(1) COVID-19: SPECIAL BROWN ACT PROCEDURES

The Central Coast Water Authority has determined this meeting to be an essential public meeting and will be conducting the meeting pursuant to the provisions of the Governor's Executive Orders N-25-20, N-29-20 and N-35-20 and the corresponding Santa Barbara County Health Officer's order.

Since this is an evolving COVID-19 situation, the Central Coast Water Authority will provide updates to any changes to this policy as soon as possible. The Authority thanks you in advance for taking all precautions to prevent spreading the COVID-19 virus.

(2) OPTIONS FOR THE PUBLIC TO PARTICIPATE IN THE PUBLIC MEETING

Consistent with the Governor's Executive Orders, all meetings of the Central Coast Water Authority will be conducted remoted – via video call and telephonically – until further notice. You are strongly encouraged to listen to all meetings live via RING CENTRAL MEETING (a Zoom affiliate) and TELEPHONE, as described in the agenda which is located on CCWA's website and was distributed to CCWA's "Notice of Meeting Distribution List" in compliance with the Brown Act.

Committee members, staff, and the public may participate remotely via computer using this URL:

https://meetings.ringcentral.com/j/1498969280

Or using this teleconference phone number and access code:

+1(623) 404-9000 Access Code: 149 896 9280 (press # after entering code)

When prompted, enter (speak) your full name.

You may provide the Committee with public comment in the following manner:

If you wish to make either a general public comment or to comment on a specific agenda item as it is being heard, or if you wish to make a comment on a specific agenda item, please: "raise your hand" digitally, or telephonically.

1. If you are joining via Zoom video, simply select "participants" at the bottom of your screen and choose the "raise your hand" icon on the right. This will notify us that you wish to speak.

2. If you are joining via telephone dial-in, please dial *9 to raise your hand. All participants, with the exception of Committee Members and certain staff, will remain muted.

Please note the Committee Chair has the discretion to limit the speaker's time for any meeting or agenda matter. Typically, the practice has been 3 minutes per speaker on each item.

A REGULAR MEETING OF THE OPERATING COMMITTEE
of the
CENTRAL COAST WATER AUTHORITY

will be held at 9:00 a.m., on Thursday, July 9, 2020
via URL: https://meetings.ringcentral.com/j/1498969280
or via telephone by dialing 1(623) 404-9000 and entering code 149 896 9280#

I. Call to Order and Roll Call

II. Public Comment – (Any member of the public may address the Committee relating to any matter within the Committee's jurisdiction. Individual Speakers may be limited to five minutes; all speakers to a total of fifteen minutes.)

III. ✴ Approve Minutes of the March 12, 2020 Operating Committee Meeting

IV. Executive Director's Report

A. Operations Update
B. Warren Act Contract Renewal Update
C. Suspended Table A Reacquisition Update
✴ D. Water Management Strategies Request for Qualifications Update
✴ E. Siemens Energy & Environmental Solution Proposal for Solar Power Installation at the Water Treatment Plant and 20 Year Power Purchase Agreement
✴ F. Additional Revision to Payment Schedule for FY 2020/21 DWR Fixed Costs

V. Reports from Committee Members for Information Only

VI. Date of Next Regular Meeting:
October 8, 2020

VII. Adjournment

255 Industrial Way
Buellton, CA 93427
(805) 688-2292
Fax (805) 686-4700
www.ccwa.com

✴ Indicates attachment of document to agenda packet

MINUTES OF THE

CENTRAL COAST WATER AUTHORITY
OPERATING COMMITTEE

March 12, 2020

I. Call to Order and Roll Call

Mr. Garcia, Committee Chair, called the March 12, 2020, Central Coast Water Authority Operating Committee meeting held at 255 Industrial Way, Buellton, California, to order at 9:08 a.m. Attachment No. 1 is a list of those in attendance.

Committee members present:

Paeter Garcia	-	Santa Ynez River Water Conservation District, ID#1
Ryan Drake	-	Goleta Water District
Rose Hess	-	City of Buellton
Shad Springer	-	City of Santa Maria
Shannon Sweeney	-	City of Guadalupe
Catherine Taylor	-	City of Santa Barbara

Matt Van der Linden, Advisory Member for the City of Solvang was also present.

II. Public Comment

There was no public comment.

III. Consent Calendar

A. Approve Minutes of the January 9, 2020 Operating Committee Meeting

Motion to approve the Minutes of the January 9, 2020 Operating Committee meeting was made by Ms. Sweeney, seconded by Ms. Hess, and carried with all in favor and none opposed.

IV. Executive Director's Report

A. Operations Update

John Brady, CCWA Deputy Director, reported plant production, chemical costs, and totals pumped into Lake Cachuma:

	Plant Production (AF)	Chemical Costs ($/AF)	SYPF Pumping Total (AF)
January 2020	1,043.49	$33.67	142.48
February 2020	1,099.98	$31.96	3.91

- Staff has been investigating causes and researching solutions following a nitrification event in late 2019. It appears the nitrification may be related to a biofilm so staff is focusing on biofilm monitoring and assessment. Pigging methods as well as chemical methods are being investigated for the pipeline, with the expectation that action may be needed at Winter Shutdown, or sooner.

- The granular activated carbon has been replaced in the last two filters at the water treatment plant, and Mr. Brady reviewed the quality control and testing of the new material.
- The project to replace the switchgear at the Santa Ynez Pumping Plant was awarded to Taft Electric and will begin in April with replacement of the transformer at the site. The transformer replacement will take approximately one week and requested deliveries should still be made. The switchgear replacement will take place in mid-May, and will take approximately three weeks to complete. Since the work will be spread partially over two months, the pumping restrictions will be split, and there should be sufficient capacity for meeting the needs of South Coast agencies.
- CCWA is working on the EPA mandated Risk and Resiliency Assessment, and has been coordinating with COMB as the two agencies complete their assessments. The assessment will be completed before the end of the year.
- CCWA has been working with San Luis Obispo County on the Development of Water Management Strategies for Maximization of the State Water Project in Santa Barbara and San Luis Obispo Counties.
- The Consumer Confidence Report will be completed by April 1.
- Have completed several inspections at CCWA facilities, including an unannounced CalOSHA inspection of the WTP and scheduled Environmental Laboratory Accreditation Program (ELAP) inspection of the laboratory at the Water Treatment Plant.
- Tabletop emergency plan exercise with CalFire Station 51 was held at the WTP to go over hazardous chemicals at the plant.
- CCWA's Distribution Technician Trainee has passed the Distribution On-Call test and has reached full Distribution Technician status. A job offer has been extended to a candidate for CCWA's open Instrumentation & Control Technician position.
- Ongoing budget development included meetings related to Capital Improvement Projects (CIP) and network planning.
- Devil's Den Pumping Plant, owned and operated by DWR, is currently experiencing an issue which has caused shut-down of delivery of water to the Water Treatment Plant. CCWA is monitoring the situation and will notify participants if action is needed. Mr. Brady explained the steps that would be taken in the event delivery is not resumed before action is necessary.

B. CCWA Water Supply Situation Report

Ray Stokes, CCWA Executive Director, reviewed the Northern Sierra, Tulare, and San Joaquin precipitation indices, all of which show well below average totals. Snowpack levels are also all at less than 50% of average. Reservoir levels are at about average levels, with Lake Oroville at 89% of average and San Luis Reservoir at 79% of average.

Mr. Stokes reviewed the delivery status report as presented to the Committee, updated on March 4, 2020 and provided an update on the 2020 Water Purchase Program, which has been reduced to 1000 AF as the only current participant is La Cumbre Mutual Water District.

C. Siemens Energy & Environmental Solution Proposal for Solar Power Installation at the WTP and 20 Year Power Purchase Agreement

Several staff members of Siemens Energy were present and introduced to the Committee. Ernest Kim, Business Development Manager, Colin Ackerman, Solar Project Developer, Sirisha Nerella, Energy Engineer, were introduced as Siemens' staff on the project. Mr. Brady reviewed the background of Siemens Energy & Environmental's proposal to construct an array of solar panels for electrical generation at the Polonio Pass Water Treatment plant. Mr. Brady's comments included cost comparisons with current PG&E costs, and CCWA's options related to the proposal, including locations of the solar panels and the Kw size options. The current analysis indicates a benefit to CCWA in long term electrical costs savings and reduction of CCWA's carbon footprint.

Several members of the Committee expressed reservations related to experience and the changing power structure, including the impending bankruptcy of PG&E.

Following discussion, upon a motion by Mr. Springer, seconded by Ms. Sweeney and carried with all in favor and none opposed, the Committee recommended the CCWA Board of Directors further consider the proposal for the solar project.

D. Delta Conveyance Project Contract Amendment Negotiations Update

Mr. Stokes provided an update on the ongoing negotiations related to the Delta Conveyance Project contract amendment with DWR. Currently negotiations are suspended with DWR.

E. State Water Project Contract Assignment Status Report

Mr. Stokes provided an update, stating that CCWA is preparing a letter to request the Santa Barbara County Board of Supervisors consider the matter, as it has been on hold for some time.

F. Warren Act Contract Renewal

Mr. Stokes began discussions with the USBR last year to renew its contract to pump water to Lake Cachuma. The contract expires in July 2020. He stated that CCWA has requested an increase in the maximum annual deliveries into Lake Cachuma from the current amount of 13,750 acre feet (AF) to 17,706 AF per year. USBR has indicated that it is likely CCWA will be issued an interim contract as it is expected that the July expiration date will pass before renewal.

G. Ernst & Young Audit Report and Findings on the DWR Statement of Charges

Mr. Stokes reviewed the report included in the meeting materials.

H. CCWA FY 2020/21 Preliminary Budget

Ms. Lisa Long, CCWA Controller, provided an overview of the report included in the meeting materials.

The Committee adjourned to closed session at 10:48 AM.

V. Closed Session

A. CLOSED SESSION: CONFERENCE WITH REAL PROPERTY NEGOTIATOR(S)
Government Code section 54956.8
Negotiator: Executive Director
Property: State Water Project water
Negotiating Parties: State Water Contractors (Central Coast Water Authority on behalf of the Santa Barbara County Flood Control and Water Conservation District) and the California Department of Water Resources
Under negotiation: Price & Terms

The Committee reconvened from closed session at 11:36 AM.

Committee Chair Garcia announced there was no reportable action as a result of closed session.

VI. Reports from Committee Members for Information Only

There were no reports from the Committee members.

VII. Date of Next Regular Meeting:

July 9, 2020

VIII. Adjournment

The meeting was adjourned at 11:37 AM.

Respectfully submitted,

_____
Elizabeth F. Watkins
Secretary to the Board

/lfw

CENTRAL COAST WATER AUTHORITY

Meeting: Operating Committee

Date: March 12, 2020

NAME	ORGANIZATION	TELEPHONE
SHAD SPRINGER	CITY OF SANTA MARIA	(805) 925-0951
Ryan Drake	Goleta Water District	(805) 879-4607
MATT VANDERLINDEN	CITY OF SOLVANG	(805) 688-5575
PAETER GARCIA	SYRWCD, ID NO.1	(805) 688-6015
Rose Hess	CITY OF BUELLTON	805-686-0137
CATHY TAYLOR	CITY OF SANTA BARBARA	805-564-5571
Shannon Sweeney	City of Guadalupe	805-356-3910
Nick Turner	MWD	805-969-2271
Kevin Walsh	SYRWCD	
Tom Fayram	County	
Ernest Kim	Siemens	714) 425-7140
Colin Ackerman	Siemens	570 302 4197
Sejal Turakhia	Siemens	510-861-4681
Stephanie Hastings	BHFS	805-963-7000
John Brady	CCWA	805 658 7272

Placing your name on this list is voluntary and is not required to attend this meeting.

CENTRAL COAST WATER AUTHORITY

MEMORANDUM

July 2, 2020

TO: CCWA Operating Committee

FROM: John Brady
Deputy Director, Operations and Engineering

SUBJECT: Water Management Strategies Request for Qualifications Update

Background

The Central Coast Water Authority (CCWA) and the San Luis Obispo County Flood Control and Water Conservation District (SLO County) are jointly pursuing a project to identify and evaluate strategies for optimizing the yield from the State Water Project (SWP). Due to the lack of sufficient storage capacity locally, both agencies have historically relied upon the SWP's San Luis Reservoir for storage of carryover water. Although this method of storage is currently available, it has an associated on-going risk of losing carryover water during a "spill event" at the San Luis Reservoir. This is the primary challenge to optimally managing SWP water supplies for both agencies.

It is anticipated that the risk of a "spill event" at San Luis Reservoir will increase in the future, particularly if projects such as the Delta Conveyance Project are constructed and operated. Further, through prior participation in existing groundwater banking operations, CCWA has experienced certain limitations on the return of water from these operations during times of drought as well as on the delivery of water to these operations prior to spill events at San Luis Reservoir. Consequently, a more reliable method of managing carryover water is needed.

The State Water Supply Contract currently has a pending amendment that provides a set of new water management tools. These tools were developed primarily by the SWP contractors and arose from many of the lessons learned during the last severe drought. CCWA and SLO County aim to consider and evaluate the pending water management tool amendment of the State Water Supply Contract. The objective is to identify both physical and administrative methods to optimize the overall management of SWP supplies.

Request For Qualification

CCWA staff collaborated with SLO County staff and subsequently prepared a Request for Qualification (RFQ) for this project. The emphasis of the RFQ was to identify a consulting firm with a high level of expertise in the SWP operations, design and management.

The project RFQ was finalized and subsequently issued on April 6, 2020 to a list of approximately 20 qualified consulting firms that were identified by staff's research. The RFQ was also advertised through posting on CCWA's website. Two Addenda were issued, one extended the deadline for submitting Statement of Qualifications and the second to require electronic submittals only. The deadline for responding to the RFQ was May 1, 2020. On this date, CCWA received a total of four Statement of Qualifications.

The submitted Statement of Qualifications (SOQ) were reviewed by a panel of CCWA staff and SLO County staff. The panel ranked each SOQ, as described by the RFQ. While all four consulting firms that submitted SOQs were very well qualified and each had its own unique set of strengths, the panel concluded the SOQ submitted by the Provost & Pritchard Consulting Group and Hallmark Group team was the most qualified for our specific project. This team included a group of professionals with a very high level of expertise in the SWP operations, design and management. The SOQ for the Provost & Pritchard/Hallmark Group team is attached.

As described in the RFQ, once the most qualified consulting firm is identified, CCWA and SLO County staff will initiate negotiations to determine the specific scope of work and cost. This process has been initiated and is currently underway. CCWA also informed the other consulting firms that submitted SOQs for the project by letter that another consulting firm was selected.

Funding

Since this project is being pursued for the benefit of both CCWA and SLO County, a mutually acceptable joint funding agreement was developed by both CCWA and SLO County legal counsel. SLO County is currently pursuing approval for this Joint Funding Agreement from their Board. SLO County staff did present the Joint Funding Agreement to their Board on June 16, 2020, but did not receive approval due to a 2 for and 2 against vote. SLO County staff will bring the Joint Funding Agreement back to their Board for a full Board vote within the next two months.

CCWA staff anticipates that the benefit of the project will be further explained by SLO County staff to their Board and the Joint Funding Agreement will be approved. CCWA staff will present the Joint Funding Agreement to the CCWA Board once the SLO County Board has approved the agreement and upon completion of the negotiations with the Provost & Pritchard/Hallmark Group. This project was included in the CCWA FY 2020/2021 Budget in the amount of $75,000.

Central Coast Water Authority

Consulting Services to Develop Water Management Strategies to Maximize Yield of the State Water Project for San Luis Obispo and Santa Barbara Counties



Statement of Qualifications

May 1, 2020

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

HALLMARK GROUP Capital Program Management

Attachment B

COVER SHEET

CCWA

RFQ FOR Engineering Consultant

Name of Firm: Provost & Pritchard Consulting Group

Mailing Address: 10860 Gold Center Drive, Suite 275

Rancho Cordova, CA 95670

Contact Person: Terry Erlewine, PE

Telephone: (916) 918-2020 Fax (559) 326-1090

Firm is a:

Joint Venture	( )
California Corporation	(x)
Partnership	( )
Sole Proprietorship	( )
Other	( )

Firm's Federal Tax ID Number: 94-2187078

Firm's or Individual's Professional Registration Number: Civil Engineer, California #32985

Signature of Authorized Representative

Date: May 1, 2020

Terry Erlewine, PE

Typed name of Authorized Representative

Signature of Authorized Representative

Date May 1, 2020

Randy Hopkins, PE, Vice President

Typed name of Authorized Representative

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

HALLMARK GROUP Capital Program Management

10860 Gold Center Dr. Ste. 275
Rancho Cordova, CA 95670
Phone (916) 918-2020

May 1, 2020

John Brady, Deputy Director
Central Coast Water Authority
255 Industrial Way
Buellton, California 93427

Subject: **Consulting Services to Develop Water Management Strategies to Maximize Yield of the State Water Project for San Luis Obispo and Santa Barbara Counties**

Dear Mr. Brady:

Thank you for the opportunity to submit this proposal to provide professional services to develop water management strategies to optimize water yield for the State Water Project (SWP). This proposal discusses our understanding of the project, recommends a scope of services with deliverables, sets forth our assumptions and discusses other services that may be of interest as the project proceeds. Provost & Pritchard (P&P) and Hallmark Group are partnering for this proposal to form a team with exceptional capability in strategic water resource development and management.

