



## Item No. 17 Town of Atherton

### CITY COUNCIL STAFF REPORT – REGULAR AGENDA

**TO: HONORABLE MAYOR AND CITY COUNCIL  
GEORGE RODERICKS, CITY MANAGER**

**FROM: ROBERT OVADIA, PUBLIC WORKS DIRECTOR**

**DATE: FEBRUARY 19, 2020**

**SUBJECT: APPROVAL OF A PROFESSIONAL SERVICES AGREEMENT WITH  
SAGE ENERGY CONSULTING FOR PROCUREMENT ASSISTANCE  
FOR A SOLAR AND MICRO-GRID POWER SERVICES PROVIDER**

#### **RECOMMENDATION**

Authorize the City Attorney to prepare and the City Manager to execute an agreement with Sage Energy Consulting of San Rafael, California for procurement assistance for a solar and micro-grid service provider, in the total amount of \$134,700 plus an administrative contingency of \$13,500.

#### **BACKGROUND**

The Town is currently in the process of constructing its new Town Center and Library complex. When the project was initially designed, the complex included provisions for rooftop and parking canopy solar infrastructure as well as a micro-grid power back-up system as additive alternates. Construction bids received for the overall project were significantly higher than the available budget for the project. The bids received for the solar system and micro-grid systems ranged between \$3.26 million and \$4.647 million.

Per the direction of Council, the project was redesigned to reduce some of the project complexities and project costs while maintaining the intent of the project. As part of the redesign, the project scope was modified to make the facilities “solar ready,” including basic infrastructure to support the solar and microgrid systems, with the final installation of the systems deferred to a later contract.

The Council further recommended that staff evaluate the possibility of entering into a Power Purchase or other similar agreement that would allow for the installations by a third-party at no upfront costs to the Town, with the system being paid for over time including energy cost offsets. As a municipality, the Town is ineligible to receive certain incentives that are available to private parties. Utilizing a third-party provider would allow for a potential cost reduction associated with incentives that the third-party may be able to obtain.

On December 18, 2019, the City Council authorized staff to release a Request for Proposals (RFPs) seeking a consultant that can provide the Town with procurement services for a solar and micro-grid power services provider.

The consultant's overall responsibility will be to provide technical assistance to staff and the City Council in preparing the RFPs for a Power Services Provider, managing the RFP process, reviewing proposals and qualifications, assist in evaluation and selection of a provider, review project documents, and oversee installation, commissioning and validation of system performance.

### **ANALYSIS**

The RFP was released on December 20, 2019. The Town published the RFP on its website, directly solicited proposals from 11 firms and published the release of the RFP through Integrated Marketing Systems to increase outreach of the RFP.

The Town received formal responses from three firms – Sage Energy Consulting (teamed with Clean Coalition), Integral Group, and Optony.

After review of the proposals and interviews with each firm, staff is recommending that the Council consider award of a professional services agreement with Sage Energy Consulting. Sage Energy Consulting is a well-qualified firm and has assisted many public agencies in the evaluation and procurement of solar and micro-grid systems both directly and through Power Purchase Agreements.

The Sage's overall responsibility will be to provide technical assistance to staff and the City Council in preparing the Request for Proposals for a Power Services Provider for the City Council's consideration, managing the RFP process, reviewing proposals and qualifications, assist in evaluation and selection of a provider, review project documents, and oversee installation, commissioning and validation of system performance.

Sage submitted a proposal in the amount of \$165,600, including 1-year of Asset Management services in the amount of \$4,400. Staff worked with Sage to refine the level of effort and cost proposal to a total not-to-exceed budget of \$134,700 including optional asset management services for 5-years in the amount of \$9,700. Staff is also requesting an administrative contingency of \$13,500 to cover unforeseen items.

### **POLICY FOCUS**

The Council policy focus should be on the desire to utilize solar power and backup systems for the Town Center project.

**FISCAL IMPACT**

Funding for this item will come from the Civic Center project account. The budget request for this item is \$134,700 plus an administrative contingency of \$13,500. It is anticipated that the cost of installation and maintenance of the solar and micro-grid system would be covered through the future power purchase rate.

**PUBLIC NOTICE**

Public notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting in print and electronically. Information about the project is also disseminated via the Town’s electronic News Flash and Atherton Online. There are approximately 1,200 subscribers to the Town’s electronic News Flash publications. Subscribers include residents as well as stakeholders – to include, but be not limited to, media outlets, school districts, Menlo Park Fire District, service providers (water, power, and sewer), and regional elected officials. The Town maintains an active and up to date Project Website at <http://ca-atherton.civicplus.com/index.aspx?NID=290>.

**COMMISSION/COMMITTEE FEEDBACK/REFERRAL**

This item \_\_\_ has or X has not been before a Town Committee or Commission.

- \_\_\_ Audit/Finance Committee (meets every other month)
- \_\_\_ Bicycle/Pedestrian Committee (meets as needed)
- \_\_\_ PMC & Civic Center Advisory Committee (meets as needed)
- \_\_\_ Environmental Programs Committee (meets every other month)
- \_\_\_ Park and Recreation Committee (meets each month)
- \_\_\_ Planning Commission (meets each month)
- \_\_\_ Rail Committee (meets every other month)
- \_\_\_ Transportation Committee (meets every other month)

**ATTACHMENTS**

1. Sage Energy Consulting Proposal
2. Task Cost Fee Worksheet – Revised 2/7/20



Statement of Qualifications and Proposal for  
Professional Support Services for Development of a  
Power Purchase Agreement for Solar and Storage  
(Microgrid) at Atherton Town Center  
January 30, 2020



1719 Fifth Avenue, San Rafael, CA 94901  
(415) 663-9914 | [www.sagerenew.com](http://www.sagerenew.com)



Santa Barbara, CA and Menlo Park, CA  
(650) 796-2353 | [www.clean-coalition.org](http://www.clean-coalition.org)



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## Cover Letter

January 30, 2020

Town of Atherton  
Attn: Robert Ovadia, Director of Public Works  
150 Watkins Avenue  
Atherton, CA 94027  
rovadia@ci.atherton.ca.us  
650.752.0541

**Subject: Response to RFP for Development of a Power Purchase Agreement for Solar and Solar Storage (Microgrid) at Atherton Town Center**

Dear Mr. Ovadia,

Sage Energy Consulting (Sage) and the Clean Coalition are pleased to present our proposal in response to the referenced RFP. The scope of services listed is exactly our team's core business and we have years of experience becoming experts for this type of project. Our core business is working with California public agencies to provide professional energy planning and project management services to help implement cost-effective renewable energy projects. Our understanding of the unique needs and requirements for public entities allows us to set goals and expectations, engage stakeholders, and align schedules with city council and facility management calendars. Our work results in streamlined and transparent decision-making processes, reduced project risk, and optimal financial and performance outcomes for energy projects.

Since 2009, both Sage and Clean Coalition have been trusted by more than 100 California public agencies to provide the highest-quality planning and management services for advanced energy projects. Over the past decade we have strengthened and refined our expertise in helping public entities mitigate project risk and facilitate decision-making among project stakeholders. Sage has assisted over 100 California public agencies with renewable energy projects, including City of Woodside, Regional San, Marin Clean Energy, City of Ontario, Redwood Unified School District, Kern High School District, and San Diego Unified School District.

Sage Energy Consulting and Clean Coalition share a philosophy of business that is anchored in service, integrity, and work quality. We are highly ethical in our interactions with all parties and constantly strive to provide the highest-quality advice and deliverables to our clients. The foundation of our business is the trusting relationships we form with each other and our clients based on this philosophy. This clarity of intention has allowed our companies to build growing businesses that are trusted and respected by clients and industry professionals alike.

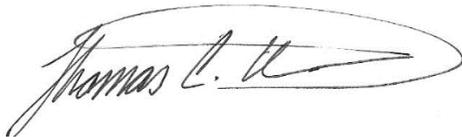
The qualities that make our team exceptionally qualified to guide and assist the District in pursuing an integrated system with solar photovoltaic (PV), battery energy storage (BESS), and micro-grid include:

- **A focus on finance.** We are well versed in all forms of public project finance and provide the technical and conservative financial analysis needed for decision-makers to evaluate a project. Sage regularly evaluates and helps clients procure projects with Power Purchase Agreements (PPAs), general obligation and municipal bonds, tax-exempt municipal leases, and other financing mechanisms. Our financial analysis includes lifecycle cost and savings estimates, operating and finance costs, as well as detailed utility tariff analyses and storage/microgrid incentives.
- **Deep knowledge of the solar PV and battery storage/microgrid markets.** The Sage/Clean Coalition team has extensive experience managing solar and battery/microgrid on public projects for design, installation, operation, and maintenance of these systems. Our team provides industry-leading planning services and foresees potential project challenges. We represent our clients' interests during contracting, design, construction, and operations. Our market knowledge informs our RFP performance specifications and provides us a deep database of market pricing.
- **Highly vetted approach and process.** The Sage/Clean Coalition team's approach to planning and managing energy projects has been vetted and refined over more than a hundred projects. Our innovative RFP templates and submittal forms provide the basis for a transparent and fair comparison of proposals and are familiar to most major solar contractors. Over the last decade, our approach has been continually improved by our close working relationships with the legal, financial, and construction management teams that serve our clients.
- **Full project management services.** The Sage/Clean Coalition team provides a comprehensive management approach to optimize energy savings, reduce costs, and mitigate risks. Sage offers the independent expertise necessary to successfully manage renewable energy projects from feasibility through construction and operations. Our services are tailored to the specific goals and requirements of each client and project, providing project controls and hands-on project management to move efficiently through the process of assessing, procuring, implementing, and operating an energy project.
- **Local footprint.** Both Sage Clean Coalition has team members that live and work in the San Francisco Bay Area, allowing us to respond quickly to the Town's requests and be physically present when needed.
- **Sage and Clean Coalition are both scrupulously independent.** We are not associated with equipment manufacturers, vendors, or contractors. Our independence guarantees our objectivity, and we properly align our incentives to put our clients' goals and interests first. We take deep pride in the objectivity, accuracy, and integrity of our work. Furthermore, we certify that no employee or official of the Town of Atherton has been employed or retained to solicit or assist in the procuring of the resulting contract with the city, nor will be employed to deliver our services.

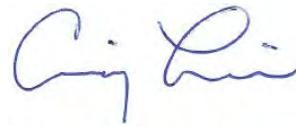
For the Town of Atherton, our project team includes Tom Williard as Sage's Principal in Charge, David Seiler as Project Manager, James Dobbs as Data Analyst, Scott Moore as Design/Construction Manager, and Ilan Fuss as Asset Management Coordinator.

We are confident that our combination of experience, technical and financial expertise make the Sage/Clean Coalition team the perfect consulting partner for the city's energy projects. We encourage you to contact any of our clients as references and appreciate the opportunity to work with you and the District to plan and implement successful energy projects.

Sincerely,



Tom Williard  
Managing Principal and Founder  
Sage Energy Consulting  
415.847.9066  
tom@sagerenew.com



Craig Lewis  
Executive Director  
Clean Coalition  
650.796.2353  
craig@clean-coalition.org

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## 1. Firm Profiles

Sage Energy Consulting and Clean Coalition have joined forces for this project to bring unprecedented expertise and depth to the Town of Atherton's energy program. Sage has worked with over 100 California public agencies to assess their potential for renewable and advanced energy projects, and has developed industry-leading tools to objectively model financial risk and then tightly manage projects from competitive procurement through operations. Clean Coalition brings unmatched depth in energy policy and microgrid/resiliency analysis.

### 1.1 Sage Energy Consulting

Sage Energy Consulting, Inc. (Sage), located in San Rafael, California, is an independent energy consulting and project management firm and a certified Very Small Business Enterprise (VSBE). Sage is a California S-Corporation, incorporated in 2009. Sage is scrupulously independent and is not aligned with any developers or financiers of energy projects. Working as owner's representative, Sage provides expert consulting on all phases of energy projects, including feasibility and planning, procurement, implementation, commissioning, and asset management. Our work results in streamlined decision-making processes, reduced project risk, and optimal financial and performance outcomes for energy projects. Our understanding of the unique needs of public agencies and the California energy market allows us to set goals, engage stakeholders, streamline decision-making, and deliver projects and reports efficiently.

Sage has consulted on more than 350 megawatts of renewable generation, storage, microgrid, vehicle electrification, and efficiency projects for more than 100 public agencies in California. Sage's core business is working with public agencies to plan and implement renewable energy and advanced energy projects to meet resource adequacy requirements, decrease emissions, reduce energy costs, provide resiliency, plan and implement EV fleet and facilities upgrades, and achieve ZNE and zero-carbon goals.

Sage works with all market-ready renewable energy technologies, including solar PV, solar thermal, fuel cells, wind energy systems, and RE-supporting technologies such as energy storage and microgrids. Sage has consulted for battery energy storage systems (BESS) and energy efficiency for more than 100 clients, including the California Energy Commission. On behalf of our clients, we have worked directly with Tesla and other BESS and PV+BESS companies to understand and refine their BESS energy value accounting and pricing, and to integrate these technologies with LEED, Living Building Challenge, and upcoming Title 24 targets and requirements. Sage is actively helping public agencies plan for EV infrastructure upgrades and fleet transitions. This deep understanding of the market is used to determine if BESS or other new technology investment is appropriate, what assumptions have the greatest market impact, and anticipated investment risk.

Sage's team of 13 consists of its three founding principals, its chief operating officer, three veteran project managers, two construction/operations managers, two energy analysts, and two project administrators. The team at Sage includes three registered Professional Engineers, three certified

LEED APs, a Certified Energy Manager, and a licensed electrician (C-10). Several members of the Sage team have worked previously for energy project developers and have hands-on experience successfully implementing projects. Sage's assessments of energy projects are informed by a decade of procurements. Sage uniquely combines engineering knowledge, detailed utility tariff and energy market insight with the project financing acumen necessary to accurately forecast the long-term financial returns of energy projects.

## Services

Sage offers full renewable and advanced energy project development and management services to ensure client projects are carefully conceived, tightly managed, successfully implemented, and maintain performance over the lifetime of the technology. Our services include feasibility studies, competitive procurement (RFQ/P), contracting support, design review and owner's engineer services, technical construction management, commissioning verification and independent third-party commissioning, project closeout, and operational phase asset management. Sage's successful project management and implementation process includes the following elements:

1. Investment-Grade Feasibility Study – An in-depth analysis of the proposed project. We conduct thorough site visits, collect detailed information about current and future energy usage, and work with stakeholders to set goals, design standards, and expectations for the project. Based on these, Sage creates energy system designs using industry-leading design tools, develops conceptual layouts, performs lifecycle financial analysis for different financing alternatives, and assists with presenting the study findings to decision-makers. The study outlines the process to implement a project and key considerations, such as schedule, permitting, and utility interconnection. The detailed results of the Investment-Grade Feasibility Study provide the necessary metrics for a go/no-go decision and form the basis of a competitive procurement.
2. RFQ/P Documents – Sage has highly vetted RFP templates, specifications and criteria documents that have been used for many California public agency projects and reviewed by most of the large legal firms working with California public agencies. Sage provides Word and Excel files for qualitative and quantitative input from proposers. The Excel file plugs into our project financial model so that all proposers are evaluated identically, and results are based on realistic assumptions.
3. Procurement Management – Sage uses electronic document management and active vendor engagement to ensure maximum vendor participation. We run highly organized site walks that focus on information that proposers need. Addendums are clear, concise and timely.
4. Vendor Selection – Sage uses Word and Excel files for vendor proposals to allow for timely, thorough and fair evaluation. We use project specific criteria and weighting that is clearly displayed in scoring tables.
5. Contracting Support – Sage reviews contracts should-to-shoulder with your legal team to ensure that technical details such as NEM warranty provisions, specifications, and performance guarantees are handled correctly.

