Edison
The Clean Coalition	Kenneth Sahm White	Policy Analysis	Author- The Hunter's Point Project: A Model of Clean Local Energy
The Clean Coalition	John Bernhardt	Outreach	Author- The Power of Local Energy
EcoShift	Rick Betita	Energy Analyst	Technology Director at Climate Earth
The Offset Project	Kristin Cushman	Event Production	CaRecycle- Salinas Valley Regional Waste Diversion
The Offset Project	Rico Tesio	Project Management Support	Pebble Beach AT&T Pro-Am Sustainability Program
Optony Inc.	Thomas Yurysta	Technical Specifications and Design Evaluation	US DOE Programs including ASTI and SSTI
Optony Inc.	Karina Zafiro	Project Organization	Local renewable planning under RREP & US DOE Program ASTI
Optony Inc.	Tristan Lobdell	Policy Research	Local renewable planning under RREP and financing projects under Clean Energy Renewable Bonds (CREBS)

SECTION 5: DESCRIPTION OF PROPOSED SERVICES

ALH Economics is thrilled to present the following description of services for the 7 Tasks outlined in Alameda County's EBCE LDBP RFP (#16-CCA-02).

Our project combines robust community engagement strategies, rigorous distributed energy resource assessments, powerful financial and economic modeling, and expert scenario planning to produce a Local Development Business Plan that will support a wide range of social, economic and environmental goals for the East Bay Community Energy CCA program.

Task 1: Technical Potential and Feasibility of Grid-side Distributed Energy Resources

Solar Siting Survey with Integrated Hosting/Integration Capacity Analysis

The purpose of this subtask is to assist Alameda County by assessing opportunities for local solar generation as outlined in Task 1 of the LDBP RFP. Led by The Clean Coalition, the Project Team will conduct a Solar Siting Survey (SSS) to determine the Technical Siting Potential for solar photovoltaic (PV) installations within Alameda County. In addition to assessing the Technical Solar Potential, the Clean Coalition will also evaluate the Interconnection Hosting Capacity of the power grid in Alameda County, which will highlight locations where connecting local solar to the grid will be easiest and least costly.

Methodology

The Clean Coalition will first assess the Technical Siting Potential of solar PV on municipal, commercial, and industrial rooftops, parking lots, and brownfields within Alameda County. Their assessment will identify all prospective solar sites and the usable square footage at each location. Depending on a site's expected generation potential, it will fall into one of three categories – high, medium, or low density siting opportunities. The Clean Coalition uses industry tools like Helioscope to validate the accuracy of its categorizations. Through this methodology, the Clean Coalition will identify prime solar siting opportunities, as well as an accurate estimate of the site-specific and cumulative solar potential, in an efficient manner.

This assessment will produce the following:

- A summary document detailing key findings, including an estimate of the cumulative technical solar siting potential in megawatts (MW) and megawatt-hours across Alameda County
- A Google Earth map (.kmz format) displaying the locations, generation potential per site and per aggregated sites (e.g., shopping malls, universities), rating (e.g.,, high, medium, or low density), and proximity to the feeder (if a circuit map is provided), for all prospective sites that are able to host the predetermined, minimum project size
- A correlating Excel database that contains the site addresses, generation potential, rating, and proximity to the feeder

Figure 2- SSS Overview of Solar Siting Survey results for the Peninsula Advanced Energy Communities (PAEC) project

Additional details included in both the Google Earth map and correlating Excel database include: the feasible solar PV square footage per site location, the site type (e.g., parking lot, brownfield, commercial or industrial rooftop, etc.), the solar potential in kilowatts (kW) and expected kilowatt-hours generated per site location and type, and overall totals.

Figure 3- Sample of detail for individual solar hosting site identified by our Solar Siting Survey process

Proposed Minimum Project Size

To meet the requested timelines and budget allocation, the Project Team proposes identifying all potential project sites that have the capacity to host a minimum project size of 1 MW. The Project Team is open to discussing a different minimum project size (i.e.- 500 kW) with the Selection Committee and/or the EBCE Board of Directors. However, there would be additional costs and time required if a lower threshold is set for this work, because the amount of the time it takes to determine the Technical Siting Potential depends on the size of the geographic area and the minimum PV project size assessed. For example, in the same geographic area, it will take more time to assess potential siting opportunities for solar installations starting at 100 kW and above than it would to assess the potential for installations starting at 1 MW and above. This is because there are far more sites to assess at smaller project sizes. Similarly, it takes longer to determine the Interconnection Hosting Capacity at smaller project sizes due to the fact that more grid

locations will need to be evaluated. There is also a substantial amount of work required to aggregate the required datasets for conducting the Interconnection Hosting Capacity so there are some fixed associated costs regardless of volume.

Additional DER Siting Potential

Our analysis will also identify siting potential of various other technologies for additional DER deployment of systems 1 MW or larger. To achieve this, the Project Team will utilize the same basic methodology outlined above for the Solar Siting Survey to produce additional layers in the Google map (.kmz) file, which will allow EBCE to see each DER resource as a separate color-coded layer on the map. The potential sites identified for these additional resources will also be included in the Excel database detailed above.

Our assessment will focus on the following technologies:

1. Wind Energy Systems
2. Landfill Gas and/or Biogas to Electricity Systems
3. Biomass to Electricity Systems
4. Microgrids
5. Energy Storage

Grid-side Storage Potential

Battery Energy Storage Systems installed in-front-of-the-meter can be utilized as an application-technology. The applicability of each technology and the relative potential for generating economic value will be determined. An assessment will determine the likelihood of a particular storage application and its relevance to the current market, as well as the appropriateness of a specific technology to serve the needs of that application.

The eight applications to be reviewed and identified are as follows:

1. Electric Supply Capacity
2. Regulation
3. Spinning, Non-Spinning, and Supplemental Reserves
4. Voltage Support
5. Load Following/Ramping Support for Renewables
6. Frequency Response
7. Distribution Congestion Relief

Definitions of each application listed above will be provided, followed by an overview of any potential regulatory concerns specific to EBCE territory providing an assessment of both planned regulatory initiatives and local network and market conditions in the County of Alameda region. These will be reviewed specifically as they relate to energy storage potential.

Overall Estimate of Technical Potential

The target SSS geographic area comprises all of Alameda County with the exception of the City of Alameda, which is served by a municipal utility: Alameda Municipal Power (AMP). A comprehensive SSS across the target geographic area, with a minimum project size of 1 MW(AC),

the Clean Coalition anticipates that hundreds of MW of solar siting will be identified on very large rooftops, parking lots, and parking structures.

Furthermore, a multiplier estimate for siting smaller solar projects on built-environments will be provided. The Clean Coalition estimates that the multiplier for projects of 500 kW or larger would be approximately 3x and the multiplier for projects 100 kW or larger would be approximately 10x.

Integrated Hosting Capacity Analysis

The Clean Coalition will also evaluate the Interconnection Hosting Capacity of the existing power grid infrastructure in Alameda County. Using their technical expertise and deep experience with California's Distribution Resources Planning (DRP) activities, the Clean Coalition has the ability to identify those locations in Alameda County, at the line segment level of the distribution grid, where interconnecting solar projects will be easiest and cheapest. A line segment is essentially a block-by-block section of a distribution feeder and is the relevant level for assessing Interconnection Hosting Capacity.

This analysis will produce an enhanced Google Earth map and correlating Excel database that includes details on the Interconnection Hosting Capacity at each prospective DER site.

Feasibility Analysis

The Project Team will conduct a thorough Feasibility Analysis on the potential projects identified through the DER Siting Surveys detailed above. That analysis will include the following considerations:

Site Potential

The Clean Coalition will identify the technical solar siting potential and provide specific location details that other team members will potentially assess for additional siting potential. The Clean Coalition will also specify whether the density of the technical solar siting potential is high, medium, or low; depending on elements like roof protrusions/skylights and shading effects from neighboring buildings.

Site Footprint

The Clean Coalition will assess the footprint of built environments that meet the minimum solar project size. In other words, the site footprint of potential solar sites will be assessed for size and density in order to determine if the minimum solar project size can be achieved; and if so to capture the site data as described above.

Locational Net Benefit Analysis

Locational Net Benefit Analysis (LNBA) is an emerging method for identifying optimal locations for DER deployment from benefit perspective, which has been included in recent CPUC proceedings (i.e., IDER and DRP). Our proposed approach is to use the integrated capacity and hosting assessments to provide a streamlined LNBA that is in line with the emerging best practices under these CPUC proceedings. This will provide insights and

guidance to EBCE in terms of which line segments would be most beneficial to focus on in terms of least cost and net benefit.

Levelized Cost of Energy Analysis

The Project Team will produce a comparative levelized cost of electricity analysis, which will aid EBCE in understanding the relative costs and benefits of each of the energy technologies outlined above. This will provide a simple "apples-to-apples" method of comparing these technologies from a planning perspective, and will highlight the technologies that are most feasible from in terms of cost considerations.

Financial Feasibility Analysis

Our financial feasibility analysis will quantify the estimated costs and benefits for recommended strategies. Key evaluation criteria will be identified, and ratepayer costs and benefits will be evaluated based on energy rates paid by consumers under CCA service versus PG&E service costs. This feasibility analysis will be prepared for Alameda County's preferred time period, reflecting at least a 10-year time period. The results will provide the means to understand the impacts to the CCA Cost of Service, as well as comparative findings regarding ratepayer costs and savings pursuant to the representative supply scenarios.

Stakeholder Engagement

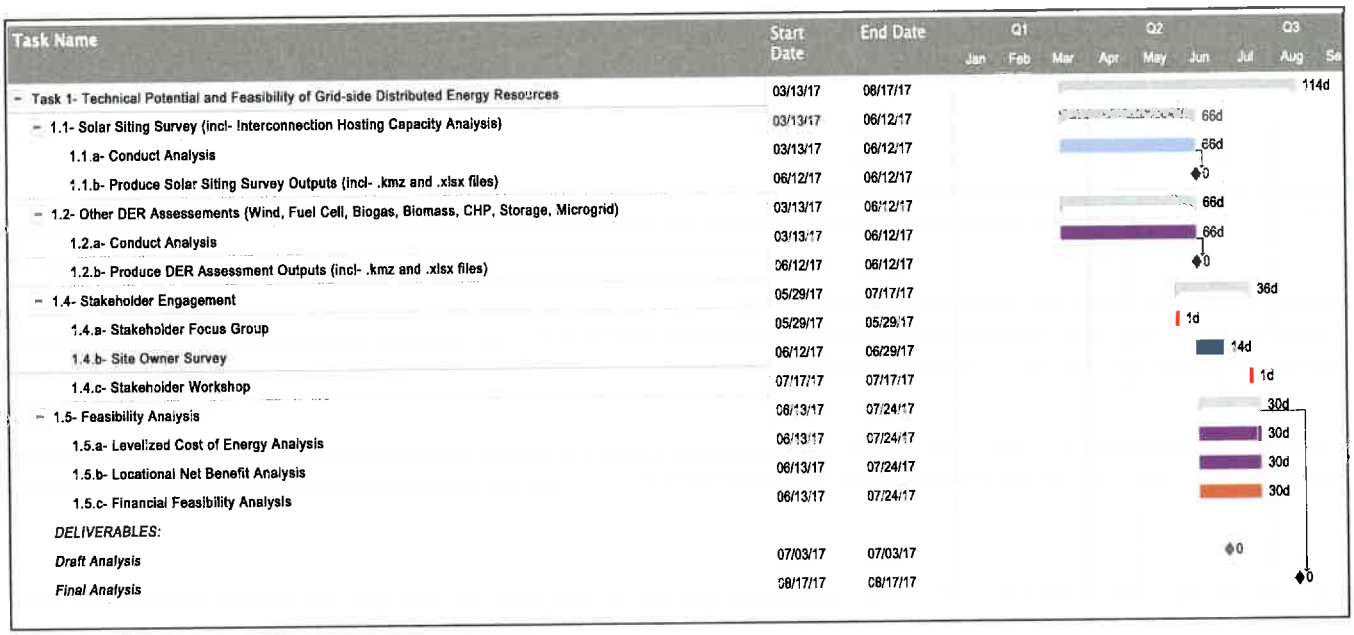
For Task 1 it is important to help EBCE understand the potential for constructing DER projects within its service territory within the 5-year planning horizon contemplated within the context of the LDBP. This means engaging with property owners identified as having the potential to build and/or host projects on their properties to develop a current and actionable understanding of their willingness to implement such projects within that timeframe. It also means working closely with EBCE's contractors and consultants to understand the CCA's portfolio and plans for procurement. To accomplish this, the Project Team will seek input from these key stakeholders through a cloud-based Survey Instrument combined with Focus Group and Workshop events, which will provide an opportunity for a two-way flow of information to and from property owners. This will provide the basis for the Project Team to estimate a realistic timeframe for projects to be developed.

Task 1: Cost

The total cost for the proposed services outlined for Task 1 is $100,000.00.

Task 1: Implementation Plan and Schedule

The preliminary Draft Analysis will be completed within 3.5 months of contract approval, with the Final Analysis completed within 4.5 months for inclusion in overall analysis and LDBP.



Task Name	Start Date	End Date
Task 1- Technical Potential and Feasibility of Grid-side Distributed Energy Resources	03/13/17	08/17/17
1.1- Solar Siting Survey (incl- Interconnection Hosting Capacity Analysis)	03/13/17	06/12/17
1.1.a- Conduct Analysis	03/13/17	06/12/17
1.1.b- Produce Solar Siting Survey Outputs (incl- .kmz and .xlsx files)	06/12/17	06/12/17
1.2- Other DER Assessements (Wind, Fuel Cell, Biogas, Biomass, CHP, Storage, Microgrid)	03/13/17	06/12/17
1.2.a- Conduct Analysis	03/13/17	06/12/17
1.2.b- Produce DER Assessment Outputs (incl- .kmz and .xlsx files)	06/12/17	06/12/17
1.4- Stakeholder Engagement	05/29/17	07/17/17
1.4.a- Stakeholder Focus Group	05/29/17	05/29/17
1.4.b- Site Owner Survey	06/12/17	06/29/17
1.4.c- Stakeholder Workshop	07/17/17	07/17/17
1.5- Feasibility Analysis	06/13/17	07/24/17
1.5.a- Levelized Cost of Energy Analysis	06/13/17	07/24/17
1.5.b- Locational Net Benefit Analysis	06/13/17	07/24/17
1.5.c- Financial Feasibility Analysis	06/13/17	07/24/17
DELIVERABLES:		
Draft Analysis	07/03/17	07/03/17
Final Analysis	08/17/17	08/17/17

Figure 4- Implementation Schedule for Task 1

Task 1: Deliverables

- Draft Task 1 Analysis
- Final Task 1 Analysis

Task 2: Technical potential and feasibility of customer-side distributed energy resources, including energy efficiency

Customer-side distributed energy resources and energy efficiency programs will play an important role in EBCE implementation. Behind-the-meter energy generation (such as rooftop PV) and demand reduction (such as energy efficiency upgrades) reduce the need for grid-supplied electricity, saving an estimated $0.22 per kWh in avoided time-of-delivery costs, line losses, and transmission and distribution costs (according to the BASE 2020 report). Microgrids, connected to rooftop PV generation and battery storage systems, can increase the reliability and resilience of the local electricity grid. In addition, energy investments on the customer side will spur job creation and foster a sense of ownership for EBCE customers.

Alameda County's size, diverse demographics, and range of climates present unique challenges and opportunities for a 21st-century, customer-focused electricity grid. To this end, EcoShift's technical expertise in energy analysis, coupled with its experience with solar deployment at a local level across several Northern California jurisdictions, will ensure the Project Team's success for Task 2.

Methodology

EcoShift's proposed methodology for identifying and assessing customer-side distributed energy resources and energy efficiency projects will be executed in the following steps:

1. **Identify "hot spots" in Alameda County** with high electricity consumption, where behind-the-meter technologies have the potential to reduce the energy demand and short-term capacity required of the electricity grid. Patterns of particularly high usage on a local city or neighborhood level will be identified. Building types and electricity use patterns will be used to characterize these high-consumption hot spots and better match them to the appropriate behind-the-meter technologies for reducing peak load capacity and flattening the demand profile.

   Load analysis is the critical first step in strategic planning for EBCE, which enables hot spot identification. The study of system loads in the service area will include (a) Establishing past, current and projected future monthly peak and minimum demand curves; (b) Understanding the peak and minimum demands for key customer classes including residential, commercial, industrial, agricultural and municipal; and (c) Modeling system loads by time of use and temperature to understand how seasonality and other factors influence load. The Project Team will start with existing load profiles from the MRW Study and any PG&E Data requested/received to-date, and requesting additional data from PG&E under CCA Info Tariff to provide the basis for granular load profile development. Simultaneously, the Project Team will coordinate and confer with the JPA to further define geographic and demographic parameters for load analysis and modeling, as well as account for non-CCA-eligible Direct Access customers, such as the UC Berkeley campus.

This approach will be used to determine hot spot areas where significant DER can be deployed. Through the Project Team's coordination and communication with the JPA, the load analysis and modeling will provide a clear understanding of the region's energy metabolism, as well as set the parameters for the rest of task 2.

2. **Perform an initial high-level screening** to determine which behind-the-meter technologies might best serve EBCE and its customers based on technical and cost considerations. Customer-side electricity generation potential for *solar PV, combined heat and power*, and *microturbine* technologies will be assessed using publicly available data on solar resources, natural gas consumption, and wind resources in Alameda County, respectively. Energy demand reduction potential for energy-efficient lighting upgrades and air conditioner on/off cycling will be investigated, especially where areas with older lighting infrastructure and high summertime electricity use are identified. Technical potential will be combined with existing and projected cost data to narrow down the selected technologies. Of high importance is continuous consideration of PG&E existing programs, with a goal of either: augmenting current PG&E programs to broaden deployment, identifying new areas for DER where PG&E isn't focused, accurately counting for existing program as "business-as-usual".

3. **Generate heat maps** that overlay multiple layers of geospatial data to identify areas where electricity demand "hot spots" coincide with cost-effective opportunities for behind-the-meter demand reduction. For areas with high potential for rooftop PV generation, the technical feasibility of microgrids (with integrated battery storage) will be investigated. Locations with high on-site natural consumption will be identified as possible sites for combined heat and power plants. Our team's familiarity with regional characteristics of Alameda County will be essential in determining the feasibility and potential siting for proposed projects. Specific focus will be placed on low-income communities and areas with aging infrastructure, and input from JPA will be critical at this stage to ensure that stakeholder goals and perspectives are included.

4. **Conduct a detailed analysis** on the technical and economic feasibility of the identified potential project types. Location- or site-specific data will be used where appropriate to refine initial assessments of system cost and potential for electricity generation or demand reduction technologies. Project types will then be ranked and prioritized based on factors such as levelized cost of energy, total annual grid electricity avoided (kWh), peak load capacity reduced (MW), system cost and benefit ($), and jobs created (both direct and indirect, taking into account the macroeconomic impacts of in-county development and higher electricity rates on job creation as described in the original MRW technical study). These projects will then be included in a higher-level scenario analysis (Task 7) that investigates, for example, conservative and aggressive scenarios for behind-the-meter development.

   Levelized Cost of Energy Analysis will aid EBCE in output metrics for the relative costs and benefits of each of the energy technologies outlined above in a simple "apples-to-apples" method. The Project Team will produce a comparative levelized cost of electricity analysis, comparing these technologies from a planning perspective, and will highlight the technologies that are most feasible from in terms of cost considerations.

Locational Net Benefit Analysis (LNBA) will be included as an emerging method for identifying optimal locations for DER deployment from benefit perspective. This will provide insights and guidance to EBCE in terms of which line segments would be most beneficial to focus on in terms of least cost and net benefit.

5. **Summarize the results** of the analysis in a report on the technical potential and feasibility of customer-side distributed energy resources, including energy efficiency. For each project type analyzed, we will estimate the overall technical potential, as well as provide a new capacity estimate. Results will create the foundation of a pro-forma scenario analysis tool for the evaluation and comparison of all project types to support the region's decision-making (upfront/ongoing costs, staffing, ramp-up strategy, potential energy/GHG reductions). This will define the parameters of the scenario analysis and allow definition of a work plan, as well as systematic synthesis and comparison of the effectiveness of project types analyzed.

This process ensures that a wide range of behind-the-meter solutions are considered, while also allowing for a more detailed assessment of a handful of feasible technologies to best suit the needs of Alameda County residents. Opportunities for customer-side demand reduction are as varied as the EBCE customers themselves, and an in-depth analysis of these solutions will be an integral part of a comprehensive Local Development Business Plan for EBCE.

Stakeholder Engagement

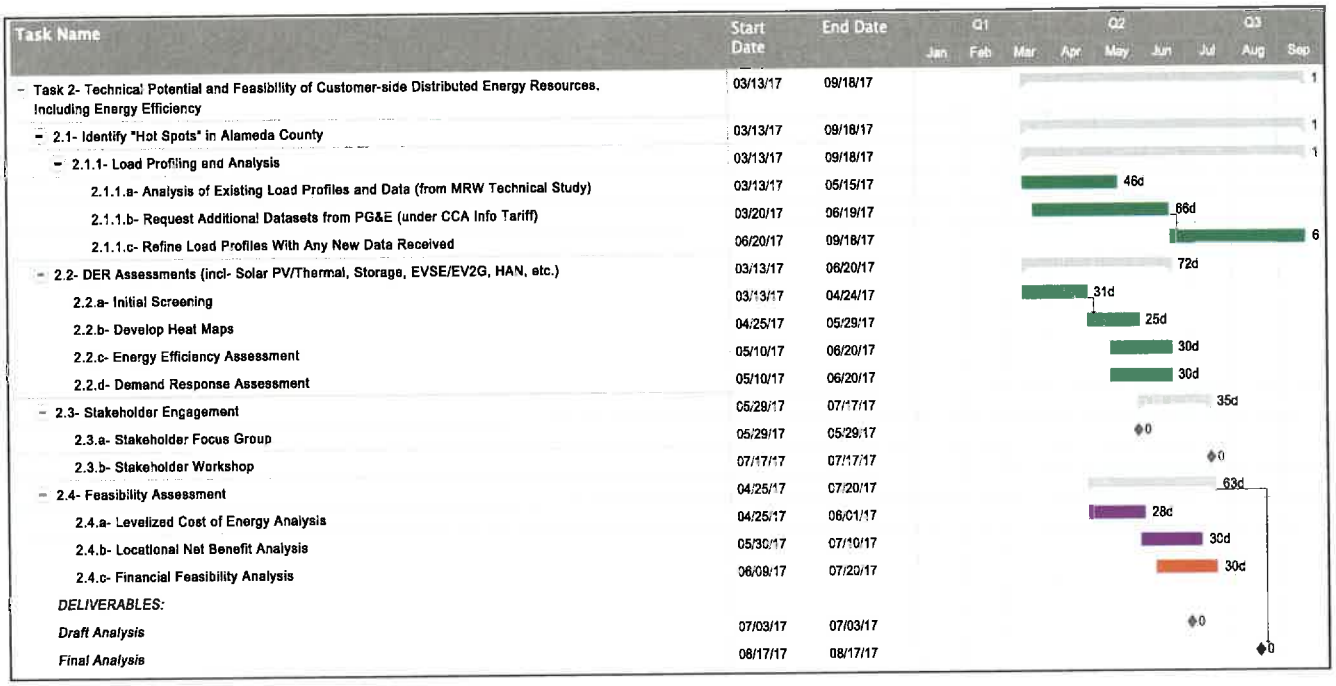
For Task 2 it is important to help EBCE understand the potential for deploying innovative energy efficiency initiatives, dispatchable energy resources, and demand response technologies within its service territory within the 5-year planning horizon contemplated within the context of the LDBP. This means engaging with technology and service providers to better understand what is possible and who has capacity to implement such projects within that timeframe. It also means working closely with EBCE's contractors and consultants to understand the CCA's portfolio and plans for procurement. To accomplish this, the Project Team will seek input from these key stakeholders through Focus Group and Workshop events, which will provide an opportunity for a two-way flow of information to and from vendors. This will provide the basis for the Project Team to estimate a realistic timeframe for deployment.

Task 2: Cost

The total cost for the proposed services outlined for Task 1 is $90,000.

Task 2: Implementation Plan and Schedule

The preliminary Draft Analysis will be completed within 3.5 months of contract approval, with the Final Analysis completed within 4.5 months for inclusion in overall analysis and LDBP.



Task Name	Start Date	End Date
Task 2- Technical Potential and Feasibility of Customer-side Distributed Energy Resources, Including Energy Efficiency	03/13/17	09/18/17
2.1- Identify "Hot Spots" in Alameda County	03/13/17	09/18/17
2.1.1- Load Profiling and Analysis	03/13/17	09/18/17
2.1.1.a- Analysis of Existing Load Profiles and Data (from MRW Technical Study)	03/13/17	05/15/17
2.1.1.b- Request Additional Datasets from PG&E (under CCA Info Tariff)	03/20/17	06/19/17
2.1.1.c- Refine Load Profiles With Any New Data Received	06/20/17	09/18/17
2.2- DER Assessments (incl- Solar PV/Thermal, Storage, EVSE/EV2G, HAN, etc.)	03/13/17	06/20/17
2.2.a- Initial Screening	03/13/17	04/24/17
2.2.b- Develop Heat Maps	04/25/17	05/29/17
2.2.c- Energy Efficiency Assessment	05/10/17	06/20/17
2.2.d- Demand Response Assessment	05/10/17	06/20/17
2.3- Stakeholder Engagement	05/29/17	07/17/17
2.3.a- Stakeholder Focus Group	05/29/17	05/29/17
2.3.b- Stakeholder Workshop	07/17/17	07/17/17
2.4- Feasibility Assessment	04/25/17	07/20/17
2.4.a- Levelized Cost of Energy Analysis	04/25/17	06/01/17
2.4.b- Locational Net Benefit Analysis	05/30/17	07/10/17
2.4.c- Financial Feasibility Analysis	06/09/17	07/20/17
DELIVERABLES:		
Draft Analysis	07/03/17	07/03/17
Final Analysis	08/17/17	08/17/17

Figure 5- Implementation Schedule for Task 2

Task 2: Deliverables

- Preliminary Draft Analysis
- Final Analysis

6.3- Task 3: Analysis of Development Models and Strategies

Market Animation and Incentive Programs

Feed-in Tariff Design

The Clean Coalition will take the lead in the design of an effective feed-in tariff (FIT) program for Alameda County's emerging CCA program. The Clean Coalition has guided utilities across the country — from large, investor-owned utilities like Georgia Power to small, public utilities like Alameda Municipal Power — in the design and implementation of FIT programs. More importantly, the Clean Coalition has designed the FIT programs for several existing CCA programs in California, including Marin Clean Energy, Sonoma Clean Power, and most recently CleanPowerSF making them one of the most (if not the most) qualified vendors for the FIT program design portion of the LDBP RFP.

The Clean Coalition will lead the Project Team through the development of three distinct deliverables. The first deliverable will be a kick-off meeting between key members of the Project Team, Alameda County, and the EBCE CCA program staff to discuss key considerations for designing a FIT, including primary objectives of the program. The second deliverable will be a document reflecting the Project Team's initial recommended FIT design elements, which will incorporate learnings from the kick-off meeting and best practices associated with existing FIT programs. The third deliverable will be a presentation led by the Clean Coalition on our initial FIT program design recommendations. This presentation will be made to Alameda County and the EBCE CCA staff in person, and provide a digital copy of the presentation file will also be provided.