We understand that Central Coast Water Authority (CCWA) is investigating the potential of water management alternatives including banking, exchanging and transferring State Water Project (SWP) and other water supplies. Since 2008, severe operational constraints on the SWP have resulted in limited periods of surplus water availability. While the periods of water availability are limited, when they do occur, the quantities of Article 21 Water or at-risk carryover water (Article 56 Water) available can be relatively large and exceed the capability of several SWP contractors (Contractors), like CCWA, to fully utilize their available supply. In recent years, occasional periods of wet conditions in the Sacramento-San Joaquin Delta, coupled with significant quantities of water carried over by Contractors in San Luis Reservoir, resulted in lost opportunities by CCWA and other Contractors to take advantage of excess flows. The growing number of factors that will impact future SWP supplies requires Contractors to constantly adapt their water management strategies. To assist with such adaptation, the Department of Water Resources (DWR) and the Contractors negotiated in 2018 to amend the SWP Water Service Contract (Water Management Tools Amendment) to increase water management flexibility for Contractors. This contract amendment will expand the range of options available to Contractors like CCWA.

At the same time as the SWP supply and regulatory conditions are evolving, a recent CCWA study identified additional conveyance capacity available in the Coastal Branch downstream of the Polonio Pass Treatment Plant. The additional conveyance, together with the Water Management Tools Amendment, provides an opportunity for reevaluating how San Luis Obispo and Santa Barbara Counties' SWP allocation can be optimized to meet the needs of both agencies. We have prepared a draft scope of work that addresses the factors needed to identify, evaluate and select water management strategies to meet the needs of San Luis Obispo and Santa Barbara County SWP water users.

Provost & Pritchard has been providing engineering and related services in Central California for 52 years, with a major emphasis on water resources. Hallmark Group has provided program management services for some of the largest water infrastructure and planning processes in California specializing in water resources management.

The Provost & Pritchard/Hallmark Group team will be relying in large part on the experience of Terry Erlewine, Curtis Creel, Jim Beck, Dan Flory, and Harry Starkey, which have a combined 150 years of experience working on the SWP, Central Valley Project (CVP), Banking and Groundwater projects that are the core of CCWA's proposed project. As a summary:

- Mr. Erlewine worked on groundwater in the San Joaquin Valley and water supply operations for DWR, being involved in initial development of the Kern Water Bank during that period. More recently, Mr. Erlewine was General Manager at the State Water Contractors, where he was involved in all aspects of SWP contractual and operating activities.

- Prior to joining the Hallmark Group, Mr. Creel worked for DWR for 19 years with a significant focus on SWP operations including his role as Chief of the SWP Operations Planning Branch. Additionally, Curtis spent nearly 15 years of his water management career with Kern County Water Agency (KCWA) continuing his participation in SWP and CVP operations review, managing local water transfer and banking activities, and serving as the co-lead negotiator for the Area of Origin Settlement. During his last three years at KCWA, he served as General Manager leading negotiations for the SWP Coordinated Operations Agreement.
- Mr. Flory has extensive experience with the SWP, being employed by DWR for 23 years, primarily working on SWP issues with the State Water Project Analysis Office (SWPAO) and including six years as chief of SWPAO. Subsequent to his DWR experience, Mr. Flory went on to serve as General Manager for Antelope Valley-East Kern Water Agency where he continued to be involved in SWP management activities, including groundwater banking development and water transfers. Most recently, with Provost & Pritchard, Mr. Flory has worked for Dudley Ridge Water District and other Contractors in representing their interests in SWP issues.
- Mr. Beck participated in a wide range of water management activities during his 32-year tenure at the KCWA, including 11 years as the General Manager. These water management activities included participation in SWP operations and transfer activities. Jim performed multiple water supply assessments for KCWA operations. He was influential in the development of the Kern Water Bank, later serving on the Board of Directors during its formation. Most recently, Mr. Beck has been instrumental in the development of Groundwater Sustainability Plans for Groundwater Sustainability Agencies in Kern County and other locations.
- Mr. Starkey's 30-year career in water has focused on water and power management in Kern County. As the former General Manager of the West Kern and Berrenda Mesa Water Districts, Harry has extensive water banking experience in and around Kern County. His experience includes the permitting, designing, constructing, financing, acquiring rights of and operating water banking projects on the Kern Fan including the management of the Cross Valley Canal. In addition to his capital program management expertise, Harry has developed urban water management plans, water shortage contingency plans, water banking programs, and preparation of various environmental compliance documents for permanent water transfers in California to further secure water reliability in Kern County.

In addition to the five primary study participants, Provost & Pritchard/Hallmark Group have a wide array of experience in water resources projects through their ongoing water management, engineering, water banking and groundwater analysis experience. With implementation of the Sustainable Groundwater Management Act (SGMA), Provost & Pritchard and Hallmark Group have been intensely involved in the development of Groundwater Sustainability Plans (GSPs) in the San Joaquin Valley and other parts of California. A summary of this experience is contained in this proposal.

We believe that the experience summarized above, and presented in more detail in the attached proposal, will allow the Provost & Pritchard/Hallmark Group Team to efficiently develop the proposed water management strategy. We are pleased to be able to submit this project and look forward to hearing from you.

Respectfully,

Provost & Pritchard Consulting Group

Terry Erlewine, RCE 32985
Principal Engineer / Principal-in Charge

Randy Hopkins, RCE 63538
Vice-President

Hallmark Group

Charles R. Gardner, Jr., PgMP
CEO

Central Coast Water Authority

Consulting Services to Develop Water Management Strategies to Maximize Yield of the State Water Project for San Luis Obispo and Santa Barbara Counties

Statement of Qualifications

May 1, 2020

Prepared for:
Central Coast Water Authority
John Brady, Deputy Director
255 Industrial Way • Bulleton, California 93427
Telephone: (805) 688-2292 • Email: jlb@ccwa.com

Submitted by:
Provost & Pritchard Consulting Group
10760 Gold Center Dr. Ste. 275
Rancho Cordova, CA 95670
Telephone: (916) 918-2020 • Fax: (559) 326-1090
Website: www.provostandpritchard.com

Table of Contents

Statement of Qualifications

Firms' Capabilities

Provost & Pritchard

Provost & Pritchard was founded in 1968 in Fresno California in the heart of the Central Valley. Our first client, Laguna Irrigation District was experiencing difficulty in delivering surface water through their canal system to irrigate the farm fields around Riverdale, California. Jim Provost took on this work, evaluated the canal system, the check structures, the pipelines, and the size of the canals and our work in water was born!

Over the course of the last 52 years, the firm has grown in size, services offered, and geography; office locations in Sacramento, Chico, Modesto, Merced, Los Banos, Clovis, Fresno, Visalia, and Bakersfield. With nearly 190 employees, our staff is diverse in its specialties, and includes water resource, civil and agriculture engineers, hydrogeologists, planners, environmental specialists, land surveyors, construction managers and field representatives.

Water Resource Engineering

Since the firm's beginning, Provost & Pritchard Consulting Group has been an integral part of the development of irrigated agriculture throughout California. The firm's consulting and engineering services are rooted in this tradition. Today's challenges go beyond the design of new water projects. Increased competition for water supplies, drainage needs, and water quality issues demand new approaches and innovative solutions. Provost & Pritchard continues to lead the way by providing a variety of services to help clients maximize the benefits from their water supplies.

With significant knowledge of the water issues facing municipal and agricultural entities in California, Provost & Pritchard integrates water policy, water conservation, operational knowledge and value engineering in many of our projects.

Services Include:

- District Management and Engineering
- Civil Engineering Design
- Water Resource Management Planning
- Groundwater Management and Design
- Surface Water Hydrology and Modeling
- Water Rights and Transfers
- Dams, Reservoirs and Levees
- Grant Writing and Grant Management
- CEQA and NEPA documentation
- Land Surveying
- Geographic Information Systems Mapping
- Construction Management and Field Services
- Unmanned Aircraft Systems (UAS)

Hallmark Group

Hallmark Group Capital Program Management was founded in 2001 in response to the needs of project owners who sought expert administration and management for their most important programs. Excelling in the leadership and management of complex programs for both government and private clients, our areas of focus include project management, water resources management, and strategic development and implementation.

Our expert team brings proven industry expertise to the clients we serve. Whether it is complex water management, strategic development, or a capital program, we provide the resources to expertly manage projects. Our team has a demonstrated record of success for public and private clients. Hallmark Group's sound strategies enable owners to make confident decisions about their programs and see them through to successful completion.

Project Personnel

Provost & Pritchard Key Personnel

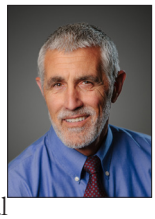
Terry Erlewine, PE
Principal-in-Charge

Terry Erlewine has more than 38 years of experience providing water resources planning and analysis. He has conducted many surface and groundwater resources studies, including water uses, operations studies, groundwater modelling, and groundwater conjunctive use programs. For the last twenty-three years, Mr. Erlewine worked for the State Water Contractors (SWC), most recently serving as General Manager for 14 years. Previously, Mr. Erlewine worked as a consultant on water resources. Mr. Erlewine began his career with the California Department of Water Resources (DWR). In his 13-year tenure with the Department, he was involved in all aspects of surface water and groundwater projects. This DWR experience included operating the State Water Project (SWP)/Central Valley Project (CVP) operations model and planning work on development of Kern Water Bank.

Dan Flory, PE

Dan Flory has more than 35 years of experience in water resources engineering including over 20 years with the DWR and the past four years as a principal engineer at Provost & Pritchard. Mr. Flory served in progressively more responsible roles for DWR, culminating in his position as the department's executive manager. Mr. Flory supervised and directed the work of 100 engineers and analysts in the administration of power purchase and water supply contracts. His Wwork also included the allocation of water supplies to water users and the distribution of water and power costs to 29 SWP contracting agencies. For 11 years Mr. Flory supervised the Water Contracts Administration and Negotiation Section. He is an experienced advisor to legislative staffs, appointed officials and board members as well as serving as an expert witness providing testimony in litigation involving water rights.

Dale Melville, PE



Dale Melville is a principal engineer and Chair of the Board of Director's at Provost & Pritchard. With over 45 years of consulting engineering experience, he has been involved with projects related to all aspects of agricultural and municipal infrastructure projects. He has been district engineer to several municipal and agricultural districts. Mr. Melville's experience includes site investigations, feasibility studies, management of projects related to design and construction of both municipal and agricultural water and wastewater conveyance and treatment systems, wastewater reclamation, agricultural irrigation and drainage systems, water transfers/exchanges, and groundwater recharge/recovery facilities. Mr. Melville has established working relationships with numerous state and federal government agencies in preparing applications and securing grant and loan funds for infrastructure projects.

David Halopoff, PE

David Halopoff is a project manager and senior engineer at Provost & Pritchard's Bakersfield office with more than seven years of professional experience. His experience includes water resources and civil engineering, design, and construction. Mr. Halopoff has been involved with projects related to all aspects of municipal and agricultural water supply and distribution, groundwater recharge and recovery projects (direct and in-lieu), groundwater hydrogeology, groundwater engineering, groundwater well design and construction, groundwater quality, water supply studies, pump design, and construction oversight of public works and agricultural facilities. Mr. Halopoff has worked on over 50 well projects that include design and construction of municipal, industrial, and agricultural groundwater production wells.

Hallmark Group Key Personnel

Curtis Creel, PE

As Hallmark Group Director of Water Supply Management, Curtis brings over 33 years of California water resources expertise earned through valued relationships and a unique perspective of both public and private water strategy and management. As General Manager of the Kern County Water Agency (KCWA) Mr. Creel participated in the management of some of the most significant water programs in the history of the State, from technical and policy guidance for the State Water Project (SWP) and Central Valley Project (CVP), to contributing to the State approval of the California WaterFix plan in 2017. A substantial portion of his work has involved managing large groups of stakeholders including United States Bureau of Reclamation (USBR), State and federal permitting agencies, non-government organizations, water agencies and private sector participants with diverse and sometimes adverse interests.

Jim Beck

With over 30 years of experience in the Kern County water resource community, Jim brings unparalleled depth of knowledge of operations as related to the SWP, CVP, GSPs, and banking. As the Executive Director for local Kern Groundwater Sustainability Agencies and former General Manager of the Kern County Water Agency (KCWA), Jim has been implementing initiatives to meet Kern County's complex water needs for most of his career. Jim's decades of California water policy leadership are reflected by the efficacy of his work with the California WaterFix. Jim conducted a series of meetings locally to provide project updates and to develop a Kern County implementation strategy and contributed to the negotiation of State and local funding agreements. During his time with KCWA, Jim served key roles on many programs— including the State Water Project—that placed the agency at the vanguard of good water management practices. He also managed KCWA's urban water district—Improvement District No. 4 (ID4)—which provides a supplemental water supply for the Metropolitan Bakersfield area, and led KCWA staff in such critical projects as the expansion of ID4's Henry C. Garnet Water Purification Plant, and expansion of the Cross Valley Canal.

Harry Starkey, PE

Harry has dedicated his 30-year career to Kern County water resources planning, development, and implementation. Formerly serving as the General Manager for the West Kern Water District, his leadership in Kern County is demonstrated through the delivery of the West Kern Recharge and Recovery groundwater banking project and multiple groundwater banking and exchange programs agreements that leverage current groundwater storage and recovery assets to develop additional water supply at no cost to the District (current yield = 51,000 af of new water). In addition to his capital program management expertise, Harry has developed urban water management plans, water shortage contingency plans, water banking programs such as Berrenda Mesa, Pioneer, Kern Water Bank, West Kern Banking Programs, and preparation of environmental compliance documents for permanent water transfers in California to increase water reliability in Kern County.

Additional Resources

Team Member	Title	Years of Experience	Area of Expertise
Provost & Pritchard Consulting Group			
Brian Ehlers, PE	Principal Engineer	38 years	• Groundwater Studies • Groundwater Banking
Tom Glover, PE	Principal Engineer	41 years	• SWP Contract Negotiations
Kevin Johansen, PE	Principal Water Resources Engineer	35 years	• Water Transfers • Supervision of Water Operations
Rick Iger, PE	Principal Engineer	43 years	• Groundwater Recharge and Banking • SGMA Compliance
Hallmark Group Capital Program Management			
Charles R. Gardner, Jr., PgMP	President and Strategic Advisor	30 years	• Strategic Planning • State and Federal Coordination
Jessica Alwan	Senior Project Manager	15 years	• Reporting Development • Workshop Facilitation
Taylor Blakslee	Project Manager	12 years	• Stakeholder Engagement • Project Team and Coordination

Required Qualifications

State Water Project Operations

California Department of Water Resources
Sacramento, California, SWPAO Division Chief

For six years working for the Department of Water Resources (2000-2006), Mr. Flory supervised and directed the work of 100 engineers and analysts in the administration of water supply and power purchase contracts. The operating budget, including power purchases was about $300 million a year. Work included the allocation of water supplies to SWP water users, review and approval of water transfers, interpretation of water supply contracts and the distribution of water and power costs to 29 SWP contracting agencies.

State Water Project Allocations
State Water Project Contractors

In 2000, DWR reduced the SWP allocation from 100 percent to 90 percent after its analysis showed a potential for a significant reduction in water supplies available to the SWP. This conclusion was based on previous practice by DWR to consider extremely conservative water supply forecasts when making decisions about SWP allocations. As a result, the SWP was not being operated to its full potential. Contractors approached DWR about adjusting its procedure to optimize the use of the water supplies available to the SWP. Mr. Creel, as the Chief of the SWP Operations Planning Branch, (SWPOPB) lead a process to investigate enhancements to how his staff would perform the SWP allocation analyses and make recommendations to the DWR Director on what water supply allocations the SWP could support. Both Mr. Erlewine and Mr. Flory played integral roles in supporting the development of SWPOPB process. The ultimate outcome was a significant improvement in SWP operations and allocations.

Ongoing Consulting Services
Dudley Ridge Water District, Kings County, California

Provost & Pritchard continues to provide ongoing consulting services to the Dudley Ridge Water District. Mr. Melville has been the manager-engineer for this agricultural water district, administering their State Water Project contract for over 25 years. In addition to his management duties, he has developed conjunctive use and long-term transfer/exchange programs for the District, including groundwater banking projects with the Kern Water Bank Authority and Cawelo Water District, exchange programs with Kern County Water Agency, Tulare Lake Basin Water Storage District, and San Gabriel Valley Municipal Water District, and numerous annual water transfers and exchanges. He also assisted in the formation of the Kern Water Bank Authority, a public agency involved in the acquisition, development, and operation of a 20,000-acre groundwater banking facility, which was the largest groundwater recharge project in the world (Mr. Melville was a founding member of the board of directors for the Kern Water Bank Authority). Mr. Melville has also assisted the District in the permanent transfers of State Water Project Table A water to Mojave Water Agency and Antelope Valley-East Kern Water Agency.

State Water Project Water Allocation
State Water Contractors, Statewide

Provost & Pritchard staff conducted ongoing reviews SWP water supply allocations while at SWC, as General Manager and Engineer. The analysis included regular meetings with DWR staff and managers to discuss current water supply allocations. At differentce times, evaluated SWP allocations procedures and developed proposals for revising SWP operations and allocations to meet SWP contractor needs.

Area of Origin Settlement
South-of-Delta SWP Contractors

In 2008, four North-of-Delta Contractors filed a lawsuit against DWR regarding implementation of Article 18 of the SWP Water Service Contract. Their lawsuit contended a priority right for water supplies from the SWP above other Contractors based on the Area of Origin statute in the California Water Code. In 2009 the plaintiffs, DWR and other Contractors that intervened in the litigation on behalf of DWR (Intervenors), were directed to enter settlement

discussions by the Superior Court. Mr. Creel was the co-lead negotiator for the Intervenors. He managed the analyses performed on behalf of the Intervenors, participated in the development of settlement approaches, and helped negotiate a successful outcome. The provisions of the settlement required a creative approach to allowing the plaintiffs access to SWP storage facilities and water supplies while minimizing potential water supply impacts to other Contractors.

