Response to the Santa Barbara Unified School District's
Request for Proposals from Consultants for

Establishment of a Power Purchase Agreement to Implement a District-Wide Renewable Energy Infrastructure

December 6, 2019

SAGE ENERGY CONSULTING

1719 Fifth Avenue, San Rafael, CA 94901
(415) 663-9914 | www.sagerenew.com

Clean Coalition
Making Clean Local Energy Accessible Now

Santa Barbara, CA and Menlo Park, CA
(650) 796-2353 | www.clean-coalition.org

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Cover Letter

Santa Barbara Unified School District
Attn: Lucia Gonzalez, Planning Specialist
720 Santa Barbara Street
Santa Barbara, CA 93101

Subject: Request for Proposals from Consultants for Establishment of a Power Purchase Agreement to Implement a District-Wide Renewable Energy Infrastructure

Dear Ms. Gonzalez,

Sage Energy Consulting (Sage) and the Clean Coalition are pleased to present this proposal in response to the referenced RFP. Our team's core business is working with California public agencies and educational institutions to provide energy planning and to help implement renewable 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 our team has strengthened and refined our expertise in helping public entities mitigate project risk and facilitate decision-making among project stakeholders. Sage has assisted over 75 California public education districts with renewable energy projects, including Riverside Unified School District, Ventura County Community College District, Temecula Valley 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 electric vehicle charging (EVSE) include:

- **Deep knowledge of the solar PV, EV, and battery storage/microgrid markets.** The Sage/Clean Coalition team has managed PPA projects with all of the major California market solar/battery and EV contractors on public projects for design, installation, operation and maintenance of these systems. Our team provides industry-leading planning and microgrid evaluation services, identifying potential project challenges and unique opportunities. Our market knowledge extends from state policy level through detailed understanding of the financing mechanisms and grant opportunities available for advanced energy projects. This

exceptionally broad knowledge informs our feasibility studies, project 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 many 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 EPCs. 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 suite of energy project management services from feasibility assessments through operational phase asset management. Our services are tailored to the specific goals and requirements of each client, 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.** Clean Coalition has team members that live and work in Santa Barbara, allowing us to respond quickly to SBUSD requests and be physically present when needed.
- **A focus on finance.** We are well versed in all forms of public project finance and grant programs, providing the technical and conservative financial analysis needed for decision-makers to evaluate a project. Our team regularly evaluates and helps clients procure projects with Power Purchase Agreements (PPAs), GO and muni 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, including RES-BCT, Community Renewables Programs, and storage/microgrid incentives.
- **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 client's goals and interests first. We take deep pride in the objectivity, accuracy and integrity of our work.

We are confident that our combination of experience and technical and financial expertise make the Sage/Clean Coalition team the perfect partners for the District's energy projects. We encourage you to contact any of our clients as references and look forward to the opportunity to work with you.

Sincerely,

David Williard
Managing Principal
Sage Energy Consulting
Cell: (415) 497-6242
david@sagerenew.com

Craig Lewis
Executive Director
Clean Coalition
Cell: (650) 796-2353
craig@clean-coalition.org

1. Team Profile

Sage Energy Consulting and Clean Coalition have joined forces for this project to bring unprecedented expertise and depth to SBUSD's energy program. Sage has worked with over 100 California school districts 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, as well as Santa Barbara-based staff to ensure that our team is highly responsive.

1.1 Firm Overviews

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 financers 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 RE 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, 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.

Sage Renewable Energy Consulting, Inc. dba Sage Energy Consulting
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Phone: 415.663.9914
Fax: 510.369.2130
Main contact: David Williard, david@sagerenew.com, 415.497.6242
Federal Tax ID #: 27-0766890

Certificate of Insurance

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 09/20/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	Robert F. Smith Whitecap Insurance Services 1623A Fifth Avenue San Rafael, CA 94901
CONTACT NAME:	Candi Chamberlain
PHONE (A/C, No, Ext):	(415) 499-7722 — **FAX (A/C, No):** (415) 479-3962
E-MAIL ADDRESS:	candi@whitecapins.com
INSURED	Sage Renewable Energy Consulting Inc. 1719 Fifth Avenue San Rafael, CA 94901

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A :	Ohio Security Insurance Company	24082
INSURER B :	American Fire & Casualty Company	24066
INSURER C :	Republic Indemnity Company of America	22179
INSURER D :	Continental Casualty Company	20443
INSURER E :		
INSURER F :		