All three elements of the FIT Design component of our proposed scope of work can be accomplished within 6 months of the signing a contract.

Methodology

Kick-off meeting

Before implementing a FIT, it is imperative to work through a number of key considerations. During the kick-off meeting, Clean Coalition staff will facilitate a conversation with Alameda County and/or EBCE staff to determine the primary goals of the FIT. Goals may include:

- Meeting local or state sustainability objectives
- Expanding customer choice for local energy generation
- Enhancing local capacity and grid resilience
- Guiding deployment of local renewables to optimal grid locations
- Stimulating economies of scale and local employment
- Enhancing local government revenues

The goals of the FIT will determine specific design elements that are most appropriate. The Clean Coalition will discuss with Alameda County and/or EBCE staff all of the major considerations regarding the launch of a FIT, including the potential benefits of starting with a pilot.

Initial recommended FIT program design

Incorporating learnings from the kick-off meeting, the Clean Coalition will develop an initial recommended program design for a FIT for Alameda County's CCA. This deliverable will provide a proposed structure and design for the FIT and be based on the following structure:

1. Introduction
    a. Brief overview of our recommendations
2. Program size and timing
    a. Size of initial tranche
    b. Program expansion
        i. Timing and size of future tranches
3. Project eligibility
    a. Technologies and project sizes
        i. Based on physical limitations, resource opportunities, and pricing requirements
4. Pricing
    a. Initial 20-year fixed pricing
        i. Based on analysis of resource quality, known market conditions, and relevant procurement data for given capacity ranges and types of installations
    b. Pricing structure options
        i. Delineate pros and cons, with clear recommendation, on:
            1. Market responsive pricing
                a. Adjustment amounts and frequency
            2. Fixed pricing or time-variant pricing (i.e., TOD pricing)
            3. Universal maximum price
5. Program budget
    a. Budget required for recommended program size and pricing
    b. Sensitivity table showing a few variations of alternative program sizes/pricing and associated budget requirements
6. Policies and procedures
    a. Summary of relevant existing FIT programs (MCE, SCP, LADWP, Palo Alto, etc)
        i. Table of key features
        ii. Assessment of key feature effectiveness
    b. Best-practice policies and procedures
        i. Program application
        ii. Project queuing
        iii. Contracts
            1. Best-practice PPA examples
                a. Recommendations on:
                    i. REC ownership
                    ii. Contract length
            2. Best-practice lease examples for municipal properties
                a. City of Palo Alto parking structures

This document will be delivered in a PDF and/or Microsoft Word format.

Presentation of FIT program design recommendations

The Clean Coalition will create a presentation in Microsoft PowerPoint format of its recommended FIT program design for Alameda County's CCA FIT program; to be delivered in electronic form and also presented live to Alameda County staff.

The presentation file will be delivered in a PDF and/or Microsoft PowerPoint format.

Net Energy Metering (NEM)

The Project Team will provide recommendations to EBCE regarding a Net Energy Metering (NEM) program design that supports the social, economic and environmental goals of the CCA. We will review best practices in NEM design, including the NEM program recently implemented by the State of New York under the Governor's Reforming the Energy Vision (REV) initiative, which is capturing value streams from DER deployment far beyond kilowatt hours of energy produced. New York's NEM program provides a model for how to move beyond the limitations of current NEM designs, and the Project Team will help EBCE understand the relative pros and cons of such an approach in context of the local CCA and LDBP.

The Clean Coalition has significant experience in designing and evaluating NEM successor tariffs, including under contract for Alameda Municipal Power (AMP). The Clean Coalition can provide similar support on efforts for EBCE by leveraging its work for AMP, which developed multiple NEM successor tariff possibilities. The Clean Coalition can primarily provide support by sharing the recommendations that it made for AMP. In addition, the Clean Coalition will support other members of the proposal team in assessing other NEM ideas.

The Clean Coalition recently identified the following four NEM successor approaches for AMP's consideration (note that AMP officially adopted the Hybrid approach several months ago):

- Self-Generation (no export)
- Feed-in Tariff
- Hybrid (self-generation + fixed rate for export)
- Rebate with Feed-in Tariff

Notes Regarding Official Clean Coalition NEM Recommendations to AMP:

Design separate programs for commercial/municipal and residential market segments:

- For the commercial/municipal segment, a Feed-In Tariff (FIT) approach seemed to be amenable to most participants as long as the economics would prove viable. Hence, a value plus premium approach would be viable, whether the premium is in the form of an enhanced per kWh rate or a per W rebate.
- For the residential segment, a self-generation plus fixed rate seemed to be amenable to most participants as long as the economics would prove viable.
- Conduct various analyses to facilitate data-driven decisions and education:

- Economic analysis that clearly shows the economic viability of whatever options will be formally proposed.
- Market analysis that highlights what is happening in other places.
- Powerflow analysis that definitively highlights how much solar generation can be accommodated within the AMP service territory and where.
- Solar siting survey to illuminate where solar can feasibly be sited.
- Solar pricing sensitivity analysis to determine how much of the potential solar would likely be developed at specific price levels.

Rate Design as an Incentive

The Project Team will assist EBCE in understanding the power of Rate Design to incentive and accelerate the deployment of beneficial DER's within the CCA's service area. California CCA's are able to set rates without regulation by the CPUC, which provides a powerful opportunity to develop special rates to incentivize the development of distributed, local resources.

Incentivizing smart, dispatchable DER's can have significant benefits to EBCE, including enhancing the CCA programs fiscal stability by providing the means to react to energy market conditions in real-time. A network of dispatchable assets can help the CCA optimize financial performance by alleviating congestion (i.e., Congestion Revenue Rights), reducing peak demand (i.e., decreased Procurement Costs, Capacity Requirements and Demand Charges), and smoothing unexpected fluctuations in load and/or demand (i.e., avoiding expensive CAISO charges for exceeding forecasted load).

The Project Team will evaluate and synthesize best market practices in special incentive rate design, and provide recommendations for feasible and beneficial rates to incentivize the development of high-priority, high-value resources that benefit EBCE, its members and its ratepayers. Such rate structures may include incentives for dispatchable energy storage, grid enabled EV Chargers, smart home appliances, and advanced microgrids.

On-bill Repayment

On-bill Repayment is another potential resource that our Project Team can help EBCE understand and take advantage of. This is a way to engage customers in the process of developing local DERs, while simultaneously covering the cost of development of those resources. EBCE could offer programs to local businesses and home owners that could allow them to develop valuable clean energy assets on their properties with little or no out-of-pocket or upfront costs, by allowing them to pay for those costs through small monthly payments on their energy bills over a set period of time.

Typically, such programs would focus on technologies that reduce energy costs and payments are structured to be less than the bill savings achieved, meaning the customer saves money on their bill while paying off the cost of the project. This can be the basis for a perpetual EBCE revolving loan fund for residential Solar + Storage deployment for example, which could provide a host of benefits that improved customer relationships and retention. In this way, On-bill Repayment can support the deployment of dispatchable DER's that yields many benefits to the CCA.

The Project Team will provide actionable recommendations for how to incorporate On-bill Repayment into the LDBP in ways that provide benefits to EBCE, its members and its ratepayers.

Outsourcing

The Project Team will provide recommendations for the appropriate role of outsourcing as it relates to the implementation of the LDBP. The use of standard RFP procurement to solicit short and/or long term power purchase agreements will be evaluated in context of the outcomes from Tasks 1 and 2.

Agency as Developer/Co-developer

The potential for EBCE to employ design, build and own (DBO) strategies to develop beneficial assets will be evaluated. To-date most CCA programs have opted to focus on building a solid credit rating in the first five years of operation, in order to be well-positioned to take advantage of this potentially powerful approach to asset development. However, the ability to act as a co-developer during that initial period of operation may provide a way for EBCE to get started with a robust DBO strategy much sooner. Our Project Team has extensive experience assisting public agencies with developing DBO strategies, and understanding complex options for how to finance such efforts using a wide range of public and private finance mechanisms. The Project Team will evaluate available options, and make actionable recommendations to EBCE for how to maximize the benefits of each over the 5-10 year horizon contemplated in the context of the LDBP.

Financial Feasibility Analysis

ALH Economics will conduct a thorough analysis of the financial feasibility to quantify the estimated costs and benefits of the strategies recommended by the Project Team. Key evaluation criteria will be identified, and ratepayer costs and benefits will be evaluated based on energy rates paid by consumers under CCA service versus PG&E service costs. This feasibility analysis will be prepared for Alameda County's preferred time period, reflecting at least a 10-year time period. The results will provide the means to understand the impacts to the CCA Cost of Service, as well as comparative findings regarding ratepayer costs and savings pursuant to the representative supply scenarios.

Stakeholder Engagement

For Task 3 it is important to help EBCE understand the needs and motivations driving local businesses and residents to make energy upgrades on their properties, so that the best portfolio of incentives and development models can be developed for the CCA program. This means engaging with local business owners and home owners to develop a current and actionable understanding of their perspectives on proposed strategies for incentivizing DER deployment. It also means engaging with staff and consultants at existing CCA's, as well as EBCE's contractors and consultants, to understand what is already working and where there might be need for innovation. To accomplish this, the Project Team will seek input from these key stakeholders through a cloud-based Survey Instrument combined with Focus Group and Workshop events, which will provide an opportunity for a two-way flow of information to and from property owners. This will provide the basis for the Project Team to estimate impacts associated with recommended strategies.

Task 3: Cost

The total cost for the proposed services outlined for Task 1 is $50,000.00.

Task 3: Implementation Plan and Schedule

Our Preliminary Recommendations will be delivered within 5 months of contract approval, with our Final Recommendations delivered within 7 months for inclusion in overall analysis and LDBP.

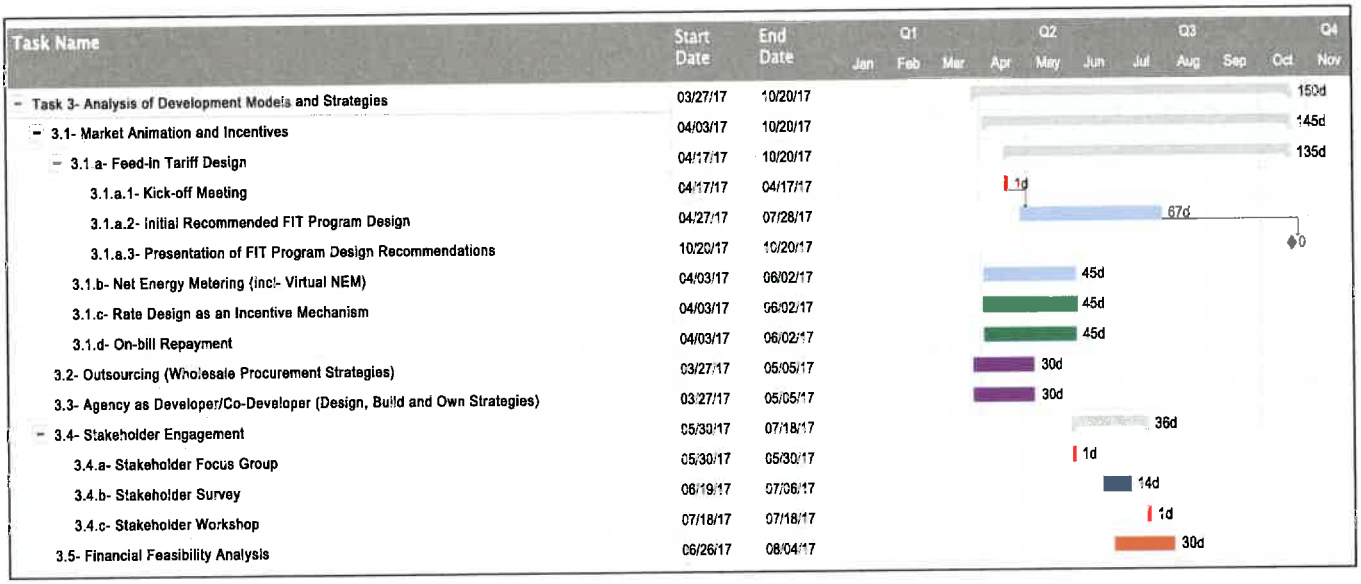


Figure 6- Implementation Schedule for Task 3

Task 3: Deliverables

- Market Animation and Incentives Program Design Recommendations

6.4- Task 4: EBCE Development Issues

Examination of the local economic impacts of community choice aggregation can be explored with a two-step modeling process. The first step entails conducting IMPLAN analyses for different local development scenarios developed in Task 3. The second step will analyze the IMPLAN findings to examine not only job quantity, but also job quality and access to new jobs for disadvantaged workers.

Labor Standards and Workforce Development Policies

As evidenced by the quotes below, Community Choice Aggregation offers a promising path toward GHG reductions by increasing renewable energy in a way that spurs local economic development and creates good jobs in local clean energy.

> *"By developing local clean energy resources, Community Choice programs can spur local economic development in the community, provide good local clean energy jobs, offer competitive electric utility bills and price stability, reduce pollution, and provide other community benefits."*[1]

> *"A Community Choice program can be a true energy service provider, integrating energy supply with demand reduction in a manner that meets community goals related to climate action, employment creation, price stability and local control."*[2]

> *"Significant local build-out in community-based renewable energy resources to create quality, unionized family-sustaining jobs, especially for low-income communities of color most impacted by pollution and climate change".*[3]

> *"A Community Choice energy program that prioritizes the building of local renewable energy assets can be a great opportunity and tool for creating pathways and incentives for economic development in low-income communities of color. It can create new jobs and businesses, as well as rules for local hiring and procurement."* [4]

We plan to evaluate as much as possible, the full costs and benefits of achieving these goals, and to identify an optimal scenario—that can achieve these goals while maintaining rate competitiveness with PG&E.

Ongoing coordination among the team members developing the assumptions and local development scenarios will help ensure that assumptions about labor rates, including prevailing wage, and union participation are built into local development plan feasibility from the get go.

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[1] http://www.localcleanenergy.org/policy-platform/communitychoiceenergy

[2] Baruch, Seth and Al Weinrub (2014). *East Bay Community Choice Energy: From Concept to Implementation*. Berkeley Climate Action Coalition, Community Choice Working Group. February 2014, p.ii

[3] http://www.localcleanenergy.org/files/Barbara%20Stebbins_CCA_CPHC%2013.pdf

[4] http://www.localcleanenergy.org/files/What%20the%20Heck%20is%20a%20REC.pdf p.10

Our assumption is that while it is possible to achieve all of the goals of local, reliable, affordable power and good quality jobs for local residents, appropriate financing and innovative asset ownership models, and most of all a plan to phase in different offerings and services, will be critical to EBCE's success.

The experience and expertise of ALH Economics combined with the expertise around type, quality, and access to jobs in the clean energy industry of Betony Jones (Fourth Sector Strategies) will ensure that the local economic and employment analysis is relevant to the many labor and equity stakeholders in Alameda County. For example, IMPLAN projections of clean energy project or portfolio costs include assumptions about worker compensation. To support a full cost accounting of meeting GHG reduction, renewable energy, and energy efficiency goals, we would analyze alternative scenarios which account for varying assumptions about worker wages and benefits which reflect prevailing wages, union benefits, apprenticeship contributions and other job quality standards. Based on Ms. Jones' research of other renewable energy construction and energy efficiency programs, we can also provide estimates of employment distribution by white and blue collar workers, including apprenticeship contributions and work hours. Apprenticeship is a key job quality metric because apprenticeship programs are a key point of entry for workers, including those from disadvantaged communities, to train for a career in the skilled construction trades.

Methodology

1) Provide input and analysis on implementation scenarios that yield optimal benefits for Alameda County businesses and workers
2) Identify and provide analysis of potential tradeoffs in EBCE's local development goals
3) Solicit input from stakeholders and survey requirements of utilities, service providers, contractors, cities and counties to identify wage and benefits packages for different classes of EBCE staff and contractors.
4) Compare different asset ownership scenarios according to the quality and number of jobs created in Alameda County
5) Provide case studies and examples of innovative policies and programs that accelerate a an equitable and inclusive green economy that can be models for EBCE program design and offerings.
6) Stakeholder outreach with include local job training program providers including registered apprenticeship programs and pre-apprenticeship programs, in order to identify role EBCE could play in establishing career ladders for local workers in the green economy.
7) Provide and explain menu of labor standards that can work with optimally with clean energy deployment scenarios provided in Task 3 and 7. These standards may include
    a. Responsible Contractor Criteria
    b. Workforce policy for Power Purchase Agreements
    c. Project Labor Agreements

d. Community Benefit Agreements

e. Worker Skill Standards

f. Wage Standards, such as prevailing wage or other wage floor as appropriate

g. Target Hire

8) For each scenario, identify scale at which a program can cost effectively meet energy targets, labor standards, the needs of disadvantaged communities, and general energy affordability.

9) Prepare a summary report of alternative financing options including private investment and state funds, and identify opportunities for EBCE to access state funding opportunities.

10) Develop a set of metrics with associated data collection needs and guidance on operationalizing the goals of the EBCE program in trackable and measureable ways, including metrics on

    a. Job numbers

    b. Job quality

    c. Access to jobs and economic opportunities

    d. Local development and investment

11) Incorporate results from each of the above activities to inform Task 7 (including the development of local development scenarios and provide actionable business plan), with guidance on workforce policies, to EBCE.

Stakeholder Engagement

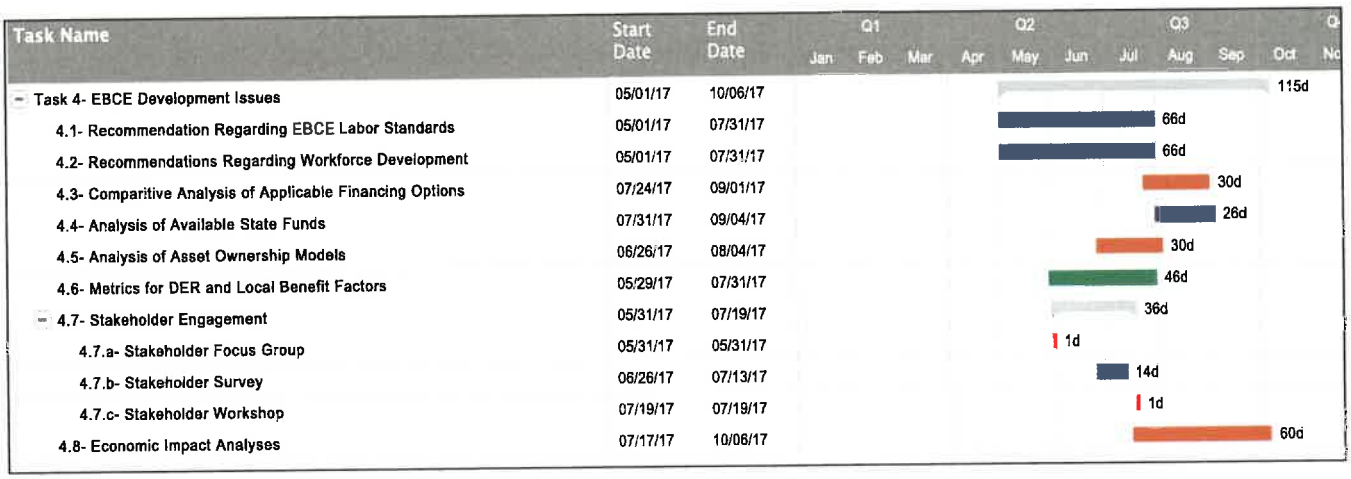
For Task 4 it is important to help EBCE understand what local labor and community organizations, workforce development and vocational training providers would like to see in terms of labor standards and workforce development policies to best meet the needs and goals for the local workforce. This means engaging in a meaningful dialog with these important stakeholders to develop a solid working relationship and insights into mutually beneficial scenarios. To accomplish this, the Project Team will seek input from these key stakeholders through a cloud-based Survey Instrument combined with Focus Group and Workshop events, which will provide an opportunity for a two-way flow of information to and from the community. This will provide the basis for the Project Team to refine its recommendations to EBCE regarding labor standards and workforce development policies.

Task 4: Cost

The total cost for the proposed services outlined for Task 1 is $50,000.00.

Task 4: Implementation Plan and Schedule

Our Preliminary Recommendations will be delivered within 5 months of contract approval, with the our Final Recommendations delivered within 7 months for inclusion in overall analysis and LDBP.



Task Name	Start Date	End Date
Task 4- EBCE Development Issues	05/01/17	10/06/17
4.1- Recommendation Regarding EBCE Labor Standards	05/01/17	07/31/17
4.2- Recommendations Regarding Workforce Development	05/01/17	07/31/17
4.3- Comparitive Analysis of Applicable Financing Options	07/24/17	09/01/17
4.4- Analysis of Available State Funds	07/31/17	09/04/17
4.5- Analysis of Asset Ownership Models	06/26/17	08/04/17
4.6- Metrics for DER and Local Benefit Factors	05/29/17	07/31/17
4.7- Stakeholder Engagement	05/31/17	07/19/17
4.7.a- Stakeholder Focus Group	05/31/17	05/31/17
4.7.b- Stakeholder Survey	06/26/17	07/13/17
4.7.c- Stakeholder Workshop	07/19/17	07/19/17
4.8- Economic Impact Analyses	07/17/17	10/06/17

Figure 7- Implementation Schedule for Task 4

Task 4: Deliverables

- Labor Standards Recommendations
- Workforce Development Policy Recommendations

6.5- Task 5: Implementation and other policy issues

Local Jurisdictional Considerations:

Permitting and Zoning

The Team will conduct a survey of the permitting process for solar panel installation in Alameda County cities and the unincorporated area. This will include researching permit costs on-line and interviewing City processing staff regarding the permit process, zoning regulations, timing, and cost verification. We will prepare a maxtrix of the relative permitting costs across local jurisdictions for a standardized project (e.g., same project size across jurisdictions) to compare pricing and identify the range of permitting costs added to the cost of a typical solar project. The matrix will also address required zoning designations or variance requirements. We will also contact solar installation companies to obtain their thoughts and insights regarding the permit process, how it varies across Alameda County cities and the unincorporated area, and suggestions for simplifying and streamlining the process. From this research process, as well the Team knowledge and experience, we will identify existing barriers associated with the permit process, and prepare recommendations for providing a more uniform process across all county jurisdictions as well as cost savings implications.

Grid Interconnection

The Project Team has extensive experience with grid interconnection of distributed clean energy projects in California, including within PG&E's service territory. We will leverage that experience, and our excellent relationships with PG&E staff to provide detailed insights and understanding regarding the implications of grid interconnection in relationship to the implementation of the LDBP. We will also utilize the outputs from the DER Assessments under Task 1 and Task 2—which include integrated hosting capacity analysis—to further refine our reporting and recommendations regarding grid interconnection.

California Environmental Quality Act (CEQA) Implications

We will also prepare a summary regarding the CEQA process and its applicability to DER installation projects. Our Project Team has extensive experience with the development of large scale clean energy projects, including CEQA aspects, which we will leverage to provide EBCE with actionable insights regarding the CEQA implications of the LDBP. Additionally, as part of our stakeholder engagement process for this task we will speak to local environmental consulting firms regarding their knowledge and experience with these types of projects locally and also query City Planning departments in Alameda County regarding known triggers for CEQA compliance pertaining to solar projects. We will identify the project types that do and do not require CEQA compliance, and prepare generalized estimates of the processing time involved. These will be generalized as some CEQA processes can become long and protracted depending upon the level of opposition garnered by some projects.

Citizen Participation and Initiative

The Project Team will participate in a rigorous stakeholder engagement process throughout the project, including activities related to Task 4, which will solicit citizen feedback critical for this task.

We will conduct a citizen survey, as well as semi-structure interviews (i.e., focus group) to solicit input and feedback from labor, equity, and other advocacy groups. The Project Team will leverage our combined decades of experience with community engagement on clean energy and climate protection issues to provide options and recommendations for maximizing citizen participation and initiatives.

The outcomes of Task 2 (including the Customer-side DER Assessments) to inform this task, because specific programs that target the small business and residential sectors with exciting advanced clean energy offerings provide an excellent way to engage EBCE's customers in the process of creating a new, community-focused energy paradigm through the CCA program. Such programs could include providing opportunities to install grid-enabled EV Chargers, smart appliances and/or solar +storage systems at local homes and businesses with no upfront cost using On-bill Repayment strategies. These strategies open new doors for citizen participation, and beneficial initiatives that allow customers to extract new value from a localized energy market.

Equity

Building on the work outlined in Task 4, the Project Team will evaluate potential program features that would promote equity and make recommendations to EBCE that ensure that the interests of disadvantaged communities are being served. Possible strategies for achieving this include providing low-cost access to solar pv and/or energy storage technologies through so-called "solar share" programs, or offering special rates for low-income ratepayers who install energy efficiency and/or demand response technologies (i.e., smart thermostats and grid-enabled appliances).

Contracting Models

The Project Team will evaluate various approaches to procuring necessary energy services, and will provide input to EBCE on local economic impacts of available contracting models. We will identify optimal opportunities for outsourcing and optimal opportunities for developing and retaining in-house expertise. The Project Team will present options and recommendations based on our analysis, which can enhance EBCE's competitive advantage.

Long-term Stability and Reliability

The Project Team will provide input on phasing in of different program goals to ensure long-term stability and reliability, as well as stakeholder and customer satisfaction and community pride and ownership of the program. We will focus on the ability of EBCE to develop a network of smart, dispatchable DER's that will not only reduce power procurement costs for the CCA, but will also provide the ability for the CCA to respond to energy market conditions in real-time. Such a network of dispatchable assets can provide many significant benefits to EBCE, including an enhanced risk mitigation portfolio that can allow the CCA to take advantage of peak load management (i.e., load shedding, load shifting) to avoid costly CAISO charges for exceeding forecasted energy demands when unexpected spikes in energy load occur (i.e., heat waves). These strategies can help the CCA stabilize its Cost of Service, enhancing program stability and competitiveness with the incumbent utility's rates. The Project Team has extensive experience evaluating regulatory barriers and implications for such advanced energy strategies, and we will

provide actionable insights and recommendations for how to achieve enhanced stability and reliability under the current regime.

Recommendations for Encouraging Entrepreneurial Creativity
Innovations in the rapidly evolving energy marketplace are happening at a breakneck pace, and EBCE needs to develop insights into how to leverage those changes to its advantage and embed those insights into the LDBP. The Project Team has unparalleled experience in this area, and we will provide expert advice and programmatic recommendations that can help EBCE maximize the opportunities for encouraging local entrepreneurial creativity and private-public partnership models in ways that benefit the CCA program and the local economy.