Central Valley Project Operations

Coordinated Operations Agreement Negotiations
California Department of Water Resources and U.S. Bureau of Reclamation

In 2016, DWR and USBR began an intensive review of the Coordinated Operations Agreement (COA) as specified within the agreement. Article 14 of the COA requires that DWR and USBR review the agreement and make changes, if necessary. After an unsuccessful series of discussions about how to review and update the COA, DWR and USBR entered into a broader negotiation to address issues related to Endangered Species Act and SWRCB compliance, as well as cooperation on developing joint infrastructure projects like the California WaterFix and Sites Reservoir. The initial part of the negotiations required a focused discussion regarding changes to the COA. Mr. Creel was the lead negotiator for the Contractors regarding COA matters. He worked closely with other Contractor staff as well as key DWR staff to develop an approach that could result in a successful negotiation outcome. He also worked closely with CVP contractors to work through a compromise that would provide for an equitable sharing of available water supplies and water requirements among the CVP and SWP.

General Water Transfers/Exchanges,
Various Clients, San Joaquin Valley, California

Provost & Pritchard has assisted numerous public agency and private clients with negotiations and obtaining regulatory approvals (SWRCB, DWR, USBR, and local agencies) including CEQA and NEPA compliance for water transfers totaling more than 500,000 acre-feet. Provost & Pritchard staff have prepared applications, drafted agreements, and obtained regulatory approvals for change of place-of-use or point of delivery agreements for typically two to five water transfers per year since the mid-1990s. Transfers have included: SWP contractors in Kings, Kern, Tulare, San Luis Obispo, Stanislaus, and Los Angeles counties; San Luis Unit-CVP water, Friant-CVP water, and Kern, Kaweah, Tule, and Kings Rivers. Water has been transferred to San Luis Unit-Central CVP contractors, Friant-CVP contractors, SWP contractors, environmental purposes, and individual landowners within CVP and SWP service areas.

California WaterFix
California Department of Water Resources

In 2009, the Hallmark Group began managing the Delta Habitat Conservation and Conveyance Program, which was tasked with addressing the State of California's need for a more reliable water system and to protect the delicate Delta ecosystem. Serving as program manager, Hallmark Group successfully gained Department of Water Resources (DWR) certification of the 60,000-page California WaterFix the environmental analysis. Obtaining the signed Notice of Determination from DWR took nearly eight years of careful coordination with state, SWP, CVP, and key stakeholders, at the local, state, and federal level. It required development of the biological assessment, negotiation and issuance of biological opinions, multiple facility refinements to meet project objectives and respond to over 16,000 comments. The efforts of the Hallmark team resulted in California Department of Fish and Wildlife issuance of the Incidental Take Permit for WaterFix construction and operation in compliance with Section 2081(b) of the California Endangered Species Act. Key design and project features included a 10% complete design, class III construction cost estimate, level II schedule, and program-level risk register, all produced under Hallmark Group leadership.

Coordinated Operations Agreement Analysis
State Water Contractors, Statewide

Provost & Pritchard staff participated in analysis of the coordinated operations of the SWP and the CVP as part of recurring reviews of the Coordinated Operations Agreement. These efforts occurred as a consultant with Provost & Pritchard for the SWC, and previously as General Manager for the SWC. The efforts involved direction and review of operations studies of the SWP and CVP, analysis of the relative benefits for the SWP and the CVP and participation in negotiations. This work lead to the Napa Agreement in 2003 and the recent update to the Coordinated Operation Agreement (COA).

Groundwater Sustainability Plans

Groundwater Sustainability Plan Development
North Fork Kings GSA, Fresno County, California

Provost & Pritchard prepared the GSP for the North Fork Kings GSA. The team actively worked with the North Fork Kings Managers since 2017. Beginning 2018, monthly public meetings were held to review the regulations and requirements, discuss alternatives, provide recommendations, prepare draft chapter language and address comments received from the committee, and address comments from the public. The completed GSP was adopted by the GSA in December 2019 and submitted to DWR in January 2020.

Groundwater Sustainability Plan Development
San Gorgonio Pass Water Agency, Beaumont, California

Provost & Pritchard is currently managing development of a GSP for the 64,000-acre San Gorgonio Pass Subbasin. Mr. Erlewine is the project manager in charge of completion for the project. The GSP will serve three GSAs in the subbasin – the San Gorgonio Pass GSA, Verbenia GSA and a portion of the Desert Water Agency GSA. The GSP will address groundwater sustainability in an area of limited water supply availability and increasing urban development. The GSP will be completed and adopted by GSAs prior to January 2022.

Basin Coordination
Kern Groundwater Authority, Bakersfield, California

Provost & Pritchard is currently acting as the Basin Coordinator for the Kern Groundwater Authority, which is the largest GSA in the Kern Subbasin. Mr. Erlewine initially served as acting general manager (Basin Coordinator) and subsequently served in a senior advisory role. While acting Basin Coordinator, he developed Kern Groundwater Authority budget and schedule for GSP preparation. He also provided technical advice on groundwater modeling and other GSP preparation elements. He developed projected future water supply conditions for the SWP considering climate change for use in SGMA groundwater modeling projections.

Cuyama Basin Groundwater Sustainability Agency
Cuyama Basin Water District, Kern County, California

The Cuyama Basin Groundwater Sustainability Agency was formed by a Joint Exercise Powers Agreement (JEPA) by multiple agencies and districts under the Sustainable Groundwater Management Act. The Cuyama Groundwater Basin has been identified by the California Department of Water Resources as a high priority Basin and subject to conditions of critical overdraft. The Agency must develop a Groundwater Sustainability Plan with identified actions and projects to determine sustainability levels and how the Basin will implement and monitor them to maintain sustainability.

The Hallmark Group provides all Board reporting and facilitation, ensuring Brown Act compliance, document control, project controls, financial management services, budget development and tracking, schedule management, consultant management, contract management, stakeholder outreach facilitation, committee management, and coordination with the California Department of Water Resources for grant administration and reporting. Jim Beck serves as Executive Director of the GSA.

Within a very short timeframe, the Hallmark Group team managed the proposal review and selection of key consultants for the program, developed annual and program budgets, developed and facilitated negotiations for program cost allocation among participants, developed the program schedule, and implemented executive level Board reporting.

Eastside Water Management Area
Eastside Water Management Area

The Kern Sub-basin of the Tulare Basin has been identified as a high priority Basin by the California Department of Water Resources, which is subject to conditions of critical overdraft. Non-district landowners in the eastern portion of Kern County contracted with the Hallmark Group to form the Eastside Water Management Area (EWMA) to best represent their interests in developing a Groundwater Sustainability Plan chapter as required by the Sustainable Groundwater Management Act (SGMA). The EWMA membership draws from a 153,000-acre area and currently includes 42 members representing nearly 35,000 acres.

The Hallmark Group's organizational expertise provided for the cohesion of a diverse group of non-district landowners into a formal non-profit entity to best represent their unique interests under the Kern Groundwater Authority GSA. Additionally, the Hallmark Group's knowledge of local water resources and robust relationships in the water community have allowed the EWMA to work directly with adjacent water districts in resolving SGMA-related issues. Hallmark Group provides Board reporting and facilitation, project controls, schedule management, consultant management,

contract management, stakeholder outreach facilitation, and representation at Kern Groundwater Authority meetings. Within a very short timeframe, the Hallmark Group team managed the proposal review and selection of key consultants for the program, and facilitated negotiations for program cost allocation among participants, and implemented executive level Board reporting.

Sustainable Groundwater Management Act of 2014
Kern County Water Agency

As General Manager, Jim Beck led KCWA's participation in development of the Sustainable Groundwater Management Act (SGMA) of 2014. The bill was developed for the state California as a framework for sustainable, groundwater management to stop overdraft and bring groundwater basins into balanced levels of pumping and recharge. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California. Mr. Beck oversaw the review of draft language of the bill, met with local policy leaders to evaluate the bill and develop a response. Jim also directly engaged with then Governor Brown to express concerns over the Governor's proposed bill and to provide recommend changes.

Groundwater Banking Operations

Orestimba Creek Recharge and Recovery Project
San Joaquin River Exchange Contractors Water Authority, Los Banos, CA

Provost & Pritchard has been working with the San Joaquin River Exchange Contractors Water Authority since 2012 on the Orestimba Creek Recharge and Recovery Project. The Orestimba Creek Recharge and Recovery Project includes construction of groundwater banking facilities along Orestimba Creek between the DMC and the Eastin Water District Boundary. The Orestimba Creek and DMC would be used to convey water to and from the bank. The purpose of the project is to provide a place to store high flow and carryover supplies which would be regulated to provide a critical year water supply and provide water to meet peak demands in the summer. Provost and Pritchard provided design and construction management for two 0.5-acre test recharge ponds and a 20-acre pilot project. The work included surveying, coordination and analysis of geotechnical sampling, pond and conveyance facility design, permitting and grant application support, operations oversight and test result analysis.

Recharge and Recovery Enhancement Project
Kern Water Bank Authority, Kern County, California

Provost & Pritchard provided planning and design engineering services for the Recharge and Recovery Enhancement Project for the Kern Water Bank Authority. The project included the construction of 190 net acres of new recharge ponds, three new recovery wells and 1.7 miles of pipelines. The project team prepared planning documents needed for a successful grant application under the IRWMP program. As a part of the planning documents the team developed a water availability analysis using historical data and projected operations to approximate the amount of stored and recovered groundwater resulting from the proposed project implementation. Upon receipt of the grant, Provost & Pritchard prepared the project design documents, assisted with permitting, reviewed well drilling work, and assisted with construction management. The total cost of the project was approximately $3.5M, of which $2.3M was funded through the IRWMP grant.

Kern Water Bank
DWR and the Kern Water Bank Participants

The Kern Water Bank is located on a large, undeveloped section of the Kern River's sandy alluvial fan and covers nearly 30 square miles. It has about 7,000 acres of recharge ponds which, on average, recharge at a rate of 0.3 feet per day.

Originally, the KWB was conceived as a supplemental water supply project for the SWP. During the time it was being developed by DWR, Terry Erlewine (while at DWR), Jim Beck and Harry Starkey (at KCWA) worked on project permitting and facility planning and development. Jim Beck and Harry Starkey both assisted in the effort that led to the acquisition of the property and associated facilities by local Kern County interests. Following that local acquisition, Jim Beck represented Improvement District No. 4 on the Kern Water Bank Board of Directors.

The KWB has become recognized as a world-class groundwater recharge and recovery facility. Its development required the successful navigation of extremely complicated regulatory and contractual processes. The property has over 20,000 acres of recharge facilities, over 85 groundwater recovery wells and a canal that integrates the project with the SWP as well as the Friant Kern Canal and the Kern River. Having participated in the initial development of the various facilities, afforded our team members to apply that experience to the development and operation of additional groundwater banking projects.

Pioneer and Berrenda Mesa Groundwater Banking Projects

KCWA Member Units

In 1992, KCWA purchased 2,253 acres of land to develop additional water recharge and banking facilities, referred to as the Pioneer Properties. The Pioneer Properties consist of two parcels on either side of the Kern River southwest of Bakersfield. KCWA developed the project to assist local water districts in their water resource management through recharge water to and recover water from the groundwater basin. Jim Beck participated in the permitting and development of this vital resource while Harry Starkey served in an engineering and construction management capacity. In addition, Jim Beck was part of the team that developed agreements with the local water districts that govern the financing and operation of the facility.

The Berrenda Mesa banking project is located along the south side of the Kern River just upstream of the Pioneer Properties. The project consists of 369 acres with an annual recharge capacity of 58,000 af and an annual recovery capacity of 46,000 af. The Projected was initially developed by the Berrenda Mesa Water District, who acquired the property. The Project was one of the first to optimize recharge of imported surface water in the natural channel of the Kern River. As General Manager of the Berrenda Mesa Water District, Harry Starkey represented the interests of the property owner in the management and operation of the Project, that also included several other KCWA member units.

West Kern Water District Groundwater Banking Project

West Kern Water District

Harry Starkey led the development and operation of the West Kern Banking Project. The project involved the acquisition of 500 acres of land for recharge ponds, drilling and equipping of five water wells, constructing an associated 4.5 megawatts solar project and the construction of a 30-inch ductile iron trunk line. This project was primarily developed for the conjunctive use of West Kern's highly variable SWP supply. The project evolved to allow for local water marketing purposes that generated supplemental revenue insulating customers from rate increases particularly during mandatory conservation measures.

Scope of Work

To meet Central Coast Water Authority's ("CCWA") identified needs, the following scope of work has been developed. This scope addresses the topics identified in the CCWA SOQ and provides elaboration on how each topic would be completed. As described in greater detail below, this scope of work envisions using an annual planning model to determine the estimated operation and quantification of water supplies. Should it be determined through the course of the work that this level of planning is too course and limits the understanding of how a specific alternative might operate and the resulting supply that would result from the program, an optional scope task (Subtask 4.6) has been included that would allow for the opportunity to evaluate specific alternatives in more detail. This additional task includes components based on an annual analysis of water management options. Depending on the complexity of that analysis and the interest of local stakeholders, a more detailed monthly planning model would be developed to refine potential operations.

Task 1.0 – Project Management

This task includes overall project administration, subconsultant management, preparing monthly progress reports, and contract administration with the CCWA Program Manager.

This task also includes attending monthly meetings with the GSA (in-person or on-line, subject to the then-current health requriements). These meetings will focus on a series of topics shown under Task 2 through 5. At each meeting a presentation will be given on progress and results, and comments will be solicited on draft sections and upcoming work. In addition, focused workshops on important topics, such as Development of Selection Criteria, or review of the completed Optimization Alternatives, may also be held. A description of the anticipated meetings is provided below:

- Initial Project Meeting
  An initial meeting will be held to review the project requirements, provide an overview of the proposed scope of work, budget and schedule, identify available information and reference, and develop an effective strategy for developing a water management strategy. This will result in a detailed roadmap for future work so all parties are familiar with and concur with the project approach.
- Strategy Development Meetings
  Throughout the course of the project, Provost & Pritchard and Hallmark Group will conduct regular meetings with the CCWA Program Manager. Each meeting will focus on a specific list of topics described below under Tasks 2, 3, 4 and 5. These meetings are anticipated to be monthly for the first six months, with quarterly meetings expected after the initial six-month effort. Attendance at other committee meetings would also be included in this task to assist with strategy coordination and development

Deliverables:

- Monthly Progress Reports
- Prepare material and presentations for monthly meetings with GSP Working Group through 2020, with quarterly meetings afterwards

Task 2.0 – Review and Summarize Pertinent Rules and Requirements

Applicable regulatory requirements for water management options will be identified. As a State Water Project ("SWP") contractor, the starting point will be CCWA's Water Supply Contract for the SWP. As currently operational, these contracts include provisions addressing factors such as storage in SWP facilities and outside a contractor's service area (Article 56), transportation of non-project water (Article 55), and water transfers and exchanges. Additionally, there are supplemental guidelines (for example Notice to State

Water Project Contractors #17-11) that address how the contract is being implemented. As noted in CCWA's SOQ, the current SWP contract provisions have proven to be an impediment to many beneficial water management practices for SWP contractors seeking to maximize the utility of their SWP water supply and integrate it with their local resources. Finally, there are ongoing practices that SWP contractors have developed, in coordination with DWR's Operations Control Office that address more short term and real time operations specific to carryover water, interruptible water, and annual allocations.

As noted in the CCWA SOQ, a Water Management amendment is currently being finalized. The new amendment will make significant changes to the existing rules in the SWP Water Supply Contracts that will greatly facilitate implementation of effective water management strategies for agencies such as CCWA. The new amendment, for example, will allow annual or multi-year transfers that have been limited in the past.

In addition to SWP regulations, other agencies have jurisdiction over potential water management actions (such as banking, transfers and exchanges) that may need to be addressed depending on the actions. These other agencies include the Department of Water Resources, the State Water Resources Control Board, the U.S. Bureau of Reclamation, the Delta Stewardship Council, the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, Groundwater Sustainability Agencies, and County Governments. Depending on the situation, other agencies with jurisdiction could include Integrated Regional Water Management Agencies, an adjudicated groundwater basin watermaster, and the Regional Water Quality Control Board.

The product of this process will be a concise summary of the regulations that affect different types of water management actions at different locations. A generalized checklist will be developed for different types of management actions that will be useful for ongoing development and implementation of those actions.

Deliverable:

- Summary of Rules and Regulations affecting water management options for Central Coast and its member agencies.

Task 3.0 – Development of Selection Criteria

This task will involve a process to develop local consensus for the criteria to be used for identifying selection criteria for water management alternatives. The CCWA SOQ identifies many of the criteria that would be appropriate for selecting a project – cost, reliability and control of conveyance, ability to deliver water, ability to return water, water losses and other factors. These factors, and additional potential factors (e.g., water quality, location), will be summarized and reviewed with CCWA and affected stakeholders to develop final selection criteria. At least two meetings (potentially in conjunction with other meetings) will be conducted with CCWA and identified stakeholders to review potential selection criteria, refine the criteria, and settle on the final criteria and appropriate weighting.

Deliverable:

- Selection criteria for reviewing selecting water management alternatives.

Task 4.0 – Development of Optimization Alternative

The development and selection of alternative management strategies will be the primary task for the scope of work. Considering this, the task has been broken into several subtasks as described below. As noted earlier, the anticipated initial approach will be to pursue development of a simplified annual analysis. The limitations of this approach will be identified and, if imperative, a more detailed monthly model will be developed for evaluating alternatives.
The subtasks for completing Task 4 are proposed as follows:

Subtask 4.1 – Identify Water Management Components

An initial task will be to summarize the water management alternatives that are available to meet CCWA's needs. The alternatives will include physical alternatives (such as a water bank) and operational alternatives (for example, transfers or exchanges with other agencies). A wide range of potential alternatives will be identified, including alternatives in San Luis Obispo and Santa Barbara Counties that have been proposed by local stakeholders. Each alternative will be described consistent with selection criteria identified in Task 3, including a narrative overview, facilities configuration,

capital cost, operating cost, conveyance requirements, total storage capacity, intake conveyance capability, and extraction conveyance capacity.