6. Design Review – After a contract is signed, Sage digs in with the vendor’s design team to ensure that RFP and contract provisions are adhered to, and that issues which arise are addressed to our client’s advantage. Sage recommends 30%, 60% and 90% design submittals and reviews each carefully. For significant design changes, Sage will remodel project financial and environmental returns to ensure the project continues to perform as required.
7. Technical Construction Management – Sage works with our client’s and the vendor’s construction managers to ensure that technical issues unique to renewable and advanced energy projects are addressed quickly and effectively to our client’s advantage.
8. Commissioning Verification – Sage reviews the vendor’s Cx protocols at the beginning of the project to ensure that systems will be adequately commissioned in line with industry best practices. We then review the Cx report and spot check work to ensure systems are built to design and operating per contract.
9. Asset Management – Sage offers operational phase asset management to ensure that O&M contractors are performing work to contract, that performance guarantees are met, and that systems are optimized. We typically include 1 year of this service with our project contract to ensure that systems are operating correctly during the critical first year. Additional years of Asset Management are encouraged and available.

## 1.2 Clean Coalition

The Clean Coalition is a 501(c)3 nonprofit organization that operates as a project of Natural Capitalism Solutions, also a 501(c)3 nonprofit organization. Since our founding in 2009, the Clean Coalition has worked with electric utilities, states, and municipalities across the United States to shape policies and programs enabling the deployment of clean local energy to address climate change and deliver economic, environmental, and resilience benefits to communities. Our cutting-edge initiatives have led to the development of nearly 3 gigawatts of clean local energy. When fully online, these projects will provide peak power to nearly 3 million American homes, reducing carbon emissions by 3.9 million metric tons annually.

The Clean Coalition’s mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. Our “25 by 25” vision: From 2025 onward, at least 25% of all electricity generated from newly added generation capacity in the United States will be from local renewable energy sources.

Our organization has had significant impact-shaping policies and programs that enable the deployment of clean local energy to address climate change and secure economic, environmental, and resilience benefits for communities. Following is a list of three key projects completed within the last five years that are helping our clients achieve their climate action goals and objectives, but will help shape the renewable energy industry in California and beyond.

Clean Coalition staff have successfully designed Community Microgrids under grants from the California Energy Commission (CEC) and the New York State Energy Research & Development Authority, deployed electric vehicle charging infrastructure (EVCI) with CEC funding and deployed solar parking canopies through public funds and a feed-in tariff (FIT) program in Palo Alto, CA.

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## 2. Key Personnel

### 2.1 Sage Key Personnel

**Tom Williard** will be the **Principal In Charge (PIC)**. Mr. Williard is a founder of Sage Energy Consulting and has more than 15 years of experience as a professional energy consultant, with a focus on the development of technical and financial models that are now widely used to assess renewable energy systems and to predict potential energy generation and financial performance, serving as CEO since Sage's inception. In 2013, Mr. Williard cofounded SolEd Benefit Corporation and wrote the project financial models used to structure PPA and lease financings that reduced the cost of renewable energy projects for public schools. In 2005, he cofounded Solmetric, a company that developed the SunEye, a high-precision instrument now widely used in the solar industry to measure shade characteristics. In 2001, he cofounded System Design, a renewable energy system design and due diligence company. Prior to his work with advanced energy, Mr. Williard spent 20 years in the electronics industry as a senior hardware and software design engineer, as senior technologist with a large networking company, in engineering management, and as a management consultant.

**Brent Johnson, PE, LEED AP**, will perform design guidance and deliverable review. Mr. Johnson is one of the founders of Sage Energy Consulting and has managed or supported most of Sage's projects to date. Mr. Johnson has 21 years of experience as a Civil-Environmental Engineer, with 10 years in the renewable energy sector. During his time at Sage, he has developed custom financial and energy modeling tools and managed all aspects of renewable generation and storage projects including feasibility studies, system design, project bids and construction, commissioning, asset management, and environmental credits management. Mr. Johnson has worked on over 40 renewable energy projects totaling over 100 MW, most of them for public agencies. His projects have encompassed a number of technologies such as solar PV, storage, solar thermal, EV charging, wind, and hydropower. Mr. Johnson has been instrumental in developing Sage's construction management and commissioning procedures and templates, and he regularly manages these phases of projects. Mr. Johnson holds an M.S. and B.S. in Civil-Environmental Engineering from UC Berkeley, is a registered Professional Engineer (PE) in California and has a LEED AP accreditation from the US Green Building Council.

**David Seiler** will be the **Project Manager**. Mr. Seiler has over fifteen years of experience in the energy and solar PV sector, including project feasibility analysis, design, development, installation, and commissioning. His experience includes quantitative and qualitative analysis of proposals and presentation of analyses to help clients determine the best solution for their needs. He has been involved with the design, construction, and implementation of dozens of solar PV systems for public and private clients in California. Prior to joining Sage, Mr. Seiler worked for an established solar EPC firm, so he brings the latest market knowledge and best practices to Sage. At Sage, he manages solar and storage feasibility/planning studies, reviews solar PV design and proposals, manages the contractor selection and installation of energy systems, and is a key member driving Sage's growth strategy.

**James Dobbs** is a **Data Analyst** and will perform modeling and data analysis. Mr. Dobbs is a programmer with a background in applied mathematics and physics. He has worked with machine learning algorithms for the ATLAS project at CERN and utilized Python to simulate particle showers. At Sage, he has created battery storage and electric vehicle charging models, updated proprietary Sage models, conducted photovoltaic feasibility studies for numerous clients, and analyzed the performance of the developed renewable systems.

**Scott Moore** will be Sage's **Design/Construction Lead**. Mr. Moore has fifteen years of experience in the construction industry, including nine years in the energy and solar PV sector. As a project team Design/Construction Lead, Mr. Moore provides invaluable project development insight and focus during design review, construction management, and contract closeout. Mr. Moore's strengths ensure that contract specifications and DSA requirements effectively drive design and engineering coordination, considering all disciplines, to execute the final program/project plans. During construction, Mr. Moore's diverse background enables him to efficiently attain client goals and objectives.

**Ilan Fuss** will be the **Asset Management Coordinator**. Mr. Fuss has 9 years of experience in renewable energy with a focus on solar asset management, project finance, and financial modeling. Mr. Fuss joined Sage in 2015 and has led the development of Sage's Solar Asset Management division, which focuses on auditing and improving the operational and financial performance of existing renewable energy projects. Prior to joining Sage, Mr. Fuss worked for a leading solar contractor and focused on providing financing solutions for his clients through a network of strategic relationships and managed the RFP response team.

## 2.2 Clean Coalition Key Personnel

**Craig Lewis, MSEE & MBA, Founder and Executive Director:** Craig will provide executive-level leadership for Clean Coalition and will assist with stakeholder alignment for the project. Craig has over 30 years of experience in the renewables, wireless, semiconductor, and banking industries. Previously VP of Government Relations at GreenVolts, he was the first to successfully navigate a solar project through California's Renewable Portfolio Standard solicitation process. Craig was energy policy lead on Steve Westly's 2006 California gubernatorial campaign. His resume includes senior government relations, corporate development, and marketing positions at leading wireless, semiconductor, and banking companies such as Qualcomm, Ericsson, and Barclays Bank. Craig received an MBA and MSEE from the University of Southern California and a BSEE from the University of California, Berkeley.

**Dr. Frank Wasko, Managing Director:** Frank will serve as the Clean Coalition's Principal In Charge/Project Manager (PI/PM) responsible for the Clean Coalition's overall components of the project. He will direct Clean Coalition's project work, budget, schedule, and deliverables. He will also be the Clean Coalition's primary point of contact. Frank brings to the Clean Coalition 30 years of service and experience from Southern California Edison (SCE) across a variety of functions, including field project management and field construction. In his last position at SCE, Frank served as Region Manager for government affairs. Frank also has a strong background in engineering/distribution

service planning, infrastructure upgrade and improvement programs, rate optimization, and third-party interconnection. Frank graduated magna cum laude from Pepperdine University with a BA in Business Communications, and earned both a master's and doctorate degree from the University of Southern California. Frank was awarded the 2015 Dissertation of the Year Award from the USC Price School of Public Policy.

**Kenneth Sahm White, Doctoral Candidate ABD, Policy & Economic Analysis Director:** Sahm will lead the regulatory and economics analysis deliverable reviews. Sahm has over 20 years of experience in economic and environmental policy, with over 200 filings before public utility and energy commissions. Prior to joining the Clean Coalition, he held positions as a Senior Research Consultant to the Center for Ecoliteracy, Technical and Policy Analyst in the development of the Ecological Footprint, and Associate Director of Progressive Secretary, a leading web source of legislative constituent engagement. Subsequent to his doctoral graduate work in the Social Studies of Science and Technology at MIT, Sahm has completed coursework for an MS Environmental Studies from San Jose State University with a planned thesis focus on economic optimization of local greenhouse gas reduction strategies.

**Wendy Boyle, Grants & Contracts Manager** will serve as the Clean Coalition's Contract and Administrative Manager for the project, responsible for overseeing and managing the organization's contractual and administrative components. She will also provide PI/PM support. Wendy has over 30 years' experience working with a variety of enterprises (i.e., corporations, non-profits, and state/federal/local agencies) providing support and leadership in the areas of business operations and administration, program/project management, grant/contract management, and grant funding research in sectors focused in the area of renewable energy, clean energy, economic, and workforce development. Wendy previously served as the Director of Operations at SolarTech, and as part of the Clean Coalition's Rooftop Solar Challenge awarded by the U.S. Department of Energy, she collaborated with the Clean Coalition and Pacific Gas & Electric, resulting in the development of a case study on streamlining interconnection for residential solar PV projects. Wendy holds certificates of completion and accomplishments in the areas of Materials & Contract Management, Operations Management, Economics and Environmental Energy, and Business Law and Finance. Wendy is currently pursuing her Grants Management certification.

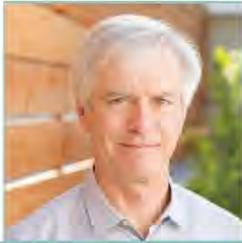
**Bob O'Hagan, MSEE, Program Engineer:** Bob will serve as the Clean Coalition's Engineering Lead, working closely with Sage and the Town of Atherton's engineering team. Bob oversees the development of tools and processes that allow high penetrations of distributed generation while maintaining or improving distribution grid reliability. He started his career designing telecommunications and test equipment and then transitioned into operations management for both public companies and startups. Bob is now a leading engineer in clean energy and renewable power systems. Bob has an MS from Stanford in Electrical Engineering and an MBA from Santa Clara University. He received his BS in Electrical Engineering from Southern Methodist University.

## 2.3 Qualifications and Experience

Table 1 provides the roles, responsibilities, and experience for key personnel on the Sage-Clean Coalition team. Resumes for key personnel are provided on the following pages.

Table 1. Roles and responsibilities of key personnel

Name	Project Roles and Responsibilities	Experience
<b>Sage</b>		
Tom Williard (Managing Principal/CEO)	Principal In Charge – Overall responsibility for the project	17 years in renewable energy 20 years in electrical engineering
Brent Johnson, PE, LEED AP (Managing Principal)	Design guidance and review, deliverable review	21 years in energy and water engineering
David Seiler (Project Manager)	Project Manager – Directs project work; primary point of contact for the Sage team; primary responsibility for schedule and deliverables	17 years in PV industry 5 years in renewable energy project management
James Dobbs (Data Analyst)	Data acquisition and modeling solar PV, BESS, and microgrid scenarios	3 years in energy modeling
Scott Moore (Construction Manager)	Design review, construction oversight, Cx oversight, project closeout	11 years in solar 15 years in construction
Ilan Fuss (Associate Principal)	Asset Management set-up and oversight	9 years in renewable energy
<b>Clean Coalition (CC)</b>		
Craig Lewis (Founder, Executive Director)	Executive Director – overall financial responsibility and leadership to the CC, executive-level stakeholder alignment	30 years in the renewables industry
Dr. Frank Wasko (Managing Director)	CC Principal In Charge/Project Manager– Primary point of contact for the CC, overall responsibility for the CC’s components of the project (i.e., directs project work, CC’s budget, schedule, and deliverables)	30 years in energy and project management
Kenneth Sahn White (Economics & Policy Analysis Director)	Regulatory and economics analysis deliverable review	20 years in economic and environmental policy
Wendy Boyle (Grants & Contracts Manager)	Contract & Administrative Manager and PI/ PM support	14 years in renewable energy 30 years in contract, administrative and project management
Bob O’Hagan (Program Engineer)	Engineering Lead	8 years in renewable energy 40 years electrical engineering



## Tom Williard

### Principal & CEO

#### PROFESSIONAL HISTORY

- 15 Years Renewable Energy
- 8 Years Engineering Management
- 20 Years Electrical Engineering

#### WORK EXPERIENCE



**Sage Energy Consulting**  
Founder, CEO  
2009 — Present

**SolEd Benefit Corporation**  
Founder, COO/CTO  
2013 — 2014

**Sustainability Systems**  
Renewable Energy Consultancy  
Principal  
2005 — 2009

**System Design**  
Renewable Energy Consultancy  
Founder and Principal  
2001 — 2004

**Engineering Management**  
Consultant  
1996 — 2001

**Ascend Communications**  
Hayes Microcomputer / Softcom  
Digital Microsystems  
Dunn Instruments  
Senior Hardware and Software  
Electrical Engineer, Senior  
Technologist, Project Manager  
1980 — 1996

Mr. Williard has more than 15 years of experience as a professional energy consultant, with a focus on the development of technical and financial models that are now widely used to assess renewable energy systems and to predict potential energy generation and financial performance, serving as CEO since Sage's inception. In 2013, Mr. Williard cofounded SolEd Benefit Corporation and wrote the project financial models used to structure PPA and lease financings that reduced the cost of renewable energy projects for public schools. In 2005, he cofounded Solmetric, a company that developed the SunEye, a high-precision instrument now widely used in the solar industry to measure shade characteristics. In 2001 he cofounded System Design, a renewable energy system design and due diligence company.

Prior to 2001, Mr. Williard worked in electronics engineering in senior hardware and software engineering positions and in engineering management. Mr. Williard served for seven years as an elected public school trustee in Marin County. As a Sage Principal, he provides financial, policy, and technical oversight for all company projects, and provides expert testimony for clients and industry groups.

#### AREAS OF EXPERTISE

Modeling Tool Development for Solar PV, Wind & Biogas  
Financial Modeling & System Finance  
Engineering & Business Development  
Renewable Energy Resource Assessments & Feasibility Studies  
Renewable Energy Systems Commissioning Certification & Support  
Renewable Energy Policy Support and Expert Testimony

#### REPRESENTATIVE PROJECT EXPERIENCE

##### County of Santa Clara

San Jose, CA • 2010-2017

- Zero Net Energy (ZNE) Study
- 2.4 MWp Fuel Cells
- 11.4 MWp Solar PV PPA RES-BCT
- CPUC Policy Guidance

As a leader in implementing ZNE and renewable energy policies, the County's work with Sage included a 400,000 sq.ft. government building retrofit. Over 7 years, Tom led a team providing planning, analysis and advisory support for the County's successful projects.





## Brent Johnson PE, LEED AP

Principal

### PROFESSIONAL HISTORY

- 7 Years Renewable Energy
- 15 Years Civil Environmental Engineering



**Sage Energy Consulting**  
Founder  
2009 — Present

### EDUCATION

#### M.S. Civil Environmental Engineering

University of California, Berkeley

#### B.S. Civil Environmental Engineering

Worcester Polytechnic Institute (WPI)

### REGISTRATIONS

#### Professional Engineer (PE)

Civil Engineering, CA Reg. No. C62137

#### LEED AP

U.S. Green Building Council

### AFFILIATIONS

California Solar Energy Industries Association (CalSEIA)  
Solar Energy Industries Association (SEIA)  
UC Berkeley, Guest Lecturer

Mr. Johnson has 15 years of experience as a Civil-Environmental Engineer, with 7 years in the renewable energy sector. During his time at Sage, he has developed custom financial and energy modeling tools and managed all aspects of renewable generation projects including feasibility studies, system design, project bids and construction, commissioning, and environmental credits management. Brent has worked on over 100MW of renewable projects encompassing a number of technologies such as solar PV, storage, solar thermal, wind, and hydropower.