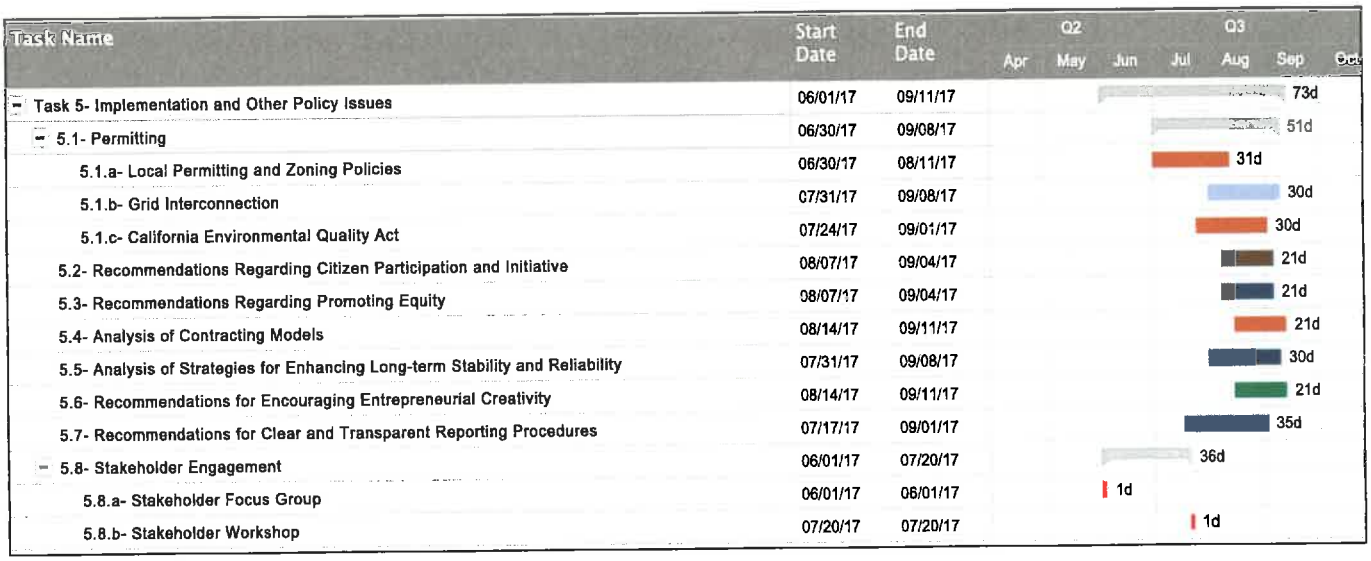
Recommendations for Clear and Transparent Reporting
The Project Team will provide options and concise recommendations for how to structure a clear and transparent reporting structure that meets or exceeds all statutory requirements (i.e., AB1110-Ting: Greenhouse Gas Emissions Intensity Reporting) and EBCE goals (customer engagement and retention). We will help EBCE understand the cost implications of both basic compliance reporting, as well as "gold-standard" reporting designed to exceed state and federal reporting requirements.

Stakeholder Engagement
For Task 5 it is important to help EBCE understand what has been proposed to and contemplated and/or implemented by existing and emerging CCA's in California, so that EBCE can refine its own vision and plan for implementing CCA in Alameda County. To accomplish this, the Project Team will seek input from key stakeholders through Focus Group and Workshop events, which will provide an opportunity for a two-way flow of information to and from CCA professionals and administrators, including EBCE's contractors and consultants.

Task 5: Cost
The total cost for the proposed services outlined for Task 1 is $45,000.00.

Task 5: Implementation Plan and Schedule

The preliminary Recommendations will be delivered within 4.5 months of contract approval, with our Final Recommendations delivered within 6 months for inclusion in overall analysis and LDBP.



Task Name	Start Date	End Date	Duration
Task 5- Implementation and Other Policy Issues	06/01/17	09/11/17	73d
5.1- Permitting	06/30/17	09/08/17	51d
5.1.a- Local Permitting and Zoning Policies	06/30/17	08/11/17	31d
5.1.b- Grid Interconnection	07/31/17	09/08/17	30d
5.1.c- California Environmental Quality Act	07/24/17	09/01/17	30d
5.2- Recommendations Regarding Citizen Participation and Initiative	08/07/17	09/04/17	21d
5.3- Recommendations Regarding Promoting Equity	08/07/17	09/04/17	21d
5.4- Analysis of Contracting Models	08/14/17	09/11/17	21d
5.5- Analysis of Strategies for Enhancing Long-term Stability and Reliability	07/31/17	09/08/17	30d
5.6- Recommendations for Encouraging Entrepreneurial Creativity	08/14/17	09/11/17	21d
5.7- Recommendations for Clear and Transparent Reporting Procedures	07/17/17	09/01/17	35d
5.8- Stakeholder Engagement	06/01/17	07/20/17	36d
5.8.a- Stakeholder Focus Group	06/01/17	06/01/17	1d
5.8.b- Stakeholder Workshop	07/20/17	07/20/17	1d

Figure 8- Implementation Schedule for Task 5

Task 5: Deliverables

- Implementation Policy Recommendations

6.6- Task 6: Integrated resource planning

IRP Approach

The success of the LDBP depends on consistency in balancing current and future trends in the energy market at large against the EBCE program's chosen direction for overarching rate and regulatory methods. The Integrated Resource Plan provides that balanced consistency. A driving theme of the Integrated Resource Plan process will be incorporation of the immense corpus of previous work done by the team in the form of long-range renewable energy technology roadmaps, solar planning and zoning local policy roadmaps, as well as larger State initiatives such as Renewable Energy Transmission Initiative (RETI 2.0). Given the ambitious local energy planning role of the EBCE, the IRP will combine wholesale resource planning and energy procurement with on-site and in-County utility scale and distributed energy generation resources.

IRP Methodology: Integrating LDBP Outcomes with IRP

The IRP will incorporate all parallel modeling from the solar siting and policy research teams, as well as existing EBCE consultants and studies. IRP methodology shall specifically balance local development with existing policy advisement, economic impacts advisement, and potential implications of upcoming CPUC/CAISO proceedings on the success of the LDBP.

In addition, the IRP will synthesize interrelate issues, challenges, and solutions provided by local and long-term resource planning at municipal utilities. IRP authors will target close reading and interpretations of regulations applicable to CCA that provide policy guidance on renewable energy and relevant legislation used by other CCAs and municipal alliances (NCPA, SCPPA). IRP considerations for utility partnerships and mutual DER integration will also benefit from Optony's expected formation of a utility-CCA working group to help bridge potential animosity between CCA, investor owned utilities, and other key energy stakeholders in Northern California.

Innovative Program Options for DER Integration

In order to gather innovative program options such as electric vehicle to grid (V2G) microgrids; building and home area managed power networks (i.e., nanogrids); and the virtual power plant concept the IRP authors will solicit input from as many related government meetings as feasible. This will include CCA board, county supervisors board, city council, municipal utility board, California Public Utilities Commission, CAISO, Western Interstate Energy Board, Committee on Regional Electric Power Cooperation, California Energy Commission, and other State of California meetings. To truly drive a roadmap for integrating unproven resources considerations will be made for the benefits of in-person advocacy of this integrated resource planning to promote and influence State policy and regional transmission planning. This wide net of information capture will ensure that EBCE IRP document meets the highest and best practices of other established and emerging community choice programs in the State, if not the nation.

The IRP will be a key partner document to the EBCE Implementation Plan in terms of building heretofore unknown classifications of local energy assets; synchronization of local energy planning (i.e., new deployment of energy storage and new solar must not outpace each other); local

renewable energy project power output phase angles for balancing and volt/VAR support; and daily output peak power scheduling.

Benefits of Microgrid Development and EV Charging Stations

Optony will aid the County and EBCE Board to standardize in-County resource PPA terms to facilitate and forecast local energy and micro-grid impacts on wholesale PPA commitment. The value of fuel switching and local generation electric vehicle charging will be considered, as will standardization of EV charging station operating agreements. Because of the unique ambitions of the EBCE IRP (i.e., development of local energy resources, innovative energy efficiency programs, aggregation of end-use facilities in micro-grid configurations, local micro-aggregation grid services, and synergies with other municipal services including water supply, wastewater treatment), specific attention will be paid to potential wholesale procurement impacts, strategies, and contingencies for local development of micro-aggregation, as well as wind, solar, fuel cell, bio-gas, energy storage, and other feasible opportunities.

The team will review current knowledge and practices of IRPs prepared by other California CCAs. The team is familiar with the load and climate action plan goals of EBCE member jurisdictions, and will consider uncaptured and unseen costs that the member cities would in achieving these climate action goals independently. The IRP will inform as to the advantages and disadvantages in scale and prospects of aggregation for overall climate action compliance given the risks of organizational structure, operations, debt funding, rate setting, local special purpose tariffs, and other costs to participants.

The benefits of this IRP process will be to encompass education of the EBCE Board as to best practices of other CCAs in setting rates and allocating costs among participants. However, the competing subjective considerations of equal cost sharing for all customers versus universal access for disadvantaged communities shall be evaluated as a unique challenge unresolved by other Northern California CCAs. The EBCE will face new challenges in providing local development without inequitable cost shifting among customer groups.

The IRP will provide research and reporting on third party electricity suppliers, as well as financial, sustainability, technical and operational capabilities of pertinent Qualified Facilities. The IRP will seek a broad base of government and community engagement connections as a focus group for feedback of research, and to proving the further benefit of disentangling ethical challenges to participant rights and responsibilities, universal access, reliability, and equitable customer treatment.

Demand Reduction and Demand Response

Above all, the IRP will provide general goals and ongoing year-by-year objectives in a budget-prioritized order to incorporate dynamic rate design including demand response pay-to-cut as well as pay-to-load scenarios, and to value demand response against fossil-based energy markets, hydroelectric power procurement, wind energy contracting, interstate energy dynamic transfers, and distributed energy resources.

Energy Storage Contracting Strategy

Policy opportunities (e.g., SCE's Local Capacity Requirement program) as well as local regulations and zoning ordinances will be used to compare and contrast options for central station energy storage and distributed energy storage. Storage timing requirements will be considered and planned according to length of charge-discharge cycle period. Various technologies (e.g., flywheel, lithium-ion, compressed hydrogen) will be evaluated for cost competitiveness.

Recommendations for Optimizing the Integration of DER Development with Renewable Portfolio Standard, Power Procurement, and Scheduling

The IRP will take into consideration all options to meet State RPS requirements as well as renewable energy expectations of community stakeholders include wind, solar, small hydro, bio-gas/bio-mass, geothermal, and eligible imports from within dynamically transferred CAISO markets. The IRP will consider the concurrent review of ESP responses to ensure Renewable Portfolio Standard compliance as well as to ensure maximum monetization of Renewable Energy Certificates registration, administration, and transfer though the Western Renewable Energy Generation Information System (WREGIS). The IRP will take into consideration that the price of RECs may change as may the RPS.

IRP authors will track and advise the EBCE Board on anticipated expansion of CAISO market and implications for broader acceptable Category 1 directly interconnected and dynamically transferred renewables. Authors will aid City, County, and EBCE Board to refine RFP formats for wholesale energy procurement, energy scheduling/coordination, and resource adequacy.
IRP electricity load evaluations and forecasting and will aid County and EBCE Board in retaining accurate data and forecasts for program load, number of customers, and sales revenue. This data will be critical to budgeting for energy purchase and operating budget estimates. The IRP will advise on scoping level of retained profits for energy efficiency programs, micro-grid and local renewable resource oversight and administration, and community awareness and engagement activities.

New Generation

The IRP will gather public opinion surveys and include statistics from local input to forecast IRP impacts of participation rates for high renewables premium products (50% - 100% renewable). IRP definitions will aid EBCE to classify "local energy" products as part of the high renewable products. IRP modeling will use rate designs that include administrative and programming overhead costs and contrast the EBCE resource mix against PG&E energy portfolio. Using all the aforementioned inputs, the IRP will model multiple power supply options to aid EBCE to evaluate different energy portfolios to determine the need for new generation, and required energy dispatch shaping of that energy.

The IRP authors will examine CAISO operations updates, closely follow CAISO initiatives, attend CAISO public meetings, and will addressing PG&E, CPUC and CAISO requirements through a technical of stepladder policy mapping from year-one successful program launch, into early operations, and sustainable local buildout transition.

This IRP development methodology is by no means inflexible; as a multifunction consulting resource this team is prepared to adapt to emerging and specific needs of the EBCE Board during the next few months. This flexibility allows for iterations of the document with the larger interdisciplinary team to bring in innovative outcomes of labor and economic modeling and to avoid unrealistic objectives or time horizons.

Analysis of Risks and Mitigations

The crosscutting thread between the IRP and the LDBP is the obligation of the EBCE Board to uphold prudent fiduciary duty, rigorous budget certainty, and compliant regulatory registration; all directed toward accretion of the public good. The IRP will combine a simulation of CAISO charges will results from multiple hypothetical PPA/ESP contracts. The topic of synthetic PPAs dynamic PPAs, and the concept of the demand response PPA will be expanded and considered. Budget cost and budget certainty enhancements of excess generation dispatchability will be considered as will risks and benefits of power curtailment either locally or at remote facilities.

The IRP will consider business solutions including behavioral science, social norming, gamification, and creative power contracting that are outside of the typical "engineering toolbox".

To plan hedging strategies for risk the IRP authors will conference with relevant public investment trusts, public employee retirement funds, and banking services corporations with previous CCA experience. The IRP will track and summarize the program financing needs and methods of solicitation for banking services developed in the early months of launch as use financial analysis in conjunction with load growth predictions to update and amend the analysis developed for the feasibility study. The IRP authors will participate in discussions and negotiations with financial institutions both prior to launch and during program operation in order to fully capture the terms, risks, and potential mitigations strategies against program insolvency. IRP financial planning and analysis will consider State and federal access to capital for clean energy programs in order to aid the EBCE Board to plan and acquire subsidized loans, low interest bonds, credit enhancement through federal loan guarantees, and access to no-cost grant funding opportunities from the State of California and federal programs. Financial impacts relevant to the IRP will be modeled and to evaluate timing of changes and selection to the preferred banking services partner for EBCE.

Stakeholder Engagement

For Task 6 it is important for EBCE to have a current understanding of emerging best practices in integrated resource planning to prepare for an exhaustive IRP process in upcoming years. IRP planning will leverage extensive overlapping academic research for energy service providers, and will incorporate fundamental aims of the Joint Powers Authority program charter, as well as community input from the multiple stakeholder engagement paths, and solicit direction from the EBCE Board of Directors. The IRP will be co-evolved alongside EBCE executive choices in energy planning and greenhouse gas modeling. At the midpoint of IRP creation the team will reevaluate feedback from stakeholders regarding the EBCE Implementation Plan and all relevant recommendations and criticisms revealed during CPUC proceedings. The Project Team will also seek input from key stakeholders through Focus Group and Workshop events, which will provide

an opportunity for a two-way flow of information to and from industry professionals and energy product and service providers, including EBCE contractors and consultants.

Task 6: Cost

The total cost for the proposed services outlined for Task 1 is $45,000.00.

Task 6: Implementation Plan and Schedule

Optony will lead the integrative approach to planning research and forecasting of load and resource development, rate modeling impacts, and rate-setting incentives. Optony will first provide studies and modeling of local energy resource economic targets and rules design to stimulate and enable local development buildout. Optony has developed cost modeling software for the proposed Integrated Resource Plan that will allow the firm to scope and value ancillary services and will work with information technology partners to determine the day-over-day value to integrated resource planning of a virtual power plant or dynamically dispatched local energy market – if deemed a desired or necessary precondition to successful realization of the goals for the Local Development Business Plan.

The preliminary Recommendations will be delivered within 4.5 months of contract approval, with our Final Recommendations delivered within 7 months for inclusion in overall analysis and LDBP.

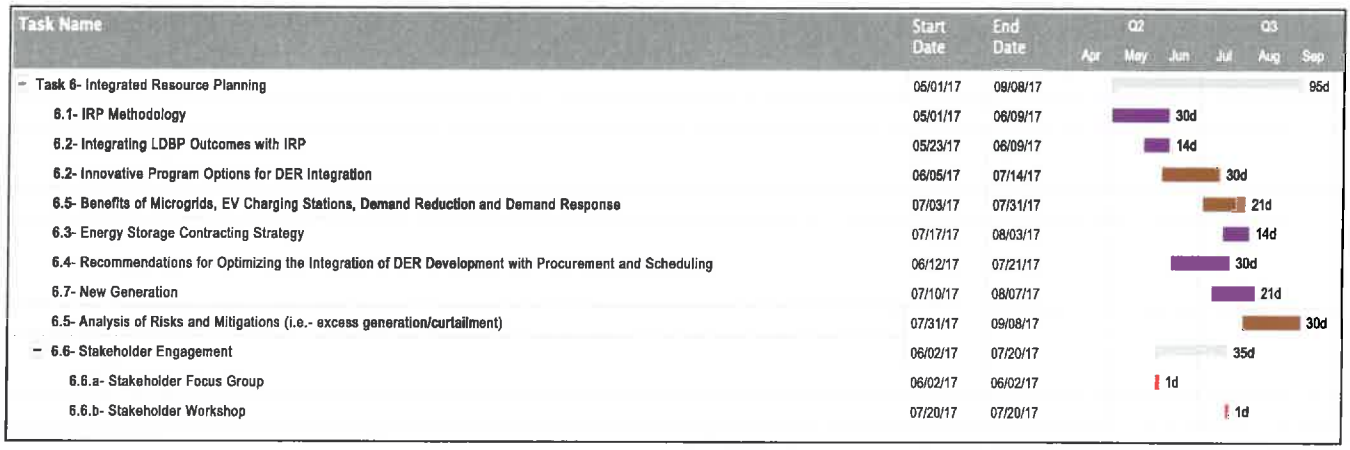


Figure 9- Implementation Schedule for Task 6

Task 6: Deliverables

- Integrated Resource Planning Recommendations

6.7- Task 7: Preliminary plan scenarios

Scenario analysis is the critical output of the project that brings the grid-side, customer-side, policy variables, and overall impacts to life. Because project outputs from each task of the study have varied assumptions, impacts, and magnitudes, a concise and clear scenario analysis allows rapid interpretation of results for decision-making and engagement with the public audience.

EcoShift's recent award-winning scenario analysis & planning project with the University of California takes an innovative approach to scenario analysis, and we propose taking advantage of this for EBCE. The goal is to provide comprehensive scenario results in a user-friendly and digestible format while simultaneously creating the foundation for ongoing evaluation and comparison of EBCE options for energy programs through a dynamic analysis tool. In doing so, EBCE will define the parameters of a future planning, and analysis efforts as the EBCE moves towards implementation of various areas of the plan will be streamlined. This will also enable systematic synthesis and comparison of all key parameters of each program/project analyzed by the study.

The final result will be a short set of scenarios that estimate reasonably achievable results within ten years, including their objectives, target metrics, financial analysis, proposed sequencing/load order, and risks/tradeoffs - so that these can inform and become part of the implementation plan. This powerful and flexible scenario analysis approach increases the value of this study for EBCE and public stakeholders.

Methodology
Our unique methodology for scenario development and analysis follows these steps:

1. **Define data inputs** generated through analysis in Tasks 1-3 & 5: Projects/programs with associated key inputs (e.g., projected MW deployed, upfront/ongoing costs, etc.), and key assumptions (e.g., $/MW, adoption rates, etc.). This will involve close collaboration with the project team to identify all important analytical requirements. Inputs will be included from analysis of net metering, feed-in-tariffs, grid upgrade needs/limits, different ownership and financing options of DER, community solar options, etc. The goal is to enable analysis of each approach independently to consider overall effects on EBCE, with all parameters and assumptions flexible to assess any sensitivity.

2. **Collect and validate key assumptions to develop baseline and implementation scenarios,** which represents continuation of the current trajectory in the absence of the Community Choice program. This will incorporate all impacts from state policies (e.g., RPS), regulations (e.g., SB 350), and incentive programs (e.g., SGIP), market factors (e.g., assumptions of future cost of solar), normal trajectories of existing DER (e.g., projected growth in penetration of rooftop solar). The baseline "business-as-usual" scenario will be used to compare to deployment of programs and projects under a more aggressive EBCE strategy. The project

team will solicit validation/input from the JPA Board and community stakeholders on these baseline assumptions, as they are key to interpreting final scenarios.

3. **Define and prioritize scenario impact variables** based on output of Task 4, including metrics such as renewables percentage, local renewables percentage, total and ongoing investment (including staffing implications), NPV, job-years created, size of reserve, income/wealth generation, penetration of programs in disadvantaged communities, average percent change in electricity bills, GHG reductions, and others determined by the project team, and through engagement with the JPA Board and community stakeholders. Our analysis will balance financial metrics (net present value, cash flow, savings-to-investment ratio, upfront and staffing costs) with the non-financial (environmental and social) metrics and present them in a comparable, easy to understand way based on an agreed-upon prioritization/scale of quantitative metrics and qualitative factors.

4. **Cost of Service (Fiscal/Budget) Impacts** will be identified to incorporate the different types of costs that would be incurred by the CCA program in providing electric service to its customers. This will include review and estimation of the applicable cost of service elements. These cost categories and estimated costs will be incorporated into the scenario analysis results to support the Financial Feasibility Analysis of select scenarios. Representative elements could include the following:
    - Electricity purchases
    - Renewable energy purchases
    - Electric generation
    - Transmission and grid services
    - Financing costs
    - Billing, metering, and data management
    - Staff and other operating costs
    - Uncollectable accounts
    - Program reserves
    - Bonding and security requirements
    - PG&E Surcharges

5. **Develop pro forma scenario analysis model** to dynamical combine information from all projects/programs to project scenario impact variables for Alameda County's preferred time period, reflecting at least a 10-year horizon. This will provide a quantitative analysis of the estimated costs and benefits, and ratepayer costs and benefits will be evaluated based on energy rates paid by consumers under CCA service versus PG&E service costs. This will include consideration of a phase-in strategy for the CCA customer base, as well as changes in PG&E's operations. A pro forma analysis model will be prepared, taking into consideration key variables, such as the following: Customer Account Projections; Estimated Load Requirements; Estimated CCA Operating Costs; Comparative Revenue Projections; Reserve Contributions; Customer Surcharges; and Change in Customer Charges. Many of the costs will be based upon estimates in the Cost of Service analysis component of the work scope. The results will provide comparative findings regarding ratepayer costs and savings pursuant to the representative

supply scenarios. The model will incorporate assumptions for baseline scenarios, and allows adaptation to sensitivities or updated conditions to examine the impacts of changes in select cost and revenue variables. For example, it will be possible to easily update key policy assumptions such as RPS targets, local generation targets, and adoption rates of individual customer-side energy efficiency and DER programs, etc. It will also be possible to change key assumptions such as energy escalation rates, discount rate, inflation rate, and financing rates. Economy-wide impacts, such as indirect job creation and wealth generation will be modelled using IMPLAN; initial scenario output of financial information – spending in categories specified by IMPLAN – will be used to generate economy-wide output metrics. These IMPLAN results will be then included in the final metrics report of the scenario. Scenario output will show all impact metrics plus assumptions and projections of each program/project analyzed.

6. **Preliminary scenario analysis** to understand which variables have the greatest effect on scenario impact variables. EcoShift's combined academic and consulting background gives us the expertise to analyze complex data and distill information for planning purposes. Because a wide range of variables and assumptions will drive results, it is important to first review general outputs to make the techno-economic analysis a robust and reliable planning approach. Preliminary scenario analysis will be shared with project stakeholder to get input on generating the final scenarios.

7. **Collaboratively agree on principles to generate final scenarios.** We have used different approaches in past projects, and recommend defining scenarios through an iterative, collaborative approach based on either: (1) maximizing a specific impact area (e.g., How can we create the most carbon reductions? Jobs?), (2) optimizing for a set of prioritized impacts/goals (Which scenario will create relatively low total upfront costs, while prioritizing local jobs/investment over increasing the local RPS over 50% before 2030), (3) defining scenarios based on logical actions of a CCEs implemented according to development models analyzed in Task 4 (e.g., Maximum Local Portfolio Standard). Input from the JPA Board and community stakeholders will be critical at this stage.

8. **Final scenario results and sensitivity:** The final scenarios included for comparisons will each focus on optimizing EBCE to create a certain set of outcomes. Our modeling approach allows us to easily analyze sensitivity analysis around critical assumptions (cost of purchased energy, cost/W of rooftop solar, etc.). The risk analysis accompanying each scenario will frame potential risks and mitigations in both quantitative model output terms and qualitative terms.

Stakeholder Engagement

Our entire proposed process for Task 7 is designed to engage key stakeholders to understand and contribute to critical goals and perceived tradeoffs among approaches and impacts, as well as gives the ability for EBCE to update and reanalyze long after the project ends. The information and common understanding can then be used for EBCE to set targets and/or minimum thresholds for different categories of impact, as well as understand the optimal mix of market purchases and DER. Easy-to-interpret graphical output, backed up by clear documentation, are critical to the usefulness and validity of the process. The Project Team will also seek direct input from key

stakeholders through Focus Group and Workshop events, which will provide an opportunity for a two-way flow of information to and from the community about the LDBP and its potential to provide social, economic, and environmental benefits to the greater Alameda County community.

Conclusions and Summary of Recommended Scenario

A Summary Report will synthesize results of the scenario analysis and recommended conclusions. Easy-to-interpret graphics, combined with complete documentation of assumptions and model parameters are both critical outputs to engage stakeholders quickly and engender trust in the process. The Summary Report will document why specific scenarios were selected for analysis, review sources of information, report output metrics for each scenario, and discuss implications of the scenario output and comparison.

Task 7: Cost

The total cost for the proposed services outlined for Task 1 is $52,500.00.

Task 7: Implementation Plan and Schedule

The preliminary Draft of the LDBP will be delivered by August 28, 2017 (~6.5 months after the first meeting of the EBCE JPA Board), and the Final LDBP will be delivered by December 29, 2017.

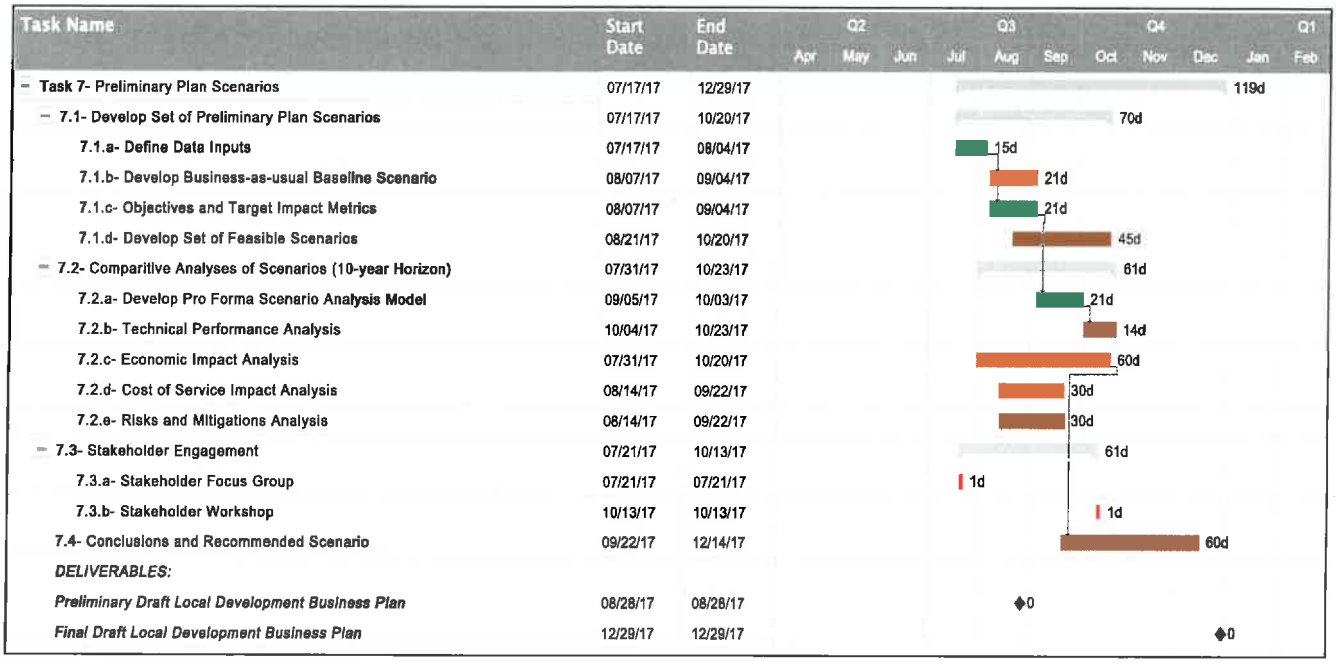


Figure 10- Implementation Schedule for Task 7

Task 7: Deliverables

- Preliminary Draft of Local Development Business Plan
- Final Local Development Business Plan

SECTION 6: IMPLEMENTATION PLAN AND SCHEDULE

Below we summarize our plan for implementing the proposed project, and the associated timeline for each task/subtask based on an estimated project initiation in March of 2017. Our Project Team is open to discussing any adjustments to the proposed work plan that are necessary or desirable.