Deliverable:

- Summary of Water Management Components

Subtask 4.2 – Identify Local and System Capacity Limitations

Conveyance will be needed to the sites to implement certain water management alternatives (both local and remote) and for return of water to the CCWA surface area (for remote alternatives). The recent capacity assessment of the Coastal Branch prepared by WSC is helpful in this regard – identifying existing and potential capacities for delivering water within San Luis Obispo and Santa Barbara Counties that is in excess of the design capacity level. Access to increased capacity for the Coastal Branch downstream of Polonio Pass Treatment Plant ("PPTP") will also necessitate possible modifications at the treatment plant to provide the higher capacities identified. Coastal Branch capacity upstream of the PPTP is generally available for the reaches downstream of Devils Den Pumping Plant ("DDPP") due to the higher capacity designed into those reaches to optimize power operations. Capacity in the Coastal Branch reaches upstream of the DDPP and in the California Aqueduct will be quantified based on recent operational capacity (reflecting impacts of subsidence) and historical delivery patterns for other water users.

Capacity in the California Aqueduct and other conveyance facilities needed for water management alternatives, such as water banks, will be quantified for the period of interest. For example, the ability to store carryover water later in the year will depend on the use of facilities by other water managers and the relative priority of a CCWA alternative as compared to other water users. The intent of this review will be to confirm that conveyance for recharge water is available during high demand periods when it is most needed. A similar analysis will be performed for conveyance to return water from a water bank, exchange or some other type of water management alternative. Experiences during recent drought periods demonstrated that there can be limited capacity to return water by instantaneous exchange (for projects such as groundwater storage downstream of the Coastal Aqueduct) during extreme drought periods when the water is needed.

Subtask 4.3 – Quantify SWP Supply Capability

A primary goal of the evaluation will be to sync up the local demands with available SWP water supplies and water management alternatives. The primary source of SWP water supply information will be CALSIM reservoir operations studies for different assumptions about future regulatory conditions, facilities, and climate conditions. CALSIM studies will be obtained for monthly deliveries to SWP contractors for use in evaluations. Initially, these study results for Table A, Article 56, and Article 21 Water will be computed for San Luis Obispo and Santa Barbara Counties based on their Table A allocations. These monthly results will also be summarized annually for use in the management alternatives.

As a complement to direct use of CALSIM study results, an analysis of SWP operations trends in recent years will be conducted. Initial review of SWP operations shows that actual SWP storage in San Luis Reservoir is normally considerably higher than the assumptions used for CALSIM studies. Actual SWP San Luis Reservoir storages that are 100,000s of acre-feet higher than CALSIM study results would mean that the quantity and occurrence of carryover water being spilled may be considerably higher in the real world than what is indicated by CALSIM results. Adjustments to CALSIM operations based on actual operations will be developed and applied to CALSIM results as an alternative for analysis that may improve the utility of the results. The result of the SWP water supply analysis will be tables showing monthly and annual amounts of various types of SWP water available for San Luis Obispo and Santa Barbara Counties, as well as for other SWP contractors that may be partners in water management alternatives such as banking, exchanges, or transfers.

Subtask 4.4 – Evaluate Management Alternatives

The water supply and conveyance information identified in Subtasks 4.2 and 4.3 will be combined with demand information for Central Coast water users to evaluate individual and combined water management alternatives. From three to ten different water management alternatives will be evaluated on an annual basis to quantify their performance for meeting Central Coast water users water needs. The evaluation will quantify the minimum level of deliveries, average level of deliveries, storage in banking sites, cost, and other parameters to be considered in the selection criteria. The use of annual operations analysis for the evaluation will be reviewed early in the process to

determine its adequacy. If that approach is not adequate to meet CCWA planning needs, then a specific proposal for the optional Subtask 4.6 will be presented to CCWA for their consideration.

Deliverable:

- Presentation of water supply provided to CCWA Stakeholders for evaluated alternative strategies

Subtask 4.5 – Select Management Alternatives

This subtask will involve presentation of the results of Subtask 4.4 in relation to the selection criteria identified in Task 3. The performance of the various management alternatives will be reviewed with CCWA and appropriate stakeholders to identify the best individual alternative or combination of alternatives. It is also possible that refinements to the alternatives can be developed based on feedback from CCWA and stakeholders. The completed result of this task will be an approach for water management options that meets CCWA needs in the most effective manner.

Subtask 4.6 (Optional) – Develop More Detailed Local Planning Model

As noted in Subtask 4.4, the initial approach of reliance on an annual planning model will be reviewed as an initial step. It is possible that a more detailed monthly model may be helpful for more accurate analysis of water management alternatives. This model would include different delivery zones within CCWA along with monthly capacities for the Coastal Branch, the Chorro Valley and Lopez Pipelines, other local conveyance, groundwater basins, and other features that have the potential to improve overall water management. This task would be scoped early in the study and reviewed with CCWA and its stakeholders to confirm the need for the analysis and define the level of effort for the subtask.

Task 5.0 – Consideration of Increased Table A Amount

CCWA is currently pursuing increasing its SWP Table A amounts through purchase of the Suspended Coastal Branch Table A and through SWP-wide projects such as the Delta Conveyance Facility project. The benefits and usability of SWP Table A amounts will be developed using the CALSIM review described above. The raw water supply benefits of the Suspended Coastal Branch Table A purchase will be quantified, together with the benefits that can be achieved through a broader water management approach and the associated costs of that approach. Similar analysis would be conducted for projects like the Delta Conveyance Facility, if requested. The results of these analyses would be presented to CCWA for their consideration in making management choices.

Deliverable:

- Memorandum summarizing Benefits and Risks for increased Table A Options

Time Availability

Provost & Pritchard and Hallmark Group staff will be available as needed to perform their specific service associated with the CCWA. Even with the recent events surrounding COVID-19, our team has continued to be available to our clients either through in-person meetings or remotely. We have the diversity and the depth of staff needed for the Water Authority's project.

Provost & Pritchard and Hallmark Group utilize a scheduling software to allocate individual staff at all levels of involvement with the project from start to finish. The principal-in-charge will check weekly availability of each assigned staff so that the agreed upon schedule and critical deadlines are met. This weekly review of allocated staff hours to the Authority's project will protect against staff being pulled off to other assignments. Additionally, for the Authority's project our principal-in-charge, can commit additional support staff as needed to meet the agreed upon schedule.

Provost & Pritchard and Hallmark Group employs highly trained staff with experience in a wide range of disciplines. With integrated computer and telephone systems and video conferencing capabilities between our firm's nine office locations, our project teams are able to function efficiently and effectively as one, allowing the convenient utilization of staff expertise and resources from our other locations, as necessary. This convenience and efficient ability to communicate within our offices allows our project teams to focus on providing quality products for our clients while keeping their projects on schedule and within budget.

Rate Sheet

Provost & Pritchard	
Principal Engineer	$185.00 - $225.00
Senior Engineer	$150.00 - $178.00
Associate Engineer	$120.00 - $145.00
Assistant Engineer	$95.00 - $120.00
Senior Technician	$130.00 - $150.00
Associate Technician	$103.00 - $125.00
Assistant Technician	$75.00 - $95.00
Project Administrator	$78.00 - $98.00
Hallmark Group	
Principal & Strategic Advisor / Vice President and Program Manager	$300.00
Director Water Resources / Supply	$250.00
Project Controls Manager	$225.00
Senior Project Manager	$200.00
Project Manager	$175.00
Senior Project Analyst	$155.00
Project Analyst / Contract Administrator	$140.00
Project Coordinator / Document Control	$125.00
Project Administrator	$110.00

References

Agency	Contact	Telephone	Email	Project
Provost & Pritchard				
North Fork Kings GSA 4886 East Jensen Avenue Fresno, CA 93725	Mark McKean	(559) 866-8600	mckean@psnw.com	• Groundwater Sustainability Plan Development
Central California Irrigation District P.O. Box 1231 Los Banos, CA 93635	Jarrett Martin	(209) 826-1421	jmartin@ccidwater.org	• Los Banos Creek Diversion Project
San Gorgonio Pass Water Agency 1210 Beaumont Avenue Beaumont, CA 92223	Jeff Davis	(909) 845-2577	jdavis@sgpwa.com	• Groundwater Sustainability Plan Development
Hallmark Group				
California Department of Water Resources 1416 9th Street Sacramento, CA 95814	Karla Nemeth	(916) 653-7007	karla.nemeth@resources.ca.gov	• WaterFix Transition Services and Environmental Planning Program Management
Westlands Water District 3131 N. Fresno Street P.O. Box 6056 Fresno, CA 93703-6056	Tom Birmingham	(559) 241-6201	tbirmingham@wwd.ca.gov	• Yolo Ranch Restoration Project
Metropolitan Water District of SoCal P.O. Box 54153 Los Angeles, CA 90054-0153	Jeff Kightlinger	(213) 217-6211	jkightlinger@mwdh2o.com	• WaterFix Environmental Planning Program Management

Appendix A: Resumes

Appendix A: Resumes

Terry Erlewine, PE

Principal-in-Charge

Provost & Pritchard

Education

- ✓ M.S., Civil Engineering, University of California, Davis
- ✓ B.S., Civil Engineering, University of California, Davis

Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #32985

Affiliations

- ✓ Groundwater Resources Association

Areas of Expertise

- ✓ Water Resources
- ✓ Groundwater Resource Studies
- ✓ Groundwater Modeling
- ✓ Groundwater Conjunctive Use Programs
- ✓ Surface Water Studies

Professional Summary

Terry Erlewine is Principal Water Resources Engineer with Provost & Pritchard who has more than 38 years of experience providing water resources planning and analysis. He has conducted many surface and groundwater resources studies, including water uses, operations studies, groundwater modeling, and groundwater conjunctive use programs. For twenty-three years, Mr. Erlewine worked for the State Water Contractors, most recently serving as General Manager for 14 years. Previously, Mr. Erlewine worked as a consultant on water resources. Mr. Erlewine began his career with the California Department of Water Resources. In his 13-year tenure with the Department, he was involved in all aspects of surface water and groundwater projects.

Relevant Experience

San Gorgonio Pass Water Agency, Beaumont, California, Project Manager – Mr. Erlewine is currently managing development of a Groundwater Sustainability Plan for the 64,000-acre San Gorgonio Pass Subbasin. The GSP will serve three GSAs in the subbasin – the San Gorgonio Pass GSA, Verbenia GSA and a portion of the Desert Water Agency GSA. The GSP will address groundwater sustainability in an area of limited water supply availability and increasing urban development. The GSP will be completed and adopted by GSAs prior to January 2022.

North Fork Kings GSA, Riverdale, California, Project Engineer – Mr. Erlewine developed water budget for the North Fork Kings GSA, quantifying water budget components including agricultural water use, M&I water use, effective precipitation, groundwater seepage and groundwater pumping. The analysis also considered climate change, including effects on evapotranspiration, precipitation and local water supplies.

Kern Groundwater Authority, Bakersfield, California, Basin Coordinator – Mr. Erlewine served as Basin Coordinator for the Kern Groundwater Authority, which is the largest Groundwater Sustainability in the Kern Subbasin. Mr. Erlewine initially served as acting general manager (Planning Manager) and subsequently served in a senior advisory role. While acting Planning Manager, he developed KGA budget and schedule for GSP preparation. He also provided technical advice on groundwater modeling and other GSP preparation elements. He developed projected future water supply conditions for the State Water Project considering climate change

Terry Erlewine, PE *(continued)*

Principal-in-Charge

for use in SGMA groundwater modeling projections.

State Water Contractors, Sacramento, California, General Manager – Mr. Erlewine managed the State Water Contractors, developing consensus on a wide variety of issues related to State Water Project (SWP) and other factors for the 27 member agencies of the State Water Contractors. He organized and directed monthly meetings for a nine-member Board of Directors, regularly reported on water supply and management issues, and provided annual reports on objectives for the State Water Contractors.

Mr. Erlewine routinely discussed water supply impacts of Delta regulations with State Water Resources Control Board, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife Staff. Frequently presented views of the SWP contractors at State Water Resources Control Board hearings.

Water Supply Impact Analysis, State Water Contractors, Sacramento, California – Mr. Erlewine prepared an analysis of water supply impacts to the State Water Project of federal endangered species act regulatory measures. Water supply impacts included reduction in water deliveries to State Water Project customers leading to reduced crop acreage, increased costs for alternative supplies and groundwater level impacts. Testimony was presented to Eastern District of California Federal Court in litigation on implementation of the Operations Criteria and Plan biological opinion.

State Water Contractors, Sacramento, California, General Manager - Worked with Agricultural Economist and Water Supply Engineers in developing approach for analyzing water supply and economic impacts of water supply scenarios for State Water Project (SWP) contractor districts over multi-year drought periods. Developed water supply data for selected SWP contractors to apply in analysis of shortages during recent drought periods.

Semitropic Water Bank, Semitropic Water Storage District, Wasco, Groundwater Task Lead – Evaluated groundwater level impacts from proposed Metropolitan Water District of Southern California water banking program with Semitropic Water Storage District in the San Joaquin Valley. Groundwater levels were projected for a three-year period with and without the proposed banking program. Significant impacts of the proposed banking operation were summarized and present in California Environmental Quality Act documentation.

Sacramento Valley Water Management Agreement, State Water Contractors, Sacramento, Committee Co-Chair – Mr. Erlewine served as co-chair of the Technical Measurement and Monitoring Committee for the Sacramento Valley Water Management Agreement. The Technical Measurement and Monitoring Committee collectively developed groundwater monitoring approaches that would identify water supply benefits and impacts for proposed water management actions, primarily conjunctive use projects. Membership in the Technical Measurement and Monitoring Committee included representatives of the SWP Contractors, the CVP Contractors, Sacramento Valley Water Users, the Department of Water Resources and the U.S. Bureau of Reclamation.

San Joaquin Valley Groundwater Study, Department of Water Resources, Fresno, Project Manager – Modified and updated finite element groundwater model for San Joaquin Valley, California. Modified elements in network to reflect geology and variations in recharge due to surface water supply. Calibrated groundwater model for 12 years through comparison of modeled results to average water levels as determined from geostatistical analysis.

Kern Fan Element Water Bank, Department of Water Resources, Bakersfield, Project Manager – Developed finite difference groundwater model for 40,000-acre conjunctive use site and vicinity in Kern County, California. Model was developed with multiple layers and used to simulate impacts of proposed recharge basin and extraction well configurations. Pre-processing program was developed to quantify pumping and recharge amounts for various project alternatives.

Dan Flory, PE

Provost & Pritchard

Education

- ✓ B.S., Civil Engineering, California State University, Chico
- ✓ Executive Management Program, University of California, Davis

Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #33004

Areas of Expertise

- ✓ Water Resources Engineering
- ✓ Water Banking
- ✓ Water Transfers
- ✓ Bid Documents
- ✓ Data Analysis

Professional Summary

Dan Flory is a Principal Engineer specializing in water resources with Provost & Pritchard. Mr. Flory has more than 30 years of experience in water resources engineering including water banking and transfers. He served in 28 progressively more responsible roles for the California Department of Water Resources, culminating in his position as the department's executive manager. He worked an additional four years in engineering with the California Department of Water Resources. He is an experienced advisor to legislative staffs, appointed officials and board members as well as serving as an expert witness providing testimony in litigation involving water rights.

Relevant Experience

Westside Recharge Basin, Antelope Valley East Kern Water Agency, General Manager – Led the development of three groundwater banks in the Antelope Valley, including recharge basins and over 30 extraction wells to meet local water quantity and dry year supply needs.

AVEK 2014-15 Dry Year Exchanges, Antelope Valley East Kern Water Agency, General Manager – negotiated water transfer and exchange agreements involving SWP supplies to firm up dry year supplies and recover over $13 million in SWP costs for the Agency.

Monterey Amendment, Water Supply Contract Negotiation, California Department of Water Resources, Principal Engineer – negotiate and draft contract language for long term water supply for the Department with Local Agencies and SWP contractors.

Term 91 Supply Study, State Water Resources Control Board, Associate Engineer – perform analysis of surface water rights to determine the availability of unappropriated water in the Sacramento – San Joaquin watershed.