His previous experience in the US and overseas has included design of large municipal facilities, computer modeling, construction management, operational support, and CEQA permitting. He has overseen all aspects of project development from concept to commissioned facilities, including serving as a construction manager on a complex, \$170M multi-year linear project. Brent holds an M.S. in Civil-Environmental Engineering from UC Berkeley, is a registered Professional Engineer (PE) in California and has his LEED certification from the US Green Building Council. He also currently serves as a director for his local water and fire district.

### AREAS OF EXPERTISE

Renewable Energy Feasibility Studies for Solar PV, Solar Thermal, Storage and Efficiency  
Energy Usage and Generation Modeling  
Financial and Tariff Modeling  
Renewable Energy Incentives Management  
Conceptual Through Detailed Design of Large Municipal Facilities and Linear Projects  
Construction Management  
Environmental Permitting

### REPRESENTATIVE PROJECT EXPERIENCE

#### Sacramento Regional County Sanitation District

Elk Grove, CA • 2015 - Present

- 3.9 MW Solar PV Single-Axis Tracker Ground Mount System
- Power Purchase Agreement (PPA)
- CEQA Review

To offset energy consumption from a large, multi-year, multi-phase expansion of its Wastewater Treatment Facility, Regional San turned to Sage to competitively procure a solar PV project that would meet CEQA mitigation targets and minimize footprint and impacts to surrounding open space.





## David Seiler

### Director of Business Development

#### PROFESSIONAL HISTORY

- 15 years in the solar industry
- 5 years in renewable energy project management

#### WORK EXPERIENCE



**Sage Energy Consulting**  
Director of Business  
Development  
2020 — Present

**Sunterra Solar**  
Program Manager  
2018 — 2019

**SolarEdge**  
Strategic Account Manager  
2015 — 2018

**ABB/Power-One**  
Key Account and Channel Sales  
2011 — 2015

**Energy Recommerce/National Semiconductor**  
Sales Manager/Director of Support  
2007 — 2011

**Solar Electric Consulting**  
Principal  
2006 — 2007

**Marin Solar**  
VP of Sales  
2003 — 2006

#### EDUCATION

**BS, Electrical Engineering**  
Bucknell University

Mr. Seiler has over fifteen years of experience in the energy and solar PV sector, including project feasibility analysis, design, development, installation, and commissioning. At Sage, he manages solar and storage feasibility and planning studies, reviews solar PV design and proposals, and manages contractor selection and installation of energy systems.

Mr. Seiler is also responsible for developing and supporting strategies focused on driving revenue growth and exploring new markets. He designs and executes marketing campaigns to promote new partners and opportunities.

Mr. Seiler's experience includes quantitative and qualitative analysis of proposals and presentation of analyses to help clients determine the best solution for their needs. He has been deeply involved with the design, construction, and implementation of dozens of commercial solar PV systems for public and private clients in California.

Prior to joining Sage, Mr. Seiler worked for a well-regarded solar EPC firm, focused on commercial and public works, so he brings the latest market knowledge and best practices to Sage. He led solar projects from design to closeout, including managing subcontractors and overseeing construction. He understands projects from the perspectives of all the stakeholders.

#### AREAS OF EXPERTISE

PV Design and Project Management  
Strategic Account Management

#### REPRESENTATIVE PROJECT EXPERIENCE

##### Vacaville High School

Vacaville, CA • 2017-2018

- 143-kW solar PV
- Two electrical services for four buildings

Mr. Seiler helped with management and construction of a project at Vacaville High School that added PV systems to four existing buildings with two utility interconnections. The PV modules had a unique tilt-up racking system and were mounted on a standing seam roof.





## James Dobbs

Associate

### PROFESSIONAL HISTORY



**Sage Energy Consulting**  
Associate  
2017 — Present

### EDUCATION

**B.S. Physics, Applied Mathematics**  
*Minor in Chemistry*  
Sonoma State University

Mr. Dobbs is a programmer with a background in applied mathematics and physics. He has worked with machine learning algorithms for the ATLAS project at CERN and utilized Python to simulate particle showers. He earned his B.S. in Applied Mathematics and Physics from Sonoma State University, where he conducted research involving the electromagnetic properties of single crystals and analysis of defects on thin films.

Prior to joining Sage, Mr. Dobbs taught physics and mathematics at Sonoma State University as a student instructor and tutor, where he created engaging problems for students involving renewable energy topics such as photovoltaic cells, wind energy, and hydro-pumps.

Since beginning working at Sage in September 2017, he has created battery storage and electric vehicle charging models, updated proprietary Sage models, conducted photovoltaic feasibility studies for numerous clients, and analyzed the performance of the developed renewable systems.

### AREAS OF EXPERTISE

Data Acquisition, Processing, and Analysis  
Renewable Energy Systems  
Financial and Performance Analysis  
Tariff and Financial Modeling

### REPRESENTATIVE PROJECT EXPERIENCE

#### Electric Vehicle Model

Mr. Dobbs created an electric vehicle model that generates randomized electric interval data based on statistical implementation of charging patterns for various scenarios.

#### Battery Model

Mr. Dobbs created an energy arbitrage battery model to predict behavior and savings of a generalized system that generates interval-level electric charge and discharge patterns.

#### Financial Model

Mr. Dobbs programmed an improved statistical analysis into Sage's proprietary financial models to include a sensitivity ranking and correlations.

#### Data Processing and Analysis

Data processing is at the heart of the analysis conducted at Sage. Mr. Dobbs created a toolset of R processing codes to streamline the processing procedures.



## Scott Moore

### Project Manager, Design & Construction

#### PROFESSIONAL HISTORY

- 12 Years Renewable Energy
- 16 Years Construction Industry

#### WORK EXPERIENCE



**Sage Energy Consulting**  
Construction & Operations  
Manager  
2015 — Present

**Sunetric**  
Commercial Project Manager  
2013 — 2015

**Municipal Solar**  
Commercial Project Manager  
2012 — 2013

**RGS Energy**  
Lead Commercial Installer &  
Project Manager  
2009 — 2012

**Matheson Solar**  
Solar PV Installer & Electrician  
2008 — 2009

**Hoffman Construction**  
**ROC Construction**  
Carpenter's Apprentice  
2004 — 2008

#### REGISTRATIONS & CERTIFICATIONS

**C10 Electrical Contractor License**  
California License #1042358

#### AFFILIATIONS

California Solar Energy Industries  
Association (CalSEIA)  
Solar Energy Industries Association (SEIA)

Mr. Moore has sixteen years of experience in the construction industry, including twelve in the energy and solar PV sector. He is a licensed electrical contractor in California. As a project team Construction Lead, Mr. Moore has implemented numerous PV installations in California, Nevada and Hawaii for various solar EPCs, government agencies, military branches, utilities, school districts, and private clients. He provides invaluable project development insight and focus during conceptual design, system specification, cost estimating, design review, construction management and contract closeout.

During the development phase of a project, Mr. Moore's strengths ensure that contract specifications and requirements effectively drive design & engineering coordination, considering all disciplines, to execute the final program/project plans. During construction, Mr. Moore's diverse background enables him to adapt and understand potential conflicts and opportunities, and to then identify the best course of action to efficiently realize established client objectives. Mr. Moore's depth of knowledge and ability to communicate effectively are key attributes that he brings to the project team. The importance of closing out a contract, nuances of what it takes to bring a project to completion, rigorous document control throughout the project, are additional strong suits of Scott's that bring value and success to everything he works on.

#### CERTIFICATIONS

PV Design & Installation, Solar Living Institute  
OSHA 10 Certification  
C2 Motorized Mobile Platforms  
C2 Slips, Trips and Falls R2  
C1 Ladder Safety Awareness R2  
C1 Fall Protection Awareness R  
G1 Walking-Working Surfaces (Supervisors/Managers)

#### REPRESENTATIVE PROJECT EXPERIENCE

##### Marin Clean Energy (MCE) SolarOne

Richmond, CA • 2016 - Present

This project was developed and eventually constructed on an oil-refinery brownfield landfill, otherwise useless acreage. Scott consulted and facilitated the designs development of the project through closeout. The complexity of MCE SOLARONE was significant, from it being under an array of regulatory jurisdictions to the construction schedule being accelerated, Scott worked with all project stakeholders to ensure that the final design specifications, environmental requirements, best practices in construction means, methods and safety were all adhered to. He is currently conducting Commissioning Verification on this project.





## Ilan Fuss

*Associate Principal*

### PROFESSIONAL HISTORY

9 Years Renewable Energy

### WORK EXPERIENCE



**Sage Energy Consulting**  
Associate Principal  
2015 — Present

**Sun Light & Power**  
Finance and Business  
Development Executive  
2013 — 2014

**Sungevity**  
Solar Consultant  
2012 — 2013

**Sunergy Systems**  
Senior Solar Design Consultant  
2009 — 2011

### EDUCATION

**B.A. Economics**  
University of Washington, Seattle

### CERTIFICATIONS

**Solar Living Institute**  
PV Design & Installation

Mr. Fuss has 9 years of experience in renewable energy with a focus on solar asset management, project finance, and financial modeling. Mr. Fuss joined Sage in 2015 and has led the development of Sage's Solar Asset Management division, which focuses on auditing and improving the operational and financial performance of existing renewable energy projects.

Prior to joining Sage, Mr. Fuss worked for a leading solar contractor and focused on providing financing solutions for his clients through a network of strategic relationships and managed the RFP response team. His previous work experience includes several years of solar design and project development. As a Sage Associate Principal, he leads Solar Asset Management, manages projects in multiple phases, and provides oversight and review for the project management team.

### AREAS OF EXPERTISE

Solar Asset Management  
Utility Tariff Modeling  
Financial Modeling & Project Finance  
Engineering & Business Development  
Renewable Energy Resource Assessments & Feasibility Studies  
Design & Construction Oversight  
Renewable Energy Project Management

### REPRESENTATIVE PROJECT EXPERIENCE

#### Rancho California Water District — Solar PV Asset Management

Santa Rosa, CA • 2015 - Present

- 7.9 MW Solar PV
- 4 Sites

This project encompassed an in-depth review of the technical and financial performance of operational PV systems. A key project outcome included increased savings derived from utility tariff optimization based on Sage's analysis. Mr. Fuss managed the project from contracting through completion.





## **CRAIG LEWIS**

Craig Lewis has over 30 years of experience in the renewables, wireless, semiconductor, and banking industries. Previously VP of Government Relations at GreenVolts, he was the first to successfully navigate a solar project through California's Renewable Portfolio Standard solicitation process. Craig was energy policy lead on Steve Westly's 2006 California gubernatorial campaign. His resume includes senior government relations, corporate development, and marketing positions at leading wireless, semiconductor, and banking companies such as Qualcomm, Ericsson, and Barclays Bank. Craig received an MBA and MSEE from the University of Southern California and a BSEE from the University of California, Berkeley.

### **PROFESSIONAL PREPARATION**

**University of Southern California**, Business Administration, MBA

**University of Southern California**, Electrical Engineering, MSE

**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**

*[Making Way for Wholesale Distributed Generation: Not for the Faint of Heart](#)*, 2018

*[To Unleash Wholesale Distributed Generation, We Must Streamline Interconnection](#)*, 2018

*[Attack of the killer balloons, and the clean local energy solution](#)*, 2018

*[Batteries Save the Day](#)*, 2018

*[Montecito Community Microgrid Initiative will provide energy resilience to the region](#)*, 2018

*[Clean Coalition partners with the City of San Diego to drive local solar development](#)*, 2018

*[Expanding the Energy Imbalance Market Is the Right Way to Regionalize California's Grid](#)*, 2018

(with Doug Karpa)

*[Feed-In Tariffs for Unleashing Clean Local Energy and Obviating Polluting Gas Plants in California](#)*, 2018

*[CAISO Suggests New RFO to Settle Question of Storage vs. Puente Gas Peaker](#)*, 2017

[Ellwood gas peaker plant is unanimously rejected](#), 2017  
[Community Microgrids Offer “Repeatable” Way to Replace Fossil Fuel Peakers in California](#), 2017  
[Level the playing field for clean energy](#), 2017  
[Let solar-roof savings shine on all ratepayers: Guest commentary](#), 2017  
[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**

California Energy Summit: “Wildfire Prevention Planning and Implementation”, panelist, 2019  
Microgrid 2019: “From Wildfires to Environmental Protection: How Microgrids Service Communities”, panelist, 2019  
Smart Cities International Symposium & Exhibition: “Catalyzing Smart Communities: Changing Parameters, Players and Structures”, panelist, 2019  
HOMER International Microgrid Conference: “Lessons from Community Microgrid Developments in California”, panelist, 2019  
Community Choice Forum: “The Local Economic Impacts of Community Choice,” panelist, 2018  
Leadership Palo Alto’s Environment & Sustainability Day: “Community Microgrids Optimizing economics, environment, & resilience,” panelist, 2018  
East Bay Community Energy’s Local Business Development Plan Community Engagement Symposium: “Roadmap to for accelerating the deployment of local clean energy resources,” panelist, 2018  
Rebuilding Montecito: Pathways to a Resilient Future: “Montecito Community Microgrid Renewables-driven Resilience for Critical Facilities,” panelist, 2018  
Germany California Energy Storage Symposium: “Community Microgrids Optimizing economics, environment, & resilience,” panelist, 2018  
Platts Western States Power & Gas Conference: “Energy Transition to Renewables,” panelist, 2017  
Central Coast Sustainability Summit: “Stormwater Capture Efforts: Rethinking a Local Resource,” panelist, 2017  
California Energy Summit: “CAISO Regionalization” and “Municipal to Choice Community Aggregation,” panelist, 2017  
Los Angeles Business Council: “California Businesses for Cleaner, Greener Communities,” panelist, 2017  
Better, safer buildings: Holistic building upgrades for seismic safety and resource efficiency: “Peninsula Advanced Energy Community (PAEC),” panelist, 2017  
Distributed Solar Summit: “Smart Inverters & Intelligent Control for Solar+ Storage,” moderator, 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  
Silicon Valley Energy Summit: “The Conversations for Connections,” moderator, 2016  
The Business of Local Energy Summit: “Big Ideas to Optimize Community Choice Energy Impact and Sustainability,” panelist, 2016



### **DR. FRANK WASKO**

Frank brings to the Clean Coalition 30 years of service and experience from Southern California Edison (SCE) across a variety of functions, including field project management and field construction. In his last position at SCE, Frank served as Region Manager for government affairs. Frank also has a strong background in municipalization, infrastructure upgrade and improvement programs, rate optimization, and third-party interconnection. Frank graduated Magna Cum Laude from Pepperdine University with a BA in Business Communications, and earned both a Masters and Doctorate degree from the University of Southern California. Frank was awarded the 2015 Dissertation of the Year Award from the USC Price School of Public Policy.

### **PROFESSIONAL PREPARATION**

**University of Southern California**, Policy, Planning and Development, PhD

**University of Southern California**, Public Policy, MA

**Pepperdine University**, Business Communications, BA Magna Cum Laude

### **PROFESSIONAL EXPERIENCE**

**Clean Coalition** – Palo Alto, CA

Managing Director, 2016 – Present

**The Advocacy Group** – Costa Mesa, CA

Director of Business Development, San Diego Region, 2016

**A-M EHR, Inc.** – Lake Forest, CA

Senior Project Manager, 2016

**Southern California Edison** – Santa Ana, CA

Regional Manager, 2002 – 2015

Regional Project Manager, 2000 – 2002

Regional EMF/Engineering Specialist, 1991 – 2000

Distribution Engineer, 1990 – 1991

Energy Management Analyst, 1988 – 1990

Service Planner/Duty Supervisor, 1986 – 1988

### **PUBLICATIONS**

[\*Peninsula Advanced Energy Community \(PAEC\)\*](#), 2019 (with Wendy Boyle)

[\*How solar emergency microgrids provide resilience to vulnerable communities\*](#), 2018

[\*Permitting 2.0: A crucial step on the road to our clean energy future\*](#), 2018

[\*Life without Nuclear Power: A Nuclear Plant Retirement Formulation Model and Guide Based on Economics\*](#), awarded the 2015 Dissertation of the Year Award from the USC Price School of Public Policy.

