



March 20, 2019

Dylan Feik, City Manager
 City Manager's Department
 City of Calistoga
 1232 Washington Street, Calistoga, CA 94515

Re: Clean Coalition Proposal Letter for Development of the Calistoga Community Microgrid

Dear Dylan,

The Clean Coalition team is pleased to provide our expert consulting services to help design clean energy and resilience features for the new Calistoga Community Microgrid. Our team will engage with your team over the next seventy-five business days to complete the activities and deliverables under Phase 1. This includes a feasibility assessment and presentation.

Outline of Work

We will schedule our work in a series of three phases to complete the project. The statement of work outline (SOW) is as follows and detailed in Exhibit A:

Table 1. Proposal for Calistoga Community Microgrid

SOW Phase Number	Phase	Total Hours
1	<i>Calistoga Community Microgrid Feasibility Assessment</i>	162
2	<i>Calistoga Community Microgrid Planning and Engineering</i>	190
3	<i>Develop RFP specifications</i>	90
TOTAL	\$69,000 USD	442 Hours

Timeline

Phase 1 work will be completed within seventy-five business days of the contract execution date. The contract execution date is defined by signing a contract, or by receiving permission in writing to start work.

Payment, Fees & NDA

Work will begin once the contract agreement has been signed. Our total invoicing for this SOW will not exceed \$69,000 unless a change order is submitted for additional work and resources. We require a \$25,290 payment after completion of *Phase 1, Calistoga Community Microgrid Feasibility Assessment*. The Clean Coalition's hourly aggregated fee on this project is \$156.11 per hour. Detailed hourly rates can be found in Exhibit C. The Clean Coalition reserves the right to adjust hours within the contracted scope. Any adjustments to the phase hours will not exceed the project budget amount.

As part of our independent analysis, we will ask for various site data and technical information required for producing a comprehensive analysis. A detailed list of information and other inputs required from City of Calistoga and other stakeholders is included in Exhibit B below. Any exchange and transfer of data or documents for the project, will be covered by mutual NDA as attached to the contract agreement.

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean

Coalition has worked with municipalities, utilities and other load serving entities, and policymaking bodies across the country to deliver extensive renewable energy and grid modernization outcomes.

Clean Coalition contact

The Clean Coalition team looks forward to working with the City of Calistoga and the Calistoga City Council on this important project. I will be the primary Clean Coalition point-of-contact for finalizing this contract. Malini will be the Clean Coalition point-of-contact for project management and updates. Her contact information is included below.

Sincerely,

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Exhibit A – Statement of Work (Phase Outline)

Phase 1: Calistoga Community Microgrid Feasibility Assessment

Objective: Define project goals, engage the key stakeholders, and determine high-level project scope, costs and benefits. Assess the project area for critical facilities, solar generation potential, storage siting opportunities, and technical design constraints and produce a functional design for the entire City of Calistoga (maximum configuration), as well as 5 target sites for near-term deployment. Develop a basic technical and economic analysis using 15-minute interval data to provide cost estimates within 70% of the final cost. Assemble key collateral materials and use them to engage key stakeholders and secure buy-in to move on to Phase 2, Planning and Engineering. If consensus cannot be achieved on moving forward with the selected sites, Clean Coalition will work to develop a staging deliverable that secures consensus.

Scope of Work:

- Define goals of the Calistoga Community Microgrid (e.g. extent of services/ benefits to City of Calistoga, critical facilities and the wider community).
- Define scope of the Calistoga Community Microgrid maximum configuration and Phase 1 configuration.
- Identify key stakeholders including city leadership and staff (elected officials, city manager, urban planners, office of emergency services, etc.) as well as stakeholders for each deployment site (building owner, building operator e.g. facilities staff, finance and operations team, other building occupants, etc.)
- Perform Solar Siting Survey (SSS) for the defined geographic area(s).
- Identify 5 critical facilities that can achieve the near-term goals.
- Assess existing DER and new DER siting opportunities that are estimated to be needed for achieving the goals.
- Determine relevant nearby substations for geographic diversity and resilience.
- Determine DER hosting capacity by utilizing existing publicly available ICA maps, and requesting distribution feeder maps and substation interval data from PG&E.
- Obtain 1 year of interval data for each site.
- Perform basic technical and economic analysis for each site, using percentage values for Tier 1, 2 and 3 loads. Note that site-specific conditions (e.g. on-site electrical infrastructure) will not be included in the feasibility assessment at this time.
- Produce a functional design and develop slide presentation.
- Engage key stakeholders and secure buy-in before proceeding to Planning and Engineering.

Key Deliverables:

- Kick-off meeting.
- Executed contractual / SOW agreement for consulting services.
- Executed City of Calistoga Work Authorization.
- Calistoga Community Microgrid Overview presentation which includes: General information regarding the background and potential for community microgrids, site overview map with Solar Siting Survey, detailed site map graphics, 5 target deployment sites, hosting capacity details, functional block diagram, summary of loads and equipment, and 70% cost estimates. All aforementioned collateral material will be included in this presentation deck with speaker notes.