Previous Experience

Antelope Valley-East Kern Water Agency, Palmdale, California, General Manager – Reporting to the Board of Directors, Mr. Flory was responsible to oversee all operations of the Agency. He managed a $45 million budget and 40 operations and administrative staff. His position also included supplying water through four water treatment plants to a population of about 400,000 and 2,400 square miles in the Mojave Desert and Antelope Valley. He led the development of three local water banks recharging SWP water in 2011 allowing the Agency to meet all water quality and water supply needs during a four-year drought. He also negotiated water delivery and exchange agreements to net $13 million in additional revenue for the Agency. (2015-2015)

Dan Flory, PE *(continued)*

California Department of Water Resources, Sacramento, California, Executive Manager – Reporting to the SWP Deputy Director and leading the Department's efforts to renegotiate and extend the long-term water supply contracts, Mr. Flory developed new and revised contract terms to fund major capital improvements including the through Delta facilities and address SWP bonding and cash flow issues. He provided expert testimony and technical support to defend the Department's long-standing practices in the allocation of water and power costs among the water contractors. As Executive Manager for FloodSAFE California he provided oversight and executive direction to the FloodSAFE program with an annual budget was over $700 million a year. He also directed the work of a large multi-disciplinary matrix management team of Department staff and consultants; developed the bond expenditure plan and managed over one hundred programs and projects and reported to the legislature and Department management all expenses and progress of the work. (2006-2009)

California Department of Water Resources, Sacramento, California, Division Chief – For six years, Mr. Flory supervised and directed the work of 100 engineers and analysts in the administration of power purchase and water supply contracts. The operating budget, including power purchases was about $300 million a year. Work included the allocation of water supplies to water users and the distribution of water and power costs to 29 SWP contracting agencies. He also developed the 400 page annual report documenting the costs to contractors. (2000-2006)

California Department of Water Resources, Sacramento, California, Principal Engineer – Mr. Flory supervised and directed the work of the Water Supply Reliability Branch. Water resource planning related to the SWP, including the Bay Delta Water Rights Hearing Group, the Arroyo Pasajero Flood Study Team and the Future Water Supply Studies Group. (1997-2000)

California Department of Water Resources, Sacramento, California, Section Chief – For 11 years Mr. Flory supervised the Water Contracts Administration and Negotiation Section. He directed the work of 20 engineers and technicians, approving water delivery schedules, documenting deliveries and facilitating water transfers. He also developed contracts for the use of the SWP facilities. (1992-1997)

California State Water Resources Control Board, Sacramento, California, Water Rights Engineer – Mr. Flory was responsible to investigate, document and to present findings to the State Water Resources Control Board on water right applications and disputes. He gave presentations at public hearings and in one-on-one staff briefings of Board members; organized staff reports; facilitated public testimony and developed the hearing record on water right hearings and adjudicatory processes for surface and groundwater resources. (1986-1992)

California Department of Water Resources, Sacramento, California, Civil Design Engineer – Mr. Flory developed civil design drawings and specifications for major SWP projects including the Bottlerock Geothermal Power Plant and the Suisun Marsh Water Quality Control Structures. (1983-1986)

California State Water Resources Control Board, Sacramento, California, Associate Engineer – As an Associate Engineer, Mr. Flory performed a special study to determine the water available for appropriation in the Sacramento San Joaquin watershed. He analyzed all water rights held in the Central Valley including all appropriative and riparian rights; determined the applicability of standard water right restrictions on diversions; took field measurements and documented water diversions for a court ordered adjudication. (1980-1983)

Dale K. Melville, PE

Provost & Pritchard

Education

- ✓ M.S. Civil Engineering, University of California, Davis
- ✓ B.S. Mechanical Engineering, University of California, Davis

Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #28098

Affiliations & Positions

- ✓ Manager - Engineer- Dudley Ridge Water District
- ✓ Executive Director - Southwest Kings Groundwater Sustainability Agency
- ✓ Director - South Valley Water Resources Authority
- ✓ Director - Westside Water Quality Coalition
- ✓ Civil and Environmental Engineering Advisory Board Member, California Polytechnic State University, San Luis Obispo

Areas of Expertise

- ✓ Water Transfers & Exchanges
- ✓ Agricultural & Municipal Infrastructure
- ✓ Agricultural & Municipal District Management
- ✓ Water/Wastewater Distribution, Treatment & Recycling

Professional Summary

Dale Melville is a principal water resources engineer and Chair of the Board of Director's at Provost & Pritchard. With over 45 years of consulting engineering experience, he has been involved with projects related to all aspects of agricultural and municipal infrastructure projects. He is or has been consulting or district engineer to several municipal and agricultural districts. Mr. Melville's experience includes site investigations, feasibility studies, management of projects related to design and construction of both municipal and agricultural water and wastewater conveyance and treatment systems, wastewater reclamation, agricultural irrigation and drainage systems, water transfers/exchanges, and groundwater recharge/recovery facilities.

Mr. Melville has established working relationships with numerous state and federal government agencies in preparing applications and securing grant and loan funds for infrastructure projects. His experience includes serving both private and public agency clients.

Relevant Experience

Ongoing Consulting Services, Dudley Ridge Water District, Kings County, California, District Manager-Engineer – Mr. Melville has been the manager-engineer for this agricultural water district, administering their State Water Project contract for over 25 years. In addition to his management duties, he has developed conjunctive use and long-term transfer/exchange programs for the District, including groundwater banking projects with the Kern Water Bank Authority and Cawelo Water District, exchange programs with Kern County Water Agency, Tulare Lake Basin Water Storage District, and San Gabriel Valley Municipal Water District, and numerous annual water transfers and exchanges. He also assisted in the formation of the Kern Water Bank Authority, a public agency involved in the acquisition, development, and operation of a 20,000-acre groundwater banking facility, which was the largest groundwater recharge project in the world (Mr. Melville was a founding member of the board of directors for the Kern Water Bank Authority). Mr. Melville has also assisted the District in the permanent transfers of State Water Project Table A water to Mojave Water Agency and Antelope Valley-East Kern Water Agency.

General Water Transfers/Exchanges, Various Clients, San Joaquin Valley, California, Project Manager – Mr. Melville has assisted numerous public agency and private clients with negotiations and obtaining regulatory approvals (State Water Resources Control Board, Department of Water Resources, U.S. Bureau of Reclamation, and local agencies) including California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) compliance for water transfers totaling more than 500,000 acre-feet. He prepared applications, drafted agreements, and obtained regulatory approvals for change of place-of-use or point of delivery agreements for typically two to five water transfers per year

Dale K. Melville, PE *(continued)*

since the mid-1990s. Transfers have included: State Water Project contractors in Kings, Kern, Tulare, San Luis Obispo, Stanislaus, and Los Angeles counties; San Luis Unit-Central Valley Project water, Friant-Central Valley Project water, and Kern, Kaweah, Tule, and Kings Rivers. Water has been transferred to San Luis Unit-Central Valley Project contractors, Friant-Central Valley Project contractors, State Water Project contractors, environmental purposes, and individual landowners within Central Valley Project and State Water Project service areas.

Water Acquisitions, Transfers, and Contracts, Westside Water Districts, Kern and Kings Counties, California, Project Manager – Since 2008 Mr. Melville has represented Belridge Water Storage District, Berrenda Mesa Water District, Dudley Ridge Water District, Lost Hills Water District, and Wheeler Ridge-Maricopa Water Storage District in the acquisition, negotiations, contract development, transfer documents, CEQA/NEPA compliance, and approvals of annual and longer-term transfers and exchanges from water purveyors from northern California, the Central Coast, and the San Joaquin Valley.

Warren Act Contract, Kern-Tulare Water District, and Rag Gulch Water District, Tulare and Kern Counties, California, Project Manager – Mr. Melville was responsible for preparation of a NEPA environmental document and U.S. Bureau of Reclamation application for a Warren Act contract to convey State Water Project and Kern River water in the Friant-Kern Canal to increase the water management options available to the districts.

Cawelo Conjunctive Use Program, Dudley Ridge Water District & Cawelo Water District, Kern County, California, Project Manager – Mr. Melville prepared an application and obtained a $7.5 million state grant used to develop a groundwater banking and conjunctive use program between Dudley Ridge and Cawelo Water Districts. Mr. Melville was instrumental in the negotiations and preparation of the operating agreement between the districts and approvals from other agencies. The program included design and construction of two groundwater recharge sites along Poso Creek (245 acres of ponds), five recovery wells and associated pipeline, diversion facilities, and appurtenances.

Water Supply Evaluation, Confidential Client, Central Valley, California, Project Manager – Mr. Melville was responsible for the preparation of a comprehensive evaluation of potential water supplies that could be pursued by an agricultural water district. The evaluation included a fatal flaw analysis, cost estimates of securing and transferring surface water supplies, and developing a prioritized list of several surface and groundwater programs for the district.

Water Contract Assignment/Water Transfer, Westlands Water District, Fresno and Kings Counties, California, Project Manager – Mr. Melville was responsible for an environmental impact report/environmental impact study (EIR/EIS) for a water contract assignment and water transfer from a Central Valley Project contractor to the district in compliance with CEQA/NEPA requirements and an extremely short client time schedule. He also served as project manager to assist the district in the preparation of two other CEQA documents, including up to 200,000 acre-feet per year in water transfers and for a groundwater pump-in program to the California Aqueduct.

Drought Water Bank, State Water Purchasing Committee, California, Committee Member – Mr. Melville was a participating member of the State Water Purchasing Committee for the 1991 Drought Water Bank (the first emergency water bank formed in the state) to secure a critical-need water supply for the Dudley Ridge Water District, a State Water Project contractor. Mr. Melville was also a participant in almost all of the subsequent dry year water purchase programs administered through the Department of Water Resources or the State Water Contractors, Inc.

Water Transfer, Poso Creek Water Company and Paramount Farming Company, Fresno and Kern Counties, California, Project Manager – Mr. Melville prepared documents and obtained approvals from the California Department of Water Resources, State Water Resources Control Board, and the State Water Contractors for a long-term change in place of use to facilitate annual water transfers between state and federal water districts.

David Halopoff, PE

Provost & Pritchard

Education

- ✓ M.S. Civil Engineering, Emphasis in Water & Environmental (in progress), California State University, Fresno
- ✓ B.S. Civil Engineering, Emphasis in Water & Environmental, California State University, Fresno

Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #87340

Affiliations

- ✓ American Society of Civil Engineers (ASCE)

Areas of Expertise

- ✓ Water Resources Engineering and Consulting
- ✓ Hydrogeology
- ✓ Groundwater Well Design and Construction
- ✓ Groundwater Engineering
- ✓ Irrigation Water Supply and Distribution
- ✓ Irrigation District Infrastructure Design
- ✓ Pump Design
- ✓ Sustainable Groundwater Management Act (SGMA)
- ✓ Regulatory Program Compliance
- ✓ Contaminant Fate & Transport
- ✓ Water Distribution System Design & Standards
- ✓ Geoenvironmental
- ✓ Soil Mechanics

Professional Summary

David Halopoff is a project manager and senior engineer at Provost & Pritchard with more than seven years of professional experience. His experience includes water resources and civil engineering, and construction. Mr. Halopoff has been involved with projects related to all aspects of municipal and agricultural water supply and distribution, groundwater recharge and recovery projects (direct and in-lieu), groundwater hydrogeology, groundwater engineering, groundwater well design and construction, groundwater quality, water supply studies, pump design, and construction oversight of public works and agricultural facilities. Mr. Halopoff has worked on over 50 well projects that include design and construction of municipal, industrial, and agricultural groundwater production wells. Water quality concerns are a common issue and many of the wells have required depth zone specific water quality formation sampling to allow effective design of the wells.

Relevant Experience

Turnipseed Basin Phase 3 Expansion, Delano-Earlimart Irrigation District, Delano, California, Project Engineer – Mr. Halopoff provided engineering and design services in preparing design and construction documents for the Delano-Earlimart Irrigation District Turnipseed Basin Phase 3 Expansion. The Project consists of 320-acres of recharge basins, a new 100 cfs water delivery lateral to the site consisting of a cast-in-place pressurized junction box on an existing 72-inch lateral and a 54-inch distribution lateral. The existing gravity lateral has existing downstream demands, and in order to alleviate potential issues delivering surface water to downstream users, motorized flow control valves were implemented on the turnout manifolds to maintain adequate head pressure in the cast-in-place junction box to provide for downstream deliveries on the existing 72-inch lateral.

Water Banking Screening Analysis, South Valley Water Resources Authority, Kern, Tulare, Kings, and Fresno Counties, California, Project Manager and Project Engineer – Mr. Halopoff provided engineering and consulting services for a two-phase screening analysis of potential water banking projects in the San Joaquin Valley, south of the Sacramento-San Joaquin Delta (area of interest). The first phase consisted of a high-level screening analysis of potential water banking projects in the area of interest with the intent to identify a limited number of projects that warranted a further in-depth feasibility analysis. The potential projects included existing, planned, and new water banking projects in the area of interest. The first phase involved collecting information related to existing water banking programs, preparing a mapping analysis of future potential recharge areas, identifying future potential water banking projects, preparing rudimentary hydrogeology and water storage information, identifying potential agencies to partner with on future banking projects, and identifying potential agencies to partner with on short or long-term exchange projects. The

David Halopoff, PE *(continued)*

work resulted in providing an initial screening of potential water banking projects and water exchange opportunities for the SVWRA to consider investing in to further enhance the water supplies of its Members. The Project also resulted in the negotiation and drafting of a multi-year water transfer agreement with an agency in the northern San Joaquin Valley where excess available surface water supplies would be transferred the South Valley Water Resources Authority via the California Aqueduct.

Groundwater Storage Analysis, Confidential Client, Kern County, California, Project Engineer – Mr. Halopoff provided engineering and evaluation services in preparing a report that provided an analysis of the various water banking options for the Semitropic Water Storage District Groundwater Banking Program located in California's San Joaquin Valley. This analysis evaluated the relative advantages and disadvantages of three buy in options to the Semitropic Groundwater Banking Program. The analysis included a water supply forecast model that analyzed the feasibility of using surface water originating north of the Sacramento-San Joaquin Delta to bank in the Semitropic Groundwater Banking Program and the availability of the recovered groundwater on an annual basis. An economic analysis of each of the three options was also provided to identify the capital and operational cost of storing and recovering the banked water supplies.

Well Rehabilitation and Well Field Management, Arvin-Edison Water Storage District, Arvin, California, Project Engineer – Mr. Halopoff has been assisting in the review of the performance and condition of Arvin-Edison Water Storage District's 76 existing groundwater recovery wells and developing a masterplan for their rehabilitation and replacement. Many of the wells are nearly 50 years old and are approaching the end of their expected lives. The master plan is also reviewing whether additional wells are needed to meet District demands, and if yes, recommending locations for additional wells. The project team has been working with the District to rehabilitate several existing pumps and motors, and to replace three groundwater recovery wells that failed during the recent drought. The team manages the collection and analysis of data on all the District groundwater recovery wells, pumps, and motors. When pumps and/or motors are identified to have problems, the team develops solutions, and manages bidding and rehabilitation and replacement work by well drillers and pump and motor suppliers (including field review of that work). To date the project has included the siting, design, construction, and equipping of ten (10) replacement groundwater recovery wells, some requiring new laterals to the District distribution facilities. One of the replacement wells included depth zone specific water quality formation sampling in the pilot hole to mitigate for arsenic water quality concerns, which was successful. The new recovery wells ranged in depths from 1,000 feet to 1,350 feet with casing sizes ranging from 16 inch to 18 inch. The work also includes design, bidding, and construction oversight expanding the District's overhead 12kV system to the new groundwater recovery wells, and installation of the control panel, well pump starter, and site electrical facilities to provide for fully functioning groundwater recovery well sites.

Aqueduct Pump Back Project, Dudley Ridge Water District, Kern County, California, Project Engineer – Mr. Halopoff provided design engineering services for the preparation of installing 2 – 250 cfs pump stations along the California Aqueduct to pump water upgradient and across two existing check structures in order to deliver water from downstream in the California Aqueduct to the Dudley Ridge Water District and other areas of Northern Kern County. Mr. Halopoff reviewed proposed pump system pump and system curves, pump characteristics, system piping, and preparation of preliminary design and construction documents. Mr. Halopoff also worked directly with the California Department of Water Resources office and field staff reviewing the proposed installation and in preparation of operation agreements.

Curtis Creel, PE

Hallmark Group

Education

- ✓ B.S Environmental Resources Engineering, Emphasis in Water Resources, Humboldt State University
- ✓ Advanced Water Resources Modeling Courses, Humboldt State University and California State University, Sacramento

Licenses/Registrations/Certifications

- ✓ Civil Engineer
- ✓ Co-authored two professional journals on operations modeling for the State Water Project

Affiliations

- ✓ Member of American Society of Civil Engineers

Professional Summary

Curtis has over 33 years of expertise focused on water resources development and management in California effectively collaborating among local, State and federal teams. He began his career with the California Department of Water Resources (DWR) as an engineer working on computer models to simulate the operations of the State Water Project (SWP) and transitioned to the role of Chief of the State Water Project Operations Planning Branch where he oversaw the tactical and strategic water operations of the SWP. Specifically, Mr. Creel was responsible for recommending SWP allocations to the Director, deciding how much water would be exported into the California Aqueduct, complying with State and federal regulations, ensuring DWR policy implementation and overseeing operations modeling.

In 2005, Curtis left DWR to continue his career in public service with the Kern County Water Agency (KCWA) comprised of a seven-member Board. As the Water Resources Manager, Curtis administered water supply contracts, administered local groundwater banking and conveyance projects and represented the KCWA on SWP matters with other public water agencies as well as DWR. He became KCWA's General Manager in 2016 and oversaw the operation and administration of KCWA (a $500M agency). Curtis now resides in the Sacramento area and remains focused on Water Supply Management for Hallmark Group.

Curtis has operated with direct accountability in an executive management capacity for large-scale water programs throughout the State and has demonstrated effective facilitation, engagement and the unique ability to gain concurrence among a variety of stakeholders

Relevant Experience

California WaterFix – KCWA 2013-2019

Curtis served as the lead negotiator for KCWA to extend the water service contracts for the SWP, as well as the California WaterFix Contract Amendment. California WaterFix (formerly the Bay Delta Conservation Plan), is a $17 billion program to provide a more reliable water supply to over 25 million California residents. Most recently, Mr. Creel lead the Agency's team in negotiations on contract amendments for the Delta Conveyance facilities.

State Water Contactors, Inc. – Board Director 2010-2019

Curtis served as a Director on the State Water Contractors, Inc. (SWC) Board for nine years. The SWC's is an association comprised of 27 public water agencies working to provide a reliable water supply to more than 27 million residents and 750,000 acres of farmland throughout the State. In his role on the Board, Curtis represented SWC on energy policy, endangered species protections and water supply development. During his tenure he provided policy direction to SWC staff and acted as a technical

Curtis Creel, PE *(continued)*

lead for various activities including expansion of Central Valley Project (CVP) and SWP modeling capabilities.