### **SYNERGISTIC ACTIVITIES**

The Promise of Microgrids Conference: “Community Microgrids Savings and Resilience for Local Governments,” panelist, 2018

BayREN Forum: Increasing Reliability and Resiliency with Microgrids, 2018

Southern California Edison Certification Distribution Service Planner

Southern California Edison Certification Distribution/Transmission Substation Certification Training Program

Certificate of Recognition, Irvine City Council, Mayor’s Award, 2013

U.S. House of Representatives Congressional Award for energy efficiency and renewables advancement in the Southern California region, 2013 and 2005

Outstanding and Invaluable Service Award, Southern California Edison 2005 and 2011



**KENNETH SAHM WHITE:**

Sahm has over 20 years of experience in economic and environmental policy, with over 200 filings before public utility and energy commissions. Prior to joining the Clean Coalition, he held positions as a Senior Research Consultant to the Center for Ecoliteracy, Technical and Policy Analyst in the development of the Ecological Footprint, and Associate Director of Progressive Secretary, a leading web source of legislative constituent engagement. Subsequent to his graduate work in the Social Studies of Science and Technology at MIT, Sahm has completed coursework for an MS Environmental Studies from San Jose State University with a planned thesis focus on economic optimization of local greenhouse gas reduction strategies.

**PROFESSIONAL PREPARATION**

San Jose State University, Environmental Studies, MS  
Massachusetts Institute of Technology, Doctoral Program in the Social Studies of Science and Technology (two years of coursework; no degree)  
University of Michigan, Psychology (Minor in Philosophy), BS

**PROFESSIONAL EXPERIENCE**

Clean Coalition – Palo Alto, CA  
Economics & Policy Analysis Director, 2010 – Present  
ICLEI – Local Government of Sustainability  
Climate Action Planning Consultant, 2008 – 2009  
Progressive Secretary – Sacramento, CA  
Director of Operations, 2003 – 2006  
Redefining Progress/Global Footprint Network – Oakland, CA  
Associate Analyst & Researcher, 2001 – 2003

**PUBLICATIONS**

*California utilities work to integrate distributed energy resources into grid*, 2017  
*California's Wholesale Distributed Solar Program Is in Trouble. Will Regulators Finally Fix It?*, 2017  
*Interconnecting Generation Facilities to the Electrical Distribution System: Model Practices*, 2013

**SYNERGISTIC ACTIVITIES**

East Bay Community Energy's Local Business Development Plan Community Engagement Symposium, panelist, 2018  
California Public Utilities Commission, "Grid Modernization Investment," panelist, 2017  
National Association of Regulatory Utility Commissioners, "Locational Net Benefits Assessment," presenter, 2017  
Western Interstate Energy Board, Technical Advisory Committee, "Locational Net Benefits Assessment," presenter, 2017  
CPUC Public Workshop on Green Tariff Shared Renewables, 2016  
Lead Intervenor, California Public Utilities Commission (CPUC)  
Rule 21 Interconnection proceedings, R.11-09-011 & R.17-07-007, 2011 – 2018  
Integrated Distributed Energy Resources proceedings, R.14-10-003, 2017 – 2018  
Distribution Resource Planning proceedings, R.14-08-013, 2015 – 2018  
Integrated Resource Planning proceedings, R.16-02-007, 2016 – 2018  
Energy Storage proceedings, R.15-03-11, 2011 – 2018  
Co-chair, Load Modifying Demand Response Valuation Working Group, CPUC, 2014 – 2015  
Member of the following Working Groups at the CPUC:  
Locational Net Benefits Assessment, Distribution Resources Plan proceeding, R.14-08-013, 2015 – present  
Integrated Capacity Analysis, Distribution Resources Plan proceeding, R.14-08-13, 2015 – present  
Cost Effectiveness, Integrated Distributed Energy Resources proceeding, R.14-10-003, 2015 – present  
Distribution Planning Advisory Group – Integrated Distributed Energy Resources proceeding, R.14-10-003, 2017 – present  
Distribution Interconnection Working Groups – Rule 21 proceeding, R.17-07-007, 2017 – present  
Member, Interconnection Policy Working Group, NY REV proceeding, New York Public Service Commission, 2016 – present

**Modeling Experience**

Rate Design Public Tool (E3/California Public Utilities Commission)  
COG – Cost of Generation Calculator (California Energy Commission)  
DERAC – Distributed Energy Resources Avoided Cost Calculator (E3/California Public Utilities Commission)  
SAM – System Advisor Model (National Renewable Energy Laboratory)  
JEDI – Jobs and Economic Development Impact (National Renewable Energy Laboratory)  
CREST – Cost of Renewable Energy Spreadsheet Tool (National Renewable Energy Laboratory)  
MARKAL – a dynamic general equilibrium energy and economics model, (International Energy Agency)  
RETScreen – Renewable Energy-efficient Technologies management software (CamnetENERGY)



**WENDY BOYLE**

Wendy has over 30 years' experience working with a variety of enterprises (i.e. corporations, non-profit, state/federal/local agencies, private & public, etc..) providing support and leadership in the areas of: business operations & administration, program / project management, grant/contract management and grant funding research in sectors focused in the area of renewable energy, clean energy, economic & workforce development. Wendy previously served as the Director of Operations at SolarTech, and as part of the Clean Coalition's Rooftop Solar Challenge awarded by the U.S. Department of Energy, she collaborated with the Clean Coalition and Pacific Gas & Electric, resulting in the development of a case study on streamlining interconnection for residential solar PV projects. Wendy holds certificates of completion and accomplishments in the areas of Materials & Contract Management, Operations Management, Economics and Environmental Energy, and Business Law and Finance. Wendy is currently pursuing her Grants Management certification.

**PROFESSIONAL PREPARATION**

**Grants Management Certification**, Management Concepts (in process)

**Certificate of Completions:**

- Federal Cost Principles**, Management Concepts
- Materials & Contract Management**, DeAnza/Foothill College
- Operations Management**, Kellogg School of Management, Northwestern University
- Economics of Energy and Environment**, Kellogg School of Management, Northwestern University

**Certificate of Accomplishments:**

- Business Law & The Entrepreneur**, Northwestern University, Northwestern Law
- Finance**, Stephen M. Ross School of Business, University of Michigan

**PROFESSIONAL EXPERIENCE**

- Clean Coalition** – Palo Alto, CA  
Grants & Contracts Manager, 2016 – Present
- SolarTech** – San Jose, CA  
Director of Operations, 2010 – 2014
- Real Goods Solar** – Campbell, CA  
Incentives & Interconnections Manager, 2008 – 2010
- Akcena Solar** – Los Gatos, CA  
Manager, Program Management, 2006 - 2008
- EXP Pharmaceuticals Services Corp** – Fremont, CA  
Manager, Administration, 2004 – 2006
- Landel Telecom** – San Jose, CA  
Business Operations Manager, 1999 – 2004

**PUBLICATIONS**

[\*Peninsula Advanced Energy Community \(PAEC\)\*](#), 2019 (with Dr. Frank Wasko)

**SYNERGISTIC ACTIVITIES**

- Volunteer Research Analyst, Sierra Club – Northern and Southern California “Permitting Fees” Reduction Initiative, 2006 – 2008
- Professional Memberships: CALED, American Solar Society, National Association of Professional Women



**ROBERT O'HAGAN**

Bob 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 and then transitioned into operations management for both public companies and startups. Bob is now a leading engineer in clean energy and renewable power systems. Bob has an MS from

Stanford in Electrical Engineering and an MBA from Santa Clara University. He received his BS in Electrical Engineering from Southern Methodist University.

**PROFESSIONAL PREPARATION**

**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**

[\*San Diego Solar Siting Survey Final Summary Report Solar Photovoltaic \(PV\) Commercial-Scale Sites for 1,000 kWac and Larger\*](#), 2019

[\*Hunters Point Community Microgrid Project Power Flow Analysis Methodology\*](#), 2016

**SYNERGISTIC ACTIVITIES**

Grid of the Future Summit, “Community Microgrid Initiative,” presenter, 2015

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

## 3. Subcontractor – Clean Coalition

### 3.1 Work to Be Subcontracted

Sage will work with Clean Coalition to perform the microgrid analysis. A microgrid is a group of interconnected energy loads and distributed energy resources that can connect to or isolate from the electrical grid, and provide the benefit of on-site resilience (back-up power during grid outages). In addition, a properly designed, renewables-based microgrid provides economic benefits during normal operations that are not available from the traditional diesel genset backup approach. Based on the information gathered from and results of the Feasibility & Planning Phase, Clean Coalition determines on-site critical load, develops conceptual microgrid system designs using industry-standard design tools, and develops an engineer's estimate of costs for microgrid-specific equipment to be included in the lifecycle financial analysis. The detailed results of the Microgrid Analysis include microgrid requirements and key elements for inclusion in a microgrid RFP (e.g. RFP specifications).

In 2017, the Clean Coalition performed a very comprehensive initial assessment of the Town of Atherton's New Civic Center's preliminary design concept under its Peninsula Advanced Energy Community (PAEC) Initiative funded through the California Energy Commission. The feasibility assessment for this proposed project will focus on current technical data provided by the Town of Atherton.

The Clean Coalition's [Community Microgrid Initiative](#) is a multi-year effort to plan and develop a new approach for designing and operating the electric grid, based on local renewables and other distributed energy resources. Renewables-driven microgrids are the cornerstone of this Initiative, which will deliver an unparalleled trifecta of economic, environmental, and resilience benefits across communities everywhere. Under the Community Microgrid Initiative, the Clean Coalition has completed 20+ techno-economic feasibility assessments and designs for solar-driven microgrids at a variety of critical community facilities, including universities, medical campuses, municipal complexes, schools, school districts, and multi-family housing; under a variety of public and private funding sources. Our role in the project development process is to serve as a technical consultant and buyer's representative; we perform both high-level and detailed feasibility assessments for renewables-driven microgrids, and also perform the planning and engineering required to develop RFPs for design-build microgrid projects. Our expertise is in designing solar+storage microgrid systems for emergency backup power for single-building, multi-building, and campus-scale projects.

The Clean Coalition's combination of deep technical, policy, economic, and communications experience is a unique differentiator.

Past and current clients include East Bay Community Energy, CleanPowerSF, City of San Diego, City of Calistoga, City of Palo Alto, University of California Davis Sacramento Campus, Southern California Edison, VMware, Alameda Municipal Power, Long Island Power Authority, PSEG Long Island, and the California Energy Commission.

### 3.2 Clean Coalition Qualifications

Because Sage and Clean Coalition will be working together as a team on this project, we've included Clean Coalition's qualifications and experience throughout this proposal alongside Sage's.



Figure 1. Clean Coalition Town of Atherton New Civic Center Technical & Economic Feasibility Assessment, 2017 (initial microgrid concept)

## 4. Project Work Plan

The Sage/Clean Coalition team offers a unique combination of both the breadth and depth of project management services. Our workplan is outlined in detail below and encompasses the full scope of energy projects to ensure they are accurately and honestly assessed, procured with transparent and fair criteria, and then implemented and operated at the highest standards of the industry.



### 4.1 Project Kick-Off

The project kick-off meeting is a high-level assessment to establish the specific project goals and needs. This will include a review of the data needs for the preparation and release of the RFP and the assessment criteria when reviewing the proposals for the Power Service Provider.

Project Kick-Off	<ul style="list-style-type: none"> <li>Kick-off meeting with The Town of Atherton staff to discuss feasibility scope, goals, informational needs.</li> <li>Establish anticipated electrical consumption offset target for the site.</li> <li>Review ideal locations for PV systems and any updated considerations</li> <li>Review targets for Battery Energy Storage System (BESS)</li> <li>Provide an overview of the data and information needs to prepare the RFP.</li> <li>Identify key goals when assessing proposals from the Power Service Provider.</li> </ul> <p><u>Site Visits</u>: One kick-off meeting in Atherton.</p>
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## 4.2 Schedule for the RFP and Project

Sage will consult with the Town of Atherton to develop a feasible schedule to meet the project goals and will serve as our guide throughout the project.

Determine Project Schedule, Gather and Review Data

- Provide a schedule for the preparation and release of the RFP and meet with the Town council to review.
- Include a timeline for review and selection of a Power Services Provider and present to the Town Council.
- Provide a target dates for any required negotiations with the Power Services Provider and the Town Council and the contract award. Meeting with the Town Council will happen prior to the contract award.
- Define the anticipated design completion deadline prior to permitting and interconnection applications.
- Provide the target Construction and Commissioning schedule. Additional meetings with the Town Council and Town committee will be required prior and upon completion of the commissioning.
- Review the existing and detailed PV System and BESS feasibility analysis identifying the system specifications and performance targets.
- Identify who from the Town of Atherton or site contractor will provide the site utility information for the Interconnection application.
- Meet the site contractor and verify latest building drawings are available.

Site Visits: One for initial meeting with Town of Atherton and site investigations; up to two Sage staff and up to two Clean Coalition staff to attend.

## 4.3 Data Collection and Review of Existing Information

Sage conducts thorough site visits, collects detailed information about current and future energy usage, and works with stakeholders to set goals, design standards and expectations for the project. Based on this information, Sage creates energy system designs using industry leading design tools, develops energy production modeling, performs lifecycle financial analysis for different financing alternatives. The study also outlines the process to implement a project and key considerations, such as financing options, schedule, utility interconnection and permitting. The detailed results of the Investment-Grade Feasibility Study provide the necessary metrics for a go no-go decision and form the basis of a competitive procurement.

1. Data Collection – In the first Phase the Sage and Clean Coalition team will work with the Town of Atherton to collect all relevant information and data that has been prepared in previous efforts. The list of target sites will be verified as suitable for solar PV/BESS development. This available information will be the starting point and we will then identify any additional information that is needed for this project.
2. Investment-Grade Feasibility Study – The second phase is an in-depth analysis of the proposed project. We conduct thorough site visits, collect detailed information about current and future

energy usage, and work with stakeholders to set goals, design standards, and expectations for the project. Based on these, Sage creates energy system designs using industry-leading design tools, develops conceptual layouts, performs lifecycle financial analysis for different financing alternatives, and assists with presenting the study findings to decision-makers. The study outlines the process to implement a project and key considerations, such as schedule, permitting, and utility interconnection. The detailed results of the Investment-Grade Feasibility Study provide the necessary metrics for a go/no-go decision and form the basis of a competitive procurement.