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	☑ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☑ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☑ POLICY ☐ PRO-JECT ☐ LOC OTHER:	X	X	BKS58911424	10/03/2019	10/03/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 500,000 $ 15,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☑ HIRED AUTOS ONLY ☑ NON-OWNED AUTOS ONLY			BAS58911424	10/03/2019	10/03/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	☐ UMBRELLA LIAB ☑ OCCUR ☑ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☑ RETENTION $ 10,000			ESA58911424	10/03/2019	10/03/2020	EACH OCCURRENCE AGGREGATE	$ 1,000,000 $ 1,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N ☐ N / A If yes, describe under DESCRIPTION OF OPERATIONS below			252998-02	09/25/2019	09/25/2020	☑ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D	Professional Liability			287304527	11/02/2019	11/02/2020	$2,000,000/Claim $2,000,000/Aggregate	Deductible: $5,000 Per Claim

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

EVIDENCE OF COMMERCIAL GENERAL LIABILITY, BUSINESS AUTO LIABILITY (Hired & Non-Owned), EXCESS LIABILITY, WORKERS COMPENSATION, AND PROFESSIONAL LIABILITY INSURANCE COVERAGES FOR THE NAMED INSURED

CERTIFICATE HOLDER

Sage Renewable Energy Consulting, Inc
1719 Fifth Avenue
San Rafael, CA 94901

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Rob Smith

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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 engineering 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.

The Clean Coalition is headquartered in Santa Barbara, CA, at 1800 Garden St., and has offices in the San Francisco Bay Area.

1.2 Personnel

Team Member Short Bios – Sage

Tom 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.

David Williard, LEED AP, is a founder of Sage Energy Consulting. He has over 22 years of experience working as a professional environmental consultant, with a focus on energy efficiency and renewable energy generation for the past 14 years. Mr. Williard has managed all aspects of renewable energy projects, from planning and feasibility through implementation and operations, for over 70 public and private clients. He has helped develop over 130 MW of renewable energy projects, including managing the largest solar PV project implemented by a school district in North America at 27 sites in Kern County, CA. Prior to starting Sage, he founded Sustainergy Systems Consulting and Design, and was owner and Principal from 2005 to 2009. Mr. Williard earned his B.S. in Energy Management and Design from Sonoma State University.

Brent Johnson, PE, LEED AP, will serve as Principal in Charge. 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 his LEED accreditation from the US Green Building Council.

Ilan 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. Ilan earned a B.A. in Economics from the University of Washington in Seattle.

Dana Coe is an Associate Principal at Sage with a background as both an atmospheric scientist and in renewable energy project management. Ms. Coe joined Sage in January 2018, building on 22 years of experience as an environmental consultant, including 15 years as a senior project manager (PM) and principal investigator (PI). With Sage, Ms. Coe manages complex energy development projects for municipal and other government agencies. These projects involve unique issues such as multi-organizational teams, special contract requirements, or risk of scope creep. Ms. Coe is also facilitating a 1-megawatt solar energy project for the San Joaquin Regional Transit District. This project must integrate seamlessly with the District's plans for expedited bus fleet electrification and charging infrastructure, site development, and expansion of the solar energy asset to 3 megawatts plus battery storage. She is also organizing resources, subcontracts, and project plans for a $2.8 million consulting services contract with the San Francisco Public Utility Commission. Ms. Coe earned an M.S.P.H. in Environmental Science and Engineering from the University of North Carolina at Chapel Hill and a B.S. in Civil Engineering from Northwestern University.

Scott Moore has fifteen years of experience in the construction industry, including nine years in the energy and solar PV sector. 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 and 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.

James 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 analyzation of defects on thin films. 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.

For further information about Sage team members, please see www.sagerenew.com.

Team Member Short Bios – Clean Coalition

Craig Lewis, MSEE & MBA, Founder and Executive Director: 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.

Frank Wasko, PhD, Managing Director: 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 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: 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, 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.