Oroville Facilities – 2001-2005

Curtis has direct experience with modeling and participated in DWR's efforts to obtain an updated Federal Energy Regulatory Commission (FERC) license for the Oroville Facilities. Located on the Feather River in Butte County, the principal features include the Oroville Dam and Reservoir, Edward Hyatt Powerplant, Thermalito Facilities, Feather River Fish Hatchery, and associated recreational, fish and wildlife preservation and enhancement facilities. The hydroelectric facilities have a combined license capacity of approximately 762 megawatts, which produce an average of 2.2 billion kilowatt-hours of electricity each year. As DWR's lead on the Engineering and Operations Workgroup, Curtis worked with stakeholders to provide project updates regarding possible changes to facility operations and led a team responsible for modeling operations and water quality conditions for the Feather River. His team included both DWR and consultant experts that developed important information about how the operations of the Oroville Complex could be adjusted to meet specific objectives identified in the relicensing process.

Biological Opinions for the CVP and SWP – DWR Lead Representative 1995-2005

While working as DWR Chief of the State Water Project Operations Planning Branch, Curtis acted as the Department's lead representative for the development of biological opinions to cover the operations of the SWP and CVP. Curtis participated in a variety of technical and policy driven activities and was involved in discussions with fishery agencies to develop appropriate criteria.

CALFED – Chief of Compliance Monitoring, Engineering Assistant to Chief Deputy Director, and Chief of the SWP Operations Planning Branch 1992-2005

In 1994, the State and federal administrations developed a framework to improve environmental conditions in the Sacramento-San Joaquin Delta. The framework included (1) developing new criteria to protect beneficial uses of water in the Delta, (2) developing structural changes in the Delta to improve the interaction between human and environmental needs, and (3) improving coordination among State and federal administrations and stakeholders on the operation of the SWP and CVP. Curtis played a vital role in determining how the SWP and CVP would be operated to provide water supply while improving conditions for the environment.

State Water Project – DWR Chief of Compliance 1992-1997

Curtis served as Chief of the Compliance Section at DWR. During this time, he directed work of staff to ensure compliance with State Water Resources Control Board (SWRCB) water rights criteria for the operations of the SWP, as well as compliance FERC license requirements. Curtis regularly interacted with SWRCB staff and was responsible for coordinating with State and federal agencies. Additionally, Curtis participated in the development of the Delta Accord and directed DWR staff to develop administrative procedures to ensure compliance with the Delta Accord criteria.

Jim Beck

Hallmark Group

Education

- ✓ M.S. Water Quality, University of Pittsburgh Graduate School of Public Health
- ✓ B.S. Biological Sciences and History, Emphasis in Environmental Biology, Minor in Chemistry

Licenses/Registrations/Certifications

- ✓ Water Quality Analyst - Grade IV - American Water Works Association
- ✓ Water Treatment Plant Operator - Grade III - State of California
- ✓ Water Distribution Operator - Grade II - State of California

Affiliations

- ✓ American Water Works Association

Professional Summary

Jim has over 30 years of expertise implementing initiatives to meet California's water needs. Formerly the General Manger of the Kern County Water Agency, Mr. Beck oversaw operation and administration, and held broad water-supply management responsibilities within Kern County. He has been instrumental in many programs that have placed the agency at the forefront of water management statewide. These programs include coordinating local participation in the State Water Project, developing and operating groundwater banking programs, operating the Cross Valley Canal, and overseeing the Henry C. Garnett Water Purification Plant.

Relevant Experience

Cuyama Basin Groundwater Sustainability Agency ($2.9M)
Executive Director 2017-Present

Jim serves as the Executive Director for the Cuyama Basing Groundwater Sustainability Agency (CBGSA) that was formed by a Joint Exercise of Powers Agreement (JEPA) by multiple agencies and districts under the Sustainable Groundwater Management Act. The Cuyama Groundwater Basin has been identified by the California Department of Water Resources (DWR) as a high priority basin and subject to conditions of critical overdraft. The CBGSA must develop a Groundwater Sustainability Plan that prevents undesirable results and identifies and implements actions and projects to reach its sustainability goal and bring the basin in balance by 2040.

In 2017, the Hallmark Group was selected to lead the CBGSA and provide Executive Director services. Within a very short timeframe, Jim directed the proposal review and selection of key consultants for the program, developed annual and program-level budgets, developed and facilitated negotiations for program cost allocation among participants, developed the program schedule, and implemented executive-level Board reporting.

Eastside Water Management Area ($400k)
Executive Director 2018-Present

Jim serves as the Executive Director for the Eastside Water Management Area (EWMA). The Kern Sub-basin of the Tulare Basin has been identified as a high priority Basin by DWR, which is subject to conditions of critical overdraft. Non-district landowners in the eastern portion of Kern County contracted with the Hallmark Group to form the Eastside Water Management Area (EWMA) to best represent their interests in developing a Groundwater Sustainability Plan chapter as required by SGMA. The EWMA membership draws from a 153,000 acre area and currently includes 42 members representing nearly 35,000 acres. The Hallmark Group provides Board reporting and facilitation, project controls, schedule management, consultant management, contract management, stakeholder outreach facilitation, and representation at Kern Groundwater Authority meetings.

Jim Beck *(continued)*

California WaterFix ($17B)
KCWA General Manager 2007-2017

Jim's 30 years of California water policy leadership are reflected by the efficacy of his work with the California WaterFix (formerly the Bay Delta Conservation Plan), a $15.5 billion program to provide a more reliable water supply to over 25 million California residents. Jim worked with stakeholders to provide project updates and to develop a Kern County implementation strategy. He also contributed to the negotiation of State and local funding agreements that identified not only the costs borne by Kern County, but also the terms and conditions for Kern County's participation in the planning effort.

Treated Water Capacity Expansion Project ($143M) and Cross Valley Canal Expansion ($100M)
KCWA General Manager 2001-2012

Jim managed KCWA's urban water district, which provides a supplemental water supply for the metropolitan Bakersfield area, and has led agency staff in two major capital improvement projects: the Treated Water Capacity Expansion Project (TWCEP) and the expansion of the Cross Valley Canal. The TWCEP included the expansion of the Henry C. Garnett Water Purification Plant, construction of new pump stations and pipelines to deliver treated water to the north, northwest and east portions of metropolitan Bakersfield, and construction of a 1MW solar photovoltaic system and electrical substation. These improvements improved drinking water quality, supply, and reliability; doubled the treatment capacity of the Henry C. Garnett Water Purification Plant; offset energy costs through solar and electrical substation facilities (over $1M in seven years); and utilized renewable energy through use of the solar project. Expansion of the Cross Valley Canal included raising the liner to increase capacity and installing additional interties and turnouts. These efforts increased the capacity of the CVC by 54% and improved water supply reliability for CVC participants.

Kern County Local Mediation
KCWA General Manager 2003-2006

Jim managed the effort in Kern County to resolve numerous local water-management issues with stakeholders. As the lead spokesperson for the KCWA, he addressed issues including local State Water Project (SWP) contract issues, groundwater issues and development, use and assignment of facilities, rights, and other KCWA assets. The effort involved over 50 stakeholder representatives which realized key advances in several areas: technical workgroups reached a consensus on draft guidelines for calculating hydrologic balances for agricultural and urban water districts, and preliminary discussions on asset allocation provided the foundation for formal agreements on allocating KCWA assets.

Groundwater Banking Programs
KCWA 1987-1995

Jim participated in the development of world-class banking projects in Kern County including the Kern Water Bank and KCWA's Pioneer Banking Project. Jim's role included technical support, project development and management, and agreement development. These projects added roughly 20,000 acre-feet (af) of recharge and 100,000 af of recovery for KCWA's Member Unit agencies. Investment and improvements to these banking programs provided increased water reliability and flexibility, improved water quality and provided habitat benefits to numerous native species and migrating waterfowl.

Harry Starkey, PE

Hallmark Group

Education

- ✓ B.S. Mechanical Engineering, California Polytechnic, San Luis Obispo

Licenses/Registrations/Certifications

- ✓ Professional Engineer, CA

Affiliations

- ✓ Association of California Water Agencies Board and Committee Member
- ✓ American Water Works Association
- ✓ Kern Bar Association Arbitrator

Professional Summary

Harry Starkey's 30-year career in water has focused on water management and development in Kern County. As the former General Manager of the West Kern and Berrenda Mesa Water Districts, Harry has extensive water banking experience in and around Kern County. His experience includes the planning, permitting, design, construction, financing, right of way acquisition and operation of water banking projects on the Kern Fan including the management of the Cross Valley Canal. In addition to his capital program management expertise, Harry has developed urban water management plans, water shortage contingency plans, water banking programs such as Berrenda Mesa, Pioneer, Kern Water Bank, West Kern Banking Programs, and preparation of various environmental compliance documents for permanent water transfers in California to further secure water reliability in Kern County.

Relevant Experience

North Recharge and Recovery Project ($35M)
General Manager 2010-2011

Harry oversaw the project which involved the acquisition of right of way for the construction of a 500 acre groundwater banking project. The project has an annual recovery capacity of 12,000 acre-feet and an annual recharge capacity in excess of 20,000 acre-feet. The project included 5 water wells, recharge basins and pipelines that deliver stored water into the District's distribution system, the Cross Valley Canal and the California Aqueduct.

West Kern Solar Project ($19M)
Project Manager 2012-2013

This project involved the equipping of 9 electric wells each with single axis 0.5 megawatt solar arrays. Harry acted as the Project Manager and was involved from project conception, through complex environmental permitting, financing and construction. The project received $5M in Performance Based Incentive grants from PG&E.

Kern County Water Agency Emergency 23 Well ($9.5M)
Project Engineer-1991

Under an emergency drought declaration in 1991, Harry worked with a team of engineers to drill and equip wells to provide an emergency dry year water supply for Kern County agriculture. The project involved site work and the equipping of water wells with pumps and electrical switchgear. In addition, these wells were plumbed with distribution pipelines for delivery to the Cross Valley and Kern River Canals.

Kern County Water Agency 5 Well Project ($2.5M)
Project Engineer 1988

While working as a project engineer at the Kern County Water Agency, Harry was responsible for the design and construction management of

Harry Starkey, PE *(continued)*

five recovery wells on the Kern Fan. The project involved the equipping of five water wells with pumps and electrical switchgear. In addition, these five wells were plumbed with distribution pipelines for delivery to the Cross Valley Canal.

Kern Fan Water Banking Operations
Project Engineer/CVC Manager/GM 1990-2019

Harry has direct experience operating numerous water banking projects on the Kern Fan including the Pioneer Project, Berrenda Mesa Project, Kern Water Bank and the West Kern North and South Recharge and Recovery Projects. Operational responsibilities included the scheduling of water deliveries for recharge activities, coordination for the recovery of banked water and central record keeping for all water accounting.

Kern Water Bank
Project Engineer 1996

Harry worked on the initial construction and start-up operation of the recharge ponds for the Kern Water Bank. The work included the coordination of levee construction and placement of inter basin structures.

Appendix B:
Acknowledgement of Addendum

Central Coast Water Authority
ADDENDUM #1
Date of Issue: April 9, 2020

REQUEST FOR QUALIFICATIONS
Consulting Services to Develop Water Management Strategies to Maximize Yield of the State Water Project for San Luis Obispo and Santa Barbara Counties.
March 27, 2020

Addendum #1 is to document the change in the deadline for submitting Statement of Qualifications for the project. The sections of the Request For Qualifications that have been modified are presented below. Additional language are underscored and deletions are shown with strikethrough font, as follows:

PDF PAGE 2

Invitation

The Central Coast Water Authority (CCWA) is issuing a Request for Qualifications (RFQ) for professional services to develop water management strategies to optimize the yield of the State Water Project for San Luis Obispo and Santa Barbara Counties. The Project has a defined scope and timeframe and will require the services of a qualified engineering consulting firm (”Consultant”) with specific experience with the California State Water Project operations to develop, facilitate and implement the Project tasks.

It is the policy of CCWA that the selection of a Consultant that will provide professional services shall be on the basis of demonstrated competence and on the professional qualifications necessary for the satisfactory performance of the services required.

CCWA is inviting qualified Consultants to respond to this RFQ. **The deadline for submitting Statement of Qualification is ~~April 17, 2020~~. May 1, 2020**

And

PDF PAGE 9

Instructions for Submittals

Four (4) copies of the SOQ’s must be received **by 3:00 p.m. on ~~April 17, 2020~~ May 1, 2020**. Late or faxed submittals will not be accepted.

And

PDF PAGE 11

Anticipated Schedule

CCWA has identified the following tentative timetable for submittal and evaluation of the SOQ, negotiation and approval of the standard Professional Engineering Services Agreement:

March 27, 2020	Issue RFQ
~~April 17, 2020~~ May 1, 2020	Submittal Deadline for all Qualifications
~~April 27, 2020~~ May 18 – 21, 2020	Consultant Interviews (if necessary)
~~May 1, 2020~~ May 25 - 28, 2020	Selection of Consultant and Notification
~~May1, 2020~~ May 28, 2020	Commence Scope-of-Work Negotiations
~~May15, 2020~~ June 15, 2020	Complete Scope-of-Work Negotiations
~~May28, 2020~~ June 25, 2020	Board Approval of Consultant Contract
~~May 28, 2020~~ June 25, 2020	Notice to Proceed

While every attempt will be made to adhere to the above schedule following the Submittal Deadline for the SOQ, CCWA reserves the right to adjust or modify the selection process schedule. Where such changes to the selection process schedule are necessary, CCWA will advise all submitting Consultants in writing of any scheduling changes as soon as practicable

ACKNOWLEDGEMENT OF ADDENDUM #1

4/9/2020

Signature and Date

Central Coast Water Authority
ADDENDUM #2
Date of Issue: April 27, 2020

REQUEST FOR QUALIFICATIONS
Consulting Services to Develop Water Management Strategies to Maximize Yield of the State Water Project for San Luis Obispo and Santa Barbara Counties.
March 27, 2020

Addendum #2 is to document the change in the Statement of Qualifications (SOQ) submittal format. Considering the current working conditions related to COVID19, SOQs shall be submitted in electronic format. The sections of the Request For Qualifications that have been modified are presented below. Additional language are underscored and deletions are shown with strikethrough font, as follows:

PDF PAGE 9

Instructions for Submittals

~~Four (4) copies of the~~ **All** SOQ's must be **submitted in electronic format via email** ~~received~~ by 3:00 p.m. on ~~April 17, 2020~~ May 1, 2020. **The email submittal may include the SOQ as an attachment or may provide a link for downloading the SOQ.** Late or faxed submittals will not be accepted

ACKNOWLEDGEMENT OF ADDENDUM #1

4/27/2020

Signature and Date

Page **1** of **1** 47410

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CENTRAL COAST WATER AUTHORITY

MEMORANDUM

July 2, 2020

TO: CCWA Operating Committee

FROM: John Brady
Deputy Director, Operations and Engineering

SUBJECT: Siemens Energy & Environmental Solution Proposal for Solar Power Installation at the Water Treatment Plant and 20 Year Power Purchase Agreement

In 2019, representatives of Siemens Energy & Environmental Solutions (Siemens) approached CCWA about a potential project to construct an array of solar panels on the grounds of the Polonio Pass Water Treatment Plant (WTP). The basic project concept is that Siemens would construct, at no charge to CCWA, a solar panel electrical generation system sufficient to meet all power needs of the WTP. In return, CCWA would enter into a 20 year term Power Purchase Agreement with a lower known rate.

After Siemens preliminary review of the WTP energy use, they felt that the project had merit and presented a conceptual proposal to CCWA staff to advance the project further. They explained the main advantages to CCWA included (1) control of future unpredictable rate escalation and (2) eliminate concerns related to shifting Time of Use charges. The main advantages to Siemens includes use of a Federal Tax credit and a Power Purchase Agreement with a 20 year term.

After CCWA's staff preliminary review, staff requested authorization from the CCWA Board of Directors to proceed with negotiating a Project Development Agreement (Agreement) with Siemens. The Board approved the request and along with this approval, staff was authorized to retain legal counsel and HDR engineering to assist with the review and development of the Agreement and the Project Acceptance Criteria.

While negotiations are not yet complete, the most recent version of the Project Development Agreement, Project Acceptance Criteria, and a report by Siemens detailing their economic analysis of the project are attached. Staff will provide an update and additional information at the Operating Committee meeting on July 9, 2020.

Attachments

SIEMENS

Industry
Smart Infrastructure

Project Development Agreement

Siemens Industry, Inc., a Delaware corporation with its principal place of business located at 100 Technology Drive, Alpharetta, Georgia 30005 ("Siemens"), and Customer full and the Central Coast Water Authority, a California joint powers authority correct legal name, with its principal place of business (private) or principal office (public) located at 255 Industrial Way, Buellton, CA 93427 Street, City, State Zip ("Client") (individually "Party " and collectively the "Parties"), enter into this Project Development Agreement ("PDA") on this ___day of_____, 2020 (Effective Date")("PDA") and agree as follows with respect to the following facts and intentions:

RECITALS

WHEREAS, Client has expressed interest in obtaining [solar generated electricity] for use by Client (the "Project").

WHEREAS, the intended site for the development of the Projectplant to generate such [solar electricity] is [site address Client's Polonio Water Treatment Plant located at _____ ("Site");

WHEREAS, Client has selected Siemens to develop a proposal for the implementation of the Project pursuant to the terms and conditions of this PDA ("Proposal");

WHEREAS, in order to proceed further, Siemens must perform certain development work in order to create a meaningful Proposal to present to Client;

WHEREAS, such development work includes, but is not limited to, preliminary design documents, pricing, determining interconnection to existing electricity supply systems ("Development Work") and Client must provide Siemens with additional access to the Site for the Development Work...; and,

WHEREAS, the Parties agree that Siemens shall perform the Development Work and prepare the Proposal and Client shall pay Siemens for the same in accordance with the terms and conditions of this PDAherein.

