



FRESNO COUNTY FIRE

PROTECTION DISTRICT

Honor, Integrity, Cooperation & Professionalism

MEMORANDUM

Date: 6/12/2019

To: Board Directors

Attn: Mike Del Puppo
President

From: Fire District Staff

Subject: Authorization to Develop Solar Farm Engineering and Initiate the Renewable Energy Self Generation Bill Credit Transfer (RES-BCT) application with PG&E

BOARD OF DIRECTOR'S BRIEFING PAPER

ISSUE:

Since 2008 the District's electrical costs have increased by 84%. It is anticipated that future electrical energy costs will continue to escalate year over year and the District can conservatively expect that its current electrical costs will at least double again within the next 25 years from \$170K to over \$340K annually.

BACKGROUND:

The District has pursued initiatives to help stabilize and/or reduce its general operating costs over the years. In the past, the District received a presentation on renewable energy from a solar contractor that identified a few turn-key options. However, the proposal(s) were either cost prohibitive and/or the return on investment (ROI) was not suitable to the District's desire to stabilize and/or improve its energy costs as quickly as possible. Therefore, the Board directed staff to continue to analyze options and develop opportunities that reduced the total project costs and improved the amortization or return on investment period. Recently, staff has been researching several solar options in an effort to identify the most feasible and practical solution to address the District's short- and long-term energy needs/goals.

DISCUSSION:

The Local Government Renewable Energy Self Generation Bill Credit Transfer Program (RES-BCT), formerly AB 2466, was established by the legislature effective January 1, 2009, and codified in Section 2830 of the Public Utilities Code. It allows a local government with one or more eligible renewable generating facilities to export energy to the grid and receive generation credits benefiting up to 50 accounts of the same local government. Prior to entering this program, the District needs to apply to PG&E for inclusion and to determine any transmission infrastructure costs (PG&E hardware costs) associated with developing our own renewable energy generating facility. This application process also requires the submittal of engineered plans for the desired solar production system as part of the transmission infrastructure cost assessment.

Staff determined that the most practical way to establish the actual costs to develop a solar farm would be to utilize an independent industry consultant to analyze our needs, develop our project scope, solicit estimates, and compare proposals for best value. We have determined that the District needs a 407.2 kW system to meet 100% of our electrical energy needs annually. In addition, this size of production system will fit on land that the District already owns and is currently underutilizing at the Training Center.

Cost estimates were developed for owner/builder (District Staff) construction as compared to commercial contractor construction (Turn-Key Solar Contractor). The potential savings with owner/builder development is negligible at best and will not result in a best value outcome for the District. The best value development cost estimate was from Kuykendall Solar, a local commercial solar contractor. Their bid, outside of the unknown PG&E hardware costs, indicate that the District can contract for a turn-key ground mounted 407.2 kW solar production system for roughly \$800K +/- . Staff estimates that PG&E hardware costs could add from \$50K to \$150K to the project costs for a grand total estimate of \$850K-\$950K.

The District could finance the total project costs at the best and worse case cost estimate scenarios and still benefit from a return on investment within 5-6yrs. This would allow the District to enjoy 20-25 years of electrical production ownership, with only minimal maintenance costs, resulting in significant savings (\$3.5M-\$5.2M) over that period. In addition, the annual finance payment for a five-year term would nearly match the District's current and expected electrical costs over the same five-year period. Therefore, the short-term gain would be cost stabilization/predictability and the long-term gain would result in significant savings year over year.

In order to determine the actual PG&E hardware costs and make an informed/educated determination on the comprehensive feasibility of developing a solar production system of this size, the District will need to develop engineered project plans and authorize staff to initiate the PG&E application/permit process. Kuykendall Solar estimates that the engineered project plans will cost from \$10K-\$15K and take 45 days to complete. It is estimated that the application/permit

approval will take up to 90 days for completion following plan development. At the conclusion of the plan development and application/permit approval process, staff will report back to the Board on the determined PG&E hardware costs and the total expected project costs. This will allow the Board to make a comprehensive and informed decision on the feasibility/overall scope of the project and to determine if the District wants to proceed with the construction of the project.