- Preliminary design review with 5 target deployment sites and city staff.

Phase 2: Calistoga Community Microgrid Planning and Engineering

Objective: Obtain detailed site information, understand any technical and economic design constraints, and develop a feasibility assessment which includes preliminary engineering design and economic analysis, including 90% cost estimates. Engage an EPC to produce key engineering deliverables and develop key collateral materials. Meet with utility to share project plans, confirm interconnection type, and confirm availability of incentives. Secure buy-in to proceed with developing RFP specifications.

Scope of Work:

- Secure all relevant site information for 5 target sites- see exhibit B for a detailed list.
- Site walk to obtain site-specific information and any design restrictions including an assessment of load-shedding capabilities and assessment of monitoring, communications, and control equipment required for the site.
- Develop site conceptual drawing indicating key features e.g. existing and new equipment and construction impacts.
- Finance meeting with relevant stakeholders to determine financing requirements and ownership models.
- Initial discussion of O&M and responsible parties.
- Establish stakeholder consensus on definition of Tier 1, Tier 2, and Tier 3 loads, business value of resilience, and community value of resilience.
- Evaluate relevant distribution grid and site circuit layouts, plot circuits on map and determine if there is adequate hosting capacity.
- Determine site-specific interconnection options, available utility programs, and available incentives.
- Produce the preliminary engineering design and economic analysis and share results with site stakeholders and city staff. Secure buy-in to proceed with developing engineering deliverables.
- Engage EPC to do key engineering work:
 - Verify interconnection details and availability of incentives.
 - Develop conceptual single line drawings/ block diagrams for each site and for the overall Community Microgrid.
 - Develop civil site plans with locations of equipment and trenching paths.
 - Determine 90% cost estimates and provide detailed project economics including total project cost, applicable incentives, IRR and cost of resilience.
- Update the collateral material with preliminary engineering design and associated economics and share results with site stakeholders and city staff.
- Meet with utility regarding conceptual design and single line diagram/ block diagram, verify interconnection options and verify availability of any utility incentives.
- Identify any likely economic gaps and investigate grant funding opportunities or other funding (e.g. Foundations or Public-Private partnerships to close any such gaps).
- Secure buy-in and proceed to Deployment Preparation.

Key Deliverables:

- Meetings:

- Engineering site walk for 5 target deployment sites.
- Project team meetings.
- Finance meeting.
- Intermediate design review with 5 target deployment sites and city staff.
- Meeting with Utility/ Load Serving Entity (LSE).
- Final design review with 5 target deployment sites and city staff.
- Draft Calistoga Community Microgrid design and economics presentation: a presentation specific to the project at hand with narrative about the community being served and project benefits. The presentation will build upon the Calistoga Community Microgrid Overview presentation and will include an electric load analysis, utility bill analysis, system sizing analysis, and economics overview for each of the 5 target deployment sites.
- Final Community Microgrid design and economics presentation:
- Project Description document: a 2 to 3-page overview of the project that includes a map showing location of CM resources, system sizing details, and a narrative about the benefits of the project. Artist renderings will be included as available.
- Technical Work Products (models, system sizing, etc.) can be provided upon request.

Key Deliverables from EPC:

- Interconnection details summary.
- Single line drawings.
- Civil site drawings (Civil drawings- PV layouts and trenching path diagram).

Phase 3: Develop Request for Proposal (RFP) Specifications

Objective: Develop the technical specifications for a Calistoga Community Microgrid RFP. Integrating the technical specifications into the boilerplate language of the City/ other entity is outside of the scope of this project.

Scope of Work:

- Develop an RFP from the preliminary engineering design so that there can be a competitive bid process among EPCs for deploying the project.
- Proposals should discuss solutions for financing, ownership and O&M of the project.

Key Deliverables:

- RFP technical specifications relating to clean energy, clean transportation and resilience solutions.

Exhibit B – Information Request

In order to produce an accurate feasibility assessment for the Calistoga Community Microgrid, we need the following technical inputs from the City of Calistoga and other stakeholders:

- Calistoga substation interval data (minimum 1 year of data).
- Site load interval data for existing sites and load models for proposed new construction
 - 15-minute interval data is **required** to properly size a battery; if the site cannot provide 15-minute interval data, the load profile will be estimated and energy cost savings cannot be guaranteed.
- Facility map(s).
- Architectural, electrical and structural as-built drawings for relevant buildings and parking garages/ lots with SLDs and electrical panel schedules.
- Utility infrastructure maps including distribution feeder maps and feeder hosting capacities (can be provided by PG&E).
- Participation in discussions related to: project goals and objectives, identifying key stakeholders, engineering site walks, PG&E rates and participation, site participation, finance meeting, community engagement, and design review(s).

Exhibit C – Rate Schedule

Staff	Hourly Rates	Hours	Amount
Executive Director	\$275	10	\$2,750
Director/Program Management	\$175	95	\$16,625
Engineer / Manager	\$150	300	\$45,000
Associate / Other	\$125	37	\$4,625
TOTAL		442	\$69,000

**The Clean Coalition's aggregated hourly rate on this project is \$156.11/per hour.*