Primary Point of Contact for Alameda County's EBCE

Amy Herman (Principal of ALH Economics) will by the primary point of contact for EBCE and/or Alameda County staff for the duration of the project. Amy will coordinate all internal communication with the Project Team and Project Manager, and will be responsible for the delivery of all work products as well as timely billing and administrative services relating to project implementation.

Project Management and Quality Assurance

The Offset Project will manage this project efficiently, and all work products will be of the highest possible quality. Our staff plans and manages complex clean energy, zero-waste, GHG reduction, workforce development, and environmental certification projects each year, including rigorous event management projects like the AT&T Pebble Beach Pro Am, which involves months of planning, coordination between many partner organizations, and the management of over 500 volunteers. Our Chief Project Manager, Chris Sentieri, has developed a comprehensive Project Management Plan using industry standard methods and modern project management tools that will allow him to monitor progress on all tasks and stay connected to all team members at all times.

Mr. Sentieri uses a modern, cloud-based project management software platform called Smartsheet, which is a Microsoft Project compatible suite of project management tools that allows for a centralized management process. Smartsheet is a secure and always accessible platform, which allows Mr. Sentieri to coordinate tasks, allocate resources, monitor progress, communicate with team members, set reminders and alerts, store and distribute files, backup critical files, manage calendars, generate reports and much more. Smartsheet is accessible by smartphone or computer 24/7, allowing Mr. Sentieri to manage project flow at all times. Mr. Sentieri has developed a Project Management Plan, and an initial draft Gantt chart has been prepared using Smartsheet, which indicates how all proposed tasks will be coordinated and how they are interrelated. Each of our key team members is also experienced and highly capable of coordinating tasks collaboratively and delivering work products on schedule.

Work Plan and Schedule

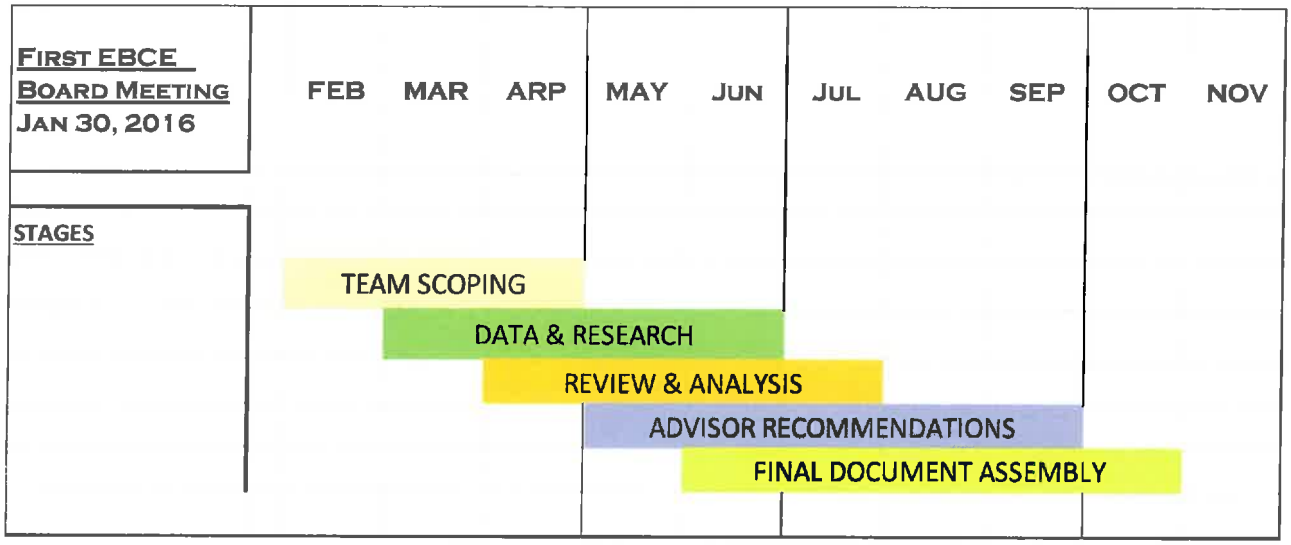


Figure 11- Overview of Project Schedule

Task Name	Start Date	End Date	Duration
Task 1- Technical Potential and Feasibility of Grid-side Distributed Energy Resources	03/13/17	08/17/17	114d
1.1- Solar Siting Survey (incl- Interconnection Hosting Capacity Analysis)	03/13/17	06/12/17	66d
1.1.a- Conduct Analysis	03/13/17	06/12/17	66d
1.1.b- Produce Solar Siting Survey Outputs (incl- .kmz and .xlsx files)	06/12/17	06/12/17	**Milestone**
1.2- Other DER Assessements (Wind, Fuel Cell, Biogas, Biomass, CHP, Storage, Microgrid)	03/13/17	06/12/17	66d
1.2.a- Conduct Analysis	03/13/17	06/12/17	66d
1.2.b- Produce DER Assessment Outputs (incl- .kmz and .xlsx files)	06/12/17	06/12/17	**Milestone**
1.4- Stakeholder Engagement	05/29/17	07/17/17	36d
1.4.a- Stakeholder Focus Group	05/29/17	05/29/17	1d
1.4.b- Site Owner Survey	06/12/17	06/29/17	14d
1.4.c- Stakeholder Workshop	07/17/17	07/17/17	1d
1.5- Feasibility Analysis	06/13/17	07/24/17	30d
1.5.a- Levelized Cost of Energy Analysis	06/13/17	07/24/17	30d
1.5.b- Locational Net Benefit Analysis	06/13/17	07/24/17	30d
1.5.c- Financial Feasibility Analysis	06/13/17	07/24/17	30d
DELIVERABLES:			
Draft Analysis	07/03/17	07/03/17	**Milestone**
Final Analysis	08/17/17	08/17/17	**Milestone**

Task 2- Technical Potential and Feasibility of Customer-side Distributed Energy Resources, Including Energy Efficiency	03/13/17	09/18/17	136d
2.1- Identify "Hot Spots" in Alameda County	03/13/17	09/18/17	136d
2.1.1- Load Profiling and Analysis	03/13/17	09/18/17	136d
2.1.1.a- Analysis of Existing Load Profiles and Data (from MRW Technical Study)	03/13/17	05/15/17	46d
2.1.1.b- Request Additional Datasets from PG&E (under CCA Info Tariff)	03/20/17	06/19/17	66d
2.1.1.c- Refine Load Profiles With Any New Data Received	06/20/17	09/18/17	65d
2.2- DER Assessments (incl- Solar PV/Thermal, Storage, EVSE/EV2G, HAN, etc.)	03/13/17	06/20/17	72d
2.2.a- Initial Screening	03/13/17	04/24/17	31d
2.2.b- Develop Heat Maps	04/25/17	05/29/17	25d
2.2.c- Energy Efficiency Assessment	05/10/17	06/20/17	30d
2.2.d- Demand Response Assessment	05/10/17	06/20/17	30d
2.3- Stakeholder Engagement	05/29/17	07/17/17	35d
2.3.a- Stakeholder Focus Group	05/29/17	05/29/17	1d
2.3.b- Stakeholder Workshop	07/17/17	07/17/17	1d
2.4- Feasibility Assessment	04/25/17	07/20/17	63d
2.4.a- Levelized Cost of Energy Analysis	04/25/17	06/01/17	28d
2.4.b- Locational Net Benefit Analysis	05/30/17	07/10/17	30d
2.4.c- Financial Feasibility Analysis	06/09/17	07/20/17	30d
DELIVERABLES:			
Draft Analysis	07/03/17	07/03/17	**Milestone**
Final Analysis	08/17/17	08/17/17	**Milestone**
Task 3- Analysis of Development Models and Strategies	03/27/17	10/20/17	150d
3.1- Market Animation and Incentives	04/03/17	10/20/17	145d
3.1.a- Feed-in Tariff Design	04/17/17	10/20/17	135d
3.1.a.1- Kick-off Meeting	04/17/17	04/17/17	1d
3.1.a.2- Initial Recommended FIT Program Design	04/27/17	07/28/17	67d
3.1.a.3- Presentation of FIT Program Design Recommendations	10/20/17	10/20/17	**Milestone**
3.1.b- Net Energy Metering (incl- Virtual NEM)	04/03/17	06/02/17	45d
3.1.c- Rate Design as an Incentive Mechanism	04/03/17	06/02/17	45d
3.1.d- On-bill Repayment	04/03/17	06/02/17	45d
3.2- Outsourcing (Wholesale Procurement Strategies)	03/27/17	05/05/17	30d
3.3- Agency as Developer/Co-Developer (Design, Build and Own Strategies)	03/27/17	05/05/17	30d
3.4- Stakeholder Engagement	05/30/17	07/18/17	36d
3.4.a- Stakeholder Focus Group	05/30/17	05/30/17	1d
3.4.b- Stakeholder Survey	06/19/17	07/06/17	14d
3.4.c- Stakeholder Workshop	07/18/17	07/18/17	1d

3.5- Financial Feasibility Analysis	06/26/17	08/04/17	30d
Task 4- EBCE Development Issues	05/01/17	10/06/17	115d
4.1- Recommendation Regarding EBCE Labor Standards	05/01/17	07/31/17	66d
4.2- Recommendations Regarding Workforce Development	05/01/17	07/31/17	66d
4.3- Comparitive Analysis of Applicable Financing Options	07/24/17	09/01/17	30d
4.4- Analysis of Available State Funds	07/31/17	09/04/17	26d
4.5- Analysis of Asset Ownership Models	06/26/17	08/04/17	30d
4.6- Metrics for DER and Local Benefit Factors	05/29/17	07/31/17	46d
4.7- Stakeholder Engagement	05/31/17	07/19/17	36d
4.7.a- Stakeholder Focus Group	05/31/17	05/31/17	1d
4.7.b- Stakeholder Survey	06/26/17	07/13/17	14d
4.7.c- Stakeholder Workshop	07/19/17	07/19/17	1d
4.8- Economic Impact Analyses	07/17/17	10/06/17	60d
Task 5- Implementation and Other Policy Issues	06/01/17	09/11/17	73d
5.1- Permitting	06/30/17	09/08/17	51d
5.1.a- Local Permitting and Zoning Policies	06/30/17	08/11/17	31d
5.1.b- Grid Interconnection	07/31/17	09/08/17	30d
5.1.c- California Environmental Quality Act	07/24/17	09/01/17	30d
5.2- Recommendations Regarding Citizen Participation and Initiative	08/07/17	09/04/17	21d
5.3- Recommendations Regarding Promoting Equity	08/07/17	09/04/17	21d
5.4- Analysis of Contracting Models	08/14/17	09/11/17	21d
5.5- Analysis of Strategies for Enhancing Long-term Stability and Reliability	07/31/17	09/08/17	30d
5.6- Recommendations for Encouraging Entrepreneurial Creativity	08/14/17	09/11/17	21d
5.7- Recommendations for Clear and Transparent Reporting Procedures	07/17/17	09/01/17	35d
5.8- Stakeholder Engagement	06/01/17	07/20/17	36d
5.8.a- Stakeholder Focus Group	06/01/17	06/01/17	1d
5.8.b- Stakeholder Workshop	07/20/17	07/20/17	1d
Task 6- Integrated Resource Planning	05/01/17	09/08/17	95d
6.1- IRP Methodology	05/01/17	06/09/17	30d
6.2- Integrating LDBP Outcomes with IRP	05/23/17	06/09/17	14d
6.3- Innovative Program Options for DER Integration	06/05/17	07/14/17	30d
6.4- Benefits of Microgrids, EV Charging Stations, Demand Reduction and Demand Response	07/03/17	07/31/17	21d
6.5- Energy Storage Contracting Strategy	07/17/17	08/03/17	14d
6.6- Recommendations for Optimizing the Integration of DER Development with Procurement and Scheduling	06/12/17	07/21/17	30d

6.7- New Generation	07/10/17	08/07/17	21d
6.8- Analysis of Risks and Mitigations (i.e., excess generation/curtailment)	07/31/17	09/08/17	30d
6.9- Stakeholder Engagement	06/02/17	07/20/17	35d
6.9.a- Stakeholder Focus Group	06/02/17	06/02/17	1d
6.9.b- Stakeholder Workshop	07/20/17	07/20/17	1d
Task 7- Preliminary Plan Scenarios	07/17/17	12/29/17	119d
7.1- Develop Set of Preliminary Plan Scenarios	07/17/17	10/20/17	70d
7.1.a- Define Data Inputs	07/17/17	08/04/17	15d
7.1.b- Develop Business-as-usual Baseline Scenario	08/07/17	09/04/17	21d
7.1.c- Objectives and Target Impact Metrics	08/07/17	09/04/17	21d
7.1.d- Develop Set of Feasible Scenarios	08/21/17	10/20/17	45d
7.2- Comparitive Analyses of Scenarios (10-year Horizon)	07/31/17	10/23/17	61d
7.2.a- Develop Pro Forma Scenario Analysis Model	09/05/17	10/03/17	21d
7.2.b- Technical Performance Analysis	10/04/17	10/23/17	14d
7.2.c- Economic Impact Analysis	07/31/17	10/20/17	60d
7.2.d- Cost of Service Impact Analysis	08/14/17	09/22/17	30d
7.2.e- Risks and Mitigations Analysis	08/14/17	09/22/17	30d
7.3- Stakeholder Engagement	07/21/17	10/13/17	61d
7.3.a- Stakeholder Focus Group	07/21/17	07/21/17	1d
7.3.b- Stakeholder Workshop	10/13/17	10/13/17	1d
7.4- Conclusions and Recommended Scenario	09/22/17	12/14/17	60d
DELIVERABLES:			
Preliminary Draft Local Development Business Plan	10/06/17	10/06/17	**Milestone**
Final Draft Local Development Business Plan	12/29/17	12/29/17	**Milestone**

Estimated Staff Hours by Task

Billable and In-kind Hours by Task								
Organization	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Total Hours
ALH Billable Hours	42	63	28	153	86	19	144	533
ALH In-kind Hours	4	6	3	15	9	2	14	53
Clean Coalition Billable Hours	349	35	123	0	16	33	10	567
Clean Coalition In-kind Hours	35	4	12	0	2	3	1	57
EcoShift Billable Hours	39	243	39	10	23	17	84	454
EcoShift In-kind Hours	4	24	4	1	2	2	8	45
Optony Billable Hours	61	88	46	24	52	148	13	432
Optony In-kind Hours	12	18	9	5	10	30	3	86
Offset Project Billable Hours	47	203	65	137	134	85	50	721
Offset Project In-kind Hours	19	81	26	55	53	34	20	288
Betony Jones Billable Hours								133
Betony Jones In-kind Hours								7
Gary Calderon Billable Hours								67
Gary Calderon In-kind Hours								13
Total Hours by Task	612	764	355	399	386	374	347	3,458

Figure 12- Estimated Billable and In-kind Staff Hours by Task

SECTION 7: CREDENTIALS

Qualifications and Experience

7.1- ALH Urban and Regional Economics

RELEVANT PROJECTS

Alameda County Community Development Agency, Surplus Site Disposition Assistance:

Since 2015 ALH Economics has been providing urban economic and real estate consulting services designed to help Alameda County achieve its economic development goals for the County's unincorporated areas. Many of these tasks pertain to a potential development parcel in the unincorporated Alameda County community of Cherryland. These services include support the County's developer solicitation process for the site, assist with preparation of a developer RFP (including preparing a market overview for the property), document review and input, compile developer distribution list, review and evaluate responses, and prepare a recommendation to the County Board of Supervisors Unincorporated Services Committee. Upon selection of a site developer, ALH Economics continues to provide support, including due diligence analysis of the developer's development proposal and financial pro forma, analysis of the site's proposed retail component, and preparation of required financial reports pursuant to Government Code requirements since the County acquired the property through former Redevelopment Agency funds. Additional project support involves analysis of the site development requirements pursuant to the County's new Specific Plan governing land use in the subject unincorporated area.

Office of Community Investment and Infrastructure (OCII) (Successor Agency to the Redevelopment Agency of the City and County of San Francisco) Candlestick Point and Hunters Point Shipyard Financial Due Diligence:

ALH Urban & Regional Economics has been providing ongoing advice to the San Francisco Office of Community Investment & Infrastructure ("OCII") regarding the Candlestick Point and Phase 2 Hunters Point Shipyard Project. The main task has been to review, analyze, and advise OCII on the proforma prepared by the Developer in 2016, including the reasonableness of the assumptions included in the pro forma, analysis of financial impact of any proposed Project changes to the development plan (i.e., changes in land use, development timeline/phasing, etc.). Additionally, ALH Economics expects to quantify the impact of proposed changes to public benefits provided by the Developer, and analyze the impact of changes of tax increment and special tax financing assumptions.

ALH Economics previously completed another assignment for OCII, with some similar attributes. This assignment pertained to UCSF PILOT Agreement Evaluation. For this assignment, ALH Economics assisted OCII in negotiations with UCSF regarding its purchase of property from Salesforce Inc. in San Francisco's Mission Bay South Redevelopment Project Area. The purpose of the acquisition was to develop buildings and a parking garage to support UCSF's further expansion of its campus in Mission Bay. The property is subject to tax payment agreements whereby the property owner, including tax-exempt entities, is required to make certain annual payments equal to the full amount of the property taxes that would have been assessed against the property regardless of the ownership status (PILOT agreement). UCSF proposed an alternative payment strategy, comprising a lump sum payment, rather than the required annual payments. ALH Economics assisted OCII's evaluation of UCSF's proposal, including peer review of a net present value analysis (NPV) of prospective incremental in lieu tax payments based upon a set of property development assumptions conducted by UCSF's economic consultant. ALH Economics was retained by OCII to conduct an independent analysis of this NPV analysis, during which ALH Economics identified the major parameters included in the analysis, reviewed the parameters for reasonableness, and then engaged in independent research to develop key assumptions relevant to the NPV analysis. This independent research included land, building, and parking garage valuation research; comparable rent research; and discount rate research. ALH Economics replicated the USCF analysis and conducted sensitivity analysis to best support OCII's determination of an appropriate lump sum payment by UCSF in lieu of the PILOT tax payment.

City of Concord, Concord Naval Weapons Station:

After the Navy mothballed Concord Naval Weapons Station (CNWS) it became a BRAC (Base Realignment and Closure) military base. Through their prior affiliation with CBRE Consulting, ALH Economics consultants were on the planning and design team selected to develop a reuse plan for the property on behalf of the City of Concord. The work effort included market, financial and fiscal impact analysis, including analysis of up to seven project alternatives. The fiscal impact analysis was focused on assessing the extent to which the preferred alternatives were fiscally self-sustaining, such that the long-term development would not comprise a net drag on the City's fiscal position. This work has continued over time, during which time ALH Economics associates (beginning in 2011 when ALH Economics was formed) have updated the fiscal impact analysis several times, including pursuant to inclusion in the Economic Development Conveyance (EDC) application for the CNWS to the Navy. The continuing work scope for the City of Concord also includes updating the financial analysis of the project, and assisting in the master developer selection process for the CNWS Phase I by reviewing developer proposals and financial analyses. With the selection of Lennar as the Phase I master developer, ALH Economics continue to provide critical consulting services to the City of Concord, reviewing the developer's pro forma and performing due diligence analysis on the market and financial inputs and financial modeling effort.

Hospital Council of Northern California, Santa Clara County Hospitals Economic Impact Study:

ALH Economics conducted an economic impact study focusing on the hospitals in Santa Clara County. The study was commissioned by the Hospital Council of Northern and Central California, a nonprofit hospital and health system trade association representing hospitals in California. The purpose of the study was to demonstrate the importance of hospitals to the Santa Clara County community and the economic well-being of the county. The study tasks focused on identifying the direct, indirect, and induced impacts of the hospitals, as well as employment, taxes generated, and value of community benefits provided by the hospitals to the communities they serve. This study was featured in October 2013 as the focal point of a Health Care Report workshop sponsored by the San Jose Business Journal. A similar study was subsequently performed in 2014 for the Hospital Council for hospitals in the Monterey Bay Region.

Bay Area Rapid Transit District/ Economic Impact of Operations:

ALH Economics prepared an economic impact report for the Bay Area Rapid Transit District (BART), the major commuter rail system in the San Francisco Bay Area, on the topic of BART's regional impacts. The study provides information about BART's economic benefits within the Bay Area region, most specifically the three-county BART District, i.e., Alameda, Contra Costa, and San Francisco counties. The report's purpose was to provide select information for public affairs purposes, especially to support a $3.5 billion bond measure to help improve BART's transit infrastructure (this measure passed in November 2016). This information was focused on several major topic areas, including the following:

- BART's enhancement of quality-of-life for BART patrons and other commuters within the region, including personal cost and time savings as well as cultural accessibility;
- BART's contributions to targeted job growth, regional competitiveness, and labor force enhancement for Bay Area businesses;
- BART's access to affordable housing, including transit-oriented housing near BART stations as well as other regional housing locations with relatively lower cost housing;
- BART's contribution to sales taxes generated by station area employees and TOD residents;
- BART's provision of job opportunities for middle class workers and workers with technical training and a technical skill base;
- BART employee economic impacts within the region; and
- BART's economic impacts on the Bay Area associated with BART's spending, most notably the current Earthquake Safety Program, which is a major seismic retrofit project that is upgrading the original BART system.

A portion of this study's analysis focused on four representative BART stations within the system. These stations, all located in the BART District area of Alameda, Contra Costa, and

San Francisco counties, were selected based on nearby employment and the volume of system exits in the morning (i.e., destinations for the morning commute).

University of California at Riverside/Economic Impact Analysis:

While with CBRE Consulting, Ms. Herman conducted an economic impact analysis of the UC Riverside campus and its research centers (Fiscal Year 2004/05). The purpose of the study was for the University to demonstrate its impacts on the local Riverside community, the surrounding region, and beyond, as well demonstrate as its leadership role. These impacts include tangible benefits such as job generation, wages, and local and regional spending, as well as intangible benefits such as cultural opportunities, intellectual stimulation, and volunteer work. The study was especially relevant to the University's anticipated Long Range Development Plan (LRDP), both in terms of the University's economic benefits and potential negative impacts. The geographies reflected in the study included the City of Riverside, Riverside County, the Inland Empire, the State of California, and the nation. The study also included baseline analysis of a new Palm Desert campus, with the Heckman Center for Entrepreneurial Management, home of the University's MPB program. During the end of her tenure with CBRE Consulting, Ms. Herman initiated an update to this study for Fiscal Year 2009/10, which was completed by Ms. Herman after the formation of ALH Economics. This update included expansion of the University's impacts to the national level and forecasted prospective impacts for the University's new medical school.

Lawrence Berkeley National Laboratory/Economic Impact Study:

While with Sedway Group/CBRE Consulting, Ms. Herman twice conducted an economic impact analysis demonstrating the benefits of Lawrence Berkeley National Laboratory ("Berkeley Lab") to the City of Berkeley, the Bay Area region, and the State of California. The study was also intended to be useful to Berkeley Lab in the process of preparing its Long Range Development Plan. The study focused on job generation, wages, and local and regional spending. The analysis culminated in a brief memorandum of findings, as well as an Excel-based economic impact model for Berkeley Lab's future use that was designed to update itself automatically with annual inputs provided by LBL. Additional updates to this study were used as a springboard to analysis of the Lab's planned second Bay Area campus, for which Ms. Herman participated in public meetings.

CLIENT REFERENCES

Client references for ALH Economics are provided in the County of Alameda format as presented in Bid Forms Attachment A.

7.2- The Offset Project

RELEVANT PROJECTS

Bonny Doon: A Case Study in Collaborative Nonprofit Renewable Energy Development:

Bonny Doon Elementary school, located in Santa Cruz County, was the recipient of a 31 kW solar array that was planned, designed, financed, and installed using an innovative, public-private partnership approach developed and led by The Offset Project (a 501-c3 nonprofit organization) under the banner of its flagship Monterey Bay Carbon Fund program. The Monterey Bay Carbon Fund is a nonprofit community fund that directs money to renewable energy projects at Monterey Bay schools, nonprofits and other local greenhouse gas (GHG) emission reduction projects. This was the first solar project completed using the Monterey Bay Carbon Fund collaborative approach, which brought together resources and expertise from a range of public and private partners to overcome significant financial and regulatory barriers, including navigating an onerous permitting process with the Department of State Architects and structuring a feasible financing package that worked for a small and rural public school.

The project was an exercise in collective action orchestrated by The Offset Project, and it involved many partners. One of the key contributors was Cabrillo College, where students in the Construction and Energy Management program received hands-on job training on location at Bonny Doon Elementary in energy assessments, solar photovoltaic installation, and renewable energy financing. The County of Santa Cruz Green Schools Program and the Monterey Bay Area Green Business Program provided energy efficiency measures and staffing support. RC Cubed was also an important strategic partner on the project. Its team coordinated third-party analysis and system design, and structured and secured the necessary project financing. The project resulted in energy savings of 67%, first year cost savings of 10%, lifetime financial savings of $347,298, and 1,126,077 lbs. of CO2 avoided.

Monterey Bay Carbon Fund:

The Offset Project's Carbon Fund gives local individuals and businesses a way to invest their dollars in their own community by supporting local renewable energy projects like the Bonny Doon Elementary Solar PV installation. The Carbon Fund raises money in a number of ways: redirecting proceeds from renewable energy credits and offsets to subsidize costs associated with renewable energy and energy efficiency projects in the Monterey Bay Region; leveraging funding through the Monterey Bay Area Green Business and Green School Programs; accepting community donations through an online carbon emission calculator; and creating financial strategies brokered through RC Cubed.

The intent of the Monterey Bay Carbon Fund is to provide a nonprofit program that benefits the Monterey Bay community by 1) reducing local GHG emissions, 2)

accelerating the adoption of renewable energy technology by removing barriers and lowering project costs, 3) creating local jobs and new workforce training opportunities in the renewable energy field, and 4) keeping dollars in the local community. The Offset Project raises money for the Carbon Fund in collaboration with Monterey Bay Regional Climate Action Compact through voluntary donations and the sale of third-party certified carbon offsets and renewable energy certificates. Clients who have purchased certified products include companies buying green power to support LEED certification, businesses and institutions that purchase renewable energy and/or offsets to lower their carbon footprints and meet sustainability goals, and special events seeking environmental certifications.