Data Collection	<ul style="list-style-type: none"> <li>Meet with Town of Atherton to review feasibility scope and goals and conduct site visits to evaluate potential PV system component locations/limitations and to investigate existing electrical infrastructure.</li> <li>Collect historical energy consumption data and information on future changes to site usage/energy efficiency measures to estimate future energy consumption.</li> </ul>
Investment-Grade Feasibility Study	<ul style="list-style-type: none"> <li>Refine models of conceptual system designs for each site based on Client feedback and generate system energy production profiles utilizing Helioscope design software. This includes up to two iterative site designs.</li> <li>Review PG&amp;E renewable auction mechanism (RAM) project map to assess local distribution line operating voltages and capacity to assess potential interconnection issues.</li> <li>Evaluate PG&amp;E site transformers to identify potential upgrade risk and cost to accommodate on-site generation.</li> <li>Establish stakeholder consensus on definition of Tier 1 (critical), Tier 2 (priority), and Tier 3 (discretionary) loads, business value of resilience, and community value of resilience.</li> <li>Calculate Tier 1, Tier 2, and Tier 3 loads.</li> <li>Value of Resilience (VOR) calculation for inclusion in financial analysis. VOR will inform the decision-making process for deploying solar-driven microgrids through concrete \$/kWh resilience values.</li> <li>Optimization of system design for each site/alternative based on critical load consumption projections, production modeling and operational assumptions</li> <li>Produce conceptual design options of site microgrid</li> <li>Refine system sizing and equipment locations for each site with Client/stakeholders</li> <li>Financial modeling of overall project with multiple financing scenarios including Cash, Leases, Bonds and Power Purchase Agreement (PPA), as applicable. Includes sensitivity and probability projections</li> <li>Conduct review of BESS feasibility based on usage patterns of aggregated accounts, utility tariffs and Energy Toolbase evaluation software. If necessary, contact BESS vendors to confirm findings.</li> <li>Develop Feasibility Study draft report and review with Town of Atherton.</li> <li>Produce final Feasibility Study presentation with recommendations, schedule, and outline of project development steps.</li> </ul> <p><u>Site Visits:</u> None.</p>

## 4.4 Development of the Request for Proposals

Sage actively manages the procurement process, including electronic distribution of documents, coordinating site walks, managing RFI’s and addenda, and providing vendor notifications. Vendor proposals are evaluated in-depth, providing a clear comparison of qualitative and quantitative proposal metrics, as well as parameter scoring and overall ranking. We also commonly assist with interviews of top ranked firms and the decision process to select a vendor. The result is an apples-to-apples comparison for a clear, fair, and fiscally sound selection.

RFPs	<ul style="list-style-type: none"> <li>Create project-specific Request for Qualifications and Proposals (RFQ/RFP) using Sage RFP templates, including electronic submittal documents, project requirements, specifications, contract terms, and additional information.</li> <li>Review with the Town of Atherton Town Council Legal Counsel.</li> <li>Manage solicitation notices and electronic distribution to potential solar contractors in coordination with Town of Atherton.</li> <li>Coordinate and conduct site walk with interested contractors.</li> <li>Manage document access and produce Addenda with RFI responses, as needed.</li> <li>Assist the Town of Atherton with ongoing critical path project items, such as AHJ, utility interconnect, financing, etc.</li> <li>Manage electronic submission of proposals.</li> </ul> <p><u>Site Visits:</u> Two. One to present the RFP; two Sage staff and two Clean Coalition staff to attend. One to conduct RFP site walk; two Sage staff to attend and one to two Clean Coalition staff to attend.</p>
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## 4.5 Selection of Service Provider and Contract Negotiation

Upon decision to move forward with a project, Sage implements a transparent and efficient bid process. Sage has developed procurement and contract documents, vetted over many projects, that reduce legal and transaction costs and are trusted by the industry. We provide electronic proposal templates to ensure vendors provide all requested information and allow for accurate comparison of proposals. Sage utilizes an extensive vendor database and has experience with most of the major PV and energy storage vendors in California.

Vendor proposals are evaluated in depth, providing a clear comparison of qualitative and quantitative proposal metrics, as well as parameter scoring and overall ranking. We also commonly assist with interviews of top ranked firms and the decision process to select a vendor. The result is an apples-to-apples comparison for a clear, fair, and fiscally sound selection.

<p>Proposal Evaluation/ Vendor Selection</p>	<ul style="list-style-type: none"> <li>• Provide initial summary of responses and preliminary ranking of proposals based on Town of Atherton evaluation criteria.</li> <li>• Perform detailed quantitative analysis of top proposals, including review of pricing, production estimates, and lifecycle cost of energy analysis.</li> <li>• Perform qualitative analysis, including equipment and design review, proposer qualifications, schedule, reference checks, performance guarantees, O&amp;M, contract exceptions, etc.</li> <li>• Produce summary evaluation matrix, report and/or presentation for the Town of Atherton with recommendations.</li> <li>• <u>Vendor Interview (Optional)</u> <ul style="list-style-type: none"> <li>– Coordinate interview of top ranked proposers at request of the Town of Atherton.</li> <li>– Prepare interview questions and disseminate to proposers in advance of interviews.</li> <li>– Conduct interviews with the Town of Atherton City Council.</li> <li>– Participate in the Town of Atherton selection committee workshop to review proposals and rank proposers, after interviews are completed.</li> </ul> </li> <li>• Provide notifications to proposers.</li> </ul> <p><u>Site Visits:</u> One for interview/committee meeting.</p>
<p>Contract Negotiation Support</p>	<p>Assist in the negotiations between the Town of Atherton and the Power Services Provider to assure project objectives are covered with the best terms for the Town of Atherton.</p> <ul style="list-style-type: none"> <li>• Thorough review of technical aspects of contract documents and for adherence to RFP</li> <li>• Interface with client staff, legal counsel and vendor as needed</li> <li>• Participate in contract negotiations and finalization with legal counsel and vendor</li> <li>• For public contracts, prepare GC 4217 findings and resolution for Board</li> </ul> <p><u>Site Visits:</u> None. All work done remotely.</p>

## 4.6 Contract Management and Oversight

The following services detail the execution phase of the project which includes design review, permitting, construction oversight, commissioning verification, project closeout, and operational phase asset management.

### *Design Review*

Once contract documents are executed, the selected vendor begins site reconnaissance and detailed design. Sage hosts a formal kick-off meeting to set expectations for the design review process and to ensure the vendor’s design team is aware of the RFP and contract requirements.

Design Review and Assistance	<ul style="list-style-type: none"> <li>Evaluate overall system design, component selection and interconnection for conformance with Project requirements</li> <li>Coordinate design site walk to identify existing conditions and potential issues</li> <li>Coordinate and review progress design submittals</li> <li>Assist with siting issues such as easements, equipment placement, vegetation, shading, AHJ, and other considerations</li> </ul> <p><u>Site Visits:</u> Up to two. One for kick-off meeting for existing conditions site walk, all other work done remotely</p>
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### *Permitting and Interconnection*

Sage’s design process requires formal 30%, 50%, and 90% progress submittals with review by Sage, the Client and all stakeholders. During this process, Sage attends regular telephone meetings, electronically manages documents and provides formal design review response to vendors.

Permitting & Interconnection	<ul style="list-style-type: none"> <li>Assist Client with CEQA and other Client permitting responsibilities</li> <li>Review/confirm vendor design-related permitting with AHJs</li> <li>Review/confirm vendor interconnection applications</li> </ul> <p><u>Site Visits:</u> None.</p>
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## Construction Support

Sage provides customized construction support. We ensure construction is scheduled and managed to optimize completion of design, permitting, procurement and interconnection processes. We typically provide Technical Construction Support (TCS) to augment your construction management (CM) resources, which usually results in lower project costs. If you do not have, or do not want to use existing CM resources, Sage can provide full boots-on-the-ground CM. We tailor CM services to meet the requirements of your project and budget.

### Construction Support

- Kick-off – Coordinate construction kickoff meeting with Client, Client reps, Vendor and Subs
  - Meetings – Participation in weekly project meetings by phone, confirm adherence to technical requirements of RFP/contract
  - RFIs/COs – Technical review of design changes/change orders
  - Schedule – Track schedule, advise on progress and LDs
  - Payments – Review/advise on progress payment requests
- Site Visits: Two or more. Construction kickoff meeting and intermittent project check-ins.

## Commissioning

Commissioning (Cx) is a formal quality review of an installed system. Commonly, the design-build entity performs the commissioning on the system. Sage has developed a Commissioning Verification protocol to ensure projects are built to contract and performing to design expectations before they are closed out. We check components, evaluate workmanship, review vendor Cx documentation, and spot check operational parameters. Our Commissioning Verification protocol reduces commissioning costs compared to full independent third-party commissioning. Sage can also provide full independent third-party commissioning if a higher level of quality control is desired.

### Commissioning

- Review vendor Cx protocol to ensure industry standard
  - Inspection of systems, including:
    - System component and design conformance verification
    - Workmanship evaluation
    - Performance verification
  - Review closeout documentation
  - Provide input to CM on project closeout punch list and verification of completion
  - Produce summary report of Cx and closeout process
- Site Visits: One, workmanship evaluation and performance testing

### Asset Management

Sage offers Asset Management on an ongoing basis to ensure projects continue to perform optimally. Our service provides the reporting to trustees and stakeholders that illustrates both the energy and financial performance of the systems. We also ensure that Performance Guarantees, Warranties and O&M agreements are upheld and provide as-needed assistance with issues or changes in facilities.

Asset Management	<ul style="list-style-type: none"> <li>Quarterly production performance review and system report</li> <li>Annual performance evaluation, including both financial and energy production performance relative to benchmark estimates</li> <li>Annual review and summary of O&amp;M activities, including further O&amp;M recommendations to maximize savings</li> <li>Annual review of available utility tariffs and recommendations</li> </ul> <p><u>Site Visits:</u> None; all work done remotely</p>
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### 4.7 Attend Public Meetings

Sage and a representative from the Clean Coalition will attend public meetings and perform site visits before, during, and after construction to ensure the objectives and goals of the project are met.

Attend Public Meetings	<ul style="list-style-type: none"> <li>Present the RFP to the Town Council</li> <li>Present the final recommended Power Services Provider to the Town Council</li> <li>Two additional public meetings to provide updates with the RFP with the Town Council or Town Committee</li> <li>Three additional public meetings through construction, commissioning and final validation</li> </ul> <p><u>Site Visits:</u> Seven with Town Council or Town Committee.</p>
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## 5. Project Schedule

The following table outlines a typical high-level schedule for the initial phase of services. We have added in optional sub-tasks to the main scope of work outlined in the RFQ/P to provide additional services and added granularity of a typical schedule.

This schedule is reasonable based on our experience and it is possible to condense the timeline in base case scenarios. Sage is willing/able to modify the schedule as needed to fit the Town’s specific goals.

Table 2. Project schedule

Task	Deliverables	Start Date	End Date	Duration (Weeks)	Atherton Response (Weeks)
Task 1. Kick-off Meeting	- Discuss Goals, Needs and Assessment Criteria	2/24/2020	3/2/2020	1	
Task 2 Project Schedule	- Define Schedule for Major Milestones	3/2/2020	3/9/2020	1	
Task 3. Data and Information Collection	- Collect Relevant Information for RFP	3/9/2020	3/23/2020	2	
Town of Atherton to provide project information	- Town of Atherton to provide any necessary information	3/23/2020	3/30/2020		1*
3.1. Investment Grade Feasibility Study	- Modeling and design requirements - Feasibility Report and Recommendations	3/30/2020	5/11/2020	6	
Task 4. Procurement – RFP/RFQ	- Prepare RFP Documents - Distribution	5/11/2020	6/8/2020	4	
RFP Review with Town of Atherton	- Meet with Town Council to review RFP	6/8/2020	6/15/2020		1*
RFP Distribution	- Site walk - Issue Addenda - RFI Response	6/15/2020	7/13/2020	4	
Task 5. Provider Selection	- Preliminary Proposal Summary - Detailed Proposal Evaluation Summary	7/13/2020	8/3/2020	3	
5.1. Interviews of Providers (Optional)	- Interview Questions and Documentation	8/3/2020	8/10/2020	1	

Task	Deliverables	Start Date	End Date	Duration (Weeks)	Atherton Response (Weeks)
Town of Atherton Turnaround	- Meet with Town Council to recommend Power Services Provider	8/10/2020	8/17/2020		1*
Negotiate Contract	- Review Contract for Project Objectives - Participate in Contract Negotiations	8/17/2020	9/14/2020	4	
Task 6. Contract Management and Support					
6.1. Design Review	- Coordinate site visit - Review Final Design	9/14/2020	11/9/2020	8	
6.2. Permitting and Interconnection	- Assist with AJH and Interconnection activities	11/9/2020	11/23/2020	2	
6.3. Construction Support	- Regular project meetings - Track schedule and advise progress - Payments based on progress	11/23/2020	3/15/2021	16	
6.4. Commissioning	- Review Commissioning protocol and inspect systems - Review closeout documentation - Review Punchlist - PTO	3/15/2021	4/26/2021	6	
6.5. Asset Management (Optional)	- Verify System and Financial Performance - As Needed Assistance with Performance Guarantees and Issues	4/26/2021	4/25/2022	52	
Task 7. Public Meetings	- Attend Meetings for RFP Release, Provider Selection, and up to 5 additional meetings for project updates	TBD	TBD	N/A	

\* Meeting scheduled to align with Town Council meeting

## 6. Fee Information

The Sage/Clean Coalition team proposes a fixed-fee-per-task fee structure for this project. With this structure, each major project task, as detailed in the Project Work Plan section above, is individually evaluated for level of effort.

With PPA financing, **part or all of Sage/Clean Coalition’s project fees can be paid out of the project financing, virtually eliminating out-of-pocket expenses to the Town of Atherton for the project.** In this case, the cost of Sage’s fee is amortized across the PPA contract term with a slight increase in the PPA price. Progress payment terms are put into the PPA contract and the PPA vendor pays the Town of Atherton lump sum payments at various project construction milestones. Those fees are then forwarded to Sage, if we have performed our work to the Town’s satisfaction. If the project is terminated (other than for lack of performance by Sage), the Town of Atherton would be responsible for Sage’s outstanding fees for work performed to the date of termination.

The level of effort for this project is based on the following assumptions:

- Estimated Project built cost: \$2.5M
- Project sites where energy measures will be installed: 1
- Project duration: 24 months
- Project complexity: 7 out of 10, to account for microgrid
- Operational-phase Asset Management: 1 year (included in pricing)

Based on these assumptions, we have estimated the project management task costs and number of site visits per task as follows:

Table 3. Project costs by task

Task #	Task Description	Cost	Site Visits
1	Kick-off Meeting	\$1,000	1
2	Project Schedule	\$1,100	0
3	Data and Information Collection	\$5,100	0
3.1	Investment Grade Feasibility Study	\$15,100	1
4	Development of RFP	\$30,900	1
5	Selection of Power Services Provider	\$16,400	1
6	Contract Management and Oversight	\$8,100	1
6.1	Design Review	\$14,700	1
6.2	Permitting and Interconnection Management	\$6,500	0
6.3	Construction Support Management	\$30,100	5
6.4	Commissioning and Validation	\$32,700	3
6.5	1st Yr. Asset Management	\$3,900	0
7	Public Meetings	Incl. above	7 Incl. above
<b>Totals</b>		<b>\$165,600</b>	<b>14</b>

This project scope is for complete turnkey project development and management services from concept to an operational project and represents a **total fee of 6.6% of installed project costs**, assuming a \$2.5M project.

Sage recommends adding a 10% optional contingency to the project management fees to account for changes in scope or schedule, and any unforeseen tasks that may arise.

Lastly, the RFP calls for power generation and backup validation services through operational troubleshoot phases. To support the operational phase of the project, Sage offers an extended Asset Management service for a full 5 years to validate systems are performing to contract, ensure that the PPA contract owner is operating the systems in line with design and contract requirements, and to provide an accurate accounting of energy cost savings at the end of each contract year.

The recommended contingency and extended Asset Management is not included in the pricing above.

## 6.1 Hourly Rates

The following tables list hourly rates for Sage and Clean Coalition team members.

Table 4. Hourly rates for Sage team members

Name	Title	2020	2021
Tom Williard	Managing Principal (Principal in Charge)	\$250	\$265
Brent Johnson	Managing Principal	\$250	\$265
Ilan Fuss	Associate Principal	\$225	\$235
David Seiler	Project Manager	\$225	\$235
Scott Moore	Construction Manager	\$180	\$190
James Dobbs	Analyst/Technician	\$140	\$145

Table 5. Hourly rates for Clean Coalition team members

Team Member	Project Role	Hourly Rate
Craig Lewis	Executive Director/Project Manager (PM)	\$275
Dr. Frank Wasko	Principal Investigator (PI)	\$195
Kenneth Sahn White	Regulatory and Economics Analysis Co-lead	\$150
Wendy Boyle	Contract & Administrative Manager and PI Support	\$140
Bob O'Hagan	Engineering Support	\$150

## 6.2 Billing and Payment Terms

Sage invoices monthly with terms of Net 30. Billing will be on a percentage complete basis of each fixed fee task.