Malini Kannan, BSEE, Senior Engineer: Malini leads the technical activities of Clean Coalition's Community Microgrid Initiative. She has helped communities across California, the New York metropolitan area, and Puerto Rico design and develop Community Microgrids through scoping, planning, and engineering design and analysis work. Previously, as a Research Engineer at the Schatz Energy Research Center, Malini tested and analyzed performance data from small-scale solar, battery, and LED consumer electronics as a consultant to the World Bank. She also helped scope, design, and build electric vehicle charging stations on California's North Coast. Malini also has previous experience at Bloom Energy where she resolved design and quality issues with fuel cells. She received her BS in Environmental Engineering from the Department of Mechanical and Aerospace Engineering at the University of California, San Diego.

Bob O'Hagan, MSEE, Program Engineer: 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.

Gregory Young, Program Associate: Gregory is currently a graduate student in the field of Urban Sustainability, with a focus revolving around the world's dual challenges of climate change and inequality. He has worked with several nonprofits and community-based organizations in developing planning processes to help build resilience for disadvantaged populations. Universalizing local renewable energy resources has been an ongoing passion for Gregory, especially as more of the world's population transitions to urban environments. Gregory is currently pursuing an MA in Urban Sustainability at Antioch University in Los Angeles.

For further information about Clean Coalition team members, please see www.clean-coalition.org.

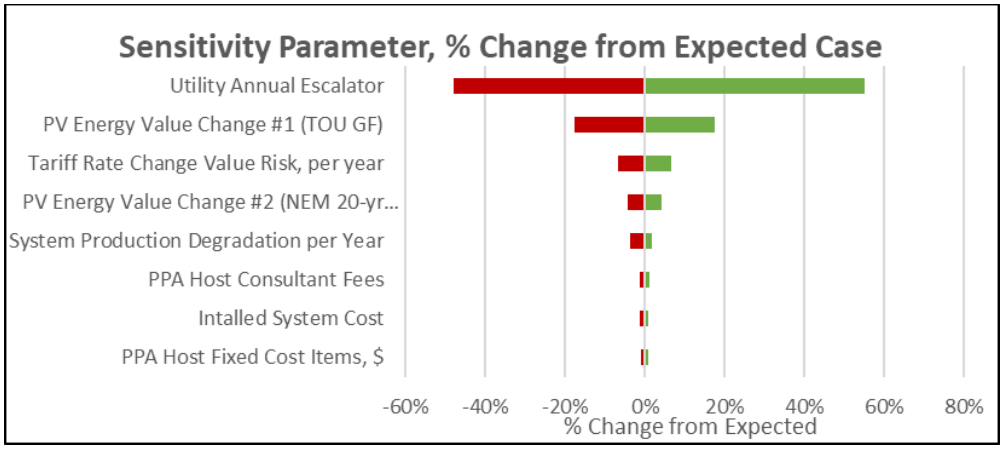
Team Member Roles, Responsibilities, and Qualifications

Name	Project Roles and Responsibilities	Experience
Sage		
Tom Williard (Managing Principal/CEO)	Financial modeling oversight and deliverable reviews	17 years in renewable energy 20 years in electrical engineering
David Williard, LEED AP (Managing Principal)	Principal In Charge – Overall responsibility for the project	22 years in energy consulting 14 years in renewable energy project planning
Brent Johnson, PE, LEED AP (Managing Principal)	Design guidance and review, deliverable review	21 years in energy and water engineering
Ilan Fuss (Associate Principal)	Asset Management set-up and oversight	9 years in renewable energy
Dana Coe (Associate Principal)	Project Manager - Directs project work; primary point of contact for the Sage team; primary responsibility for schedule and deliverables	22 years in environmental consulting 2 years in renewable energy project management
Scott Moore (Construction Manager)	Design review, construction oversight, Cx oversight, project closeout	11 years in solar 15 years in construction
James Dobbs (Data Analyst)	Data acquisition and modeling solar PV, BESS, and microgrid scenarios	3 years in energy modeling
Clean Coalition (CC)		
Craig Lewis (Founder, Executive Director)	CC Principal In Charge – Overall responsibility for CC's components of the project	30 years in renewables industry
Dr. Frank Wasko (Managing Director)	CC Project Manager – Primary point of contact for the CC, directs project work, and holds primary responsibility for CC's schedule and deliverables	30 years in energy and project management
Kenneth Sahm White (Economics & Policy Analysis Director)	Regulatory and economics analysis deliverable reviews	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
Malini Kannan (Senior Engineer)	Engineering Co-Lead	6 years in alternative energy engineering design and testing
Bob O'Hagan (Program Engineer)	Engineering Co-Lead	8 years in renewable energy 40 years electrical engineering
Gregory Young (Program Associate)	Project Coordinator – Supports project team	3 years in renewable energy