CLIENT REFERENCES

Company Name: Monterey Peninsula Foundation	Contact Person: Steve John CEO
Address: 1 Lower Ragsdale Drive	Telephone Number: (831) 649-1533
City, State, Zip: Monterey, CA 93940	E-mail Address: sj@mpfca.org
Services Provided: The Offset Project developed an Environmental Certification Program and platform of Sustainability Policies for Monterey Peninsula Foundation's PGA golf tournament, AT&T Pebble Beach Pro Am. This event secured a Gold Certification through the Council for Responsible Sports. The certification involves GHG analyses and reporting, offsetting emissions through local GHG reduction projects like electric vehicle installation and energy efficiency, water conservation measures, environmentally friendly procurement and solid waste reduction and upcycling efforts. The Offset Project has managed grant programs for the Monterey Peninsula Foundation for seven years. Program objectives include delivering public education and outreach and conducting regional stakeholder meetings to support state AB 341 and AB 1826 mandates. The Offset Project also chairs the Monterey Bay Regional Compost Coalition, a group of businesses and municipalities who work on policy, permitting and rate issues that support the success of these mandates.	
Date(s) of Service: February 2015 through February 2016	

Company Name: Rancho Cielo Youth Campus	Contact Person: Ms. Susie Brusa Executive Director
Address: 710 Old Stage Road	Telephone Number: (831) 444-3533
City, State, Zip: Salinas CA 93908	E-mail Address: susie@ranchocieloyc.org
Services Provided: The Offset Project selected Rancho Cielo Youth Campus to develop and pilot a new green workforce development education program in Monterey County, which provides participants with hands on training and crucial experience with both solar PV Installation and clean energy project finance. This training expands the region's solar ready workforce by enabling at-risk young adults to become well-qualified solar installers, poised to contribute to regional projects of all sizes as they come online. Prior to this project, there was no local solar industry job training programs offered in Monterey County. The Offset Project secured the partnerships and funding to make this project possible, raising $250,000 through the Monterey Bay Carbon Fund to pay for the solar panels and classroom instruction time. As project manager and visionary for this project, The Offset Project and its partners installed an 80 kW PV solar system, secured a reduced electrical rate for the school and trained roughly 200 students to date. Partners on this project were the International Brotherhood of Electrical Workers Local 234, Applied Solar Energy and First Solar.	
Date(s) of Service: February 2015 through February 2016	

Company Name: Department of Resources, Recycling and Recovery (CalRecycle)	Contact Person: Mr. Tharon Wright Recycling Specialist II/Grant Manager
Address: 801 K Street, 17th Floor	Telephone Number: (916) 324-1237
City, State, Zip: Salinas CA 93908	E-mail Address: tharon.wright@calrecycle.ca.gov
Services Provided: The Offset Project received a $250,000 grant from CalRecycle to form the AB 341 Waste Reduction Collaboration. This collaboration consists of six regional agencies working collaboratively to increase recycling rates in the Salinas Valley region, which includes the City of Gonzales. The Offset Project hosts bi-annual stakeholder meetings to assess community needs, leverage resources and make appropriate adjustments to the grant's work plan. Our scope of work includes designing strategic plans for the collection of waste material in major facilities and venues, tracking tonnage of recycling materials, conducting training and developing educational material as well as preparing quarterly progress reports and greenhouse gas inventories.	
Date(s) of Service: February 2015 through February 2016	

7.3- The Clean Coalition

RELEVANT PROJECTS

Southern California Edison Preferred Resources Pilot (PRP) Solar Siting Survey:

The Clean Coalition has an ongoing engagement with SCE that includes contemplations for methods of effectively procuring local renewables in SCE's PRP grid area, which is the area that was most significantly impacted by the closure of the San Onofre Nuclear Generating Station. The PRP Solar Siting Survey identified over 160 MW of technical potential for large commercial solar installations within the PRP grid area. These built-environment sites are comprised of very large rooftops, parking lots, and parking structures – most of which are large enough to host at least 500 kW of solar PV. More specifically, the PRP Solar Siting Survey identified about 90 MW of siting potential on large rooftops, 50 MW over large parking lots, and 23 MW atop multi-story parking structures. The PRP Solar Siting Survey highlights significant levels of local solar PV energy that may be generated within an area in southern and central Orange County. The grid area assessed by the Survey comprises the Preferred Resources Pilot (PRP), an effort by Southern California Edison (SCE) to study and demonstrate how distributed energy resources, including local solar PV, may support local reliability needs.

The PRP Solar Siting Survey includes a comprehensive spreadsheet and a sophisticated mapping tool for supporting solar project developers in identifying specific siting opportunities. This data will be particularly informative for solar project developers as they participate in the ongoing PRP Renewable Distributed Generation RFO.

CleanPowerSF, Feed-In Tariff (FIT) Design Recommendations:

In 2016, the Clean Coalition was hired by the San Francisco Public Utilities Commission (SFPUC) to design a FIT program for their local Community Choice Aggregation (CCA) program, which is known as CleanPowerSF. As part of this work, The Clean Coalition evaluated and offered recommendations on FIT program pricing, sizing, project eligibility, contracts, and processes. Recommendations were based upon discussions with SFPUC staff, market analysis, solar insolation for San Francisco, and best practices associated with existing FITs nationwide. The FIT is anticipated to be launched in late summer 2017.

City of Palo Alto RFP and Solar Lease Agreement:

The Clean Coalition has a long history of consulting with the City of Palo Alto and its municipal utility. In 2012, the City unanimously approved a FIT program for the City of Palo Alto Utilities (CPAU) that was developed with support from the Clean Coalition, which assisted CPAU staff in evaluating the value of local solar generation, as well as designing a program that would streamline deployment of local solar installations. The Clean Coalition also designed a Request for Proposal (RFP) and associated lease agreement, under contract

with the City, to have a solar developer build, own, and operate solar canopies atop Palo Alto's five City-owned parking structures. On January 25, 2016, the Palo Alto City Council approved a lease agreement with Komuna Energy to deploy 1.3 MW of solar from the parking structures. Importantly, the RFP and lease agreement were written to encourage proposals that included Electric Vehicle Charging Infrastructure (EVCI) deployment that leveraged the electrical work being performed for the solar. The EVCI objective was highly successful and the agreement with Komuna will contribute significantly to the electrification of transportation in Palo Alto. Komuna will install 18 electric vehicle chargers and lay the wiring for an additional 80 charging stations – providing a model for municipalities to unleash clean local energy and to facilitate the electric vehicle future. The Clean Coalition continues to advise the City of Palo Alto on multiple energy-related fronts, including on establishing a Solar Emergency Microgrid for critical facilities associated with the City's Office of Emergency Services.

Hawaii Solar Plus Storage Modeling (Solar+Storage):

The Clean Coalition helped set the stage for a game-changing solar+storage solution across multiple sites for the Island of Kauai that was announced in January 2017. The Clean Coalition conducted analysis that maximized economic value and minimized fossil fuel usage to guide the winning proposal to Kauai's electric utility. The result is the multi-site solar+storage solution that provides energy at 11 cents/kWh, which is 10% less than the 12.5 cents/kWh average cost of electricity in the United States; the same type of solar+storage solution can be configured to facilitate substantial levels of local renewables and to provide indefinite renewables-driven backup power to critical community facilities. This project, which combines 28 megawatts (MW) of solar PV capacity with a 20 MW/100 megawatt-hour battery system, across multiple sites, will provide 11% of Kauai's electricity once online in 2018.

Pacific Gas & Electric Partnerships (Multiple):

The Clean Coalition has a long-standing collaboration with Pacific Gas & Electric (PG&E) on the Hunters Point Community Microgrid Project (HPCMP) – a flagship Community Microgrid project. Once deployed, the HPCMP is expected to bring $100 million in local wages to the Bayview-Hunters Point community, while reducing greenhouse gas emissions by 1.5 billion pounds over the next 20 years.

Most recently, PG&E supported the Clean Coalition's Peninsula Advanced Energy Community (PAEC) project that has been awarded a grant by the by the California Energy Commission (CEC). The CEC defines an Advanced Energy Community as one that: minimizes the need for new energy infrastructure costs such as transmission and distribution upgrades; supports grid reliability and resiliency by incorporating technologies such as energy storage and microgrids; can be replicated and scaled-up to further drive down costs; and provides affordable access to renewable energy generation.

California Public Utilities Commission:

For years, the Clean Coalition has been the leading intervenor in the California Public Utilities Commission (CPUC) proceeding addressing Electric Rule 21, which regulates interconnection, operation, and metering requirements for distributed generation in California. Past improvements to Rule 21 that the Clean Coalition had advocated for and achieved include publication of interconnection maps, development of pre-application reports on grid constraints, approval of clarifying regulations, and advancing methods to streamline the application and review process. With the support of CPUC staff and stakeholders, on June 23, 2016 the Commission adopted important new reforms the Clean Coalition has long sought to reduce risk and uncertainty in the interconnection process. We continue to be engaged in numerous proceedings at the CPUC related to renewables procurement, the value of DER, grid modernization and the refinement of implementation of interconnection policy.

CLIENT REFERENCES

Company Name: Southern California Edison	Contact Person: Ms. Caroline McAndrews Director, Preferred Resources Pilot
Address: P.O. BOX 300	Telephone Number: (626) 302-4661
City, State, Zip: Rosemead, CA 91772-0001	E-mail Address: caroline.mcandrews@sce.com
Services Provided: The Clean Coalition has been engaged multiple times by Southern California Edison (SCE) to support the Preferred Resources Pilot (PRP). The Clean Coalition evaluated siting opportunities for local solar within the PRP grid area and analyzed the economics associated with procuring significant tranches of solar in the PRP grid area. Through this effort, we undertook an analysis to understand the price elasticity curve for procuring wholesale local solar in Orange County, California. (We can request permission to share the pricing analysis, as desired). Working with SCE, the Clean Coalition created the Solar Solutions Guide to address building owner concerns regarding solar adoption, which include economic considerations, facility issues, and vendor and technology risk.	
Date(s) of Service: February 2015 through February 2016	

Company Name: San Francisco Public Utilities Commission	Contact Person: Mr. Michael Hyams CleanPowerSF Manager

Address: 525 Golden Gate Avenue	Telephone Number: (415) 554-1590
City, State, Zip: San Francisco, CA 94102	E-mail Address: mhyams@sfwater.org
Services Provided: The Clean Coalition was hired by the San Francisco Public Utilities Commission to design a FIT program for the local Community Choice Aggregation (CCA) program, which is known as CleanPowerSF. As part of this work, we evaluated and offered recommendations on FIT program pricing, sizing, project eligibility, contracts, and processes. Our recommendations are based upon discussions with SFPUC staff, market analysis, solar insolation for San Francisco, and best practices associated with existing FITs nationwide. The FIT is anticipated to be launched in late summer 2017.	
Date(s) of Service: February 2016 through December 2016	

Company Name: Utah Associated Municipal Power Systems	Contact Person: Ms. Jackie Coombs Manager of Corporate and Member Relations
Address: 155 North 400 West, Suite 480	Telephone Number: (801) 214-6402
City, State, Zip: Salt Lake City, Utah 84103	E-mail Address: jackie@uamps.com
Services Provided: Utah Associated Municipal Power Systems (UAMPS) is a public power utility with 45 distribution utility members located in Utah, Arizona, California, Idaho, Nevada, New Mexico, Oregon, and Wyoming. The Clean Coalition was hired by UAMPS to educate its 45 utility members about program options to support customer-sited solar. We provided two detailed guides. The first focused on transitioning away from net metering towards alternative distributed generation programs. That guide provided an overview of net metering, provided details on necessary steps and considerations for retiring a NEM program, highlighted guiding principles that a NEM successor program should abide by, provided guidance in evaluation of four successor program options (self-generation, a FIT, a hybrid self-generation and FIT, and utility-owned DG), and offered suggestions for successfully establishing a successor program. The second guide focused on how to design an effective FIT program.	
Date(s) of Service: February 2015 through December 2015	

7.4- EcoShift Consulting

RELEVANT PROJECTS

University of California, Santa Cruz – Integrated Climate and Energy Scenario Analysis:

EcoShift Consulting worked with the University of California, Santa Cruz to create the university's first integrated climate and energy strategy. EcoShift worked with project partners to create a roadmap to achieving UCSC's climate and energy goals under the directive of UC President Napolitano. EcoShift's principal task on the project was to build a techno-economic scenario analysis tool that will allow UCSC to analyze strategies to reduce GHG emissions and understand any scenario according to costs, GHG reductions, and other variables. The goal of the scenario analysis tool was to give the university a high degree of flexibility to plan and manage in the face of uncertainty and changing financial and policy assumptions. The tool was being built in Excel with a graphical user interface to create efficient analysis and visualization of results.

California Public Utilities Commission - Expert Witness Testimony:

EcoShift has conducted economic analysis of energy and climate programs on behalf of Sierra Club, with a focus on rate-making. This analysis was used as expert evidence and provided in multiple proceedings at the California Public Utilities Commission. EcoShift's work involved building techno-economic models to understand and forecast the relationship between renewable energy and energy efficiency programs and portfolios and electricity rates. Analysis included tiered rates, time-of-use rates, fixed charges, low-income discounts, and incentive programs for renewables and energy efficiency. The purpose of this consulting work was to determine the best approach for energy and carbon savings, given the constraints of public utilities in the State of California, and the goals of California's AB32.

City of Santa Cruz – Solar Energy Development:

EcoShift worked with the City of Santa Cruz to catalyze commercial solar installations by providing technical assistance to a select group of business owners in the City. The project provided initial estimates of solar photovoltaic potential in the downtown commercial district, held a public workshop for business owners to learn more about the advantages of solar, supported multiple business owners through collecting bids and selecting a vendor. The project resulted in over 250kW installed in the City and identified that unbiased technical assistance can overcome key barriers to adoption.

CLIENT REFERENCES

Company Name: Sierra Club	Contact Person: Mr. Matthew Vespa Senior Attorney
Address: 85 Second St, 2nd Floor	Telephone Number: (415) 977-5753
City, State, Zip: San Francisco, CA 94105	E-mail Address: matt.vespa@sierraclub.org
Services Provided: EcoShift conducted economic analysis of energy and climate programs on behalf of Sierra Club, with a focus on rate-making, to determine the best approach for energy and carbon savings, given the constraints of public utilities in the State of California, and the goals of California's AB32. EcoShift provided this type of expert evidence in multiple proceedings at the CPUC, building techno-economic models to understand and forecast the relationship between renewable energy and energy efficiency programs and portfolios and electricity rates. Due to the projected increase in energy consumption, GHG and criteria pollution emissions, and loss of renewable energy, energy efficiency retrofit, and PV installation jobs, EcoShift found that the proposed residential rate design will be detrimental to the goals of the CPUC.	
Date(s) of Service: February 2015 through December 2015	

Company Name: University of California Santa Cruz	Contact Person: Ms. Christina Thomure Climate Action Manager
Address: 1156 High Street	Telephone Number: (208) 705-0252
City, State, Zip: Santa Cruz, CA 95064	E-mail Address: cthomure@ucsc.edu
Services Provided: EcoShift Consulting developed a complex yet flexible Scenario Analysis Tool in Excel format, compiling the historical and projected energy demands and costs, GHG instrument pricing, writing logic and macros to process data and calculations, and providing output tables and graphs with metrics like NPV, Cost/MT CO2e, payback, debt service ratio, and others used for decision-making (see graphic below). The Scenario Analysis Tool enabled the consultant team to identify the most cost-effective, attainable strategies for (a) achieving UC system-wide and UCSC climate and energy goals and (b) avoiding Cap and Trade regulation or minimizing its cost to the campus. Strategies included combinations of the four mechanisms identified in the UC President's Directive. Other recommendations included some implementation of thermal energy storage, cogeneration turndown, improvements to district systems, behavior	

and operational changes, and more. The output data and graphical representations produced by the tool enable UCSC staff to communicate complex climate and energy planning scenarios and their implications to a lay audience. The tool is also being incorporated into student curriculum to teach climate and energy planning and analysis concepts.
Date(s) of Service: February 2015 through December 2015

7.5- Optony, Inc.

RELEVANT PROJECTS

Southwest Solar Transformation Initiative (SSTI):

SSTI worked with jurisdictions to reduce barriers and lower costs for rooftop solar systems via improvements in permitting and interconnection processes, planning and zoning regulations, interconnection and net metering standards, and financing options. The SSTI program launched an online information platform as well. The Solar Roadmap platform organized global best practices and made them easily accessible for all stakeholders in solar. This online resource center is the home for SSTI municipal partners to learn about the SSTI program, discover what's happening regionally, access technical resources, and view their respective roadmaps to achieve solar success. The SSTI team conducted launch events and site visits to define existing solar processes and determine specific needs for each jurisdiction.

The SSTI Rooftop Solar Challenge program approach was to spur solar power deployment by streamlining permitting processes and improving market conditions across California and the Southwest. U.S. Energy Secretary Steven Chu commented that, "Through the Rooftop Solar Challenge, the Energy Department is helping to unleash America's solar energy potential in the Southwest and communities across the country. These awards will reduce the costs homeowners and businesses pay to install solar energy systems, while at the same time saving time and money for local governments faced with tight budgets."

Sustainable Energy Roadmap:

Several years ago California's San Joaquin Valley faced a battery of complex and interrelated environmental and economic challenges. Home foreclosure rates were among the highest in the country and unemployment rates in some communities over 40 percent, all during a time when virtually all jurisdictions are faced with significant budget cuts, service reductions and staff layoffs. Coming from this perspective, Optony helped San Joaquin Valley communities to understand the value of committing to greater use of clean energy sources as a means of addressing their challenges. Solar and other forms of renewable power were highlighted to provide a positive path forward to improve the quality of life for Valley residents: create jobs, reduce household energy costs to stave off foreclosure, and reduce emissions from electricity and natural gas usage. This broad embrace of clean energy, however, was balanced with respect for agricultural lands, as the Valley prides itself in feeding citizens around the world.

Optony assisted in the direction of substantial Federal resources for the Valley, and helped provide a comprehensive understanding of the depth of energy investments and collective contribution to the economy. To address gaps in technology and environmental understanding, Optony guided San Joaquin Valley in a regional energy and economic

development planning to develop an Energy Economy Roadmap for the Valley and to solicit jurisdictional commitments to implement identified policies, investments and strategies. This regional energy planning effort drew on local, statewide and national talent to map the proposed investments and opportunities that will provide economic development decision makers with a long-term, sustainable and unified compass for growth.

San Francisco Bay Regional Renewable Energy Projects:

In the SV-REP, RREP, and CASE-SV programs Optony deployed its expertise in procurement and project management to ensure that the RFP and PPA were properly designed, implemented and evaluated. These regional collaborative procurement projects leveraged multi-location purchasing to reduce installation costs and PPA prices for sites across dozens of Silicon Valley municipal agencies in two rounds. These major efforts included roughly 100MW in total installed capacity. As part of the project, Optony worked closely with participating cities to ensure that they reduced costs and project risks, and maximized the benefits of participation.

American Solar Transformation Initiative (ASTI):

ASTI is a nationwide program of regulation, research, and policy assistance to hundreds of public partners committed to advancing renewable energy adoption. The program drives innovative policy deployment and improvements in: permitting, planning, zoning, interconnection, and market research. Optony's approach was to drive solar market growth for individual community through local knowledge. The Solar Roadmap platform makes it easy for government agencies, regional organizations, businesses and electric utilities to identify and implement activities to meet solar market development goals. The platform aggregates useful resources, such as global best practices, successful program case studies, templates, and educational and marketing materials, and tailors it to the local specific needs. Each goal represents a positive step towards easier and more cost effective solar implementation for all participating entities. Developing community's local solar market was made easier for urban and rural communities, both benefiting from economic development, job creation, and environmental benefits from solar. The web platform created contains the largest comprehensive resource library of solar best practices and online tools available today and entirely free. Focus areas of the program targeted the highest impact market activity regulation and policy reform, including: solar market development, project financing tools, permitting process improvement, planning and zoning standards, interconnection processes.

Subject matter expert assistance was provided to over technical barriers for local government toward market transformation through cooperation with industry stakeholders, residents, and electric utilities. Expert assistance targeted: Evaluation of local solar potential, determining market impact and market strategy, assessment of current solar processes, customized roadmap, deploy of industry best practices, implementation of community programs, and tracking progress against a national benchmark.

CLIENT REFERENCES

Company Name: West Contra Costa Unified School District	Contact Person: Mr. Julio Arroyo Energy Program Manager
Address: 1108 Bissell Avenue	Telephone Number: (510) 529-8837
City, State, Zip: Richmond, CA 94801-3135	E-mail Address: julio.arroyo@wccusd.net
Services Provided: Renewable energy project portfolio planning and analysis, PG&E/MCE electricity bill rates forecasting, scenario planning, sensitivity analysis and CCA impact modeling, State/CPUC policy research and impact assessment (AB327 NEM 2.0), contract review and advisement, program management assistance, project/quality management.	
Date(s) of Service: August 2013 through present	

Company Name: County of Sonoma, CA	Contact Person: Ms. Caroline Judy Director of General Services
Address: 50 D Street. #220	Telephone Number: (707) 565-8058
City, State, Zip: Santa Rosa, CA 95404	E-mail Address: caroline.judy@sonoma-county.org
Services Provided: Optony was selected to provide local energy planning and program management. Optony provided multi-jurisdictional oversight of energy modeling and financial impact studies, bill rate studies, and program implementation design and documentation. Optony led the technical analysis of vendor proposals and served on the advisory panel for the Selection Committee through vendor interviews and proposal evaluations. Optony also served as a lead in contract negotiations, construction design, engineering, construction and quality management, and renewable power systems commissioning.	
Date(s) of Service: February 2013 through February 2016	

Company Name: South County Regional Wastewater Authority	Contact Person: Mr. Saeid Vaziry Environmental Programs Manager
Address: 1500 Southside Drive	Telephone Number: (408) 846-0202
City, State, Zip: Gilroy, CA 95020	E-mail Address: saeid.vaziry@ci.gilroy.ca.us
Services Provided: Optony was selected to provide renewable energy procurement support and project commissioning; and to lead development support for the water authority for over one megawatt of single-axis tracking solar PV systems, integrated energy managements systems, and lithium-ion battery energy storage. The scope of technical work includes site evaluation, solar and energy storage technical specifications development, risk identification, and performance analysis. Project management work includes financial modeling, RFP creation, proposal review, vendor selection, energy system and PPA contract review, and contract negotiations. Optony has also provided assistance with PG&E interconnection challenges, conciliation, and conflict resolution.	
Dates of Service: December 2015 through present	

7.6- Betony Jones

RELEVANT PROJECTS

University of California, Berkeley Labor Center Climate and Green Economy Program (formerly Don Vial Center):

Since 2014, she has been working as the Associate Director of the University of California, Berkeley Labor Center Climate and Green Economy Program (formerly known as the Don Vial Center), where she conducts research on the economic and labor impacts of climate and energy policies and programs. She advises national organizations such as the Sierra Club and the Blue Green Alliance on economic justice metrics for a clean energy transition and labor-friendly clean energy policies.

Local Government and Utility Consulting Projects (Multiple):

Betony has spent 16 years making climate policies and programs actionable. As a consultant to utility companies and local governments for the past 8 years, she developed a CPUC-mandated plan for California's investor-owned utilities to engage a skilled workforce and increase energy savings throughout their energy efficiency portfolio; she led a market research project for Alameda County StopWaste.org and the cities of Berkeley, Oakland, and San Francisco—identifying new insights for more effectively engaging class B and C office space in energy benchmarking; she ran a green job training program for at-risk youth in the broader Sacramento region; developed and taught a climate and clean energy training program for 40 contractors and tradespeople to expand their clean energy services; and designed and facilitated a week-long training for local government leaders on "quick-start" community-based greenhouse gas reduction projects. Betony designed and launched an energy efficiency partnership with PG&E and 14-counties to maximize local community, economic, and employment benefits. She has long seen the energy system as an economic development opportunity—one in which we can reduce greenhouse gases, save money, and create good local jobs—and she believes the most exciting challenges come in the implementation of programs—operationalizing all of these intended benefits.

Recent Publications

State climate policies are boosting San Joaquin Valley's economy
January 20, 2017 | F. Noel Perry, Ethan N. Elkind and Betony Jones

The Economic Impacts of California's Major Climate Programs on the San Joaquin Valley
January 19, 2017 | Betony Jones, Kevin Duncan, Ethan N. Elkind and Marilee Hanson

Comments on the Clean Energy Incentive Program
December 15, 2015 | Betony Jones and Katherine Nikki Luke

Job Impacts of California's Existing and Proposed Renewables Portfolio Standard
August 28, 2015 | Betony Jones, Peter Philips and Carol Zabin

Creating Opportunities for Good Jobs in Distributed Solar
August 27, 2015 | Betony Jones

Jobs and Investments to Achieve Zero Net Energy in MUSH Sector Buildings in the SoCalREN Territory
December 18, 2014 | Megan Emiko Scott, Betony Jones and Carol Zabin

Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities
May 8, 2014 | Carol Zabin, Jessica Halpern-Finnerty, Megan Emiko Scott and Betony Jones

CLIENT REFERENCES

Company Name: UC Berkeley Labor Center Climate Program	Contact Person: Ms Carol Zabin Director
Address: 2521 Channing Way, 3rd Floor	Telephone Number: (510) 642-9176
City, State, Zip: Berkeley, CA 94704	E-mail Address: zabin@berkeley.edu
Services Provided: CPUC/Investor Owned Utility Guidance Plan on Workforce Issues in Energy Efficiency Programs.	
Date(s) of Service: November 2015 - September 2016	

Company Name: City of Berkeley, CA	Contact Person: Ms. Billi Romain Energy / Sustainability Program Manager
Address: 2120 Milvia Street, 2nd Floor	Telephone Number: (510) 981-7432
City, State, Zip: Berkeley, CA 94704	E-mail Address: BRomain@ci.berkeley.ca.us
Services Provided: StopWaste.org grant on engaging Class B and C office space in energy benchmarking programs.	
Date(s) of Service: November 2015 - September 2016	

7.7- Gary Calderon

RELEVANT PROJECTS

The City of Fremont Fire Department Microsystem Project:

The proposed project consists of deploying a microgrid at three fire stations within the City of Fremont. The close proximity of Hayward Fault line to these Fire Stations, the maximum load capacity on the transmission line, and the need to reduce grid dependency satisfy the most important requirements: provide energy savings, increase electrical infrastructure resiliency, reduce carbon dioxide emission and demonstrate islanding from the grid for up to three hours. Using the combination of renewable generation and battery technologies, the Microgrid project could save the City of Fremont approximately $10,440 per each fire station and reduce CO2 emissions by 22,176 lbs per year for each fire station.

CLIENT REFERENCES

Company Name: The City of Fremont Fire Department	Contact Person: Rachel DiFranco, Sustainability Coordinator
Address: 25 Stillman Drive	Telephone Number: (510)494-4451
Fremont, CA 94538	E-mail Address: rdifranco@fremont.com
Services Provided: Microgrid Systems for 24/7 emergency services	
Date(s) of Service: February 2015 - present	

APPENDIX A- NOTES REGARDING ECONOMIC IMPACT ANALYSIS USING THE IMPLAN AND JEDI MODELS

The Mechanics of the Input-Output Model

Economic multipliers are generated through the use of input-output models. These are statistical models that quantify relationships among industries. They examine the pattern of purchases by industries and the associated distribution of jobs and wages by industry. Input-output models identify, for example, all the industries from which a construction contractor purchases its supplies and in what proportion. In turn, the model then identifies the industries that are suppliers to these suppliers, or "second generation" suppliers. This continues until all major purchases are accounted for contributing to the construction contractor's original purchases. These original purchases are called the "direct sales." All other associated sales from within the supply chain are considered "indirect and induced sales." There are other indirect and induced effects associated with the contractor purchases. These include retail and other expenditures made by the construction workers paid to use the materials purchased by the construction contractor.