## 6.3 Reimbursable Expenses

Reimbursable expenses are included in the fixed-fee costs above.

Fees assume all deliverable materials for the project will be provided digitally. If printed copies or other reimbursable items outside of the Scope of Work are requested, such items will be billed at cost plus 10%. For time and materials fee structure projects, all reasonable and ordinary expenses are reimbursable at cost plus 10%.

## 6.4 Travel Costs

Travel costs are included in the fixed-fee schedule above for the number of visits noted. Additional site visits or in-person meetings requested by the Town of Atherton will be costed separately and a budget will be agreed upon in writing before additional travel is undertaken.

Table 6. Incidental expenses

Incidental Expenses in Addition to Budget	Cost
Travel per mile from San Rafael CA	\$0.48/mi
Travel per hour	Hourly Rate of Personnel
Supplies	Cost + 10%
Communications	Hourly Rate of Personnel
Reproduction	Cost + 10%
Additional Meetings	Hourly Rate of Personnel
Negotiation Fees	Hourly Rate of Personnel

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## 7. References

### 7.1 Selected Sage Projects



#### Ventura County Community College District - 8 MWp Solar PV PPA on 3 Sites | California

- 8 MWp of Solar PV Shade Structures on 3 District Sites in Moorpark, Oxnard, and Ventura
- Power Purchase Agreement (PPA)
- Operational Winter 2020

#### Background

In August 2018, Ventura County Community College District (VCCCD) hired Sage to perform an analysis of the project design and estimate lifetime financial and environmental performance of a three-site solar PPA project contract proposed by Forefront Power through the SPURR REAP program. The capital cost of the project is approximately \$23M, but the District sought to leverage third-party financing and Federal Investment Tax Credit (ITC) through a PPA to minimize upfront cost. When construction is complete, the PV systems are expected to provide approximately 475,000 SF of parking shade across the three District campuses.

After the District decided to move forward with the solar project, Sage assisted with successful contract negotiations lending technical contracting support, and reviewing contract documents for technical issues, consistency, and completeness. Sage is currently providing owner's representative services to the District through the design, construction, commissioning and operational phases of the solar project. Sage will also be helping coordinate the solar project with existing battery energy storage systems at each campus (total of 1 MW/2 MWh); and providing planning and technical expertise for installation of Electric Vehicle (EV) charging stations and associated electrical infrastructure at each campus. Additionally, Sage will provide asset management services to monitor operational and financial performance of the PV and BESS systems through 2025.

#### Services Provided

Feasibility Analysis • Contract Negotiations and Support • Design, Construction, and Commissioning Support  
• Electric Vehicle Planning and Technical Expertise • Asset Management

#### Reference

David El Fattal, Vice Chancellor, Business & Administrative Services, 805.652.5536, DElfattal@vcccd.edu



**Temecula Valley USD – 6.2 MWp Solar PV on 20 Sites and 1.3 MWh of Storage on 5 Sites**

- 6.2 MWp of solar PV ground-mount and shade structures installed on 20 District sites
- 1.3 MW/2.6 MWh of battery energy storage and demand management at five District sites
- Estimated \$36 million in savings over 25 years

**Background**

Sage worked with Temecula Valley USD to provide our full suite of project services, resulting in 6.2 MWp of solar PV ground-mount and shade structures installed on 20 District sites, with 1.3 MW/2.6 MWh of energy storage and demand management at five District sites. We assisted Temecula in negotiating a PPA that will result in an estimated \$36 million in savings over 25 years.

Working on an abbreviated schedule, Sage performed a feasibility analysis, secured California Solar Initiative (CSI) incentives for the District, and developed an RFP to solicit solar design-build-finance proposals in late 2014. After detailed review of proposals and contract negotiations in early 2015, the District awarded SolarCity (now Tesla) the PPA contract to construct elevated shade-structure and ground-mount solar installations at 20 District sites. The project includes 1.3 MW of demand management at five of the sites, which received Self-Generation Incentive Program (SGIP) incentives. Sage continued to provide design review and technical assistance through construction. Follow-on services include enhanced commissioning and first-year performance review. The project will generate an estimated \$20+ million in electricity cost savings over its life, with carbon offsets in excess of 70,000 tons.

Sage’s work to achieve the District’s energy goals on this project included an independent feasibility review, RFP development and administration, proposal review and vendor selection, financial and performance modeling of selected energy projects, design review, construction support, commissioning oversight, Prop. 39 vendor evaluation and contracting, and ongoing asset performance management.

**Services Provided**

Feasibility Planning • Financial & Performance Modeling • RFP / Vendor Selection • Contracting Assistance • Design Review • Construction Oversight • Commissioning Verification • Operations Asset Management

**Reference**

**Janet Dixon**, Director of Facilities, TVUSD, (951) 506-7914, jdixon@tvusd.k12.ca.us

## 7.2 Sage Project List

See Table 7 for a list of Sage projects from the past three years that are similar to the proposed Atherton project in size and scope.

Table 7. Selected Sage projects from the past three years

Project	Client	Team Members <sup>1</sup>	Value (\$M)	Contact	Services Provided <sup>2</sup> <i>Regulatory Assistance</i>
24.5 MWp Solar PV PPA on 27 Sites	Kern HSD	DW, TW, IF, JD, SM	\$80+M	Mike Hamlin, Asst. Director of Maintenance & Operations, 661.827.3181, mike_hamlin@kernhigh.org Richard J. Ruiz, Director of Business Services, 661.827.3122, rruiz@kernhigh.org	Full Project Services, PPA, ESCO <i>DSA, CEQA, Utility Interconnection assistance</i>
4.2 MWp Solar PV PPA	Regional San	BJ, TW, IF, SM	\$12M	Steve Nebozuk, Program Manager, Regional San (916) 876-6118, nebozuks@sacsewer.com	Full Project Services, PPA <i>CEQA, Utility Interconnection assistance</i>
Solar PV and Storage Project Development	San Mateo CCCD	TW	\$4M	Joe Fullerton, Energy and Sustainability Manager 650-358-6848, fullertonj@smccd.edu	Feasibility, RFP, Procurement, Contracting Support, CEC EPIC Grant <i>Utility Interconnection and SGIP Grant Assist</i>
Solar PV and Storage Project Development	Contra Costa CCD	TW	\$15M	Tracy Marcial, Energy Manager, CCCCD (925) 229-6933, tmarcial@4cd.edu	Vendor proposal review and negotiation, Financial Modeling, Decision Support <i>Utility Interconnection assistance, SGIP</i>
8 MWp Solar PV PPA on 3 Sites	Ventura CCD	AG, BJ, JD	\$24M	David El Fattal, Vice Chancellor, Business & Administrative Services, 805.652.5536, DElfattal@vccd.edu	Full Project Services, PPA <i>DSA, Utility Interconnection assistance</i>

Project	Client	Team Members <sup>1</sup>	Value (\$M)	Contact	Services Provided <sup>2</sup> <i>Regulatory Assistance</i>
6.2 MWp of solar PV on 20 sites, 1.3 MWh of energy storage and demand mgmt. at 5 sites	Temecula USD	DW, BJ, SM, TW	\$21.1M	Janet Dixon, Director of Facilities, TVUSD (951) 506-7914, jdixon@tvusd.k12.ca.us	Full Project Services, PPA <i>DSA, CEQA, Utility Interconnection assistance, SGIP</i>
9 MW Solar PV	San Diego USD	BJ, AG, SM, IF, JD	\$40M	Scott Thomas, Architect and Design Team Lead, (619) 528-1199, scott@ztarc.com	Phase 1, 2, 3 - Full Project Services, GO Bond <i>DSA, CEQA, Utility Interconnection assistance</i>
Solar PV Design Guide	San Diego USD	BJ, SM, TW, IF, JD	NA	Scott Thomas, Architect and Design Team Lead, (619) 528-1199, scott@ztarc.com	Developing Solar PV Design Guide for the District – GO Bond
6.7 MW Solar PV RES-BCT	Rancho California Water District	IF, BJ, JD	NA	Tony Fowler, Water Systems Analyst , (951) 296-6963, fowlerlt@ranchowater.com	Performance Management
1.1 MW Solar PV PPA	City of Oceanside, Wastewater Div.	DW	\$4.5M	Jason Dafforn, Water/Wastewater Project Manager (No longer with the City of Oceanside)	PPA Contracting Assistance
750 kW Solar PV	Riverside USD	DW, JD	\$2.4M	Ken Mueller, Director of Maintenance & Operations, (951) 788-7469 ext. #84001, KMueller@rusd.k12.ca.us	Feasibility, RFP, Proposal Review Vendor Selection, Financial Modeling
5.3 MW Solar PV	Panama Buena Vista USD	IF, SM	\$28.8M	Glenn Imke, Asst. Superintendent Business Services - (661) 831-8331, gimke@pbvUSD.net	Feasibility, Proposal Review, Commissioning Verification, Performance Mgmt.
10.5 MW Community Choice Local Generation Solar PV	Marin Clean Energy	BJ, TW, SM, JD	\$17.5M	David Potovsky, Power Supply Contracts Manager - (415) 464-6652, dpotovsky@mcecleanenergy.org	Owner's Rep: Design Review, Construction Support, Commissioning <i>CAISO, Utility Interconnection assistance</i>

Project	Client	Team Members <sup>1</sup>	Value (\$M)	Contact	Services Provided <sup>2</sup> <i>Regulatory Assistance</i>
3.3 MW Solar PV	San Mateo UHSD	IF, TW, DW, BJ	\$15.5M	Elizabeth McManus, Dep. Superintendent Business Services - (650) 558-2204, emcmanus@smuhdsd.org	Full Project Services <i>CSI Program, DSA, Utility Interconnection assistance</i>
3.3 MW Solar PV	San Ramon Valley USD	BJ, SM, TW	\$13.5M	Gary Black, Asst. Superintendent Facilities & Ops - (925) 552-2960, gblack@srvusd.net	Full Project Services <i>DSA, CEQA, Utility Interconnection</i>
2.3 MW Solar PV	Livermore Valley JUSD	DW, BJ, SM	\$13.5M	Bruce Wile, Dir. Maintenance & Ops - (925) 606-3319, bwilke@lvjUSD.k12.ca.us	Full Project Services <i>DSA, CEQA, Utility Interconnection</i>
3.6 MW Solar PV	Pittsburg USD	DW, TW, BJ	\$13.0M	Enrique Palacios, Dep. Superintendent Business Services - (925) 473-2302, epalacios@pittsburg.k12.ca.us	Contracting, Cx Certification, Fuel Cells, PV Evaluation <i>CSI Program, Utility Interconnection assistance</i>
1.9 MW Solar PV	City of Ontario	BJ, TW, IF, JD	\$10.8M	Julie Bork, Housing Director - (909) 395-2307, jbjork@ci.ontario.ca.us	Full Project Services, EV Charging
2.2 MW Solar PV	Santa Maria JUHSD	BJ, SM, TW, JD	\$8.0M	Reese Thompson, Dir. Facilities & Ops - (805) 922-4573, rthompson@smjuhsd.org	Full Project Services <i>DSA, Utility Interconnection assistance</i>
1.4 MW Solar PV	Novato USD	DW, SM, TW, JD	\$6.7M	Yancy Hawkins, Asst. Superintendent Business & Operations - (415) 493-4260, yhawkins@nUSD.org	Full Project Services <i>DSA, CEQA, Utility Interconnection</i>
1.6 MW Solar PV	Union SD	BJ, SM, IF, TW, JD	\$5.6M	Rita Sohal, Asst. Superintendent - (408) 377-8010 ext. 44202, sohalr@unionsd.org	Full Project Services <i>DSA, CEQA, Utility Interconnection</i>
1.4 MW Solar PV	Martinez USD	BJ, DW, SM, IF, TW	\$5.6M	Helen Rossi - Asst. Superintendent Administrative Services - (925) 335-5925, hrossi@martinez.k12.ca.us	Full Project Services <i>DSA, Utility Interconnection assistance</i>
2 MW Solar PV	Taft UHSD	IF, SM, JD	\$4.4M	Rocky O'Neill, MOT Manager - (661) 763-2319 ext. 321, roneill@taft.k12.ca.us	Full Project Services <i>DSA, CEQA, Utility Interconnection assistance</i>
800 kW Solar PV	Rincon Valley USD	IF, SM, BJ, JD	\$3.6M	Dr. Joseph Pandolfo, Dep. Superintendent - (707) 542-7375, jpandolfo@rvusd.org	Full Project Services <i>DSA, CEQA, Utility Interconnection</i>

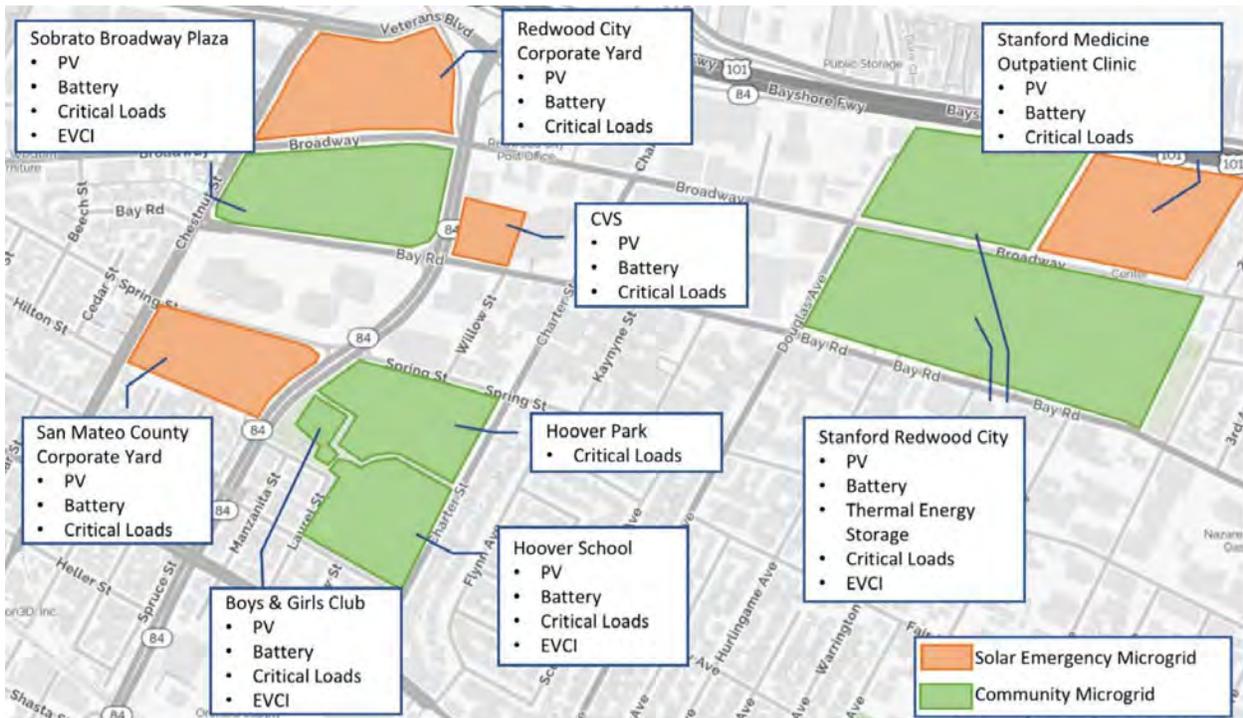
Project	Client	Team Members <sup>1</sup>	Value (\$M)	Contact	Services Provided <sup>2</sup> <i>Regulatory Assistance</i>
720 kW Solar PV	Benicia USD	BJ, SM, TW	\$3.0M	Charles Young, Superintendent - (707) 747-8300, ext. 1210, bjensen@beniciaunified.org	Full Project Services <i>DSA, Utility Interconnection assistance</i>
1.2 MW Solar PV	Moreland SD	BJ, DW	\$2.8M	Patti Ernsberger, Asst. Superintendent Business Services - (408) 874-2900, pernsberger@moreland.org	Full Project Services <i>DSA, Utility Interconnection assistance</i>
1.3 MW Solar PV	City of Shafter	DW, IF	\$2.5M	Michael James, Public Works Dir. - (661) 746-5002, ext. 5018, mjames@shafter.com	Feasibility, RFP, Proposal Evaluation, Vendor Selection, Contracting Assistance
600 kW Solar PV PPA	County of San Joaquin	IF, TW, BJ, SM	\$2.5M	Jim Stone, Dep. Dir., Dept of Public Works - (209) 468-3031, jstone@sjgov.org	Full Project Services <i>CEQA, Utility Interconnection assistance</i>
550 kW Solar PV	Gonzales USD	IF, SM	\$2.3M	Mary Dawson, Asst. Superintendent Business Services - (831) 675-0100, mdawson@gonzales.k12.ca.us	Full Project Services <i>Utility Interconnection assistance</i>
300 kW Solar PV	Larkspur-Corte Madera SD	IF, SM, DW, TW	\$2.0M	Paula Rigney, CBO - (415) 927-6960 ext. 3206, prigney@lcmschools.org	Full Project Services <i>DSA, Utility Interconnection</i>
1 MW Solar PV, Microgrid, EV Charging Infrastructure	Redwood City SD	DW, SM, TW, JD	\$3.6M	Donald Dias, Dir. Facilities - (650) 482-2238, ddias@rcsdk8.net	Full Project Services, Electric Bus Charging Infrastructure <i>DSA, CEC Grant, CEQA, Utility Interconnection assistance</i>
650 kW Solar PV	San Carlos USD	DW, SM, TW, JD	\$1.8M	Robert Porter, COO - (650) 508-7333 ext. 930, srporter@scsdk8.org	Full Project Services <i>DSA, CEC Grant, CEQA, Utility Interconnection</i>
274 kW Solar PV	Anderson Valley USD	DW, BJ	\$1.5M	Stella Bratsis, Business Mgr. - (707) 895-3774, sbratsis@avpanthers.org	Full Project Services <i>DSA, CSI Incentives, Utility Interconnection</i>