1.3 Experience

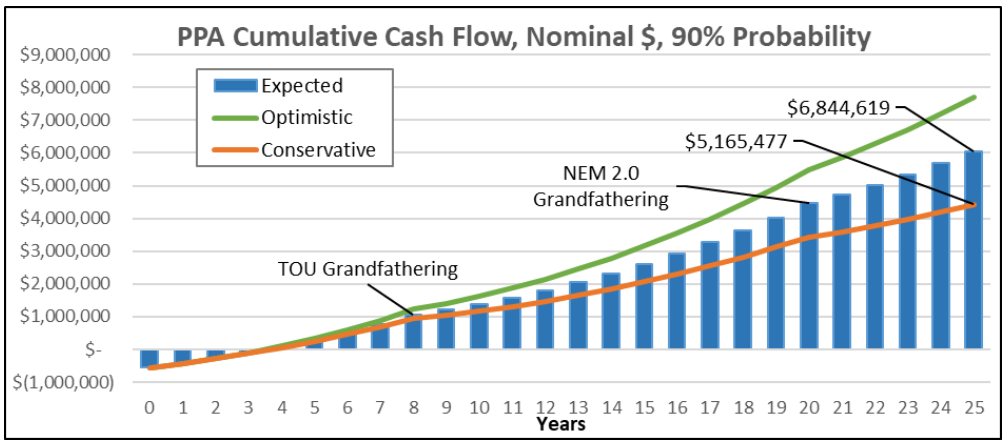
Sage Energy Consulting has consulted on more than 350 megawatts of renewable generation, storage and efficiency projects for more than 100 public agencies, including the California Energy Commission, and 75 educational districts. Project management of California public school solar PV, battery storage, and EV projects is the core of our business. In the last decade, Sage and its principals have developed an unmatched reputation for objectively assess the feasibility and then successfully guiding and implementing all stages of renewable energy projects.

Sage keeps a close eye on retail tariffs in California and produces white papers on the effects of Investor Owned Utility (IOU) rates on energy projects. Sage served as the lead technical consultant providing testimony to the California Public Utilities Commission (CPUC) for San Joaquin County – the lead agency in PG&E's General Rate Case Phase II – regarding impact of proposed tariff changes to government agencies using Renewable Energy Self Generation Bill Credit Transfer (RES-BCT). Sage also provided expert testimony to the California Solar and Storage Association's testimony to the CPUC regarding SCE's proposed RES-BCT settlement.



Financial modeling of energy projects is one of Sage's core competencies and has been a key component of our consulting work. Sage utilizes both industry-standard and proprietary software to evaluate the financial performance of projects, including analysis of current and proposed tariffs, and lifecycle cost evaluation, inclusive of sophisticated risk analysis utilizing sensitivity analysis and multi-variable Monte Carlo analysis to project future financial performance probabilities. This involves utility tariff selection to maximize project savings and is based on our intimate knowledge of utility rate structures as well as original research and modeling of future rate structure changes.

Sage maintains a database of energy project procurements and implementations with key metrics including type, size, installed cost, and financing type. We use this database in concert with indicative price estimates from leading vendors to estimate project pricing and establish conservative metrics for project performance.



Our analysis of projects is also informed by years of experience acting as client's representative during the design, implementation and operation of projects. Our project concepts represent a deep understanding of market ready technology, cost-efficient designs and the design-build process that lead to a clean transition from concept to implementation. We are also experts at project finance, understanding the various financing mechanisms, incentive and grant programs available to clients. This includes third-party (PPA), municipal lease, energy bonds, CEC loans, SGIP incentives, on-bill finance with utilities, etc.

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.

Our 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.