If the Board chooses to authorize the plan engineering and application/permit process, staff will continue to analyze project financing and rebate options for consideration with the future total expected cost and feasibility presentation. Thus, ensuring a wholistic and informed final evaluation prior to construction authorization.

ALTERNATIVES:

1. Not approve the engineering plans/application-permit process and table the solar production concept. Annual electrical energy costs will continue to increase over time.

IMPACTS *(Consider potential consequences related to each of the following areas of concern for proposed alternatives):*

- Fiscal – District would have initial financing costs to fund the project but would realize significant savings after the first five to six years.
- Operational
- Legal – N/A
- Labor – N/A
- Sociopolitical – N/A
- Policy – N/A
- Health and safety – N/A
- Environmental – Renewable energy will have a positive impact on the District's environmental foot print.
- Interagency – N/A

RECOMMENDATION:

Staff is recommending that the District Board of Director's authorize the development of the indicated solar farm engineering and initiate the Renewable Energy Self Generation Bill Credit Transfer (RES-BCT) application/permit process with PG&E.

APPROVED:



Chris Bump, Assistant Chief

6/12/2019
Date



RFP Proposal

Date	Estimate #
6/6/2019	4203

28420 Yosemite Springs PKWY Ste. E
Coarsegold, CA 93614

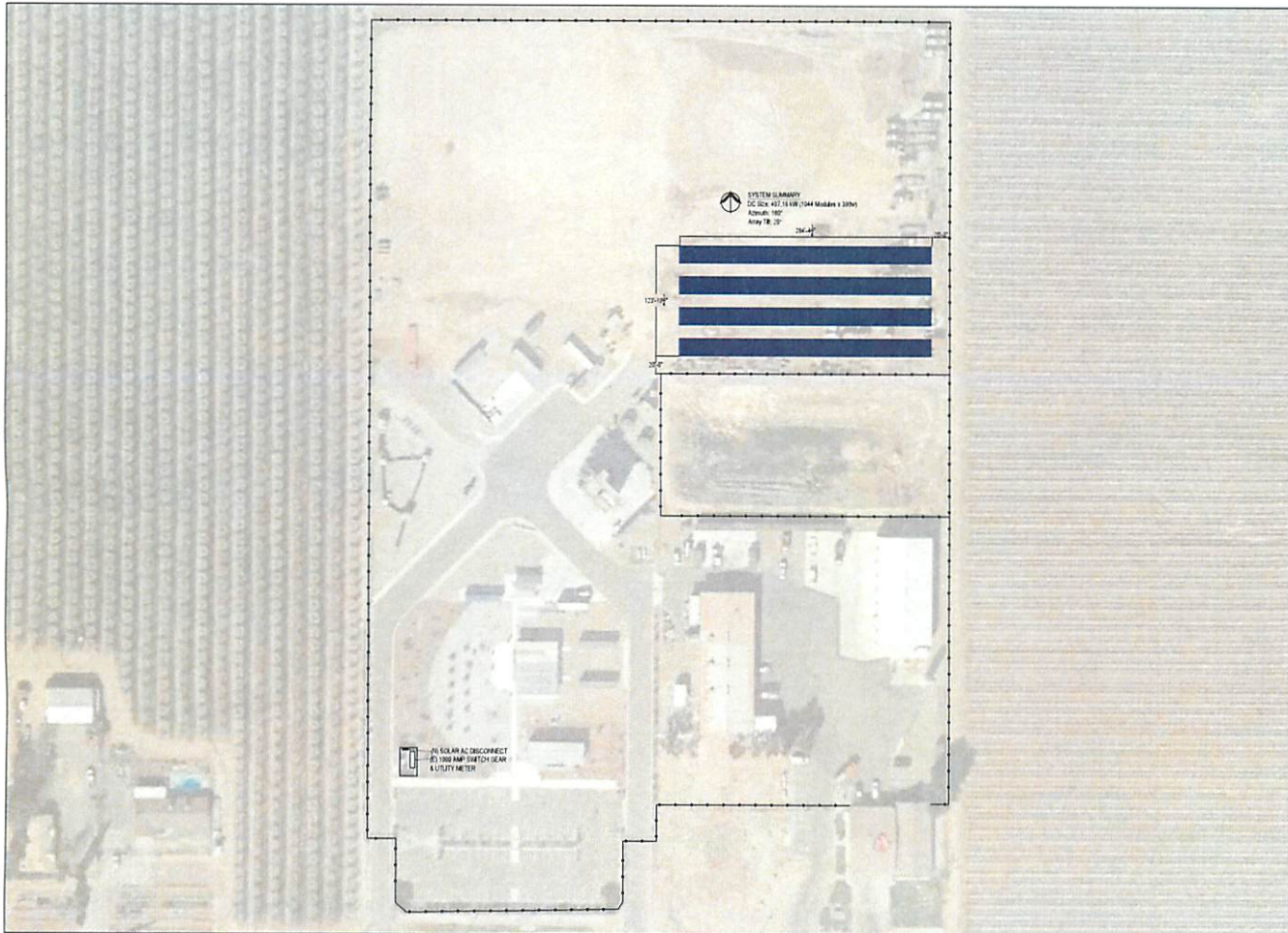
Name / Address

Fresno County Fire Protection District

Contra Costa Electric, Inc.
4690 E. Carmen Ave.
Fresno, CA 93703

P.O. No.	Terms
...	

Description	Qty	Rate	Total
<p>Installation of a 407.2kW commercial ground mounted solar system. Turn-key price includes: Engineering, design, consulting, all materials, labor (PW), permits and taxes.</p> <p>This quote includes the following cost of materials:</p> <p>Modules - \$ 233,004 Inverters - \$ 29,153 Racking - \$ 87,978</p> <p>These costs will be removed if customer procures them.</p> <p>Exclusions:</p> <p>Does not include service panel upgrades, utility interconnection requirements, nonstandard AHJ requirements, fire department requirements, Utility third party testing requirements. Project quoted at prevailing wage. Proposal is based on a clean level solar field with no subsurface obstructions or drainage issues.</p>			\$764,280