1. TW-Tom Williard, DW-David Williard, BJ-Brent Johnson, IF-Ilan Fuss, AG-Asresh Guttikonda, SM-Scott Moore, JD-James Dobbs

2. Full Project Services include feasibility, procurement, contracting, design/construction/commissioning oversight and performance management

### 7.3 Selected Clean Coalition Projects

Our organization has had significant impact on shaping policies and programs that enable the deployment of clean local energy to address climate change and secure economic, environmental, and resilience benefits for communities. Through cutting-edge programs, policies, and initiatives, we have helped bring nearly 3 gigawatts of clean local energy online — enough to provide peak power to nearly 3 million American homes. Following are three key projects completed within the last five years that are helping our clients achieve their climate action, clean energy, and resilience goals and objectives, but will help shape the renewable energy industry in California and beyond.



**PAEC (2016 – 2018; Client: California Energy Commission (CEC); project cost - \$1,649,105):** In 2016, the Clean Coalition was awarded a grant by the CEC for the PAEC. An Advanced Energy Community is 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. PAEC was a multi-year, multi-faceted project which focused on reducing peak demand in southern San Mateo County by 25 MW with DER, streamlining permitting with local AHJs, streamlining utility interconnection with PG&E, and creating model projects and project elements — such as Community Microgrids and Solar Emergency Microgrids — focused on increasing economic, environmental, and resilience benefits that can be replicated throughout California and beyond.

Services the Clean Coalition provided that are relevant to this proposed scope of work include:

- Performed a technical/economic feasibility assessment for the Town of Atherton's new Civic Center preliminary design concept to identify key sustainable strategies that assist in the lowering of resource demand, inclusive of energy, water, material, and carbon. The goal of this study was to identify feasible, scalable, and regional strategies that can be easily replicated, while serving as an educational tool for the broader community.
- Developed a Master Community Design showcasing the primary elements of the Peninsula Advanced Energy Community. The Master Community Design *Redwood City Community Microgrid: Innovation and Resilience* encompasses six site locations: Stanford Redwood City real estate development, Hoover Cluster (Hoover Community School, Boys & Girls Club of the Peninsula, Redwood City, Hoover Park), Redwood City Corporate Yard, and San Mateo County Corporate Yard.
- Planned and designed a Solar Emergency Microgrid to provide indefinite, renewables-driven backup power to critical community facilities including the Hoover Community School, part of the Redwood City School District.
- Planned and designed an EVCI master plan for the PAEC region.
- Identifying permitting and interconnection best practices for advanced energy technologies and DER that can be standardized for use throughout California.
- Creating effective tools for analyzing the costs and benefits of Advanced Energy Communities (AECs) and associated DER projects.
- Developing comprehensive financial and business models, including a Green Lease Agreement, to help make AECs financially attractive to similar community developments without advanced energy attributes.

*Contact:* Rachel Salazar, Energy Commission Specialist, (916) 445-5316,  
Rachel.Salazar@energy.ca.gov

**VMware Community Microgrid (2018; Client: VMware; project cost - \$35,000):** In 2018 the Clean Coalition performed a feasibility assessment and engineering design for a Community Microgrid at the VMware headquarters in Palo Alto, CA. The VMware Community Microgrid demonstrates large-scale deployment of local renewable energy and energy storage for energy cost savings, business continuity in the event of a grid outage, and a public private partnership between and private company and the City of Palo Alto. This resilient solution will provide renewables-driven backup power to on-site emergency services and sheltering areas, office buildings, and research and development labs. The campus's annual peak load is 8.5 MW, and its average monthly load is 2,800 MWh. The solar and energy storage combination planned for the campus will potentially obviate the need for a backup fossil-fuel generator. Three design scenarios are being considered for the Community Microgrid: a small system that powers the loads behind one utility meter, a medium system that powers several buildings and utility meters, and a large system that comprises the entire campus. All designs also include large EV charging installations and plumbing for future installations to support zero-carbon commuting.

*Contact:* Natasha Tuck, Senior Sustainability Manager, (650) 427-6428, ntuck@vmware.com



**City of Palo Alto RFP and lease agreement (2016 – 2017; Client: City of Palo Alto; project cost - \$25,000):** 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. The FIT program enabled CPAU staff to determine the value of local solar generation and design a program to streamline deployment of local solar installations.

The Clean Coalition also [designed a Request for Proposal \(RFP\)](#) and a [lease agreement](#), between the City and a solar developer. On January 25, 2016, the Palo Alto City Council approved a lease agreement with Komuna Energy to deploy 1.3 MW of solar from 5 city owned parking structures. The RFP and lease agreement were written to encourage proposals that included EVCI deployment. Komuna planned to install 18 electric vehicle chargers and lay the wiring for an additional 80 charging stations. 2017 saw [the unveiling](#) of the new solar carport installations and EVCI, which were possible because of the Palo Alto FIT that the Clean Coalition helped establish.

The Clean Coalition continues to advise the City of Palo Alto on multiple energy-related fronts, including establishing a Solar Emergency Microgrid for critical facilities associated with the City's Office of Emergency Services.

*Contact:* Mark Sartor, Public Works Director, (650) 329-2270, [mike.sartor@cityofpaloalto.org](mailto:mike.sartor@cityofpaloalto.org)



1/30/2020

Level of Effort, Task Costs Fee Calculation Worksheet

Professional Support Services for Development of a Power Purchase Agreement for Solar and Solar Storage (Micro-Grid) at Atherton Town Center

Tasks	Hourly Rate			Schedule			Managing Principal	Sr. Project Manager	Construction Manager	Analyst	Program Support Specialist	Project Admin.	Total	Hours Budget	Airfare	Mileage	Meals	Hotel	Rental Car	Travel Budget	Sage Budget	Sub 1 Total	Sub 2 Total	Sub Mark Up	Subs Budget	Combined Sage+Sub Budget	Percent of Budget	T&M NTE
	2020	From	To	Months	\$250	\$220	\$180	\$140	\$100	\$80	Hours	Total	\$	\$1	\$0.580	\$40	\$150	\$50	Total	Total	15%	Total	Total	Total	Total	%	Totals	
<b>INVESTMENT GRADE FEASIBILITY STUDY (IGFS)</b>				<b>0</b>	5	27	0	52	4	1	89	\$14,897	0	48	0	0	0	0	\$28	\$14,925	\$0	\$0	\$0	\$0	\$14,925	11%	\$14,925	
1. Kickoff Meeting					0.5						0.5	\$116								\$0	\$116			\$0	\$0	\$116	0%	\$116
1.1. Set goals, scope, schedule, deliverables for IGFS/Project						1.4					1.4	\$307								\$0	\$307			\$0	\$0	\$307	0%	\$307
1.2. Site walks to gather information						2.0					2.0	\$440		48			0			\$28	\$468			\$0	\$0	\$468	0%	\$468
2. Collect/update service information and consumption estimates						1.9		5.6			7.4	\$1,190								\$0	\$1,190			\$0	\$0	\$1,190	1%	\$1,190
3. Determine capacity of electrical service								1.9			1.9	\$260								\$0	\$260			\$0	\$0	\$260	0%	\$260
2. Detailed Value of Resiliency and resource prioritization					1.9						1.9	\$465								\$0	\$465			\$0	\$0	\$465	0%	\$465
2.1. Critical, Important, and Optional Loads						1.9		7.4			9.3	\$1,450								\$0	\$1,450			\$0	\$0	\$1,450	1%	\$1,450
2.2. Value of Resiliency analysis (VoR)						3.7		3.7			7.4	\$1,339								\$0	\$1,339			\$0	\$0	\$1,339	1%	\$1,339
2.3. Prioritization of generation assets						0.9		0.9			1.9	\$335								\$0	\$335			\$0	\$0	\$335	0%	\$335
4. Conceptual system designs					0.5						0.5	\$116								\$0	\$116			\$0	\$0	\$116	0%	\$116
4.1. Detailed Solar PV system designs						1.9		2.8			4.6	\$800								\$0	\$800			\$0	\$0	\$800	1%	\$800
4.2. Detailed ESS system designs						1.9		1.9			3.7	\$669								\$0	\$669			\$0	\$0	\$669	0%	\$669
4.3. Detailed Microgrid system designs					0.9	1.9		4.6			7.4	\$1,292								\$0	\$1,292			\$0	\$0	\$1,292	1%	\$1,292
4.5. Perform resource modeling to optimize asset usage						0.9		5.6			6.5	\$985								\$0	\$985			\$0	\$0	\$985	1%	\$985
4.6. Review component type and placement with Client, update designs						3.7		3.7			7.4	\$1,339								\$0	\$1,339			\$0	\$0	\$1,339	1%	\$1,339
5. Utility tariff modeling and optimization											0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
5.1. Create/update modeling scenarios using ETB								1.9			1.9	\$260								\$0	\$260			\$0	\$0	\$260	0%	\$260
5.2. Model year 1 scenarios								0.9			0.9	\$130								\$0	\$130			\$0	\$0	\$130	0%	\$130
5.3. Optimize for grant, tariff, environmental, financial performance								3.7			3.7	\$521								\$0	\$521			\$0	\$0	\$521	0%	\$521
6. Lifetime financial returns modeling											0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
6.1. Variable sensitivity analysis								1.9			1.9	\$260								\$0	\$260			\$0	\$0	\$260	0%	\$260
6.2. Monte Carlo analysis								1.9			1.9	\$260								\$0	\$260			\$0	\$0	\$260	0%	\$260
6.3. Model output graphing/visualization								1.9			1.9	\$260								\$0	\$260			\$0	\$0	\$260	0%	\$260
7. Feasibility Study Report					0.9						0.9	\$232								\$0	\$232			\$0	\$0	\$232	0%	\$232
7.1. Draft IGFS Report						1.9		0.9		0.9	3.7	\$614								\$0	\$614			\$0	\$0	\$614	0%	\$614
7.2. Review report draft with Client						1.9					1.9	\$409								\$0	\$409			\$0	\$0	\$409	0%	\$409
7.3. Finalize and publish IGFS					0.5	0.9		0.5		0.5	2.3	\$423								\$0	\$423			\$0	\$0	\$423	0%	\$423
8. Task Administrative Support									4.2		4.2	\$424								\$0	\$424			\$0	\$0	\$424	0%	\$424
<b>RFP PROCESS SUPPORT</b>				<b>0</b>	12	47	0	24	5	12	100	\$18,183	0	48	0	0	0	0	\$28	\$18,210	\$0	\$0	\$0	\$0	\$18,210	14%	\$18,210	
1. Kickoff Meeting					0.0						0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
1.1. Set goals, scope, schedule, deliverables					3.2	3.4		3.2			9.8	\$1,993								\$0	\$1,993			\$0	\$0	\$1,993	1%	\$1,993
2. Prepare RFQ/P Materials											0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
2.1. High Level Site Plans, all sites (if not already done)					6.4						6.4	\$1,596								\$0	\$1,596			\$0	\$0	\$1,596	1%	\$1,596
2.1.1. Draft component placement: panel and component areas, sizes, meter locations											0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
2.1.2. Review component Mounting and Placements with Client											0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
2.1.3. Finalize component Mounting and Placements								2.0			2.0	\$280								\$0	\$280			\$0	\$0	\$280	0%	\$280
2.1.4. Create Site Info sheets for RFP					3.2	6.4		9.6			9.6	\$1,596								\$0	\$1,596			\$0	\$0	\$1,596	1%	\$1,596
2.2. Create RFP Document List					0.0						0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
2.3. Prepare Specifications and Criteria						1.3				2.6	3.8	\$485								\$0	\$485			\$0	\$0	\$485	0%	\$485
2.4. Prepare Proposal Forms (Word, Excel)								9.6			9.6	\$1,341								\$0	\$1,341			\$0	\$0	\$1,341	1%	\$1,341
2.5. Prepare RFQ/P Main Body						6.4				6.4	12.8	\$1,915								\$0	\$1,915			\$0	\$0	\$1,915	1%	\$1,915
2.6. Prepare Contractor Forms						0.0				0.0	0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
2.7. Assemble FINAL RFP/Q					1.3						1.3	\$319								\$0	\$319			\$0	\$0	\$319	0%	\$319
2.7.1. Review draft documents with Client staff and legal counsel						1.3		0.6			1.9	\$370								\$0	\$370			\$0	\$0	\$370	0%	\$370
2.7.2. Incorporate comments						1.3		1.3			2.6	\$460								\$0	\$460			\$0	\$0	\$460	0%	\$460
2.7.3. Finalize RFQ/P						1.3		0.6		2.6	4.5	\$575								\$0	\$575			\$0	\$0	\$575	0%	\$575
3. RFP Distribution											0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
3.1. Create vendor distribution list						0.0					0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
3.2. Create cloud-based document distribution						0.0					0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
3.3. Release RFQ/P and notify vendors						0.0				0.0	0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
3.4. Follow up calls to vendors										0.0	0.0	\$0								\$0	\$0			\$0	\$0	\$0	0%	\$0
3.5. Prepare Pre-bid materials and conduct site walks						25.5					25.5	\$5,618		48			0			\$28	\$5,646			\$0	\$0	\$5,646	4%	\$5,646
3.6. Issue Addenda					1.0						1.0	\$239								\$0	\$239			\$0	\$0	\$239	0%	\$239
3.6.1. Collect vendor questions online and at site walks						1.0					1.0	\$211								\$0	\$211			\$0	\$0	\$211	0%	\$211
3.6.2. Draft addenda with responses						1.9					1.9	\$421								\$0	\$421			\$0	\$0	\$421	0%	\$421
3.6.3. Review addenda with Client						1.0					1.0	\$211								\$0	\$211			\$0	\$0	\$211	0%	\$211
3.6.4. Issue addenda as needed										1.0	1.0	\$77								\$0	\$77			\$0	\$0	\$77	0%	\$77
4. Task Administrative Support									4.8		4.8	\$477								\$0	\$477			\$0	\$0	\$477	0%	\$477