1.4 Representative Projects

Sage

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

Selected Sage Projects Within the Past Five Years

Project	Client	Team Members[1]	Value ($M)	Contact	Services Provided[2] *Regulatory Assistance*
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 *DSA, CEQA, Utility Interconnection assistance*
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 *CEQA, Utility Interconnection assistance*
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 *Utility Interconnection and SGIP Grant Assist*
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 *Utility Interconnection assistance, SGIP*
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@vcccd.edu	Full Project Services, PPA *DSA, Utility Interconnection assistance*
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 *DSA, CEQA, Utility Interconnection assistance, SGIP*

Project	Client	Team Members[1]	Value ($M)	Contact	Services Provided[2] *Regulatory Assistance*
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 *DSA, CEQA, Utility Interconnection assistance*
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, fowerlt@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 *CAISO, Utility Interconnection assistance*
3.3 MW Solar PV	San Mateo UHSD	IF, TW, DW, BJ	$15.5M	Elizabeth McManus, Dep. Superintendent Business Services - (650) 558-2204, emcmanus@smuhsd.org	Full Project Services *CSI Program, DSA, Utility Interconnection assistance*
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 *DSA, CEQA, Utility Interconnection*

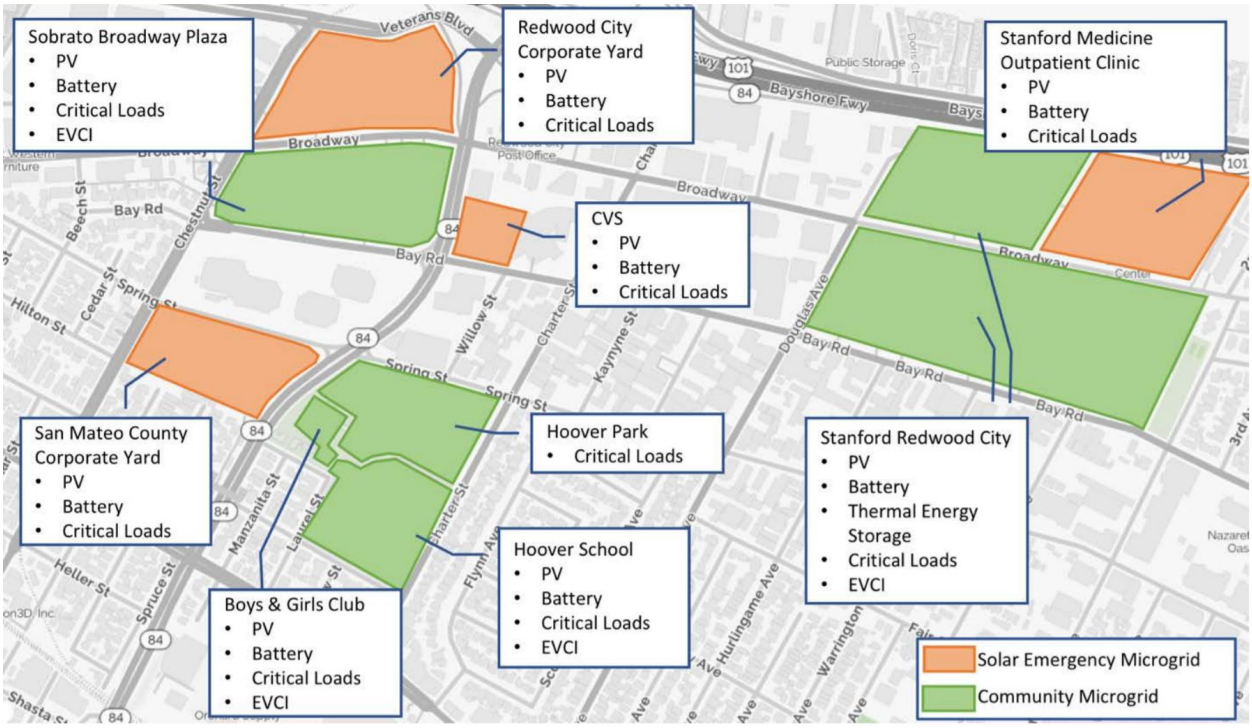
Project	Client	Team Members[1]	Value ($M)	Contact	Services Provided[2] *Regulatory Assistance*
2.3 MW Solar PV	Livermore Valley JUSD	DW, BJ, SM	$13.5M	Bruce Wile, Dir. Maintenance & Ops - (925) 606-3319, bwilke@lvjusd.k12.ca.us	Full Project Services *DSA, CEQA, Utility Interconnection*
3.6 MW Solar PV	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 *CSI Program, Utility Interconnection assistance*
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 *DSA, Utility Interconnection assistance*
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 *DSA, CEQA, Utility Interconnection*
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 *DSA, CEQA, Utility Interconnection*
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 *DSA, Utility Interconnection assistance*
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 *DSA, CEQA, Utility Interconnection assistance*
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 *DSA, CEQA, Utility Interconnection*
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 *DSA, Utility Interconnection assistance*
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 *DSA, Utility Interconnection assistance*