The size of these indirect and induced effects depends upon the definition of the region being looked at as well as the nature of the economy within the region. A large region with a closed economy, which means that most needs are being met by industries located within the region, would keep many of the sales, earnings, and jobs impacts within the region. In a region like this, the multiplier effects would be relatively large, with a large share of the effects captured within the region. In contrast, a small region with an open economy, which means an economy with a limited array of producers providing goods and services, would leak sales to other regions. Because many purchases would be made from industries outside the local economy, the multiplier impacts on the local economy would be minimized.

Indirect and Induced Impacts Defined

Input-output models measure output, or impacts, in two different ways – "indirect" impacts and "induced" impacts. "Indirect" impacts are the changes in inter-industry purchases as they respond to new demands of directly affected industries. In the case of the EBCE LDBP, indirect impacts would reflect, for example, the spending that solar installation suppliers make when purchasing goods and services from second, third, and fourth generation suppliers in order to meet the demand generated by the EBCE LDBP. Indirect impacts of EBCE LDBP-associated spending also include the share of suppliers' payroll (or employees' wages) that is supported by EBCE LDBP-related spending. For example, solar installers purchase solar panels, rent or purchase installation equipment, hire engineers, and employ construction workers to install the panels. The spending on the raw materials, equipment rentals, engineer fees, and employee payroll that is generated by the installation contract reflects the indirect impacts of EBCE LDBP construction spending. EBCE LDBP-related construction spending also supports a certain number of jobs and generates a share of the personal income of the employees of these suppliers – and this represents the indirect employment and personal income impacts of EBCE LDBP construction spending.

On the other hand, "induced" impacts typically reflect changes in spending from households as income increases due to additional production. In the case of the EBCE LDBP, induced impacts reflect the additional spending by the employees of EBCE LDBP suppliers. Using the solar panel installation example, the additional wages received by the employees of the solar installation company, equipment rental company, and engineering firm "induce" spending at grocery stores, movie theaters, and clothing stores, among others. The jobs and income that result from these consumer purchases are considered induced employment and personal income impacts.

The IMPLAN Input-Output Model

There are several input-output models commonly used by economists to estimate indirect and induced economic impacts. Because of the difficulty of measuring these effects, all of the models have limitations. Still, economists generally agree that the models can provide an approximate measure of the indirect and induced spending, jobs, and personal income generated by a given amount of direct spending in a particular geographic area. To calculate the multiplier effects of EBCE LDBP-related spending, the Project Team proposes to use the input-output model originally developed by the U.S. Department of Agriculture known as IMPLAN (IMpact Analysis for PLANning).

The IMPLAN model organizes the economy into over 400 separate industries and has comprehensive data on every area of the United States, as well as smaller geographies. The Project Team will organize all EBCE LDBP -related purchasing and payroll estimates into the IMPLAN industry classifications and use the 2015 IMPLAN tables of multipliers for Alameda County (and, optionally, the State of California) to calculate the total effect of EBCE LDBP -related spending. The IMPLAN model is based on incorporating regional purchase coefficients, which measure trade flows, i.e., the proportion of local demand purchased from local producers.

In applying the IMPLAN model to the EBCE LDBP, specific care will be taken in estimating direct, indirect, and induced economic impacts. The main concern and consideration will pertain to the share of direct spending estimated to occur within Alameda County, versus beyond the County borders. This assumption regarding local spending, including payroll, has a significant influence on the resulting economic impact assessment. A major strength of IMPLAN is its ability for the user to isolate these estimated local impacts, truly rooted in the workings of the local economy, i.e., Alameda County.

IMPLAN vs JEDI

The Project Team understands that the National Renewable Energy Labs Jobs and Economic Development Impact model (JEDI) has become the generally accepted standard for assessing the economic impacts of the construction and operation of local energy production facilities. This is a user-friendly model that produces results suitable for users with both little or more advanced training. However, the JEDI model has some inherent limitations. The most significant of these limitations relate to how it incorporates IMPLAN data, with IMPLAN comprising the overall industry standard software model supporting geographic-specific economic impact analysis in use in the United States, as stated above. IMPLAN collects and analyzes underlying economic data for all geographies of the United States, and thus can be used to perform analysis at very refined levels of geography, including cities and zip codes. More typically, however, analysis is conducted at the

county level, which allows analysts interested in local impacts to assess those impacts in a more refined manner than analysis at a higher geographic level would facilitate, such as the state level. This is where JEDI has a significant limitation. While JEDI incorporates IMPLAN data, the model includes only statewide data, which limits the ability of the model results to drill down to the local level.

The JEDI model allows the user to incorporate the share of spending expected to occur locally; however, the resulting impacts are still based on producer relationships occurring throughout the state, and not within the more local economy. In addition, the JEDI model refreshes the statewide IMPLAN data every other year. While it is likely that the underlying structure of each state's economy does not change significantly over a two-year period, there is a lag in the preparation and distribution of IMPLAN's data. Thus, if a user implements the JEDI model in the second year of a given dataset, the user is likely generating results based upon an economic structure that is somewhat outdated. For example, the most recent IMPLAN datasets currently available from IMPLAN are for 2015. If the JEDI model includes data from 2014 then a modeling effort in 2017 would be based upon a statewide economic structure that has subsequently seen three years of change. This dated application, coupled with impacts being generated based on analysis of the state economy versus a more local economy, suggests that if users have the training and ability, more precise and geographic-specific economic impact results can be produced by direct use of the IMPLAN model.

Therefore, our team proposes to prepare economic impact analysis for the project based upon preparation of a customized economic impact model directly using IMPLAN. The results will be produced at the local county level based on the structure of the local economy, but also with the potential to assess statewide impacts as well. Time permitting, we could compare the results to the findings generated by use of JEDI, but the IMPLAN results are anticipated to better reflect the potential impacts from the specific project. Moreover, the JEDI model, in its efforts to simplify, has aggregated IMPLAN's more than 400 economic sectors into 14 deemed most relevant to energy-related facilities. Actual use of IMPLAN would demonstrate project impacts associated with these 14 sectors as well as other key economic sectors.

APPENDIX B- KEY STAFF RESUMES

ALH | ECON

ALH Urban & Regional Economics

PROFESSIONAL PROFILE

AMY L. HERMAN
PRINCIPAL

ALH Urban & Regional Economics
Berkeley, California

T 510.704.1599
aherman@alhecon.com

OTHER CLIENTS

- Alameda County Fair
- Arcadia Development Company
- Blu Homes, Inc.
- Environmental Science Associates
- First Carbon Solutions
- General Electric Company
- Gresham Savage Nolan & Tilden
- Kaiser Permanente
- Lawrence Berkeley National Laboratory
- Lennar
- City of Los Banos
- Merlone Geier Partners
- Michael Brandman Associates
- Mills Corporation
- City of Mountain View
- Port of San Francisco
- The Presidio Trust
- Pulte Homes
- Ronald McDonald House
- Santa Clara Valley Transportation Authority
- City of Santa Rosa
- Shea Properties
- Sheppard Mullin Richter & Hampton LLP
- Simon Property Group
- The Sobrato Organization
- Southbay Development
- City of Sunnyvale
- Sunset Development Co.
- Westfield Corporation

Amy L. Herman, Principal of ALH Urban & Regional Economics, has provided urban and regional consulting services for approximately 35 years. During this time she has been responsible for directing assignments for corporate, institutional, non-profit, and governmental clients in key service areas, including fiscal and economic impact analysis, economic development and redevelopment, feasibility analysis, location analysis, strategic planning, policy analysis, and transit-oriented development. Her award-winning economic development work has been recognized by the American Planning Association, the California Redevelopment Association, and the League of California Cities.

Prior to forming ALH Urban & Regional Economics in 2011, Ms. Herman's professional tenure included 20 years with Sedway Group, inclusive of its acquisition by CB Richard Ellis and subsequent name change to CBRE Consulting. Her prior professional work experience includes five years in the Real Estate Consulting Group of the now defunct accounting firm Laventhol & Horwath (L&H), preceded by several years with the land use consulting firm Land Economics Group, which was acquired by L&H.

Following are descriptions of select consulting assignments managed by Ms. Herman.

ECONOMIC IMPACT ANALYSIS

University of California. Conducted economic impact studies and frequent updates for five University of California campuses: Berkeley, Davis, Riverside, San Francisco, and San Diego. Prepared models suitable for annual updates by campus personnel.

Various EIR Firms. Managed numerous assignments analyzing the potential for urban decay to result from development of major big box and other shopping center retailers. The analysis comprises a required Environmental Impact Report component pursuant to CEQA.

Hospital Council of Northern and Central California. Prepared an analysis highlighting the economic impacts of hospitals and long-term care facilities in Santa Clara County. The analysis included multiplier impacts for hospital spending, county employment, and wages. Completed a similar study for the Monterey Bay Area Region.

Howard Hughes Corporation. Managed economic impact and fiscal impact analysis for a large-scale master planned development in Honolulu, including residential, commercial, and industrial land uses.

FISCAL IMPACT ANALYSIS

Stanford Management Company and Stanford Hospitals. Managed numerous assignments involving fiscal impact analysis for planned facilities developed by Stanford Management Company or Stanford Hospitals, including a satellite medical campus in Redwood City, a hotel and office complex in Menlo Park, and expansion of the hospital complex and the Stanford School of Medicine in Palo Alto.

Office of Community Investment and Infrastructure as Successor Agency to the Redevelopment Agency of the City and County of San Francisco. Managed financial analysis estimating the tax payments in lieu of property taxes associated with UCSF development of medical office space in the former Mission Bay Redevelopment Project area.

City of Concord. Structured and managed fiscal impact analysis designed to test the net fiscal impact of multiple land use alternatives pertaining to the reuse of the 5,170-acre former Concord Naval Weapons Station, leading to possible annexation into the City of Concord, California.

Bay Area Rapid Transit District. Completed economic impact analysis of BART's operations in the San Francisco Bay Area region.

San Francisco Mayor's Office of Economic Development. Conducted fiscal and economic impact analysis of redevelopment and expansion of San Francisco's Parkmerced residential community, including assessing the project's impacts on the San Francisco Municipal Transportation Agency.

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ALH Urban & Regional Economics

PROFESSIONAL PROFILE

AMY L. HERMAN
Principal

ECONOMIC DEVELOPMENT AND PUBLIC FINANCE

Infrastructure Management Group. Contributed to due diligence analysis of the proposed Transbay Transit Center to support evaluation of requested bond loan adjustment requests to support project construction.

City of Santa Monica. As a subconsultant to the City's land use consulting firm, conducted research and analysis exploring potential assessment district and other public finance options for financing key improvements in an older industrial area transitioning to a mixed use community.

Catellus/City of Alameda. Prepared a retail leasing strategy for Alameda Landing, a regional shopping center planned on the site of the former U.S. Navy's Fleet Industrial Supply Center in Alameda.

City of San Jose. Prepared a study analyzing the costs and benefits associated with creating a bioscience incentive zone in the Edenvale industrial redevelopment area.

City of Palo Alto. Conducted a retail study targeting six of Palo Alto's retail business districts for revitalization, including the identification of barriers to revitalization and recommended strategies tailored to the priorities established for each of the individual target commercial areas.

East Bay Municipal Water District. Managed economic, demographic, and real estate data analysis in support of developing market-sensitive adjustments to long-term water demand forecasts.

DEVELOPMENT FEASIBILITY

PCR Services Corporation. Analyzed the retail supportability of the planned mixed-use development of the UTC/Rocketdyne site in the Warner Center area of Los Angeles

ChevronTexaco. Conducted a regional market analysis of an 8,400-acre oil field retired from active oil production in the New Orleans, Louisiana metropolitan area.

City of San Jose. Managed alternative City Hall location analysis, focused on recommending a long-term occupation strategy for the City. Following relocation of City Hall conducted a study examining the feasibility of redeveloping the City's former City Hall location and nearby parking facilities for residential, retail, and civic land uses.

General Motors Corporation. Managed reuse studies for closed manufacturing facilities in Indiana (250 acres, 14 sites) and New Jersey (80 acres). Studies focused on the long term reuse and redevelopment potential of the closed manufacturing sites.

CORPORATE LOCATION ANALYSIS

Toyota Motor Corporation. Conducted a location analysis study for a distribution facility in the San Francisco Bay Area, designed to minimize travel time distance to the majority of area dealerships.

Cisco Systems. Managed multiple corporate location studies for Cisco Systems, headquartered in San Jose, California. These studies focused on the formulation of both a regional and a North American location strategy.

Starbucks Coffee Company. Directed analysis examining alternative locations for a new coffee roasting plant in the Western United States. A variety of economic, business, and labor market data were collected. The roasting plant was successfully sited in Sparks, Nevada.

Sacramento Regional Transportation District (RTD). Managed a consultant team assisting the RTD in planning for its immediate and long-term administrative office space needs, and in developing a strategy for maximizing the value of the existing RTD complex.

Hines. Managed comparative analysis highlighting business and employee costs associated with business locations in three competitive Bay Area locations.

PROFESSIONAL PROFILE

AMY L. HERMAN
Principal

EDUCATION

- Ms. Herman holds a Bachelor of Arts degree in urban studies, magna cum laude, from Syracuse University. She also holds a Master of Community Planning degree from the University of Cincinnati. She has also pursued advanced graduate studies in City and Regional Planning at the University of California at Berkeley.

VOLUNTEER ACTIVITIES

- Volunteer (Past President and Vice President), Rebuilding Together (formerly Christmas in April), East Bay - North
- Volunteer (Past President), Diablo Pacific Short Line, 501 (c)(3) Portable Modular Train Organization
- Volunteer (Past Secretary), Swanton Pacific Railroad, Santa Cruz County, California
- Volunteer, Redwood Valley Railway, Tilden Regional Park, California

Clean Coalition Staff

CRAIG LEWIS

Clean Coalition
Making Clean Local Energy Accessible Now

EDUCATION & TRAINING

University of Southern California, Business Administration, MBA
University of Southern California, Electrical Engineering, MSEE
University of California, Berkeley, Electrical Engineering, BSEE

PROFESSIONAL EXPERIENCE

Clean Coalition – Palo Alto, CA
Founder and Executive Director, 2009 – Present
GreenVolts – San Francisco, CA
VP of Government Relations, 2006 – 2009
Steve Westly 2006 California Gubernatorial Campaign – Palo Alto, CA
Chief Energy Advisor, 2005 – 2006
LinCom Wireless – Los Angeles, CA
VP of Marketing, 2001 – 2005
Qualcomm / Ericsson – San Diego, CA
Director of China Markets & Worldwide Government Relations, 1998 – 2001
Comarco Wireless Technologies – Singapore
Director of Pan-Asia Operations, 1995 – 1998
Barclays Bank – Los Angeles, CA
Assistant Vice President, 1991 – 1995
Hughes Aircraft Company – Los Angeles, CA
Radar Systems Engineer, 1985 – 1989

PUBLICATIONS

On Long Island a Smarter, More Resilient, Power System, 2015
Evolving the Electric Utility, 2014 (with David Olsen)
Lessons From New York: How Hurricane Sandy's Aftermath Is Creating a Smarter Power System, 2014 (with Dan Kammen)
Los Angeles Can Lead the Way with Solar Rooftops, 2014 (with Steve Westly)
Advanced Inverters: Recovering Costs and Compensating Benefits, 2013
It's Time for Grid Planners to Put Distributed Resources On Par With Transmission, 2013
Rooftops to Deserts: How Policy Directs the Growth of Renewables, 2013

SYNERGISTIC ACTIVITIES

Business of Local Energy Symposium: "Big Ideas to Optimize Community Choice Energy

Impact and Sustainability," panelist, 2016
Renewable Energy Markets: "State Renewable Energy Policy Update," panelist, 2016
NY Energy REVolution Summit: "Determining What Leading Grid Practices Need to Be Applied to
Achieve the NY REV," panelist, 2016
Distributed Solar Summit: "Smart Inverters & Intelligent Control for Solar+Storage," moderator, 2016
Storage Week Summit: "Increasing Microgrid Resiliency with Energy Storage," panelist, 2015
Solar Power International: "What's Next in Solar: Advanced Grid Functionality," panelist, 2014
California Energy Commission: "Flattening the Duck," 2014
Energy Investment Forum: "The Role of Utilities in Clean Energy Investing," 2013

ROBERT O'HAGAN

Clean Coalition
Making Clean Local Energy Accessible Now

EDUCATION & TRAINING

Santa Clara University, Operations Management, MBA
Stanford University, Electrical Engineering, MSEE
Southern Methodist University, Electrical Engineering (Computer Science minor), BSEE,
Summa Cum Laude

PROFESSIONAL EXPERIENCE

Clean Coalition – Palo Alto, CA
Program Engineer, 2012 – Present
JTS Strategic Partners – San Jose, CA
Senior Partner, 2009 – 2011
KACE Networks. – Mountain View, CA
Director of Operations & Supply Chain, 2008 – 2009
Attention Control Systems – San Jose, CA
Director Sales & Support, 2007
Innovation Engines – Mountain View, CA
Co-Founder, 2002 – 2006
Excellent Data – San Jose, CA
Consultant, 2001 – 2002
Artmetropolis – Cupertino, CA
DIRECTOR PRODUCT MANAGEMENT, 2000

PUBLICATIONS

Hunters Point Community Microgrid Project Power Flow Analysis Methodology, 2016

PRESENTATIONS

Grid of the Future Summit, "Community Microgrid Initiative," presenter, 2015

SYNERGISTIC ACTIVITIES

U.S. Patent Publication Number US7533035 B1, 2009 Innovation Engine
Member, Institute of Electrical and Electronics Engineers
Product Realization Group Certificate. Includes ISO 14971, 62304, 9001

EcoShift Staff

James Barsimantov, PhD

Dr. Barsimantov co-founded and manages EcoShift Consulting, a team of climate change, energy, water, and sustainability experts who work with leading organizations to develop and implement value-creating strategies. Using the lens of sustainability metrics, Dr. Barsimantov has led EcoShift as it identifies the challenges – and innovations – that will help clients become industry leaders and create profitable, sustainable advantage. With over 10 years of experience in the field, Dr. Barsimantov received his doctorate in Environmental Studies from UC Santa Cruz, focusing on environmental economics and resource management. James has extensive experience in greenhouse gas emissions quantification, climate action strategy, and energy analysis. He has developed sustainability rating systems, methodologies to quantify GHG emissions, and multiple client-specific tools for GHG emissions, energy usage, and financial analysis. James has provided expert witness testimony in multiple cases on energy and climate policy and speaks frequently in both academic and corporate sustainability venues on sustainability measurement, life cycle analysis, and environmental policy. He also teaches sustainability project design and environmental policy and economics in the Electrical Engineering and Environmental Studies Departments at UCSC.

Education
PhD Environmental Studies, University of California Santa Cruz (2008)
B.A. Psychology, University of California Berkeley (1998)

Professional
Peer-reviewed publications in *J. Env. & Dev., Land Use Policy Applied Geography, and Human Ecology*

Invited talks at USGBC, Sustainable Brands, USDA, TechCrunch

Selected Work Experience

Principal, EcoShift Consulting, LLC. Leading EcoShift's interdisciplinary team of engineers and analysts that bridge environmental policy, economics, engineering and modeling, and climate change planning to deliver custom solutions to challenging climate, energy, and sustainability problems.

Assistant Project Scientist, Department of Electrical Engineering, UC Santa Cruz.
Dr. Barsimantov developed curriculum for and taught a yearlong course in STEM-based team service-learning sustainability project design and implementation. He also managed project teams focusing on sustainability measurement, technology innovation, and built environment issues (energy use, water, waste, transportation).

Environmental Studies Department and Electrical Engineering Department, UC Santa Cruz. As a lecturer, Dr. Barsimantov has developed curriculum for and taught the follow lower and upper division courses: Environmental Policy and Economics, ENVS 25: 2007-2012; Ecological Economics, ENVS 141: 2010-2011; Future of the Rain Forest, ENVS 80A: 2008-2009; Sustainability Engineering & Practice, EE 80S: 2009

Campus Climate Manager, University of California Santa Cruz. Dr. Barsimantov created an assessment of the carbon footprint of UC Santa Cruz and designed projects to reduce emissions in transportation, energy, air travel, and purchasing. He also conducted cost-benefit analyses of options to reduce campus emissions, including solar PV, solar thermal, cogeneration, waste biomass, energy efficiency, transportation policy and behavior change.

Peace Corps Volunteer, Panama. Mr. Barsimantov planned and executed sustainable environmental development projects in rural Panama with community members and government agencies, watershed management, reforestation, and sustainable agriculture.

EcoShift Consulting, LLC
http://www.ecoshift.com

eco·shift CONSULTING

270 Canyon Oaks
Santa Cruz, CA 95065

Tiffany Wise-West, PhD, PE, LEED AP

Dr. Wise-West is a licensed professional civil engineer and LEED Associate Professional in Building Design and Construction with nearly twenty years of experience in sustainable municipal infrastructure project design and management, specializing in water, wastewater, solid waste, and renewable energy systems. Her diverse background includes experience in modeling, analysis, design engineering, leading fieldwork, master planning, and permitting. As an academic researcher, Tiffany complements her technical skill set with policy, regulatory, and economic expertise in the areas of sustainability, building and climate science, energy efficiency, renewable energy microgrid systems, and issues at the water and energy nexus. She specializes in negotiating public-private-academic partnerships to deploy green municipal infrastructure. Tiffany serves on as District 2 commissioner to the Santa Cruz County Commission on the Environment.

Education
Ph.D. Environmental Studies, University of California Santa Cruz (2014)
M.A., Environmental Studies, University of California Santa Cruz, (2011)
B.S., Civil & Environmental Engineering, Purdue University (1995)
Professional
Member, American Water Works Association
Member, Institute for Sustainable Infrastructure

Selected Work Experience

EcoShift Consulting, LLC, Santa Cruz, CA. *Principal:* Key player in business development, proposal preparation, project management, design and analysis of energy and climate projects.

University of California Santa Cruz, Environmental Studies Department and Schools of Engineering. *Graduate Student Researcher/Instructor:* Project management, regulatory lead, technical troubleshooter, and liaison for strategic academic-public sector partnership on renewable energy microgrid systems. Secured external funding for community sustainable infrastructure projects. Lead a programmatic and curricular gap analysis of campus sustainability skill set training. Developed and instructed innovative, applied water and energy curriculum and internship opportunities. Participated in The Chancellor's Executive Committee on Sustainability and Climate Change for 2 years and mentored students in the Impact Designs: Engineering and Sustainability through Student Service program for 3 years.

Utility Services, Inc., Sand City, CA. *Associate Engineer & Project Manager:* Conducted master planning, modeling, economic analyses, rate studies, and reporting for municipal and private clients. Designed, permitted, and managed municipal and private water infrastructure projects including off-grid renewable energy driven systems. Prepared proposals, bidding documents; conducted bid proposal evaluations, and negotiated client contracts. Instrumental in strategic business development and firm growth.

City of Santa Cruz Water Department, Santa Cruz, CA. *Assistant Civil Engineer & Construction Inspector*: Conducted water system modeling and analyses, design, cost estimation, permitting, preparation of bid documents and bid proposal coordination of water system infrastructure and treatment projects. Field work included water system construction inspection and testing, water sampling, mechanical systems start-up and testing, and seismic measurements at key infrastructure assets. Key developer of a coupled GIS and hydraulic modeling software for asset management, operations and maintenance scheduling, and energy/hydraulic design scenario testing.

Kiowa Engineering Corporation, Colorado Springs, CO. *Project Engineer & Assistant District Engineer*: Performed engineering duties in planning, designing, permitting, and preparing operations and

maintenance plans for municipal water and wastewater clients. Conducted bid proposal process. Served as assistant engineer for the Widefield Water and Sanitation District. Prepared proposals for new work.

CT Consultants, Inc., Willoughby, OH. *Project Engineer, Assistant City Engineer & Industrial Pretreatment Program Coordinator*: Performed surveying, planning, modeling, designing, and permitting the construction and maintenance of building structures and facilities, including tanks, pipelines, solid waste, and other water and sewage systems. Formally mentored to conduct studies of and generate reports assessing alternatives for environmental engineering projects. Managed the City of Conneaut's Industrial Pretreatment Program by inspecting facilities, tracking performance, issuing violations, and making reports to Ohio EPA.

The Offset Project Staff

Chris Sentieri

SPECIAL PROJECTS MANAGER, THE OFFSET PROJECT, INC.

Education

Master's Degree, Public Policy, Panetta Institute of Public Policy at CSUMB (studied with Leon Panetta)
Bachelor's Degree in Community Studies from UC Santa Cruz.

Years of Experience

18

Key Qualifications

Chris Sentieri is an experienced analyst, consultant and energy and environmental policy professional who specializes in local government affairs, economic development, community outreach and education, energy policies, development of local clean energy initiatives, carbon accounting, and climate and energy action planning. He is a Build It Green-certified professional.

Professional Experience

The Offset Project, Inc. Monterey, CA **2010-2011, 2013 to Present**
SPECIAL PROJECTS MANAGER

Mr. Sentieri has served The Offset Project for more than seven (7) years. He provides program and project development, implementation, and management for The Offset Project's clean energy and climate change initiatives, including local renewable energy development projects such as new solar PV installations at local schools, electric vehicle infrastructure development and expansion projects, and vehicle trip reduction projects (bike and pedestrian infrastructure enhancements).

Monterey Bay Carbon Fund (MBCF). Mr. Sentieri developed the MBCF program design, strategic plan and go-to-market launch strategy for an innovative, non-profit carbon fund, which raises funds for meaningful local greenhouse gas emission reduction projects by tapping into the emerging carbon markets. MBCF raises money through the procurement and resale of Green-e certified RECs and third-party verified Offsets. Mr. Sentieri has been the primary program manager for MBCF since its launch in 2010.

Net Zero Communities Program. Mr. Sentieri developed the program design and go-to-market strategy for this program, and is managing its implementation. The Net Zero Communities program is designed to assist communities in preparing to meet California's aggressive net zero energy mandates by providing direct support and valuable resources and best practices. The overarching goal of the program is to streamline and accelerate the local deployment of climate-friendly clean energy systems to secure meaningful social, environmental, and economic benefits. This program is driving policies and market solutions that pave the way for advanced distributed energy projects and Net Zero Energy (NZE) communities. This provides an opportunity for The Offset Project to work closely with climate-conscious communities and industry-leading energy professionals to develop and implement effective strategies for meeting our energy needs with clean, sustainable and locally produced renewable energy.