	Hourly Rate		Schedule	Managing Principal	Sr. Project Manager	Construction Manager	Analyst	Program Support Specialist	Project Admin.	Total	Hours Budget	Airfare	Mileage	Meals	Hotel	Rental Car	Travel Budget	Sage Budget	Sub 1 Total	Sub 2 Total	Sub Mark Up	Subs Budget	Combined Sage+Sub Budget	Percent of Budget	T&M NTE
	2020	From To																							
<b>VENDOR SELECTION</b>			0	3	34	0	24	3	0	64	\$11,930	0	48	0	0	0	\$28	\$11,958	\$0	\$0	\$0	\$0	\$11,958	9%	\$11,958
1. Initial Bid Screening (create bid analysis short list)				2.3						2.3	\$573						\$0	\$573			\$0	\$0	\$573	0%	\$573
1.1. Review proposals for qualification requirements, RFP conformance, pricing					2.3		4.6			6.9	\$1,146						\$0	\$1,146			\$0	\$0	\$1,146	1%	\$1,146
1.2. Create bid analysis short list recommendation					2.3		2.3			4.6	\$825						\$0	\$825			\$0	\$0	\$825	1%	\$825
1.3. Determine final bid analysis short list with Client					4.6					4.6	\$1,009						\$0	\$1,009			\$0	\$0	\$1,009	1%	\$1,009
2. Detailed Bid Analysis (on bid analysis short list, 3 proposals)										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
2.1. Conduct quantitative proposal analysis					9.2		9.2			18.4	\$3,308						\$0	\$3,308			\$0	\$0	\$3,308	2%	\$3,308
2.2. Conduct qualitative proposal analysis using Sage financial model					0.5		1.8			2.3	\$358						\$0	\$358			\$0	\$0	\$358	0%	\$358
2.3. Create Scoring and Ranking based on weighted criteria					1.1		4.6			5.7	\$894						\$0	\$894			\$0	\$0	\$894	1%	\$894
3. Interview Short Listed Proposers										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
3.1. Determine interview short list with Client					0.9					0.9	\$202						\$0	\$202			\$0	\$0	\$202	0%	\$202
3.2. Prepare interview materials and notify vendors/schedule interviews					1.8		0.9			2.8	\$532						\$0	\$532			\$0	\$0	\$532	0%	\$532
3.3. Interview short listed proposers					3.7					3.7	\$807						\$0	\$807			\$0	\$0	\$807	1%	\$807
3.4. Gather interview notes and create final vendor order with Client					1.8					1.8	\$403						\$0	\$403			\$0	\$0	\$403	0%	\$403
4. Select Vendor				0.9						0.9	\$229						\$0	\$229			\$0	\$0	\$229	0%	\$229
4.1. Create Vendor Selection Report					2.8		0.9			3.7	\$734						\$0	\$734			\$0	\$0	\$734	1%	\$734
4.2. Present Vendor Selection Report and Recommendation to Client					1.8					1.8	\$403		48		0		\$28	\$431			\$0	\$0	\$431	0%	\$431
4.3. Notify vendors					0.9					0.9	\$202						\$0	\$202			\$0	\$0	\$202	0%	\$202
5. Task Administrative Support								3.1		3.1	\$306						\$0	\$306			\$0	\$0	\$306	0%	\$306
<b>CONTRACTING SUPPORT</b>			0	2	24	0	8	2	0	35	\$6,978	0	0	0	0	0	\$0	\$6,978	\$0	\$0	\$0	\$0	\$6,978	5%	\$6,978
1. Contract review and negotiation				2.0						2.0	\$493						\$0	\$493			\$0	\$0	\$493	0%	\$493
1.1. Kickoff and negotiation meetings (virtual)					3.9					3.9	\$869						\$0	\$869			\$0	\$0	\$869	1%	\$869
1.2. Review vendor contract redlines with Client legal counsel					3.9					3.9	\$869						\$0	\$869			\$0	\$0	\$869	1%	\$869
1.3. Merge review notes and return to vendor (repeat as necessary)					3.9					3.9	\$869						\$0	\$869			\$0	\$0	\$869	1%	\$869
1.4. Finalize contract documents					7.9					7.9	\$1,737						\$0	\$1,737			\$0	\$0	\$1,737	1%	\$1,737
2. Remodel project financial and environmental performance (if necessary)							7.9			7.9	\$1,105						\$0	\$1,105			\$0	\$0	\$1,105	1%	\$1,105
3. Prepare necessary contract approval findings					3.9					3.9	\$869						\$0	\$869			\$0	\$0	\$869	1%	\$869
4. Task Administrative Support								1.7		1.7	\$168						\$0	\$168			\$0	\$0	\$168	0%	\$168
<b>DESIGN REVIEW</b>			0	3	16	43	3	3	0	67	\$12,491	0	48	0	0	0	\$28	\$12,518	\$0	\$0	\$0	\$0	\$12,518	9%	\$12,518
1. Design Review for compliance with RFP, contracts, permitting				2.8						2.8	\$705						\$0	\$705			\$0	\$0	\$705	1%	\$705
1.1. Conduct design review meeting and site walks with vendor engineering					11.3	11.3				22.6	\$4,510		48		0		\$28	\$4,538			\$0	\$0	\$4,538	3%	\$4,538
1.2. Attend weekly design meetings (virtual)						22.6				22.6	\$4,059						\$0	\$4,059			\$0	\$0	\$4,059	3%	\$4,059
1.3. Review vendor 30% design submittals					1.4	2.8				4.2	\$817						\$0	\$817			\$0	\$0	\$817	1%	\$817
1.4. Review vendor 60% design submittals					1.4	2.8				4.2	\$817						\$0	\$817			\$0	\$0	\$817	1%	\$817
1.5. Review vendor 90% design submittals					1.4	2.8				4.2	\$817						\$0	\$817			\$0	\$0	\$817	1%	\$817
2. Remodel project financial and environmental performance (if necessary)							2.8			2.8	\$395						\$0	\$395			\$0	\$0	\$395	0%	\$395
3. Review vendor Cx protocols for industry best practice						0.3				0.3	\$51						\$0	\$51			\$0	\$0	\$51	0%	\$51
4. Task Administrative Support								3.2		3.2	\$319						\$0	\$319			\$0	\$0	\$319	0%	\$319
<b>PERMITTING AND INTERCONNECTION MANAGEMENT</b>			0	0	9	0	9	1	0	19	\$3,324	0	0	0	0	0	\$0	\$3,324	\$0	\$0	\$0	\$0	\$3,324	2%	\$3,324
1. Ensure schedule and submittals tracking with AHJs, Fire, others					3.0					3.0	\$659						\$0	\$659			\$0	\$0	\$659	0%	\$659
2. Review and update interconnection agreements with electrical utility					3.0		6.0			9.0	\$1,497						\$0	\$1,497			\$0	\$0	\$1,497	1%	\$1,497
3. Manage and report on interconnection and grid impact study					3.0		3.0			6.0	\$1,078						\$0	\$1,078			\$0	\$0	\$1,078	1%	\$1,078
4. CEQA support, if contracted										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
4.1. Compile all necessary CEQA documentation and notices										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
4.2. Prepare Board resolution for filing of CEQA documentation										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
4.3. Assist with filing CEQA documents with County										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
5. Task Administrative Support								0.9		0.9	\$90						\$0	\$90			\$0	\$0	\$90	0%	\$90
<b>TECHNICAL CONSTRUCTION SUPPORT / MANAGEMENT</b>			0	0	4	128	2	7	0	141	\$24,957	0	288	0	0	0	\$167	\$25,124	\$0	\$0	\$0	\$0	\$25,124	19%	\$25,124
1. Technical CM Support (6-month construction)										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
1.1. Attend weekly CM meetings (virtual)						53.8				53.8	\$9,678						\$0	\$9,678			\$0	\$0	\$9,678	7%	\$9,678
1.2. Monthly site walks/inspections						53.8				53.8	\$9,678						\$167	\$9,845			\$0	\$0	\$9,845	7%	\$9,845
1.3. Review Change Orders and prepare responses					2.2	13.4				15.7	\$2,912						\$0	\$2,912			\$0	\$0	\$2,912	2%	\$2,912
1.4. Respond to issues as they arise					2.2	6.7				9.0	\$1,703						\$0	\$1,703			\$0	\$0	\$1,703	1%	\$1,703
2. Remodel project financial and environmental performance (if necessary)							2.2			2.2	\$314						\$0	\$314			\$0	\$0	\$314	0%	\$314
3. Task Administrative Support								6.7		6.7	\$672						\$0	\$672			\$0	\$0	\$672	0%	\$672
<b>COMMISSIONING VERIFICATION / OVERSIGHT</b>			0	4	8	90	0	5	0	107	\$19,397	0	96	0	0	0	\$56	\$19,453	\$0	\$0	\$0	\$0	\$19,453	14%	\$19,453
1. Vendor Cx Reports										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
1.1. Review reports and provide feedback						7.5				7.5	\$1,357						\$0	\$1,357			\$0	\$0	\$1,357	1%	\$1,357
1.2. Ensure Cx report follow up						7.5				7.5	\$1,357						\$0	\$1,357			\$0	\$0	\$1,357	1%	\$1,357
2. Punch List										0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
2.1. Provide input to punch list						7.5				7.5	\$1,357						\$0	\$1,357			\$0	\$0	\$1,357	1%	\$1,357
2.2. Inspect punch list items as addressed						7.5				7.5	\$1,357						\$0	\$1,357			\$0	\$0	\$1,357	1%	\$1,357
3. Cx Verification				3.8						3.8	\$943						\$0	\$943			\$0	\$0	\$943	1%	\$943
3.1. Visual inspections of all systems						30.2				30.2	\$5,429		48		0		\$28	\$5,457							

	Hourly Rate		Schedule		Managing Principal \$250	Sr. Project Manager \$220	Construction Manager \$180	Analyst \$140	Program Support Specialist \$100	Project Admin. \$80	Total Hours	Hours Budget Total	Airfare \$1	Mileage \$0.580	Meals \$40	Hotel \$150	Rental Car \$/Day \$50	Travel Budget Total	Sage Budget Total	Sub 1 Total	Sub 2 Total	Sub Mark Up 15%	Subs Budget Total	Combined Sage+Sub Budget Total	Percent of Budget Total	T&M NTE Totals
	2020	From	To	Months																						
<b>PROJECT CLOSEOUT</b>				<b>0</b>	<b>3</b>	<b>30</b>	<b>27</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>63</b>	<b>\$12,477</b>	<b>0</b>	<b>96</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$56</b>	<b>\$12,532</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$12,532</b>	<b>9%</b>	<b>\$12,532</b>
1. Permits, Interconnection, PTO, Contract Amendments					3.3						3.3	\$831						\$0	\$831			\$0	\$0	\$831	1%	\$831
1.1. Check all necessary permits and PTO achieved						3.3	3.3				6.6	\$1,329						\$0	\$1,329			\$0	\$0	\$1,329	1%	\$1,329
1.2. Check all vendor documentation received and complete							6.6				6.6	\$1,196						\$0	\$1,196			\$0	\$0	\$1,196	1%	\$1,196
1.3. Check all vendor Client training complete							3.3				3.3	\$598						\$0	\$598			\$0	\$0	\$598	0%	\$598
1.4. Recommend Project Signoff and Release of Holdout						3.3					3.3	\$731						\$0	\$731			\$0	\$0	\$731	1%	\$731
1.5. Ensure project contract agreements in force						6.6					6.6	\$1,462						\$0	\$1,462			\$0	\$0	\$1,462	1%	\$1,462
1.6. Support and ensure all Contract Amendments per As-Built conditions						6.6	6.6				13.3	\$2,658		48		0		\$28	\$2,686			\$0	\$0	\$2,686	2%	\$2,686
2. Client Readiness											0.0	\$0						\$0	\$0			\$0	\$0	\$0	0%	\$0
2.1. Client has received all documentation and stored correctly						6.6	6.6				13.3	\$2,658		48		0		\$28	\$2,686			\$0	\$0	\$2,686	2%	\$2,686
2.2. Client billing set up						3.3					3.3	\$731						\$0	\$731			\$0	\$0	\$731	1%	\$731
3. Task Administrative Support									2.8		2.8	\$282						\$0	\$282			\$0	\$0	\$282	0%	\$282
<b>ASSET MANAGEMENT (Optional)</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$9,667</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>	<b>\$9,667</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,667</b>	<b>7%</b>	<b>\$9,667</b>
1. Monitoring Platform Setup, 1 Sites											0.0	\$2,500						\$0	\$2,500			\$0	\$0	\$2,500	2%	\$2,500
2. Total Annual Site Charges, 1 Sites, Contract Year 1											0.0	\$1,350						\$0	\$1,350			\$0	\$0	\$1,350	1%	\$1,350
3. Total Annual Site Charges, 1 Sites, Contract Year 2											0.0	\$1,391						\$0	\$1,391			\$0	\$0	\$1,391	1%	\$1,391
4. Total Annual Site Charges, 1 Sites, Contract Year 3											0.0	\$1,432						\$0	\$1,432			\$0	\$0	\$1,432	1%	\$1,432
5. Total Annual Site Charges, 1 Sites, Contract Year 4											0.0	\$1,475						\$0	\$1,475			\$0	\$0	\$1,475	1%	\$1,475
6. Total Annual Site Charges, 1 Sites, Contract Year 5											0.0	\$1,519						\$0	\$1,519			\$0	\$0	\$1,519	1%	\$1,519
<b>Total</b>					<b>32</b>	<b>198</b>	<b>287</b>	<b>122</b>	<b>32</b>	<b>14</b>	<b>685</b>	<b>\$134,301</b>	<b>0</b>	<b>672</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$390</b>	<b>\$134,690</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$134,690</b>	<b>100%</b>	<b>\$134,690</b>
<b>Total Estimated Cost</b>												<b>Hours Budget \$134,301</b>						<b>Travel Budget \$390</b>	<b>Sage Budget \$134,690</b>	<b>Sub 1 Budget \$0</b>	<b>Sub 2 Budget \$0</b>	<b>Sub Mark Up \$0</b>	<b>Total Sub \$0</b>	<b>Total Budget \$134,690</b>		<b>T&amp;M NTE \$134,690</b>
																		<b>Checks \$ 134,690</b>				<b>\$0</b>	<b>\$0</b>	<b>\$134,690</b>		<b>\$134,690</b>

Rounded '00's

Task #	Task	T&M NTE
1	INVESTMENT GRADE FEASIBILITY STUDY (IGFS)	\$14,900
2	RFP PROCESS SUPPORT	\$18,200
3	VENDOR SELECTION	\$12,000
4	CONTRACTING SUPPORT	\$7,000
5	DESIGN REVIEW	\$12,500
6	PERMITTING AND INTERCONNECTION MANAGEMENT	\$3,300
7	TECHNICAL CONSTRUCTION SUPPORT / MANAGEMENT	\$25,100
8	COMMISSIONING VERIFICATION / OVERSIGHT	\$19,500
9	PROJECT CLOSEOUT	\$12,500
10	ASSET MANAGEMENT (Optional)	\$9,700
<b>Totals</b>		<b>\$134,700</b>

Aligned with City of Atherton RFP Tasks

Task #	Task	T&M NTE
1	Kick-off Meeting	\$900
2	Project Schedule	\$800
3	Data and Information Collection	\$5,000
3.1	Investment Grade Feasibility Study	\$8,200
4	Development of RFP	\$18,200
5	Selection of Power Services Provider	\$12,000
6	Contract Management and Oversight	\$7,000
6.1	Design Review	\$12,500
6.2	Permitting and Interconnection Management	\$3,300
6.3	Construction Support Management	\$25,100
6.4	Commissioning and Validation	\$32,000
6.5	Asset Management, 5-year (Optional)	\$9,700
7	Public Meetings	Incl. Above
		<b>\$134,700</b>