		Total	\$764,280



PROJECT:		FRESNO CO. FIRE PROTECTION DIST.	
DATE:		5/31/2019	
SCALE:		1" = 100'	
PROJECT ENGINEER:		David Sylvester	
SHEET:		PV-2	



Statement of Qualifications

Ground Mounts - Roof Tops - Canopy/Carports - Battery Systems

Kuykendall Solar Inc

28420 Yosemite Springs Pkwy E

Coarsegold, CA 93614

License #775849

(559) 658-2525

www.Kuykendallsolar.com



Serving the California Solar Market since 2000

...to the Reader

This document presents a general overview of the qualifications and experience of Kuykendall Solar Inc. Kuykendall offers a full complement of solar installation services. Our staff is comprised of professional management, electricians and technicians with extensive and varied experience. We would welcome the opportunity to discuss your project plans.

Included is an abbreviated listing of the project types and specific capabilities that we provide. It forms a general scope of the services offered by our firm. We also maintain a working relationship with several additional specialty firms to provide a broader scope of services, thereby allowing our clients to enjoy the benefits of one primary project manager.

If we could be of any assistance in your project plans, please contact any of the individuals listed below.

Liz Kuykendall – Director of Business Operations, Owner
Brian Matthewson - Director of Field Operations, Owner
Sandra Green - Director of Finance Operations, Board Member
Luke Lyster – Assistant Project Manager
Mark Luft – Project Development

Any of these individuals can be reached as follows:

Kuykendall Solar Inc
28420 Yosemite Springs Pkwy E
Coarsegold, CA 93614
559-658-2525

email: liz@kuykendallsolar.com
brianm@kuykendallsolar.com
sandra@kuykendallsolar.com
luke@kuykendallsolar.com
mark@kuykendallsolar.com

Corporate Introduction

Kuykendall Solar Inc. is a multi-discipline professional solar installation firm located in Coarsegold, Ca. The company employs approximately 50 individuals of various technical and professional backgrounds. Our installation experience ranges from over 1,500 residential homes to 80+MW of commercial rooftops, carports and ground mounted projects. Kuykendall Solar has proven, by our track record, that we have the tools necessary to complete your project in a timely and efficient manner.