Community Choice Partners, Inc., San Francisco, CA **2015 to 2016**
PRINCIPAL, GOVERNMENT AFFAIRS AND CLIMATE PLANNING

As a Principal and Government Affairs Manager at Community Choice Partners (aka-CCPartners)—a California Benefit Corporation—Chris Sentieri helped develop California's first "turnkey" Community Choice Aggregation (CCA) service (called Community Choice as a Service), which allows communities to evaluate, form and launch an advanced CCA program in approximately 1 year with no risk or upfront cost. CCPartners innovative and accelerated approach to CCA development was built upon an integrated partnership of best-in-class energy service providers (i.e., Energy Exemplar, ACES, AGR Group, Enernoc, Gas and Power Technologies). This approach incorporates next generation contracting strategies and advanced CCA program design that is empowered by utility-grade tools and processes previously unavailable to CCA's. These advancements not only eliminate risks and significant cost burdens and greatly accelerate the CCA formation process, but it also allows the CCA's to hit the ground running in regards to local clean energy project development, job creation, and economic stimulus. This streamlined, DER-focused method of forming and launching a CCA has been referred to as the "CCA 2.0" approach, and it is currently being utilized by California communities such as Humboldt County.

In his role at Community Choice Partners, Mr. Sentieri provided consulting services—including: labor relations, stakeholder engagement, procurement analysis, renewable content verification, invoice validation (i.e., CAISO charges), and staff training—to Sonoma Clean Power and the County of Los Angeles.

Association of Monterey Bay Area Governments (AMBAG), Marina, CA **2011 to 2013**
SPECIAL PROJECTS ASSOCIATE

Regional Energy and Climate Action Planning Services. Mr. Sentieri coordinated AMBAG's municipal energy and climate action planning services for the tri-county Monterey Bay region. He conducted and maintainted individual, comprehensive community-wide GHG inventories for all of AMBAG's 21 member jurisdictions. He provided on-call, ad-hoc energy and climate action planning technical support, legislative and regulatory analysis, and government agency liaison services to support the climate and energy planning processes for AMBAG's 21 member jurisdictions, including Office of Planning and Research, California Air Resources Board, the Monterey Bay Unified Air Pollution Control District and others.

Regional Energy Action Planning. Spearheaded the development of a new service offering for AMBAG's Energy Watch program, which made innovative use of CPUC funding to help local jurisdictions better understand their community's energy use patterns, and develop plans for reducing energy consumption and the associated GHG emissions. Worked closely with staff at PG&E to pilot new uses of available data sets for energy and climate planning purposes. Analyzed and synthesized comprehensive city, county and regional level PG&E energy data to help identify opportunities for reductions, and created new tools to quantify those opportunities. Developed comprehensive draft Energy Action Plans for each of the 18 cities and 3 counties in the region.

Monterey County Business Council (MCBC), Seaside, CA **2009 to 2010**
DIRECTOR OF COMPETITIVE CLUSTERS

Monterey County Wind Turbine Roundtable (2010). Responsible for creating and managing the Monterey County Wind Turbine Roundtable, which he co-chaired with the Deputy Director of the Monterey County Resource Management Agency. This was a multi-stakeholder working group that convened proponents and opponents of wind energy development in Monterey County to identify critical barriers (including proximity to protect California Condors) and identify mutually agreeable solutions. Roundtable members included legislators, policymakers, elected officials, state and federal wildlife officials, and wind energy developers and advocates. Work was instrumental in laying the groundwork for the two utility grade wind turbines that were recently installed in the Gonzales area.

Monterey County Solar PV Permit Streamlining Task Force (2010). Chaired a successful effort to develop a streamlined permitting process for rooftop mounted solar PV systems. Three-to-four week turnaround times on solar PV permits were common in Monterey County due to a cumbersome process. Chaired a working group consisting of county planning and building officials, local and state fire marshals and fire fighters, and solar PV developers and installers. The County implemented a revised over-the-counter permitting process for most rooftop mounted PV systems, which became a model policy presented by Cal Fire and the National Fire Protection Association.

Independent Climate Change and Energy Consultant **2010 to 2016**

City of Capitola Climate Action Plan (2014-2016). Responsible for the modeling of all greenhouse gas emissions and emissions reductions associated with Capitola's comprehensive set of Climate Action Plan reduction strategies; the community-wide Baseline Greenhouse Gas Inventory; the Future Year Greenhouse Gas Forecasts and adjustments for local Growth Projections, the Renewable Portfolio Standard, Pavley I and Pavley II; Project Management Support Services; Legislative and Regulatory Analysis; the development of Reduction Measure scope and sequence; and ad-hoc, on-call Technical Consulting Services.

Monterey Bay Electric Vehicle Alliance (MBEVA) (2010-2012). As a founding member of the MBEVA and Chair of the Funding and Development subcommittee, helped prepare the Monterey Bay region to be a leader in the electric vehicle movement. Efforts included successful grant proposals to the CEC, DOE, the Monterey Bay Unified Air Pollution Control District, and others, which secured funding to install a network of more than 40 EV charging stations as well as funding the development of a comprehensive regional EV readiness plan.

Driscoll's Strawberries Solar Photovoltaic Assessment (2011). Lead Consultant and Project Manager on a team of electrical engineers and consultants for the Comprehensive Solar Photovoltaic Assessment for the Driscoll's Strawberries Cassin Ranch campus, and primary author of the final assessment report.

Resume For Mr. Jonathan Whelan

Professional Experience

Optony Inc.: Director of Operations, 2015 – present; Sr. Project Manager, 2010 - 2015

Manages daily operations and strategic planning for Optony Inc., a clean energy program and project management consultancy. Jonathan is a seasoned leader with more than eleven years of comprehensive clean energy experience at multiple firms. Jonathan successfully navigates the challenges of planning, data management, and legal negotiations in multiple stakeholder process. Jonathan specializes in renewable generation modeling, financial analysis, and procurement for systems ranging from megawatt utility-scale installations to distributed generation on schools, community centers, libraries, fire stations, and medical facilities. His record shows that he turns project concepts into delivered products.

SPG Solar: Project Manager, 2007 – 2010; Lead Solar Installer, 2006 – 2007

Directed engineering and construction efforts for solar projects, starting with review and guidance of sales proposals through to project completion with interconnection, commissioning, and customer training. Responsible for directing completion of all installation support tasks, including permitting, interconnection, scheduling, design review, subcontracting, and inspection for dozens of small and large-scale solar projects in over 15 jurisdictions, and totaling over 4 MW.

Home Energy Systems: Lead Solar Installer, 2005-2006

Executed in-the-field and office system installation duties, such as system design, design review, materials acquisition, and logistical organization. Performed on-site system lay-out, installation, trouble-shooting, maintenance, and repair of new and pre-existing systems. Directed and organized crew activities, while managing owner and subcontractor needs and expectations.

Education

BS in Business Administration and Biology with Minor in Environmental Studies, Trinity University, Texas, 2001

Selected Public Speaking Engagements

Tapping Solar Potential in Higher Education. SOLAR2016 Conference. San Francisco, CA, 2016.

Higher Education Solar Development: RFPs and Contract Issues. Smart and Sustainable Campuses Conference. Baltimore, MD, 2016.

Sustainable Energy: Business Districts in China (SEBIZ). US-China Renewable Energy Industries Forum (REIF). Washington, DC, 2015.

Global Solar PV Market Opportunities. New Energy Summit, Changzhou, China, 2012.

Industry Leadership

U.S. Department of Energy evaluation committee and independent reviewer for renewables energy projects. Golden, CO, 2011.

Sample Projects

Sustainable Cities—Urban Energy Planning for Smart Growth in China and India

Funded by the U.S. Department of Energy, Optony's Sustainable Energy for Business Districts in China (SEBiz) Mr. Whelan help lead a program focused on benchmarking energy use at existing and planned Business Districts in China, and then match-making with local and American companies seeking to provide energy efficiency and construction solutions to those Business Districts. The program led to high-level meetings between Chinese facility owners and managers and American product- and service-providers.

Sustainable Energy Roadmap for California's San Joaquin Valley

Sparked by the SEBiz program, Mr. Whelan directed Optony's role in the launch of the Sustainable Energy Roadmap (SER) and Clean Energy Roadmap (CERM) online platforms. The online database and tools were created to provide commercial entities and local governments in the United States with resources and guidance for pursuing energy efficiency and renewable energy programs internally, with a geographic focus on the under-served California Central Valley. The programs have brought together a regional planning effort including municipal governments, regional planning agencies, community stakeholders, and technical experts. Mr. Whelan continues to guide the collaborative team to support San Joaquin Valley communities as they pursue smart growth strategies, related to efficient building portfolios, resilient energy supplies, and low-carbon transportation, among others. SER is supported by California's Strategic Growth Council.

Collaborative Municipal Government Procurement (multiple)

Mr. Whelan has managed the development of, and procurement and contracting consulting services for, the largest multi-agency aggregated solar purchase programs in the United States, seeking to develop up to 40 MW over 190 potential sites and 25 distinct government agencies, along with smaller collaborative and single-agency projects. He led consulting team responsible for RFP management, bid proposal evaluation, technology and construction methodology assessment, and vendor contract review. He performed outreach and stakeholder education for partner agencies, while translating solar industry vocabulary, needs, and concerns for government clients, and vice versa. Mr. Whelan contributed to the published guide, *Best Practices Guide for Collaborative Solar Procurement for Public Agencies*. He collaborated with Strategic Energy Innovations to create ground-breaking revolving fund to reduce barriers to entry for public agencies in collaborative solar procurements. Clients include: County of Santa Clara, County of Alameda, City of San Rafael, and many others.

Solar Feasibility Assessments and System Optimizations (multiple projects)

Mr. Whelan performed investment-grade Feasibility Assessments for full municipal facility portfolios, evaluating potential for solar PV development from both physical and financial perspectives. Created financial model to assess economic viability of potential sites and to determine ideal system sizing to match site physical and energy usage profiles. Recommended over 50 MW of municipal projects with financial options and rationale to enable AHJ's to pursue procurement with confidence and understanding. Directed on-site System Optimization of installed PV arrays for government, school, financial, and commercial clients. He evaluated installation techniques and system performance, both as monitored and as field-tested; analyzed performance test results and recommended areas for actions to improve system durability and production, and to increase buyer return on investment. Clients include: Santa Clara Valley Transportation Authority, West Contra Costa Unified School District, City of Walnut Creek, and many others.

Resume For Mr. Byron Pakter

OPTONY

Professional Experience

Optony Inc: Program Manager, High Penetration Urban Renewables. 2016 – Present

Byron leads Optony's study of impacts of solar energy at high levels in urban environments. This requires synthesizing proprietary research with results from National Labs and industry capabilities. Byron studies urban structural size and suitability distributions and models overall solar generation potential and financial viability.

Optony Inc: Associate Project Manager. 2015

As an American Solar Transformation Initiative project manager Byron was in charge of outreach and updates to the ASTI member database and web platform. He added new community profiles and modeled solar feasibility and finances. He was a key part of the web platform redevelopment work group.

Berkeley Energy Climate Institute: Energy Economics Researcher. 2014-2015

As an engineering team member of the American Jobs Initiative Byron created technology roadmaps, SWOT analyses, impact assessment and supply chain characterizations for advance energy technology employment impacts. He also identified policy opportunities to incent shared investment by private stakeholders.

Education

Masters of Engineering in Advanced Energy Technologies, University of California, Berkeley, 2015

B.S. in Mechanical Engineering, University of California, Berkeley, 2002

Certification in Climate Protection and Sustainability, Skyline College Math and Science Division, 2016

Select Publications

Iowa Solar and Wind - State Economic Development Guide to Creating Advanced Energy Jobs - American Jobs Project Report, March 2016

Colorado Solar and Wind - State Economic Development Guide to Creating Advanced Energy Jobs - American Jobs Project Report, March 2016

Virginia Off-Shore Wind and Carbon Fiber - State Economic Development Guide to Creating Advanced Energy Jobs, American Jobs Project Report, March 2016

Innovations in Electronic Contact Resistance Measurements -Tribology Transactions, Vol 45, Issue 4. 2002

Sample Projects

Transforming Regional Urban Transmission and Distribution (TRUSTD)

Mr. Pakter was the chief author and program manager of the TRUSTD program as an applicant under State Energy Strategies funding from the US Department of Energy. The program brought together key university, industry, and nonprofit partners to benchmark and forecast impacts of alternative electricity providers such as the growing trend in community choice aggregation. The program drew interest from utility mangers, sustainability officers, academic departments, and infrastructure financiers in California, Utah, Texas and New Mexico.

Fifty-Percent Solar Cities

As project manager for City of Berkeley's fifty percent solar plan, Mr. Pakter directed the solar study group under the City's Energy Commission. Mr. Pakter identified strategies for increase solar energy content in the city's imported energy, and to quantify the capacity in megawatts for local generation required. The solar study group mapped over 1,500 structures, created a statistical aggregation of the total solar resource, and optimized the participation levels of various building types to reduce costs of achieving in the city's goal of fifty percent solar by 2030. The solar study group then identified policy opportunities that were available through local government controls such as permitting, reach codes, and administrative procedures. Finally, Mr. Pakter directed a survey of residents and local businesses to determine their energy preferences, and support or specific criticisms of potential programmatic implementation.

Solar Energy & Economic Development (SEED) Fund

Mr. Pakter manages intake, reviews energy consumption, and provides feasibility analysis for the Solar Energy & Economic Development (SEED) Fund. The project leverages regional funding – including grants and community development investments – to defer upfront costs of renewable energy project planning, site assessments, and procurement activities. These costs are paid back through solar production contracts that are developed with vendors and recirculated as a revolving fund which defrays resource commitment for evaluation of future opportunities. Designed and executed by Optony and non-profit partner Strategic Energy Innovations (SEI), Round One of the SEED Fund brought together fourteen public agencies in Napa, Marin, and Sonoma Counties. This led to reduced project risk and project cost, as judged by the participants. According to Rebecca Woodbury at City of San Rafael, which served as the lead agency in Round One, "The result is a streamlined process and excellent energy cost savings for the participating agencies." Mr. Pakter is currently assisting in the competition of SEED Fund Round Two, and the launch of Round Three under way in the Monterey and San Joaquin regions respectively.

BETONY L. JONES

1205 Navellier Street, El Cerrito CA 94530 • c. 530.563.8384 • betony.jones@gmail.com

SUMMARY

Creative strategy and policy consultant with expertise in climate, energy, and labor issues. Driven to roll up my sleeves and do things that have not yet been done.

PROFESSIONAL EXPERIENCE

UNIVERSITY OF CALIFORNIA, BERKELEY – LABOR CENTER CLIMATE AND GREEN ECONOMY PROGRAM
(formerly: DON VIAL CENTER ON THE GREEN ECONOMY)
Berkeley, California
Sep 2014 – Present
Associate Director

- Carry out cutting edge research on economic and employment impacts of climate change and clean energy policy, covered by major national newspapers including Sacramento Bee, LA Times, and USA Today
- Wrote an energy efficiency policy proposal adopted as part of the Clinton Campaign's energy platform
- Develop, strengthen, and manage partnerships with Next10, NextGen Climate, E3, American Jobs Project, the Sierra Club, BlueGreen Alliance, Emerald Cities Collaborative, California Environmental Justice Alliance, International Brotherhood of Electrical Workers, and other labor and community-based organizations.
- Regularly invited to present my work at conferences, press conferences, legislative hearings, and other venues

FOURTH SECTOR STRATEGIES
San Francisco, California
May 2009 – Present
Founder and Principal

- Launched mission-based strategy consulting organization focused on accelerating the transition to a just and sustainable low-carbon economy
- Raised and managed over $1 million in project funding for clients including:
  - Pacific Gas and Electric Company (PG&E) and the California Public Utilities Commission (CPUC)
  - Northwest Natural Resource Group, 3 Degrees Warmer, Private Capital for Public Good, Mountain Pact, Placer Land Trust
  - Green Cities California, Urban Sustainability Directors Network, Golden Sierra Workforce Investment Board
  - City of San Francisco, City of Oakland, City of Berkeley, Salt Lake City, Alameda County

SIERRA NEVADA ENERGY WATCH
Truckee, California
Mar 2007 – Oct 2010
Founder and Managing Director

- Designed and managed start up of profitable energy efficiency social enterprise with $2 million annual budget and 1500 business customers
- Reduced energy use by 90 million kWh, saved businesses and municipalities $18 million, and reduced greenhouse gas emissions by 60,000 metric tons CO_2e and created more than 25 family-supporting jobs in the local community

SIERRA BUSINESS COUNCIL
Truckee, California
Jan 2005 – May 2009
Vice President of Program Development / Director of Programs

- Developed and led strategy to expand fee-for-service work and grow annual budget from $600K to $3 million
- Designed and launched programs to demonstrate and promote triple-bottom line business opportunities in carbon markets, clean energy, forestry, agriculture, and sustainable products development.
- Supervised 8 direct reports (program directors and program managers)

LEAGUE OF CONSERVATION VOTERS
Portland, Oregon
Jun 2004 – Nov 2004
Field Organizer

- Managed satellite office and coordinated 500 volunteers canvassers for Environmental Victory Campaign

U.S. GLOBAL CHANGE RESEARCH PROGRAM
Washington, D.C.
Mar 2001 – Jun 2001
Communications Assistant

- Briefed White House science advisors on U.S. Congressional hearings. Organized outreach and education to U.S. Congress.

WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY (OSTP)
Washington, D.C.
Nov 2000 – Mar 2001
National Security Education Program Fellow – Clinton Administration

- Prepared briefings on climate change, energy, and environmental issues for members of the President's Cabinet.
- Conducted research in preparation for international climate negotiations and for weekly reports to the President.

GRAMEEN FOUNDATION
Washington, D.C.
Nov 2000 - Jun 2001
Program Assistant – Latin America

- Supported efforts to expand micro-credit in Latin America, researching and reaching out to NGOs in the region.

EDUCATION

STANFORD UNIVERSITY – GRADUATE SCHOOL OF BUSINESS — Palo Alto, California
Certificate in Non-Profit Leadership 2009

- Two-week mini-MBA Executive Education program focusing on competitive strategy, marketing, finance, operations, and management.

YALE UNIVERSITY – SCHOOL OF FORESTRY AND ENVIRONMENTAL STUDIES — New Haven, Connecticut
Master of Environmental Science 2004

- Coursework in statistics, research methodology, sustainable development economics, international economic analysis, monitoring and evaluation, environmental management, sustainable forestry, environmental anthropology
- Received competitive teaching fellowship and highest merit-based scholarship available

UNIVERSITY OF MICHIGAN – BIOLOGY AND PRE-MED — Ann Arbor, Michigan
Bachelor of Science with Honors 2000

- Recipient of full-ride National Security Education Program (NSEP) Fellowship for Hindi study and independent research in India
- Recipient of NSEP funding for internship at the White House Office and Science and Technology Policy

ADVISORY POSITIONS

SIERRA BUSINESS COUNCIL Board of Directors	2015 – Present
BLUEGREEN ALLIANCE Califonia Steering Committee	2009 – 2011
SIERRA CASCADE LAND TRUST COUNCIL Board of Directors	2007 – 2009
TRUCKEE DONNER PUBLIC UTILITY DISTRICT Advisory Committee	2007 – 2008

SELECTED PRESENTATIONS

Policy Options for a Just Transition. 2016. Revitalizing Vulnerable Communities Conference. Environmental Protection Agency, Arlington, VA

Redefining Equity (panel discussion). 2016. Local Government Commission 2nd Bi-Annual Climate Adaptation Forum, Long Beach, CA

California's Clean Energy Revolution: More Than Just Jobs (press conference), with Senate ProTem Kevin DeLeon and Assemblymember Eduardo Garcia). https://www.youtube.com/watch?v=C8342VbsANk&feature=youtu.be

Labor Issues In California and National Climate Policy. 2015. Institute for Research on Labor and Employment Fall 2015 Colloquium Series. Berkeley, CA

Benchmarking Market Analysis: Mining the Data to Inform Strategy. 2014. Presentation to Bay Area Regional Energy Network.

Breakthrough Convening on Climate Adaptation. 2014. 2-day Meeting of the Minds on Local Government's Role in Climate Adaptation. San Diego, CA

Obstacles at the Intersection of Energy Efficiency & Community Development. 2010. Community Energy Roadmap Conference by NextGen. Bellevue, WA.

Natural Capital: Preparing for Adaptation to Global Warming. 2008. Presentation at 26th Annual Public Interest Environmental Law Conference: Compelling a Climate of Change. University of Oregon Law School, Eugene, OR.

Carbon: A New Forest Commodity – Opportunities in the Sierra Nevada. 2006. Presentation at Sierra Business Council 12th Annual Conference. Yosemite National Park, CA.

SELECTED PUBLICATIONS

State climate policies are boosting San Joaquin Valley's economy. 2017. Sacramento Bee, Soapbox, January 20, 2017.

The Economic Impacts of California's Climate Policies and Programs on the San Joaquin Valley. January 2017. Next10, San Francisco

Economic and Labor Impacts of California's Energy Efficiency Investments. In Progress. Labor Center, Climate and Green Economy Program, UC Berkeley

The Link Between Good Jobs and a Low-Carbon Future. 2016. Don Vial Center on Employment in the Green Economy, UC Berkeley

Economic Justice Metrics and Jobs Analysis on 100% Renewable Energy Target: Sierra Club Internal memo for Board of Directors and Leadership Team. August 2016. Don Vial Center on Employment in the Green Economy, UC Berkeley

Job Impacts of California's Existing and Proposed Renewables Portfolio Standard. 2015. Don Vial Center on Employment in the Green Economy, UC Berkeley

Creating Opportunities for Good Jobs in Distributed Solar. August 27, 2015. Raising the Bar: UC Berkeley Labor Center Blog.

Are Solar Energy Jobs Good Jobs? July 2, 2015. Raising the Bar: UC Berkeley Labor Center Blog.

Jobs and Investments to Achieve Zero Net Energy in MUSH Sector Buildings in the SoCalREN Territory. 2014. Don Vial Center on Employment in the Green Economy, Institute for Research on Labor and Employment, UC Berkeley

(PUBLICATIONS CONTINUED)

Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities. 2014. Don Vial Center on Employment in the Green Economy, Institute for Research on Labor and Employment, UC Berkeley

Office Building Benchmarking Guide: Engaging the Hard-to-Reach. 2014. Completed for Urban Sustainability Directors Network (USDN) in partnership with the Cities of Berkeley, San Francisco, Oakland, Boulder, and Salt Lake City.

Climate Adaptation Breakthrough Convening: A Report for the Urban Sustainability Director's Network. 2014. Green Cities California

Truckee Donner PUD Shouldn't Bet on Coal Subsidies for Long. 2006. Sierra Sun, Guest Column, Nov. 15, 2006.

Paving the Wrong Path: A Case Study of Rural Road Development in Panama. 2005. In: Journal of Sustainable Forestry 22:1/2. 73-92

Chapter on Biopiracy, International Trade Deals, and Traditional Plant Knowledge. 2002. In Creating a Sustainable Future: Living in Harmony with the Earth. Peter B. Kaufman (Ed). Researchco Book Centre, New Delhi, India.

Biodiversity: Connecting With the Tapestry of Life. 2001. Smithsonian Institution / Monitoring and Assessment of Biodiversity Program and President's Committee of Advisors on Science and Technology. Washington, D.C.

LANGUAGES

English (native)
Hindi (proficient)
Spanish (proficient)
Malay (basic)

ACADEMIC AND RESEARCH POSITIONS

FIREBIRD FOUNDATION FOR ANTHROPOLOGICAL RESEARCH — Sabah, Malaysia
Project Manager and Research Associate — Jun 2002 – Dec 2002

- Led six month plant collecting expedition in rural Borneo as part of a 50-year anthropological effort.
- Collected over 500 specieis of plants and fungus and interviewed informants to record names and uses of the plants.

ROYAL BOTANIC GARDEN AT AT KEW — London, England
Visiting Scholar — Dec 2003 and Jun 2004

- Identified the 500 plants I collected in Borneo, contributing largest ethnobotanical collection from Southeast Asia to Kew Gardens.

YALE UNIVERSITY — New Haven, Connecticut
Graduate Student Instructor/Teaching Fellow — Aug 2001 – Jun 2004

- Led discussion sections and field trips, held office hours, created and graded exams in Conservation Biology (2001); Ecology and Evolutionary Biology (2002,2003); Biological Roots of Human Behavior (2003); General Ecology (2004); Local Flora (Botany) (2003, 2004); Land Measurement and Mapping (2003)

UNIVERSITY OF WISCONSIN, COLLEGE YEAR IN INDIA — Varanasi, India
Student and Independent Researcher — Jun 1998 – Jun 1999

Conducted fieldwork in Northern India, exploring biopiracy (foreign patenting of plants) and the repurcussions of international trade deals on the intellectual property rights of farmers and traditional healers.

UNIVERSITY OF MICHIGAN DEPARTMENT OF BIOLOGY — Ann Arbor, Michigan
Research Assistant — Sep 1997 – May 1998

Extracted medicinal compounds and conducted pharmacological analysis of Alaskan medicinal plants for use in cancer treatments.

GARY CALDERON

Milpitas, CA • (408) 889 - 3206 • gcalderon1@comcast.net

PRINCIPAL CONSULTANT

Accomplished senior Sales Account Executive, Business Development manager and entrepreneur with 25+ years of success within enterprise sales, municipalities, commercial solar PV sales, commercial battery energy storage systems sales, electric vehicle sales, electrical vehicle (EV) charging infrastructure, high tech, software security and development, and engineering. Ability to analyze existing and upcoming technologies to determine the most effective way to implement and monetize their deployment for sustainable revenue generation. Areas of expertise include project management, electrical engineering, contract negotiation, IoT, sales management, strategic partnerships, distributed energy resources (DER), microgrids and SalesForce.cm pipeline management and forecasting, power purchase agreements, leasing and market design.

CAREER TRACK

CEO / Founder/Principal, SOLGRID ENERGY — Nov 2008 to Present

Consulting services:

- Battery Energy Storage System design
- Solar PV system design
- EV Charging Infrastructure system planning
- Community Choice Aggregation programs
- Project Management

Principal Consultant, Sales, Business Development for Utility Scale/C&I/Residential Battery Energy Storage Systems, Distributed Energy Resources, CCA and Microgrids, DNV-GL, OAKLAND, CA — 2015 to 2017

- Supports and manages client and vendor relationships to maximize synergies in the development and execution of clean energy projects and overall business development.
- Works with Utilities and uses analytical tools to optimize, model and develop forecasts for Distributed Energy Resources.
- Facilitates and conducts market assessments and modeling of emerging technology to determine economic viability and impact.
- Leads R&D, consultation, and implementation of projects on distributed energy resources, battery electricity storage systems, and microgrids.
- Developed and manage Community Choice Aggregation consulting services: Least-Cost, Best-Fit
- Developed and manage Battery Safety and Installation inspections requiring PE certified teams for Battery Energy Storage System utility deployments.
- 160% of 2016 sales revenue quota

VP, Sales, Business Development, & Project Management / Co-Founder GRIDSCAPE SOLUTIONS, INC. — 2011 to 2015

- Co-founded the first system integration company focused on EV Charging Infrastructure in the US and worked with utilities, large service providers and electric vehicle charger companies such as NRG, Delta, ChargePoint, and Schneider-Electric to create intelligent grids and sustainable transportation solutions for commercial markets.
- Assisted in the development of software solutions for payment systems, cloud integration, and remote maintenance.
- Secured and successfully completed a $400K contract from the California Energy Commission(CEC) for the deployment of stations for workplace charging and corridor charging within business parks; secured an additional $2.4M grant from the CEC to build microgrids for fire stations in the City of Fremont, insuring resiliency and their energy independence in case of an outage/emergency, demand charge reduction, load-shifting and utility bill offset (Solar PV + Energy Storage).
- Helped grow the organization to more than 30 people at the time of departure from the company.