NOW THEREFORE, as a result of the Recitals, which are specifically incorporated herein and for the mutual consideration contained herein, the Parties agree as follows:

AGREEMENT

1. Term. The term of this PDA ("Term") shall commence on the Effective Date and continue until terminated as provided in this PDA. Upon the date hereof, or upon such later date as agreed upon by the Parties (the "Effective Date"), Siemens shall commence performing the Development Work. The time periodterm for performing the Development Work shall conclude upon the submission of the Proposal to Client. Siemens shall use reasonable efforts to complete the Development Work and submit the Proposal no later than one hundred-eighty (180) days from the Effective Date. The Proposal shall be valid, and may not be withdrawn by Siemens, for a period of sixty (60) days, commencing on submittal of the Proposal to the Client. The Parties agree to use their best efforts to meet the following milestone schedule:

Milestone	Target Date
Kickoff meeting	
Submittal and Presentation of the Proposal	
Client Evaluation of the Proposal	
Client Decision	

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PPA ESA Negotiation	
~~Contract~~PPA ESA Execution	
Project Implementation ~~starts~~	

2. **Required Information.** Client authorizes Siemens, its employees, agents, consultants and subcontractors, on a need to know basis, to inspect and copy all information and data that Siemens reasonably deems is necessary to sufficiently perform the Development Work, whether such information is in Client's possession or in the possession of a third-party to which Client shall provide Siemens with sufficient access~~releases~~ in order to obtain such information. Client shall provide Siemens, its employees, agents and contractors, with reasonable~~ly unrestricted~~ access to the Site pursuant to a separate site access agreement which is attached as **Exhibit A**, and incorporated by this reference. In addition, Client shall promptly provide Siemens with Client's~~, the Site's and Client's parent company's~~ information as appropriate in relation to the following:

a. Utility data for the past three (3) year(s), including but not limited to, actual copies of electrical, gas, water invoices, or other utility invoices requested by Siemens ("Utility Data");

b. Information on the CCWA's~~Site's~~ hours of operation and modes of operation ("Operational Data");

c. Names and contact information of persons with whom Siemens can confer regarding any of the Utility Data, Operational Data, financial information and general day-to-day issues that may arise during performance of the Development Work ("Contact Persons");

d. If applicable, an audited financial statement for the fiscal year immediately preceding the Effective Date~~ or direction to the publicly available financial statements that represent the appropriate counterparty to the project contract documents~~; and,

e. Any and all information requested by Siemens reasonably necessary in order for Siemens to perform the Development Work.

3. **Representations, Warranties and Covenants of the Parties.**

a. Each Party~~party~~ represents, warrants and covenants to the other Party that:

i. It has all requisite power and authority, whether statutory or otherwise, to enter into this PDA~~Agreement~~, and that its execution~~ hereof~~ has been duly authorized and does not and will not constitute a breach or violation of any of its organizational documents, any applicable laws or regulations, or any agreements with third parties;

ii. It has done and will continue to do all things necessary to preserve and keep in full force and effect its existence and ~~the~~this PDA;

iii. This PDA is a legal, valid and binding obligation of the Party~~party~~, in accordance with its terms, and all requirements of the Party~~party~~ have been met and procedures have been followed by the Party~~party~~ to ensure the enforceability of ~~the~~this PDA; and,

iv. To the Party's~~party's~~ best knowledge, there is no pending or threatened suit, action, litigation or proceeding against or affecting the Party~~party~~ that impacts the validity or enforceability of this PDA.

b. Siemens further represents, warrants and covenants to Client that Siemens is duly authorized to do business in all locations where the Development Work is to be performed and the Project is to be located.

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c. Client further represents, warrants and covenants to Siemens, to the best of its knowledge, that: 1) any information provided to Siemens, or that is provided to Siemens, by Client or on behalf of Client, is accurate and that Siemens is entitled to rely on the accuracy of the same in performing the Development Work, and 2) Siemens shall not be held liable to Client in any manner whatsoever for any error, inaccuracy or omission that is caused solely by Siemens' reliance on the information supplied by Client or information provided to Siemens on behalf of Client.

4. Transactional Structure. Client and Siemens acknowledges that the Project may be implemented through various transactional structures, the specific structure to be determined as part of the Development Work. Such transaction structures may include Client entering into a Power Purchase Agreement ("PPA") and an Energy Services Agreement ("ESA") with a company other than Siemens, but with whom Siemens has a direct or indirect financial interest, (a "Project Company") or Siemens may assign its rights under the PPA ESA to a Project Company with whom Client acknowledges the assignment rights necessary to facilitate project financing. These transaction structure alternatives enable Siemens to incorporate the Project's financial benefits to include but not limited to federal tax credits, associated asset ownership benefits and incentives as may be appropriate for project financing. The Parties acknowledge that any pricing or similar economic parameters as represented by Siemens to Client, if any, are conditioned upon Siemens' rights to utilize the finance transactional structures as defined herein.

5. Fee. Siemens shall perform the Development Work for the fixed fee of $ 60,000.00 (~~spell out amount~~ Sixty thousand Dollars and no cents) (the "Fee").

6. Payment of the Fee.

a. In the event that the Parties agree that the Development Work demonstrates that the criteria set forth in the attached **Exhibit B**~~A~~ – Project Criteria, which is incorporated by this reference, ("Project Criteria") can be met through a PPA and ESA structure and Siemens submits the Proposal to Client containing such Project Criteria, then Client shall be liable to Siemens for the Fee, except as provided below .

b. On the Effective Date and during the period of time that the Development Work is being performed, Siemens will direct resources to develop the Proposal. Where the~~a~~ Proposal is completed, it will be submitted to Client within the time period set forth in Section 1 of this PDA~~hereof~~. The Proposal will identify that the Fee will be included in the calculation of the PPA and ESA pricing. Therefore, if the PPA and ESA are~~is~~ executed by the Parties, Client will have no obligation to pay the Fee to Siemens~~under the terms hereof~~.

c. In the event that Client is liable to Siemens for the Fee pursuant to clause ~~5~~6.a. and Siemens has provided Client with the~~a~~ Proposal pursuant to clause ~~5~~6.b., but Client rejects the Proposal ~~or fails to enter into the PPA ESA with Siemens after presentation of the Proposal, within the Target Date indicated in Section 1 above~~, Siemens will submit an invoice to Client for the Fee. Client shall pay Siemens in immediately available funds no later than thirty (30) days from the date of invoice.

d. If, after submittal and presentation of the Proposal to Client, the Parties are unable to successfully conclude good faith negotiations to execute a PPA ESA, Client will have no obligation to pay the Fee to Siemens.

e. If during the performance of the Development Work, Siemens believes that the Project Criteria cannot be reasonably achieved and, therefore, the~~a~~ Proposal cannot be provided to Client, Siemens will notify Client and then Client shall not have any obligation to pay the Fee.

7. Proposal Evaluation. Upon the Clients receipt of the Proposal, the Client will review the Proposal for completeness before proceeding to review the Proposal in accordance with the Project Criteria. In order to assist in the evaluation process, the Client may, in its sole discretion, request clarifications from Siemens in order to clarify aspects of the Proposal. The Client will determine if the Proposal meets the Project Criteria and, if not, which Project Criteria are not met. Siemens will then have a reasonable opportunity to supplement the Proposal in an attempt to comply with the Project Criteria. If

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there are any discrepancies between the hard copy and the electronic copy of any information provided in the Proposal, the hard copy version will prevail. If there are any differences between the sum of individual line amounts and totals, the individual line amounts will prevail. The Client may request Siemens to correct any minor irregularities or errors in the Proposal as identified by the Client following initial evaluation of the Proposal. The evaluation process will consider any revised information and reevaluate and revise scores as appropriate. Client shall complete its evaluation of the Proposal within the time period specified in section1, above.

8. Good Faith Negotiation. If the Client determines that the Proposal meets all of the Project Criteria and Siemens has complied with all of the terms and conditions of this PDA, the~~The~~ Parties acknowledge that each Party~~party~~ is obligated under this PDA to proceed in good faith, including the good faith negotiation of the PPA ESA. ~~Breach of this obligation of good faith may entitle the non-breaching party to damages provided by law.~~ The Parties agree to attempt to negotiate a term sheet for a PPA and ESA ("Term Sheet"). The Term Sheet will establish the principal terms and conditions acceptable to both parties for purposes of the development and negotiation of a PPA and ESA.

Execution of the Term Sheet is contingent upon the successful negotiation of terms. The Parties intend that negotiations shall be confidential and not subject to disclosure to third parties. If a satisfactory conclusion to negotiations of a Term Sheet cannot be reached with Siemens after the Parties have negotiated in good faith for a reasonable period of time, not to exceed ___ days, the Client will formally end negotiations and may: (a) reject the Proposal, (b) issue a request for revisions to the Proposal, or (c) extend the period for negotiating a Term Sheet.

After execution of the Term Sheet, the Parties plan to commence negotiations to attempt to negotiate a PPA and ESA based on the principal terms and intent of the executed Term Sheet. Any execution of the PPA and ESA are contingent upon the successful negotiation of final terms. If a satisfactory conclusion to negotiations of a PPA and ESA cannot be reached with Siemens after the Parties have negotiated in good faith for a period of ___ days, the Client will formally end discussions with Siemens and may: (a) reject the Proposal and Term Sheet, (b) issue a request for revisions to the Proposal and Term Sheet; or (c) extend the period for negotiations.

~~8.~~9. Termination. Client may terminate this PDA~~Agreement~~ at any time with fifteen (15) days prior written notice to Siemens. Client shall then pay to Siemens a termination fee equal to Siemens' actual reasonable costs and expenses incurred up to the date of termination which shall not exceed the Fee.

10. Insurance. Siemens shall procure and maintain in full force and effect during the Term the following insurance:

~~9.~~ a. Commercial General Liability. Commercial general liability insurance for bodily injury (including death), personal injury, property damage, owned and non-owned equipment, blanket contractual liability, completed operations, explosion, collapse, underground excavation and removal of lateral support covering Siemens' activities under this PDA, which coverage shall be at least as broad as Insurance Services Office (ISO) Occurrence form CG 0001, and with a limit in an amount of not less than One Million Dollars ($1,000,000). If insurance with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately (with the ISO CG 2503, or ISO CG 2504, or insurer's equivalent endorsement provided to Client) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.

b. Workers' Compensation and Employer's Liability Insurance. Workers' compensation insurance covering its employees in accordance with statutory requirements and employer's liability insurance with limits of not less than One Million Dollars ($1,000,000) each accident, One Million Dollars ($1,000,000) policy limit, and One Million Dollars ($1,000,000) each employee.

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c. Automobile Liability. Automobile liability insurance for bodily injury and property damage which coverage shall be at least as broad as ISO Business Auto Coverage (Form CA 0001), covering Symbol 1 (any auto), and with a limit in an amount of not less than One Million Dollars ($1,000,000) each accident.

d. The commercial general and automobile liability policies shall contain, or be endorsed to contain the following provisions: (1) Client, its elected officials, officers, agents consultants, contractors and employees shall be named as additional insureds; (2) Siemen's insurance shall be primary as respects Client, its elected officials, officers, agents and employees and any insurance, self-insurance or other coverage maintained by Client, its elected officials, officers, agents and employees shall not contribute to it; (3) any failure to comply with the reporting or other provisions of the policies including breaches and warranties shall not affect coverage provided to Client, its elected officials, officers, agents and employees; and (4) the Siemen's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

~~10.~~ Each insurance policy shall state, or be endorsed to state, that coverage shall not be canceled by the insurance carrier, except after thirty (30) days prior written notice has been given to Client in accordance with the standard ISO Accord form. Siemens shall provide thirty (30) days written notice to Client prior to the non-renewal of any policy or policies required by this PDA. All insurance coverage, as initially provided and as modified or changed, shall be subject to reasonable approval by Client. Any deductible or self-insured retention must be declared to and approved by Client. Prior to Siemens commencing work under this PDA and at any subsequent time, upon request by Client, Siemens shall provide Client with Certificates of Insurance evidencing the above coverages. Siemens shall, upon demand of Client, make available for inspection by Client certified copies of such policy or policies of insurance and the receipts for payment of premiums for all policies required to be furnished by Siemens. Siemens shall be responsible for requiring and confirming that each sub-consultant and subcontractor meets the minimum insurance requirements specified above. The above insurance coverage shall not limit the indemnification obligations of Siemens as provided below and the failure to maintain the required coverages shall constitute a material breach of this PDA.~~Both Parties shall maintain fully adequate, comprehensive insurance on their respective goods, services, and operations, as applicable.~~

11. **Indemnity.** Siemens and Client shall indemnify and hold each other harmless from and against all damages, losses and expenses suffered or paid as a result of any and all claims, demands, suits, causes of action, proceedings, judgments and liabilities, fines, penalties and costs, including reasonable attorney~~s~~' fees and disbursements, incurred in litigation or otherwise assessed, incurred or sustained by or against the indemnified party arising out of or in connection with this PDA to the extent that such damages, losses and expenses result from the negligence or willful misconduct of the indemnifying Party~~party~~.

12. **Limitation of Liability**. ANYTHING HEREIN NOTWITHSTANDING, IN NO EVENT SHALL EITHER CLIENT OR SIEMENS BE LIABLE TO THE OTHER PARTY FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING COMMERCIAL LOSS, LOSS OF USE, OR LOST PROFITS, EVEN IF EITHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND, IN ANY EVENT, SIEMENS' AGGREGATE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES OR EXPENSES ARISING OUT OF THE DEVELOPMENT WORK PERFORMED UNDER THIS PDA WHETHER BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, AGENCY, WARRANTY, TRESPASS, INDEMNITY OR ANY OTHER THEORY OF LIABILITY, SHALL BE LIMITED TO THE LESSER OF $1,000,000 OR THE TOTAL COMPENSATION RECEIVED BY SIEMENS FROM CLIENT UNDER THIS PDA, EXCEPT TO THE EXTENT SUCH DAMAGES ARE WITHIN THE SCOPE AND COVERED BY SIEMEN'S INSURANCE POLICIES.

13. ~~[For Public Customers]~~ **No Fiduciary Relationship.** CLIENT ACKNOWLEDGES AND AGREES THAT IN READING ANY OF THE INFORMATION PROVIDED HEREIN OR BY SIEMENS (I) THE PROPOSED TRANSACTION DESCRIBED IN THIS PDA IS AN ARM'S-LENGTH COMMERCIAL TRANSACTION BETWEEN CLIENT AND SIEMENS, (II) IN CONNECTION THEREWITH AND WITH THE DISCUSSIONS, UNDERTAKINGS, AND PROCEDURES LEADING UP TO THE CONSUMMATION

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OF THIS TRANSACTION, SIEMENS IS AND HAS BEEN ACTING SOLELY AS A PRINCIPAL AND IS NOT ACTING AS THE AGENT OR FIDUCIARY OF CLIENT, (III) SIEMENS IS NOT AN ADVISOR TO OR FIDUCIARY OF CLIENT WITH RESPECT TO THE TRANSACTION CONTEMPLATED HEREBY OR THE DISCUSSIONS, UNDERTAKINGS, AND PROCEDURES LEADING THERETO (REGARDLESS OF WHETHER SIEMENS HAS PROVIDED OTHER SERVICES OR IS CURRENTLY PROVIDING OTHER SERVICES TO CLIENT ON OTHER MATTERS), AND (IV) CLIENT HAS CONSULTED ITS OWN LEGAL, FINANCIAL, AND OTHER ADVISORS TO THE EXTENT IT HAS DEEMED APPROPRIATE. ~~[For Private Customers] Reserved.~~

14. **Exclusivity.** During the Term~~erm of this PDA~~, Client shall not negotiate with any third-party for the same or a substantially similar project as that which is the subject of this PDA.

15. **Limited Use License.** Payment of the Fee or payment of the termination fee does not entitle Client to rights of ownership in the Proposal, PPA and ESA and/or any documents prepared by or for Siemens related thereto ("Project Documents"). Neither does such payment provide a right for Client to use the Project Documents to perform the Project without entering into the PPA and ESA with Siemens. Client covenants to Siemens that it will not use the Project Documents for any use beyond evaluating whether to proceed with the Project with Siemens. In consideration for such covenant, Siemens grants to Client a revocable, non-transferable, non-sublicense-able, and non-exclusive license to use the Project Documents for the sole purpose of evaluating and determining whether to proceed with the Project with Siemens ("License").

The Parties acknowledge that the Project Documents contain Siemens' proprietary and/or trade secret information, the unauthorized disclosure or use of which will cause Siemens irreparable harm. The Parties further acknowledge that in the event of unauthorized disclosure or use of such proprietary and trade secret information, Siemens shall be entitled to all equitable remedies including injunctive relief, as well as all available legal remedies including punitive damages.

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The Parties further acknowledge that any other use of the Project Documents beyond the terms of this License, will be at such user's sole risk and without liability to Siemens; and, unless expressly prohibited by law, Client and the other users, if any, jointly and severally shall indemnify, defend and hold Siemens harmless from any claims, losses or damages arising from such use.

Siemens shall provide a list of all items and materials in its Project Documents that it deems to be confidential and proprietary and, therefore, exempt or protected from public disclosure under the California Public Records Act, California Government Code section 6250 et seq. ("CPRA"). Each page of the materials identified in the list shall be individually stamped or labeled as "confidential and proprietary." Each entry on the list shall identify the specific statute within the CPRA that Siemens believes exempts or protects that item from public disclosure. Items listed without an accompanying statutory reference will be treated as public information. Blanket designations that do not identify specific information or statutes will not be acceptable and may be cause for the Client to treat the Project Documents as public information subject to public disclosure. The list required under this section is intended to provide input to the Client as to the confidential nature of the Project Documents, but in no event shall such list and identification be binding on the Client or determinative of any matter relating to confidentiality. The Client will consider Siemens to have waived any claim of confidentiality and exemption from the public disclosure with respect to materials not listed and stamped as confidential.