Over the years Kuykendall has evolved its business model to address the needs of the contractors we serve. We offer everything from individual line item services to full turn-key EPC projects. Kuykendall Solar has mastered the art of sub-contracting in the solar industry. Our services to you are seamless and discreet. We arrive on time and deliver as promised. We guarantee your satisfaction and will stay on the project until it's right. We will represent you as required; from our generic attire to your branded uniforms. No project is too big or small and we are not afraid of deadlines.

Our typical clients are solar contractors whose projects range from residential to commercial and industrial projects. Most of our working relationships (channel partners) have been clients of ours for many years. We fill their needs by helping them to finish projects on time and allow them to grow their businesses before they have staffing to install. In some cases, we are just more efficient and less expensive than their having to maintain existing crews. View us as an extension of your company, managing the project exactly as you would do it. Duplicate yourself instantly, without the headaches.

Our central California location allows us to service any projects you may have in the state, and with multiple crews we can shuffle our manpower to meet your needs.

Our vision is simple.

We aim to be the best solar installation partner in CA.

Our focus is simple.

Do the job we are contracted for on time and under budget.

Our objective is simple.

Be invaluable.

Our goal:

- Offer our services to you at a price point that makes you successful.
- Deliver on our promise of quality, efficiency and thoroughness.
- Consistently review and evaluate every job for accuracy and cost control
- Surpass industry standards through safely training and electrical education

Our Installation Staff

We pride ourselves on the knowledge and experience of our installation crews. All of our project managers, superintendents and electricians have their CA certification cards. Our employees are seasoned installation professionals who are required to meet our industry leading standards. We grow their skills by paying them to participate in related industry training and education. Background and drug testing are mandatory. Additionally, our crews are cross trained in every aspect of installation, this promotes flexibility and eliminates downtime.

When the project size dictates the need for contracted labor, we only partner with the most reputable labor companies in the industry such as Labor Max; who perform background checks on their employees, and who cover all liability and worker's comp coverage and claims.

Safety Protocol

We require all of our employees to complete the OSHA 30 safety class as well as First Aid and CPR training. Every job has a fall protection plan outlined on site, and each superintendent is provided with a safety folder and is required to conduct safety meetings at the beginning of each work week. These safety meetings are mandatory, and the sign-in sheet and meeting notes are reviewed by the company President at the end of each week. We strive to consider all possible risks and then mitigate them before they arise.

Certification

Kuykendall Solar- License #775849

- B - GENERAL BUILDING CONTRACTOR
- C46 - SOLAR
- C10 - ELECTRICAL

Company Experience

(Partial List)

Commercial Rooftops

- Proctor & Gamble, Oxnard, 1.2MW
- Family Dollar, Farmersville, 64kW
- Family Dollar, Littlerock, 82kW
- Target, Elk Grove, 124.8kW
- Target, Morgan Hill, 107.8kW
- Target, San Mateo, 135.4kW
- Target, Fresno, 724kW
- Target, SLO, 484kW
- Target, Paso Robles, 468kW
- Target, Redwood City, 381kW
- Kohl's, San Gabriel, 425kW
- SoCal Gas, Anaheim, 258kW
- PetCo, San Diego, 896kW
- Cove Elementary, Madera, 87kW
- Hall Middle School, Larkspur, 105kW
- Neil Cummins, Madera, 130kW
- Walgreens, (34) locations, 1.47MW
- Cinemark's, (5) locations, 1.4MW
- HAAS Automation, Oxnard, 961kW
- Deardorff, Oxnard CA, 425kW
- ICO SCE, Hesperia, 1.7 MW
- N&S Tractor, Merced, 91kW
- Family Pet Hospital, Fresno, 54kW
- Best Western, Lemoore, 242kW
- Red Roof Inn, Ontario, 78kW
- Coast LA, Los Angeles, 1.06MW
- Parreria Almonds, Los Banos, 124kW
- Netafim, Fresno, 680kW
- Hampton Inn and Suites, Santa Monica, 44kW
- Cinemark, Carson, 212kW
- Cinemark, La Quinta, 212kW
- Cinemark, Downey, 218kW
- Cinemark, Chico, 305kW
- Cinemark, Lancaster, 487kW
- Cinemark, Fremont, 317kW
- Cinemark, Milpitas, 270kW
- Cinemark, Oxnard, 171kW