Project	Client	Team Members[1]	Value ($M)	Contact	Services Provided[2] *Regulatory Assistance*
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 *CEQA, Utility Interconnection assistance*
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 *Utility Interconnection assistance*
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 *DSA, Utility Interconnection*
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 *DSA, CEC Grant, CEQA, Utility Interconnection assistance*
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 *DSA, CEC Grant, CEQA, Utility Interconnection*
274 kW Solar PV	Anderson Valley USD	DW, BJ	$1.5M	Stella Bratsis, Business Mgr. - (707) 895-3774, sbratsis@avpanthers.org	Full Project Services *DSA, CSI Incentives, Utility Interconnection*

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

Clean Coalition

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.



Peninsula Advanced Energy Community Initiative (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 Peninsula Advanced Energy Community (PAEC) Initiative. 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:

- 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

1.5 References

Sage

Kern High School District, 24.5 MWp Solar PV PPA on 27 Sites in Kern County, CA
Richard J. Ruiz, Director of Business Services, Kern High School District
(661) 827-3122
rruiz@khsd.k12.ca.us

Temecula Unified School District, CA
Janet Dixon, Director of Facilities, TVUSD
(951) 506-7914
jdixon@tvusd.k12.ca.us

San Diego Unified School District, CA
Scott Thomas, Partner, Zagrodnik + Thomas Architects
(619) 528-1199 x11
scott@ztarc.com

Sacramento County Regional Sanitation District - Solar PV PPA
Steve Nebozuk, Program Manager, Regional San
(916) 876-6118
nebozuks@sacsewer.com

Ventura County Community College District - Solar PV PPA
David El Fattal, Vice Chancellor, Business & Administrative Services
(805) 652-5536
DElfattal@vcccd.edu

Clean Coalition

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Rachel Salazar, Energy Commission Specialist
(916) 445-5316
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California Energy Commission (CEC)
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(650) 329-2270
mike.sartor@cityofpaloalto.org

1.6 Evidence of Financial Stability

Please see the confidential financial statements included as separate pdf files with this proposal.

1.7 Litigation History

Sage Energy Consulting and Clean Coalition have no past history of litigation or pending litigation and have never been involuntarily terminated from a client engagement.

2. Proposed 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.

2.1 Feasibility & Planning Phase

Sage typically offers a two-phase approach to project feasibility analysis:

1. Feasibility Review – The first phase is a low-cost, high-level assessment to establish a conceptual project, provide high-level siting of potential systems, and establish preliminary financial results to assess a project. This is a desktop study aimed at providing indicative metrics and conceptual layouts, as well as identifying fatal flaws, for clients beginning to explore an energy 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.
3. Utility Interconnection Support – For larger or complex projects, Sage recommends initiating the utility interconnection process during the project feasibility phase, as interconnection costs and timeframe can radically alter the economics and overall viability of projects. Sage has extensive experience with submitting and managing interconnection applications and overseeing the utility interconnection process to expedite results and keep interconnection fees to a minimum.

Feasibility Scope

Feasibility Review	• Establish high-level project goals and constraints • Collect recent historical electrical consumption data • Perform desktop conceptual designs • Avoided cost modeling for each site/alternative • System lifecycle financial modeling for various financing scenarios • Feasibility assessment report • Site Visits: None.
Investment-Grade Feasibility	• Establish detailed project goals and constraints • Collect and analyze historical electrical consumption data, demographic trends, and facilities planning to estimate future energy usage • Site visit to review siting and electrical infrastructure and to gather site stakeholder input • Assess operation of existing DER • Create conceptual design options and perform production modeling • Refine system layouts and locations for each site with client/stakeholders • Financial tariff modeling and optimization for each site/alternative based on consumption projections, production modeling and tariff assumptions • Financial modeling of overall project with multiple financing scenarios including cash, leases, bonds, and power purchase agreements (PPA), as applicable. Includes sensitivity and probability projections. • Draft feasibility report, review with client and collect comments • Final feasibility report • Site Visits: Up to two. One kickoff meeting/visit sites, one to present/review findings with Client
Utility Interconnection Application Support	• Using high-level system designs, create and submit utility interconnection applications • Manage interconnection process • Negotiate on client's behalf and communicate results to client • Site Visits: None.