Direct Sales/Channel Account Management, SOLARCITY — 2011 to 2014

- Directly hired and trained 15 Field Energy Advisors that worked alongside sales managers to promote usage of solar energy among residential customers resulting in a 120-150% quota being met for increases to market share.
- Managed Solar PV projects originating from designated sales territory with responsibility for design, proposal development, and the sale of energy efficiency contracting services to residential customers that included state rebates and other incentives. All sales included Power Purchase Agreements, Leasing or Cash deals.
- Spearheaded sales of TESLA energy storage to residential customers for use during utility outages in PG&E territory.
- Helped reposition the company following the recession and successfully complete the IPO process.

Sr. Director of Sales, Major Accounts, Enterprise Sales VISIONAEL — 2008 to 2011

- Configured network of inventory software systems for use in Fortune 1000 companies on a global scale; Worked directly with customers to ensure successful deployment and management of software.
- Managed accounts such as the White House, Pentagon, Bell Canada, Kaiser Permanente, AT&T, and the US Cisco Reseller Channel.

CEO / Founder, SOLGRID ENERGY 2008 to 2011

- Assisted homeowners with taking advantage of energy efficiency programs to increase the ROI for transitioning to more renewable forms of energy.

Major Account Manager, Enterprise Sales, INFOEXPRESS (NETWORK SECURITY START-UP) 2006 to 2007

Channel Sales Manager, Enertprise Sales, AVENTAIL (PRESIDENT'S CLUB 2005) 2004 to 2006

Major Account Sales Manager, Enterprise Sales, BUSINESS OBJECTS (PRESIDENT'S CLUB 1996) 1996 to1997

Major Account Sales Manager, Enterprise Sales,SUN MICROSYSTEMS(PRESIDENT'S CLUB;1993, 1994, 1995)1989to 1996

Senior Hardware and Software Engineer for Linear Accelerator design, SIEMENS HEALTHCARE 1982 to 1989

AFFILIATIONS

ENERGY STORAGE ASSOCIATION
Member

CALIFORNIA ENERGY STORAGE ALLIANCE
Member

OPENADR
Member

GOLDEN GATE UNIVERSITY, SAN FRANCISCO
Alumni Board Member

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY
B.A.Sc., Electrical Engineering & Computer Science

SAN JOSE STATE UNIVERSITY AND LAWRENCE BERKELEY NATIONAL LABS
M.Sc.Eng., Energy Storage & Battery Technologies, 2016

GOLDEN GATE UNIVERSITY
MBA, Business Management, Marketing, and Related Support Services

PROFESSIONAL CERTIFICATIONS

U.S GREEN BUILDING COUNCIL NORTHERN CALIFORNIA CHAPTER
LEED AP; Building Design & Construction, License *10332873*, 2011

NABCEP: NORTH AMERICAN BOARD OF CERTIFIED ENERGY PRACTITIONERS
NABCEP Certificate of Knowledge, License *E072509*, 2010

SPEAKING ENGAGEMENTS

INDUSTRY TRADE EVENTS & INVESTOR MEETINGS
CONSULTANT & ADVISOR

2016 SAN FRANCISCO BAY AREA MICROGRID CONVERGENCE CONFERENCE
HOST

VOLUNTEER EXPERIENCE

GRID ALTERNATIVES
Solar PV Installation Team Leader

RECENT PROJECT EXPERIENCE

"Due Diligence Report for Energy Storage", Advanced Microgrid Systems, San Francisco, CA

"DOE Loan Guarantee" Energy Storage Project, Advanced Microgrid Systems, San Francisco, CA

"Independent Engineering of Energy Storage Platform, Safety and Installation", Stem, Inc., Millbrae, CA

"Energy Efficiency and Microgrid Assessment at California Ports" CEC, Sacramento, CA

"Demonstrating Secure, Reliable Microgrids" PON-14-301, CEC EPIC Grant, Fremont, CA

"Electric Vehicle Charging Infrastructure" PON-13-606, CEC EPIC Grant, Fremont, CA

"Northern California(NCPA) and Southern California(SCCPA) Energy Storage Mandate Evaluation", Roseville, CA

"ARPA-e Charges project, U.S. Lithium-ion Battery Energy Storage System services and monetization project

Staff Report Item 9

TO: East Bay Community Energy Board of Directors

FROM: Inder Khalsa, General Counsel
Bruce Jensen, Alameda County Community Development Agency

SUBJECT: Community Advisory Committee Scope and Conflict of Interest Code

DATE: March 1, 2017

Recommendations

1) Review and approve Community Advisory Committee Scope.

2) Approve Resolution EBCE R-2017-3 adopting the Community Advisory Committee Conflict of Interest Policy.

Analysis and Discussion

A. Community Advisory Committee Scope

Section 4.9 of the EBCE Joint Powers Agreement provides for the creation of the Community Advisory Committee (CAC) and broadly describes the roles and responsibilities of the CAC, as follows:

> **4.9 Community Advisory Committee.**
>
> The Board shall establish a Community Advisory Committee (CAC) consisting of nine members, none of whom may be voting members of the Board. The function of the CAC shall be to advise the Board of Directors on all subjects related to the operation of the CCA Program as set forth in a work plan adopted by the Board of Directors from time to time, with the exception of personnel and litigation decisions. The CAC is advisory only, and shall not have decision-making authority, or receive any delegation of authority from the Board of Directors. The Board shall publicize the opportunity to serve on the CAC, and shall appoint members of the CAC from those individuals expressing interest in serving, and who represent a diverse cross-section of interests, skill sets and geographic regions. Members of the CAC shall serve staggered four-year terms (the first term of three of the members shall be two years, and four years December 1, 2016 -11- thereafter), which may be renewed. A member of the CAC may be removed by the Board of Directors by majority vote. The Board of Directors shall determine whether the CAC members will receive a stipend and/or be entitled to reimbursement for expenses.

The Chair of the CAC will serve as a non-voting "Ex Officio Board Member" pursuant to Joint Powers Agreement Section 4.2.2.

On January 30, the Board appointed a Selection Committee to interview and propose selected members to the Board. On February 15, the Board approved the application form for the CAC.

In developing the attached draft Scope of duties/activities for the CAC, staff reviewed the Scopes of similar advisory bodies for Peninsula Clean Energy, Sonoma Clean Power, and Valley Clean Energy and developed the attached Scope for the EBCE CAC. The Scope includes the following duties and activies for the CAC:

1. Work on defined objectives as directed by the Board, to produce materials that will assist the Board in decision-making.
2. Review and comment on EBCE budget and rates, policy and programs.
3. Help the Board to identify issues of concern and opportunities to educate community members about the EBCE.
4. Identify potential partners and partnerships, which the Board may wish to pursue in implementing EBCE.
5. Draft reports, in coordination with EBCE staff, to the Board with its findings and recommendations.
6. Serve as an information-channel back to their colleagues and communities.
7. Represent the views of their constituencies in their comments and recommendations.
8. Other duties or tasks, as the Board shall determine in its sole discretion.

Staff is recommending that the Board review the Scope, receive public input, and either approve the Scope or direct staff to make revisions to the Scope.

Additional Issues to Consider:

- **Funding and Support.** Staff is proposing that the Board approve contracts up to $20,000 to assist in carrying out the CACs duties; total may not exceed $50,000 per year
- **Chief Executive Officer Reports to Community Advisory Committee.** EBCE staff or the Chief Executive Officer shall provide a report to the Community Advisory Committee on the operations of the Authority during the preceding fiscal quarter. The report shall contain information regarding the financial performance of the Authority during the preceding quarter, the number of accounts served, the amount of power delivered, and a narrative description of energy efficiency, energy conservation, renewable power generation, and other programs carried out by the Authority.

Fiscal Impact:

The EBCEA Board will be asked to consider if a stipend will be provided for CAC members for their participation in the regularly scheduled EBCEA Board meetings. Costs associated with staffing the CAC are unknown.

B. **Community Advisory Committee Conflict of Interest Policy**

Pursuant to Section 4.9 of the the EBCE Joint Powers Agreement, the Community Advisory Committee is purely an advisory body. Under the Political Reform Act (PRA) and Fair Political Practices Commission (FPPC) Regulations Section 87100, solely advisory bodies which have no final decision-making authority, or a pattern of approval of their recommendations without modification by the Board, are not

"Public Officials" subject to the PRA, and many State conflict of interest rules. As defined in the Joint Powers Agreement, the CAC qualifies as a "purely advisory body at this point in time.

Although the CAC is not subject to the PRA or FPPC Rules, other CCAs with similar advisory bodies have nonetheless adopted Conflict of Interest Policies for those bodies in order to avoid any self-dealing or public perception of conflicts. Additionally, the adoption of a Conflict of Interest Policies would be helpful to the EBCE in the event that the CAC be found to be not solely advisory and its members subject to the PRA at some point in the future. At the same time, the CAC is intended to represent a "diverse cross-section of interests, skill sets and geographic regions," and participation by a variety of community members should be encouraged.

The recommended CAC Conflict of Interest Policy is based on the conflict code adopted by Valley Clean Energy for their Advisory Committee. The objective of the CAC Conflict of Interest Policy is to encourage the participation of a variety of parties on the CAC, while also providing transparency and requiring members to recuse from decisions directly impacting their financial interests. The requirements are summarized as follows:

- **Disclosures.** CAC members should provide the same disclosure as a public official would use for the Political Reform Act (PRA).
- **Interests subject to disclosure.** Focus on interests related to the electrical energy industry – energy procurement and generation and then additional topics on a case by case basis.
- **Real Property.** Real property disclosures not needed at this time but may in the future if the EBCE engages in decisions about siting energy projects.
- **Disclosure thresholds.** The Conflict of Interest Policy establishes specific thresholds for disclosure of financial interests: (1) more than $500 of personal income in any year, and (2) for business entities or investments, is worth more than $5,000 or where the member (or any affiliates, as defined in the Code as close family members or employer) owns more than 5% of the entity.
- **Disclosure process.** Require annual disclosure but also disclosure and recusal on a real time basis (i.e. interests held when the item comes before the committee).
- **Failure to disclose.** Board discretion to determine if non-disclosure warrants removal.

The CAC Conflict of Interest Policy does not require disclosure of small scale residential or commercial renewable energy generation facilities (e.g. roof-top solar PV of 100kW or less in size). If adopted, Community Advisory Committee members will be required to disclose significant financial interests to the EBCE during the interview process and fill out a Form 700 upon appointment.

The CAC Conflict of Interest Policy balances the desire for transparency and disclosure against the Joint Powers Authority mandate to attract a broad spectrum of participants in the CAC. Staff recommends that the Board adopt Resolution R-2017-3, approving the CAC Conflict of Interest Policy.

Fiscal Impact:
Some training and individual advice to CAC members by staff or the CEO, and in some cases, legal counsel, may be required in order to ensure compliance with the the Conflict of Interest Policy. Costs associated with providing training and advice are unknown.

Attachments:
9A – Community Advisory Committee Scope
9B – Resolution EBCE R-2017-3 Adopting the Community Advisory Committee Conflict of Interest Policy
Exhibit CC - Community Advisory Committee Conflict of Interest Policy

Attachment 9A

EBCE Community Advisory Committee Scope

The purpose of the East Bay Community Energy Authority ("EBCE") Community Advisory Committee ("CAC") is to advise the EBCE Board of Directors ("Board") on all subjects related to the operation of the Community Choice Aggregation program pursuant to California Public Utilities Code Section 366.2 ("CCA Program") as provided in Section 4.9 of the EBCE Joint Powers Agreement and set forth in a work plan adopted by the Board of Directors from time to time. The Chair of the CAC serves as a non-voting Ex Officio Board Member on the Board pursuant to Section 4.1 of the Joint Powers Agreement.

The CAC will, under the direction of the Board and EBCE Chief Executive Officer:

1. Work on defined objectives as directed by the Board, to produce materials that will assist the Board in decision-making.
2. Review and comment on EBCE budget and rates, policy and programs.
3. Help the Board to identify issues of concern and opportunities to educate community members about the EBCE.
4. Identify potential partners and partnerships, which the Board may wish to pursue in implementing EBCE.
5. Draft reports, in coordination with EBCE staff, to the Board with its findings and recommendations.
6. Serve as an information-channel back to their colleagues and communities.
7. Represent the views of their constituencies in their comments and recommendations.
8. Other duties or tasks, as the Board shall determine in its sole discretion.

Attachment 9B

RESOLUTION EBCE R-2017-3

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE EAST BAY COMMUNITY ENERGY AUTHORITY ADOPTING A CONFLICT OF INTEREST CODE FOR THE EAST BAY COMMUNITY ENERGY COMMUNITY ADVISORY COMMITTEE

THE BOARD OF DIRECTORS OF THE EAST BAY COMMUNITY ENERGY AUTHORITY DOES HEREBY FIND, RESOLVE, AND ORDER AS FOLLOWS:

Section 1. The East Bay Community Energy Authority ("Authority") was formed on December 1, 2016 pursuant to a Joint Powers Agreement to study, promote, develop, conduct, operate, and manage energy and energy-related climate change programs ("CCA Program") in Alameda County.

Section 2. Section 4.9 of the Joint Powers Agreement authorizes the creation of a Community Advisory Committee ("CAC") to advise the Board on all subjects related to the operation of the CCA Program.

Section 3. The CAC is a purely advisory body and therefore not subject to the Political Reform Act, Government Code §§ 81000, et seq. or the Fair Political Practices Commission (the "FPPC") Regulations pursuant to 2 California Code of Regulations § 18100.

Section 4. Nevertheless, to promote transparency and to avoid self-dealing or the appearance of self-dealing by CAC members, the Board desires to adopt a Conflict of Interest Code for the CAC that requires disclosure of certain financial interests and recusal from decisions impacting those financial interests.

Section 5. The Board hereby adopts the East Bay Community Energy Authority Community Advisory Committee Conflict of Interest Policy, attached and incorporated herein as "Exhibit CC" as the Conflict of Interest Policy applicable to the CAC and its members.

Section 6. All CAC members required to submit a statement of economic interests shall file their statements with the Authority's Filing Official. The Filing Official, or his or her designee, shall make and retain a copy of all statements filed with the Authority. All retained statements, original or copied, shall be available for public inspection and reproduction.

ADOPTED AND APPROVED this ____ day of _____, 2017.

_____
Chair

ATTEST:

_____
Secretary

EAST BAY COMMUNITY ENERGY AUTHORITY
CONFLICT OF INTEREST CODE

APPENDIX "A"

DESIGNATED POSITIONS

Designated Positions	Disclosure Categories
Member of Board of Directors	1, 2, 3, 4
Member of Board of Directors (Alternate)	1, 2, 3, 4
Chief Executive Officer	1, 2, 3, 4
General Counsel	1, 2, 3, 4
Consultant	5
Newly Created Position	*

* Newly Created Position

A newly created position that makes or participates in the making of governmental decisions that may foreseeably have a material effect on any financial interest of the position-holder, and which specific position title is not yet listed in the Authority's Conflict of Interest Code, is included in the list of designated positions and shall disclose pursuant to the broadest disclosure category in the Code, subject to the following limitation: The Chief Executive Officer of the Authority may determine in writing that a particular newly created position, although a "designated position," is hired to perform a range of duties that are limited in scope and thus is not required to fully comply with the broadest disclosure requirements, but instead must comply with more tailored disclosure requirements specific to that newly created position. Such written determination shall include a description of the newly created position's duties and, based upon that description, a statement of the extent of disclosure requirements. The Chief Executive Officer's determination is a public record and shall be retained for public inspection in the same manner and location as this Conflict of Interest Code. (Gov. Code Section 81008.)

Within 90 days of the creation of a newly created position that must file a statement of economic interests, the Authority shall update this Conflict of Interest Code to add the actual position title in its list of designated positions, and submit the amended Conflict of Interest Code to the County Administrator's Office for code-reviewing body approval by the Alameda County Board of Supervisors. (Gov. Code Section 87306.)

EAST BAY COMMUNITY ENERGY AUTHORITY
CONFLICT OF INTEREST CODE

APPENDIX "B"

DISCLOSURE CATEGORIES

Designated positions must report financial interests in accordance with the assigned disclosure categories.

Category 1: Persons in this category shall disclose interests in real property located within the jurisdiction of the East Bay Community Energy Authority. Real property shall be deemed within the Authority's jurisdiction if the property or any part of it is located within two miles of the borders of any of the parties to the Joint Powers Agreement for the Authority, or within two miles of any land owned or used by the Authority.

Designated persons are not required to disclose property used primarily as their principal residence.

Category 2: Persons in this category shall disclose reportable income from persons or business entities that have contracted with the Authority, or that provide, plan to provide, or have provided within two years from the time a statement is required under this Conflict of Interest Code, contractual services, or other services, supplies, materials or equipment of the type utilized by the Authority.

Category 3: Persons in this category shall disclose reportable investments in business entities that contract with the Authority or that provide, plan to provide or have provided within two years from the time a statement is required under this Conflict of Interest Code, contractual services, or other services, supplies, materials or equipment of the type utilized by the Authority.

Category 4: Persons in this category shall disclose reportable business positions in business entities that contract with the Authority or that provide, plan to provide or have provided within two years from the time a statement is required under this Conflict of Interest Code, contractual services, or other services, supplies, materials or equipment of the type utilized by the Authority.

Category 5: Each Consultant, as defined for purposes of the Political Reform Act, shall disclose pursuant to the broadest disclosure category in the Authority's Conflict of Interest Code subject to the following limitation: The Chief Executive Officer of the Authority may determine in writing that a particular consultant, although a "designated position," is hired to perform a range of duties that are limited in scope and thus is not required to comply fully with the disclosure requirements of the broadest disclosure category, but instead must comply with more tailored disclosure requirements specific to that consultant. Such a written determination shall include a description of the consultant's duties and, based upon that description, a statement of the extent of the

disclosure requirements. The Chief Executive Officer's written determination is a public record and shall be retained for public inspection in the same manner and location as this Conflict of Interest Code.

EXHIBIT CC

East Bay Community Energy Authority

Community Advisory Committee – Conflict of Interest Policy

I. Purpose and Scope

The purpose of this Policy is to establish guidelines for the disclosure of potential conflicts of interest by members of the East Bay Community Energy Authority ("ECBE") Community Advisory Committee ("Committee"). The Committee is purely an advisory body, and its members are therefore not subject to the Political Reform Act ("PRA"), Fair Political Practices Commission ("FPPC") regulations, and many State conflict of interest rules. Nevertheless, EBCE wishes to ensure that any member's material financial interests that may be affected by matters on which EBCE seeks input from the Committee are publicly disclosed and known by the EBCE Board when considering the Committee's advice and/or that the Committee Member is disqualified from participating in providing advice on particular matters which may materially affect the Member's financial interests.

II. Financial Interests Subject to Disclosure

A. This policy requires the disclosure of any Qualifying Interest. A Qualifying Interest is a financial interest owned by the Committee Member or the Committee Member's affiliates' that: (1) for sources of income, generates more than $500 of personal income in any year, and (2) for business entities or investments, is worth more than $5,000 or (3) by the amount(s) for sources of income, business entities and investments that would require disclosure under the PRA and the FPPC Regulations, whichever is greater. In determining whether an interest requires disclosure or disqualification, the Committee Member and EBCE shall look to the standards in the PRA and the FPPC Regulations. A Committee Member's "affiliates" means the Committee Member's direct family (parents, spouse, siblings, minor children, and

dependents), employer, or any business entity in which the Committee Member and the Committee Member's Affiliate owns more than 5%.

B. As used in this Policy, a "Qualifying Interest" is any financial interest of the Committee Member or his or her Affiliate(s) in a "Business Entity," an "Investment," or a source of "Income," as these terms are defined in the PRA[1] and the FPPC Regulations as amended from

[1] Government Code § 82005: "Business entity" means any organization or enterprise operated for profit, including but not limited to a proprietorship, partnership, firm, business trust, joint venture, syndicate, corporation or association.

Government Code § 82034: "Investment" means any financial interest in or security issued by a business entity, including, but not limited to, common stock, preferred stock, rights, warrants, options, debt instruments, and any partnership or other ownership interest owned directly, indirectly, or beneficially by the public official, or other filer, or his or her immediate family, if the business entity or any parent, subsidiary, or otherwise related business entity has an interest in real property in the jurisdiction, or does business or plans to do business in the jurisdiction, or has done business within the jurisdiction at any time during the two years prior to the time any statement or other action is required under this title. An asset shall not be deemed an investment unless its fair market value equals or exceeds two thousand dollars ($2,000). The term "investment" does not include a time or demand deposit in a financial institution, shares in a credit union, any insurance policy, interest in a diversified mutual fund registered with the Securities and Exchange Commission under the Investment Company Act of 1940 or in a common trust fund created pursuant to Section 1564 of the Financial Code, interest in a government defined-benefit pension plan, or any bond or other debt instrument issued by any government or government agency. Investments of an individual includes a pro rata share of investments of any business entity, mutual fund, or trust in which the individual or immediate family owns, directly, indirectly, or beneficially, a 10-percent interest or greater. The term "parent, subsidiary or otherwise related business entity" shall be specifically defined by regulations of the commission.

Government Code § 82030 - "Income" means, except as provided in subdivision (b), a payment received, including but not limited to any salary, wage, advance, dividend, interest, rent, proceeds from any sale, gift, including any gift of food or beverage, loan, forgiveness or payment of indebtedness received by the filer, reimbursement for expenses, per diem, or contribution to an insurance or pension program paid by any person other than an employer, and including any community property interest in the income of a spouse. Income also includes an outstanding loan. Income of an individual also includes a pro rata share of any income of any business entity or trust in which the individual or spouse owns, directly, indirectly or beneficially, a 10-percent interest or greater. "Income," other than a gift, does not include income received from any source outside the jurisdiction and not doing business within the jurisdiction, not planning to do

business within the jurisdiction, or not having done business within the jurisdiction during the two years prior to the time any statement or other action is required under this title.

(b) "Income" also does not include:

(1) Campaign contributions required to be reported under Chapter 4 (commencing with Section 84100).

(2) Salary and reimbursement for expenses or per diem, and social security, disability, or other similar benefit payments received from a state, local, or federal government agency and reimbursement for travel expenses and per diem received from a bona fide nonprofit entity exempt from taxation under Section 501(c)(3) of the Internal Revenue Code.

(3) Any devise or inheritance.

(4) Interest, dividends, or premiums on a time or demand deposit in a financial institution, shares in a credit union or any insurance policy, payments received under any insurance policy, or any bond or other debt instrument issued by any government or government agency.

(5) Dividends, interest, or any other return on a security which is registered with the Securities and Exchange Commission of the United States government or a commodity future registered with the Commodity Futures Trading Commission of the United States government, Futures Trading Commission of the United States government, except proceeds from the sale of these securities and commodities futures.

(6) Redemption of a mutual fund.

(7) Alimony or child support payments.

(8) Any loan or loans from a commercial lending institution which are made in the lender's regular course of business on terms available to members of the public without regard to official status.

(9) Any loan from or payments received on a loan made to an individual's spouse, child, parent, grandparent, grandchild, brother, sister, parent-in-law, brother-in-law, sister-in-law, nephew, niece, uncle, aunt, or first cousin, or the spouse of any such person, provided that a loan or loan payment received from any such person shall be considered income if he or she is acting as an agent or intermediary for any person not covered by this paragraph.

(10) Any indebtedness created as part of a retail installment or credit card transaction if made in the lender's regular course of business on terms available to members of the public without regard to official status.

(11) Payments received under a defined benefit pension plan qualified under Internal Revenue Code Section 401(a).

time to time. Qualifying Interests shall be limited to those that are in the Electric Energy Business, including but not limited to businesses that generate, sell, and /or operate electric generation, and those Qualifying Interests in Electric Energy Business related Data Processing and Call Center operations and management.

The EBCE Board may modify this disclosure requirement at any time. Without limiting the foregoing, should EBCE, in the future, decide to consider participation in siting electric project(s), EBCE may at that time, require disclosure of real property interests in which the Committee Member or Affiliate has a direct or indirect interest that are relevant to the project.

III. Method of Disclosure; Disqualifying Interest

Qualifying Interest does not automatically disqualify a Committee Member from membership in the Committee or participating in Committee tasks. Rather, the Qualifying Interests must be disclosed as follows:

A. Any applicant to the EBCE Advisory Committee shall disclose any Qualifying Interest that is reasonably foreseeable to the applicant at the time of his/her application. The EBCE Board may request additional information from the applicant while considering the applicant.

B. Each Advisory Committee member shall file a Statement of Qualifying Interests within 30 days of appointment and thereafter on an annual basis. The Committee Member shall use the FPPC Form 700 for this disclosure and shall file at the same time as would be required under the PRA and the FPPC Regulations for the Form 700. The Statements shall be filed with

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(12) Proceeds from the sale of securities registered with the Securities and Exchange Commission of the United States government or from the sale of commodities futures registered if the filer sells the securities or the commodities futures on a stock or commodities exchange and does not know or have reason to know the identity of the purchaser.

the EBCE Clerk and retained by the Clerk. The Statements are available for public review as public records.

C. A Committee Member shall disqualify himself or herself if a Qualifying Interest would require disqualification under the PRA and the FPPC Regulations. The Committee Member shall announce the disqualification and the reason therefor at the Advisory Committee meeting and shall not participate in the matter in which the member has a disqualifying interest, as set forth in the PRA and FPPC Regulations.

D. Ownership of renewable generation facilities such as solar generation (i.e. solar panels) and/or wind turbines for single family dwellings or for up to four-unit multifamily dwellings shall not be considered a Qualifying Interest or an Interest requiring disqualification. Ownership of renewable generation facilities such as solar generation (i.e. solar panels) and/or wind turbines for a business or farming operation (so long as there are no sales of the generated power to third parties other that net metering) shall not be considered a Qualifying Interest; however, such ownership shall require disclosure but not disqualification if the renewable generation facility has a generation capacity of more than 100kW (DC) and the Advisory Committee is considering a recommendation for rates or cost offsets for renewable generation facilities owned by ratepayers.

E. Committee Members are encouraged to confer with the EBCE Chief Executive Officer or ECBE General Counsel for advice on whether a financial interest is a Qualifying Interest and whether a Qualifying Interest requires disqualification in a matter before the Advisory Committee.

F. Any written advice or recommendation to the EBCE Board shall disclose the Qualifying Interests of all Committee Members participating in the advice or recommendation.

Any oral or written presentation on behalf of Committee to the EBCE Board shall include a brief statement disclosing the Qualifying Interests of all Committee Members participating in developing the presentation. Any written advice regarding Qualifying Interests and /or disqualification provided by EBCE legal counsel to a member of the Committee shall be public document.

IV. Failure to Comply with the Policy

A. A Committee Member who has not complied with this Policy must notify the EBCE Board in writing as soon as possible but no later than 30 days after discovering the non-compliance. In addition, any member of the public or consultant or employee of EBCE may notify the EBCE Board of a possible incidence of non-compliance.

B. The EBCE Board should consider the Committee Member's failure to comply, and whether the Committee Member should continue to serve on the Committee.

C. A Committee Member's failure to comply with this Policy shall have no effect on actions taken by the Committee or the EBCE Board, unless either body decides, in its sole discretion, to revisit an item in light of the new information.