Commercial Rooftops - continued

- Coast LA, LA, 1.06MW
- Netafim, Fresno, 680kW
- Parreria Almond, Los Banos, 124kW
- City Centre Plaza, Redwood City, 76kW
- Pacifica, San Marcos, 264kW
- FedEx, Oceanside, 1.05MW
- FedEx Rialto, Bloomington, 648kW
- Walgreens, Menifee, 51kW
- Walgreens, Fullerton, 51kW
- Citrus, San Diego, 622kW
- Heritage, Riverside, 330kW
- Kilory – High Bluff, San Diego, 636kW
- Sanger Community Church, Sanger, 24.75kW
- Fresno Housing – City View, Fresno, 35.1kW
- Fresno Housing – Mendota Farms, Mendota, 85.5kW
- Fresno Housing – Pacific Gardens, Fresno, 60.03kW
- Fresno Housing – Orchard Apartments, Parlier, 58kW
- Mike’s Mini Storage, Madera, 20.7kW
- Chase Bank, Santa Rosa, 58.9kW
- Chase Bank, Santa Clara, 46.86kW
- Chase Bank, Saratoga, 46.86kW
- Chase Bank Upland, Upland, 44.02kW
- Chase Bank, Encino, 86.62kW
- Chase Bank Fairfax, LA, 53.2kW
- Chase Bank Northridge, 31.95kW
- Caruthers Fair, Caruthers, 68kW
- Costco, Santa Maria, 645.84kW
- Oakland Charter, 24.14kW
- Sturdy Safe, Fresno, 50.4kW
- Budget Inn, Fairfield, 109.5kW
- Emerson Apartment, Clovis, 109.72kW
- Planada, Le Grand, 323kW
- Presort Center, Dinuba, 149.6kW
- Camarena Health (roof and carport), Fresno, 432.28kW
- Myers Shop, Porterville, 36.3kW
- Myers Woman’s Club, Porterville, 37.74kW
- Maya Cinemas 12, Delano, 255kW
- Amazon, Redlands, 2.79MW
- Amazon, San Bernardino, 2.86MW
- Amazon, Riverside, 3.13MW
- Laemmle Theater, Claremont, 108kW

Solar Canopies / Carports

- Oakley RV, Oakley, 1.7MW
- Minarets HS, Madera, 479.7kW
- North Fork Elementary School, North Fork, 228kW
- Glendale High School, Glendale, 468kW
- Roosevelt Middle School, Glendale, 285kW
- Bear Valley Middle School, Wheatland, 280kW
- Wheatland Elementary, Wheatland, 82kW
- U.C. Davis, Tulare, 52kW
- Minarets HS, O'Neals, 480kW
- North Fork Elementary, North Fork, 228kW
- Betabel, San Bautista, 427kW
- San Joaquin Estates, Fresno, 308kW
- Westgate, San Jose, 151kW
- Public Works, San Joaquin, 79kW
- Sunnyvale, Sunnyvale, 98kW
- Myers Funeral Home, Porterville, 17kW
- Wolf Lakes, Sanger, 140.76kW
- United Health Center, Fresno, 299.49kW
- La Mirada Elementary, Madrid San Ysidro, 110kW
- Smythe Elementary, San Ysidro, 110kW
- High Bluff, San Diego, 636.48kW
- Evening Creek, San Diego, 471kW
- Parks at Fig Garden, Fresno, 1.1MW
- Fletcher Jones Motor Cars, Newport Beach, 1.15MW