Microgrid Resilience Analysis

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). 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).

Microgrid Resilience Analysis Scope

Planning & Engineering	• Establish detailed project goals and constraints • Secure all relevant site information (recent historical electrical consumption data, as-built drawings) • 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 • Site visit to assess design constraints, load-shedding capabilities, and assessment of monitoring, communications, and control equipment required for the site • Calculate Tier 1, Tier 2, and Tier 3 loads • 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. • Optimization of system design for each site/alternative based on critical load consumption projections, production modeling and operational assumptions • Produce conceptual design options of site microgrid • Refine system sizing and equipment locations for each site with Client/stakeholders • 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 • Draft Microgrid Resilience report, review with client and collect comments • Final Microgrid Resilience report • Site Visits: Up to two. One to assess design constraints, load-shedding capabilities, and assessment of monitoring, communications, and control equipment required for the site, one to present/ review findings with Client

2.2 Development Phase (Procurement)

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.

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.

Procurement Scope

RFPs	• Kick-off meeting to review scope, controls, schedule and data needs • Create project-specific Request for Proposals (RFP) based on Sage RFP templates, including electronic submittal documents. Typically includes sample EPC and O&M contracts with Performance Guarantee and PPA terms for third-party ownership • Manage electronic distribution to select vendors in coordination with Client • Conduct site walk with vendors • Manage document access and issue RFIs and addenda as needed • Ongoing assistance with critical path project items (permitting, interconnection, etc.) • Site Visits: One to conduct site walk • Optional Scope: Begin interconnect application process
Proposal Evaluation / Vendor Selection	• Initial summary of responses • Quantitative analysis, including review of production estimates and LCOE analysis • Qualitative analysis, including equipment, vendor qualifications, schedule, references, performance guarantees, O&M, contract exceptions, etc. • Summary of findings • Work with Client selection committee to review proposals and rank vendors • Produce summary report and/or presentation for Client with recommendations • Site Visits: Up to two. One for optional interview of top ranked proposers; One to meet with Client selection committee
Contracting	• Thorough review of technical aspects of contract documents and for adherence to RFP • Design-build contract • O&M contract (may be third party) / Performance guarantees • Scope, criteria, codes, and submittals • Red-lined document set • Interface with client staff, legal counsel, and vendor as needed • Participate in contract negotiations and finalization with legal counsel and vendor • For public contracts, prepare GC 4217 findings and resolution for Board • Site Visits: Up to one, for Client meeting/presentation

2.3 Execution Phase

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 & Permitting

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.

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. Upon major design changes and final design, we update project modeling to ensure the project continues to meet financial/production targets.

Under a design-build, the vendor is typically responsible for permitting and interconnection, however roles vary by project. Regardless of the arrangement, Sage manages the process. On a typical project, Sage supports clients in preparing CEQA documentation and oversees vendors in obtaining AHJ permits and interconnection. Sage can support any arrangement, including direct management of CEQA permitting and the interconnection process. Throughout, we maintain a project schedule and track critical path items.

Design & Permitting Scope

Design Review and Assistance	• Evaluate overall system design, component selection and interconnection for conformance with Project requirements • Coordinate design site walk to identify existing conditions and potential issues • Coordinate and review progress design submittals • Assist with siting issues such as easements, equipment placement, vegetation, shading, AHJ, and other considerations • Site Visits: Up to two. One for kick-off meeting for existing conditions site walk, all other work done remotely • Optional Scope: Manage third-party PV module batch testing for QA/QC.
Permitting & Interconnect	• Assist Client with CEQA and other Client permitting responsibilities • Review/confirm vendor design-related permitting with AHJs • Review/confirm vendor interconnection applications • Site Visits: None. • Optional Scope: • Perform CEQA study/documentation (with subconsultant) • Manage interconnection process

Construction & Commissioning

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.

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.