Ground Mounted (Fixed & Tracker)

- Le Grand Elementary, Merced, 165kW
- Roden Ranch, Lost Hills, 124kW
- RIO Farms, King City, 1,079MW
- Tera Nova, Helm, 1.1MW
- Wreden Ranch, Hanford, 1.1MW
- P&M Farms, Linden, 335kW
- Waste Water Treatment Plant, Kerman, 487kW
- Bath Farms, Caruthers, 550kW
- Orange Center Elementary School, Fresno, 90kW
- Lagorio Farms, Madera, 1.1MW
- Sierra Vista Presbyterian Church, Oakhurst, 45kW
- WWTP Kerman, Kerman, 487kW
- Hester Orchard, Exeter 300kW
- Raven Goshen, Tulare, 73kW
- Superior Almond, Cantua Creek, 113kW

Ground Mounted – continued

- King Golden State Orchard, McFarland, 675kW
- Terranova Ranch, Helm, 1.02MW
- Waste Water Treatment, San Joaquin, 101kW
- Cloverdale Dairy, Hanford, 875kW
- Wrenden Ranch, Hanford, 1.2MW
- Doreva Produce, Livingston, 216kW
- Rio, King City 1.08MW
- Lowell Mariam, 5 site project, 524kW
- Hester Orchard, Exeter, 300kW
- Raven Goshen, Visalia, 73kW
- Roden Ranch, Lost Hills, 335kW
- Paradise Ranch, Castaic, 528kW
- Kochergen Farms, Huron, 1.1MW
- Porto Bros, Kerman, 832kW
- Growing Nuts, Chowchilla, 54.4kW
- Agape, Kerman, 471.96kW
- San Juan Ranch, Dos Palos, 798kW
- Klamath Land and Cattle, Los Banos, 54.4kW
- CA City, California City, 2.4MW
- Sun Maid Dehydrator, Madera, 311kW
- Sun Maid Bethel Meter, Kingsburg, 225.72kW
- Sun Maid Selma, Selma, 602.6kW (ground and roof mount)

Battery Systems

- Cinemark, Orange, 600 KWAC 3 battery Tesla system
- Planada, Le Grand, Sungrow 250KW/548KWH system
- Viking, Fontana, Tesla 130kW system
- Fletcher Jones Motor Cars, Newport Beach, 250kW battery + storage
- Multiple residential battery systems. Certified installers for Adara, Tesla, and Outback

Letter of Recommendation

(Additional letters upon request)

Letter of recommendation for Kuykendall Solar,

My name is Sirath Patzer and I have been the DSA inspector on three different commercial rooftop projects that Kuykendall Solar has installed in Southern California.

The jobs were:

Santiago Elementary School DSA A# 04-111080, File# 30-48

South Lake Middle School DSA A# 04-111096, File# 30-48

University High School DSA A# 04-111021, File# 30-48

I was very impressed with the quality and workmanship of Mr. Kuykendall and the crews he had on site at every job I had the pleasure of working with them on. Their inspections were always seamless and his installations far above code. In relation to the above mentioned jobs, Kuykendall Solar never missed or failed an inspection, and always completed projects earlier than anticipated.

I highly recommend using Kuykendall Solar as your commercial solar installer. Everyone that has worked with them has come away happy with the quality of the install and has enjoyed working with Brian and his crews. Feel free to call if you have any questions.

Thank you,

Sirath Patzer

Inspector of Record

OSHPD/DSA/Combination Inspector

...what others say

"I have worked with Kuykendall Solar for over a year and have nothing but the highest regard for their capabilities as an electrician, builder, and their abilities to successfully manage commercial solar photovoltaic installations." ~ **Travis Somers, General Superintendent, SPG Solar, Inc.**

"We always get a quality installation from Kuykendall Solar. Working with a company that knows the Solar Industry inside and out gives us the confidence that the customer will be more than satisfied with their systems performance." ~ **Todd Bauer, Owner of Valley Solar Solutions**