Construction & Cx Scope

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. • Optional Scope: Increased level of CM, including: – Increased on-site presence, including attending/confirming milestone events – Manage schedule, RFIs, change orders, and pay requests – Review permitting adherence and closeout – Manage punchlist and closeout
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 • Optional Scope: Full third-party commissioning

Asset Management

Sage provides one year of Asset Management support in our project scope. We have found that many operational issues arise in the first year of operation. By identifying and correcting them early, fewer problems are encountered later. Sage's Asset Management typically augments the Operations and Maintenance (O&M) contract to ensure that the O&M vendor completes required O&M services to contract, that the system is performing as expected and that warranty terms and performance guarantees are honored. Sage also performs detailed modeling of actual project production and financial performance, summarized in Quarterly and Annual Reports. Sage can also offer more robust Operations Management, with the above monitoring and O&M services within a single contract.

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 Scope

Asset Management	• Quarterly production performance review and system report • Annual performance evaluation, including both financial and energy production performance relative to benchmark estimates • Annual review and summary of O&M activities, including further O&M recommendations to maximize savings • Annual review of available utility tariffs and recommendations • Site Visits: None; all work done remotely • Optional Scope: Full asset management, including O&M

3. Fee Structure

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 Approach section above, is individually evaluated for level of effort.

With PPA financing, **part or all of the Sage/Clean Coalition's project fees can be paid out of the project financing, virtually eliminating out-of-pocket expenses to SBUSD for the project**. In this case, the cost of Sage/Clean Coalition'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 SBUSD lump sum payments at various project construction milestones. Those fees are then forwarded to Sage/Clean Coalition, if we have performed our work to the District's satisfaction. If the project is terminated (other than for lack of performance by Sage/Clean Coalition), SBUSD would be responsible for Sage/Clean Coalition's outstanding fees for work performed to the date of termination.

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

- Project built cost: $40M
- Project sites evaluated: 20
- Project sites where energy measures will be installed: 14
- Project duration: 24 months
- Project complexity: 8 out of 10, to account for microgrid resiliency analysis
- Operational phase Asset Management: 1 or 5 years (pricing provided for both)

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

Task #	Project Management Task	Site Visits	T&M NTE
1	FEASIBILITY REVIEW	1	$27,000
2	INVESTMENT GRADE FEASIBILITY STUDY (IGFS)	2	$54,500
3	MICROGRID RESILIENCY ANALYSIS	2	$54,600
4	RFP PROCUREMENT MANAGEMENT	4	$86,700
5	VENDOR SELECTION	2	$43,600
6	CONTRACTING SUPPORT	0	$21,500
7	DESIGN REVIEW	2	$59,700
8	PERMITTING AND INTERCONNECTION MANAGEMENT	0	$21,500
9	TECHNICAL CONSTRUCTION SUPPORT / MANAGEMENT	8	$89,800
10	COMMISSIONING VERIFICATION / OVERSIGHT	2	$38,300
11	PROJECT CLOSEOUT	1	$22,100
	Total Project Management Fee		**$519,300**

This project scope is for complete turnkey project development and management services from concept to an operational project and represents a **total fee of 1.3% of installed project costs**, assuming a $40M project.

The Sage/Clean Coalition team 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 project management services through operational troubleshoot phases. To support the operational phase of the project, Sage offers an **Asset Management service** 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. Sage's Asset Management service is priced with a one-time setup fee and annual per site charge, with a 3% annual escalator.

Adding the 10% contingency and Asset Management service to the project management fee, the full project cost for either a one-year or five-year Asset Management fee is shown below.

Fee Component	1-yr Asset Management	5-yr Asset Management
All-in Project Management Fee, Feasibility-Closeout	$519,300	$519,300
10% Contingency	$51,900	$51,900
Asset Management	$23,000	$100,600
Fee with Contingency and Asset Management	**$594,200**	**$671,800**

3.1 Hourly Rates

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

Table 1. Hourly rates for Sage team members

Name	Title	2019-2020	2021
David Williard, LEED AP	Managing Principal (Principal in Charge)	$250	$265
Tom Williard	Managing Principal	$250	$265
Ilan Fuss	Associate Principal	$225	$235
Dana Coe	Associate Principal (Project Manager)	$225	$235
Scott Moore	Construction Manager	$180	$190
James Dobbs	Analyst/Technician	$140	$145

Table 2. 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)	$175
Kenneth Sahm White	Regulatory and Economics Analysis Co-lead	$150
Wendy Boyle	Contract & Administrative Manager and PI Support	$125
Malini Kannan	Engineering Co-lead	$150
Bob O'Hagan	Engineering Support	$150
Gregory Young	Project Coordinator	$100