16. **Intellectual Property.** Notwithstanding the foregoing, Client shall not, by virtue of this PDA, acquire any ownership interest in any formulas, patterns, devices, secret inventions or processes, copyrights, patents, other intellectual proprietary rights, or similar items of property which are owned by Siemens, any of Siemens' subcontractors, or by any of Siemens' consultants, whether or not they are used in connection with the work provided under this PDA.

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17. **Confidentiality.** Any information concerning Siemens or Client that is designated as proprietary and disclosed in confidence to the other party during the term of this PDA is disclosed in confidence. The party that receives such confidential information shall not publish or disclose the same to any other entity or person without the prior written approval of the disclosing party. To the extent that the

Parties have entered into a confidentiality agreement or will enter into such an agreement during the term of this PDA, then the terms contained in the confidentiality agreement shall be incorporated by reference herein.

~~13.~~**18. Public Records Act.** Notwithstanding any other provision of this PDA, the Project Documents will be a matter of public record subject to the CPRA. Information contained in the Project Documents and submitted to the Client is a public record and may be subject to disclosure if requested by a member of the public. Siemens should familiarize itself with the CPRA, including consulting with legal counsel, regarding its requirements for disclosure of public records and applicable exemptions from such disclosure. If Siemens claims an exemption from disclosure under the CPRA, it must identify the specific provision(s) of the CPRA providing an exemption from disclosure for each such item or portion of the Project Documents claimed by Siemens as exempt from disclosure. Siemens must also clearly identify, in writing and with specificity, all copyright, patent, or trademark materials; trade secrets; or proprietary or confidential commercial or financial information claimed as exempt from disclosure under the CPRA (collectively, "Exempt Information").

Exempt Information shall remain the property of Siemens. If a request is made under CPRA for disclosure of Exempt Information, the Client will endeavor to provide Siemens with reasonably timely notice of that request, in order that Siemens will have the opportunity, under the CPRA, to seek protection from disclosure by a court of competent jurisdiction. The Client shall not be, under any circumstances, responsible or liable to Siemens, or any other person, for the disclosure of Exempt Information, whether such disclosure is required by law, by an order of court, or as a result of inadvertence, mistake, or negligence on the part of the Client or its elected or appointed officials, officers, employees, agents, contractors, representatives, or consultants.

Siemens, by submitting claimed Exempt Information in connection with the Project Documents, unconditionally agrees to indemnify, defend, and hold harmless the Client and its elected or appointed officials, officers, employees, agents, contractors, representatives, and consultants, from and against any and all claims, damages, losses, liabilities, and expenses, including actual attorneys' fees and costs, incurred by the Client in good faith that arise out of, relate to, or result from the Client's failure to disclose any claimed Exempt Information to any person making a request for such information. If Siemens fails to timely and diligently undertake this indemnification of the Client, Siemens shall be deemed to have waived its right to claim exemption from disclosure under the CPRA; and after reasonable notice to Siemens, the Client may release the requested information in accord with applicable law.

19. General Provisions.

~~17.~~ a. Choice of Law, Jurisdiction and Venue. THIS PDA SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA~~DELAWARE~~, WITHOUT REGARD TO CHOICE OF LAW PROVISIONS. JURISDICTION AND VENUE SHALL LIE WITH THE STATE OR FEDERAL COURTS IN THE COUNTY IN WHICH CLIENT'S PRINCIPAL PLACE OF BUSINESS IS LOCATED~~THE SUBJECT PROJECT WILL BE PERFORMED~~. TO THE EXTENT PERMITTED BY LAW, THE PARTIES EACH WAIVE ANY RIGHTS THAT EACH OF THEM MAY HAVE TO A TRIAL BY JURY. FURTHERMORE, EACH PARTY WAIVES ANY OBJECTION THAT IT MAY HAVE BASED ON IMPROPER VENUE OR FORUM NON CONVENIENS.

~~18.~~ b. Merger Clause. Upon execution and delivery, this PDA: (a) constitutes the entire agreement and understanding between the Parties relating to the subject matter hereof; (b) supersedes any and all prior agreements and understandings of the Parties, oral or written, relating to the subject matter hereof; and, (c) shall not be amended, supplemented, contradicted or otherwise modified by evidence of prior, contemporaneous or subsequent oral agreements of the Parties.

c. Notices. All notices, requests, demands and other communications under this PDA shall be in writing and shall be deemed to have been duly given on the date of service if personally served or on the second day after mailing if mailed by first class mail, registered or certified, return receipt requested, postage prepaid and properly addressed as follows:

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To Client: Ray Stokes, Executive Director
Central Coast Water Authority
255 Industrial Way
Buellton, CA 93427

With Copy To: Gary M. Kvistad
Brownstein Hyatt Farber Schreck, LLP
1021 Anacapa Street, Second Floor
Santa Barbara, CA 93101

To Siemens: Siemens Industry, Inc.
100 Technology Drive
Alpharetta, Georgia 30005
Attn:

Any Party may change their address for the purpose of this paragraph by giving the other Party written notice of the new address in the above manner.

d. Attorneys' Fees. If any legal action or any arbitration or other proceeding is brought for the enforcement of this PDA, or because of an alleged dispute, breach or default in connection with any of the provisions of this PDA, the successful or prevailing Party shall be entitled to recover reasonable attorneys' fees and other costs incurred in that action or proceeding, in addition to any other relief to which it or they may be entitled.

d. Assignment. This PDA shall not be assigned by Siemens to any third party, except as otherwise provided in this PDA, without the prior written consent of Client, who shall have the sole discretion to consent or not to consent to any proposed assignment since Client is relying upon the specific expertise of Siemens and its employees. Any attempted assignment without approval of Client shall be voidable at the option of Client.

e. Waiver. No waiver of a provision of this PDA shall constitute a waiver of any other provision, whether or not similar. No waiver shall constitute a continuing waiver. No waiver shall be binding unless executed in writing by the Party making the waiver.

f. Construction of Terms. All parts of this PDA shall in all cases be construed according to their plain meaning and shall not be construed in favor or against either of the Parties. If any term, provision, covenant or condition of this PDA is held by a court of competent jurisdiction to be invalid, void or unenforceable, in whole or in part, the remainder of this PDA shall remain in full force and effect and shall not be affected, impaired or invalidated. In the event of such invalidity, voidness or unenforceability, the Parties agree to enter into supplemental agreements to effectuate the intent of the Parties and the purposes of this PDA.

IN WITNESS WHEREOF, the Parties ~~hereto~~ have caused this Project Development Agreement to be duly executed by their respective authorized signatories as of the date first above written.

CLIENT	**SIEMENS**
Central Coast Water Authority	**Siemens Industry, Inc.**
By:	By:
Ray Stokes, Executive Director	XXX

APPROVED AS TO FORM:

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Brownstein Hyatt Farber Schreck, LLP

By: _____
Gary M. Kvistad,
Attorneys for Client

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EXHIBIT A
TO THE
PROJECT DEVELOPMENT AGREEMENT

Siemens will provide to the Central Coast Water Authority (CCWA) as part of the Project Proposal information confirming that the project can meet the following criteria.

I. General Requirements.

- The Solar Facility will not interfere with the Water Treatment Plant operations or be placed within structural areas of the water treatment facility (i.e. be placed within asphalt concrete paved areas)
- Solar Facility will not structurally compromise any Water Treatment Plant structures or facilities
- The Solar Facility will integrate safely into the CCWA Electrical System
- Siemens will comply with the CCWA Habitat Conservation Plan at Polonio Water Treatment Plant
- The Project is Exempt from CEQA per SB 226. If not, Siemens will describe the required Environmental Studies and schedule
- Siemens will describe how it will comply with federal, state and local regulatory compliance, building permits or confirm that Siemens will be exempt from them
- As part of the agreement, a mid-term contract performance review will be provided on terms agreeable upon both parties
- The minimum energy losses over the 20 year period onsite will be less than 15% cumulative from life cycle production estimate determined by modeling. Model production values will be mutually agreed upon by both parties prior to facility operation. Model parameters will be mutually agreed upon prior to signing of PPA.
- An availability factor of 97% or better will be provided for the life of the agreement, evaluated on an annual basis.
- The facility will comply with minimum OSHA standards
- Siemens will confirm any ISO/Utility interconnection requirements
- Siemens will complete schedule development to identify any critical path items of each party‘s responsbilities

II. Development Report

A Development Report will be presented in a format acceptable to the CCWA that provides quantitative and qualitative evidence of industry appropriate analysis for system operations, safety, environmental clearances and economic benefits to the CCWA for the term of the agreement. Evidence should be provided in a Development Report detailing Siemens’ approach to the work. Generally, the Development Report should include:

1. Site Overview
2. General Arrangement Drawing, Electrical Single Line and Instrumentation Schematics
3. Production Estimate
4. Environmental & Permitting
5. Schedule
6. Commissioning, Measurement and Verification
7. Economic Evaluation.
8. Determination of Go/No Go for development.
9. End of Term Options.

Information requested in these sections is further defined below.

1. Site Overview

Confirmation through the use of drawings and written descriptions of the final considered location(s) for array and how integration into existing facilities will occur. Any general information about the planned facility should be identified including general layout, staging areas, exclusion areas and other issues of concern anticipated as part of project execution.

2. General Arrangement Drawing, Electrical Single Line and Instrumentation Schematics

Provide conceptual layout of array on site showing panels, racking, access paths, inverters, interconnection locations, any buried or overhead wires routes, etc. for the facility on site and other below grade existing utilities within footprint of solar array facility as provided by the CCWA. Identify offsets from key structures for accessibility verification and safety.

General project information expected to be provided includes:

- DC System voltage
- Array Totals
- Module and array decription, including module and array efficiency
- Number of modules per string
- Number of strings
- Number of Modules
- Module wattage
- Number of/Type of inverters
- PV cell specifications, including cell efficiency
- DC Capacity
- AC Capacity
- DC/AC Ratio
- Racking system
- Azmiuth
- Panel tilt angle and orientation
- Row to Row spacing
- Ground cover ratio
- Interconnection voltage
- Site temperature maximum & minimum
- Basis of Design for overall facility inlcuding civil, structural and electrical systems
- Identify codes and standards to be used for design/installation/operations, including State of California Building Code
- Solar manufacturer guranteed performance, including product warranty and decrease of power output warranty
- Manufacturer's statement of guaranteed useful life

Provide electrical single line diagram to indicate all interconnection/interface points with CCWA owned or Utility owned facilities. Indicate interconnection requirements to meet CCWA/Utility/ISO requirements for metering & protection/controls. Requirements can be verified in report rather than on drawings if preferred.

Provide instrumentation and monitoring information to confirm CCWA's ability to view facility operations for data points required as part of any PPA contractual agreements. If modifications or upgrades to CCWA's systems are anticipated, Siemens should identify these needs and include those costs in the overall development costs/PPA costs assessment.

Provide Basis is Design information indicating equipment to be used as well and codes/standards and design approach that will be used for the work. Include software description used for the evaluation.

Future O&M activities including matrix of responsibility (Siemens/CCWA) and anticipated frequency should be identified in the work.

3. Production Estimate

The completion of a PVSyst model (or equivalent) to estimate facility production based upon the facility developed is anticipated. The equipment used in general arrangement will be the same used for modeling. Weather data will be the nearest TMY2 or TMY3 data set deemed acceptable for use. A copy of PVSyst output is requested as part of the Development Report.

Nameplate and Performance characteristics requested are:

PERFORMANCE GUARANTEE		
Parameter	**Guarantee Value**	**Minimum Performance Requirement**
Nameplate Capacity	[*] MW ac	
Year One Annual Production	[*] MWhr/yr ac	No less than 97% of guarantee value
Annual Losses	[*] %/yr	Identify system losses included
Guaranteed Availability	≥ [*]	
Noise Emissions Project Edge	≤ [*] dBA	
[*] items shall be filled in by Contractor 1. Availability shall be equivalent to the availability factor as defined in IEEE 762, Standard Definitions for Use in Reporting Electric Generating Unit Reliability, Availability, and Productivity		

4. Environmental & Permitting

The assessment should include the development of a permitting matrix to define the processes and regulations that will impact facility development. Matrix will identify federal, state and local requirements and general cost/schedule implications for completion as a part of matrix development. Any permitting expected to be completed by someone other than Siemens should be clearly identified in the matrix.

Siemens will comply with the CCWA Habitat Conservation Plan at Polonio WTP. The Project is Exempt from CEQA per SB 226. If not, Siemens will produce and lead required Environmental Studies. Siemens will comply with Regulatory Compliance, Building Permits or confirm that Siemens will be exempt from CEQA.

5, Schedule

Siemens will provide an estimated schedule for all future activities to attain commercial operation of the solar plant. Schedule should indicate work that will be completed in 2020 to maximize tax credits that will be reflected in the PPA price and economic analysis.

6. Commissioning, Measurement and Verification

Specify the commissioning plan and metering equipment and how the system performance will be monitored including method of analysis, accuracy, reporting, schedule and responsibilities.

7. Economic Evaluation

Provide the CCWA with an economic evaluation and determination of estimated annual economic benefits anticipated for the CCWA for the life of the facility. Identify the estimated total lifecycle cost of the project for CCWA with estimates of annual cost and savings estimates included for the life of the contract.

List and explain all assumptions. Provide estimated electricity sale back to the grid, include value, quantity and timing. The following information should be indicated in report including any clarifications on any line items:

- Study Period — years
- Weighted Average Cost of Capital — %
- Electricity Use (assumed) — kWh
- Year One Solar Production — kWh
- Annual PPA Costs — $
- Annual Energy Costs — $
    - Demand
    - Use
    - Misc. Utility charges
- Annual Cost Savings** — $
- PPA Price Estimate — $/kWh
- PPA Price Escalation — %
- System Size (DC) — kWdc
- System Cost — $/kWdc
- Total Cost of System (x yr term) — $
- O&M Cost
    - Monitoring — $/kW-yr
    - Maintenance — $/kW-yr
    - Repair — $/kW-yr
- O&M Cost Escalation — %

**Savings to consider potential impacts to changes to demand and use charges for power purchased from Utility, if applicable.

If the determination of feasibility makes assumptions, clarifications or exceptions that shift any costs to CCWA, CCWA may deem the evaluation non-compliant with the intent of the good faith discussions to date. Specifically, CCWA is moving forward with the Project Development Agreement with the following understandings:

- CCWA will not be responcible for any of the construction cost for the project.
- CCWA will recieve an immediate benefit of at least a 10% reduction of Energy costs from teh energy costs currently applied to the CCWA operation in PG&E Tariff E19 as of May 1 2020
- CCWA will recive the benefit of paying for Demand Charges pursuant to Tariff B19, Option R.

8. Determination of Go/No Go for Development.

If the site is determined to be non-feasible, Siemens will provide economic evidence that the proposed site is not feasible for economic model review by CCWA concurrence. Include all assumptions and exceptions pertinent to the determination.

9. End of Term Options.

Describe proposal for the solar facilities at the end of the term, transfer to CCWA, decommissioning and removal, or other proposed action. Identify decommissioning activities, responsible parties (CCWA/Siemens) and end of life use of materials and equipment as part of activities.

SIEMENS

Ingenuity for life

PV Only - 569kW Option R $0.09/kwh PPA - Copied on 4/10/2020 12:09:10 PM

Prepared For

CCWA - Polonio Pass
0000000
collin.ackerman@siemens.com

The Energy Toolbase provides comprehensive cost analysis for commercial, municipal, and residential renewable energy projects. We provide the tools that professionals need to compete in the fast paced renewable energy market by leveraging our first hand experience developing energy projects. Our software developers are NABCEP certified energy professionals and have completed energy analysis for companies including the Mirage Casino Resorts, Boston Scientific, Leviton, Balfour Beatty Construction, and many others.

Prepared By

4/10/2020

Brian Hurley
(802) 363-9972
brian.hurley@siemens.com

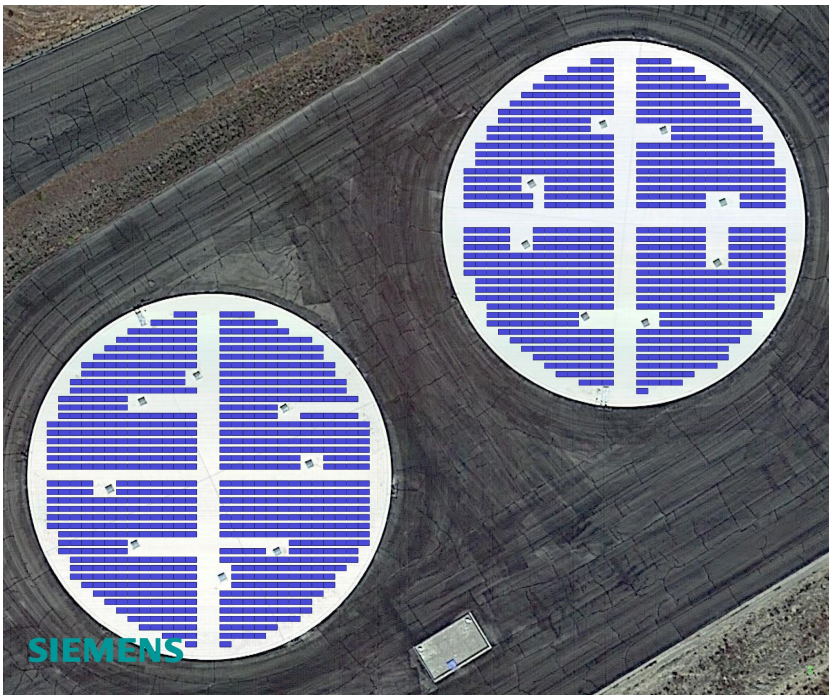


Table of Contents

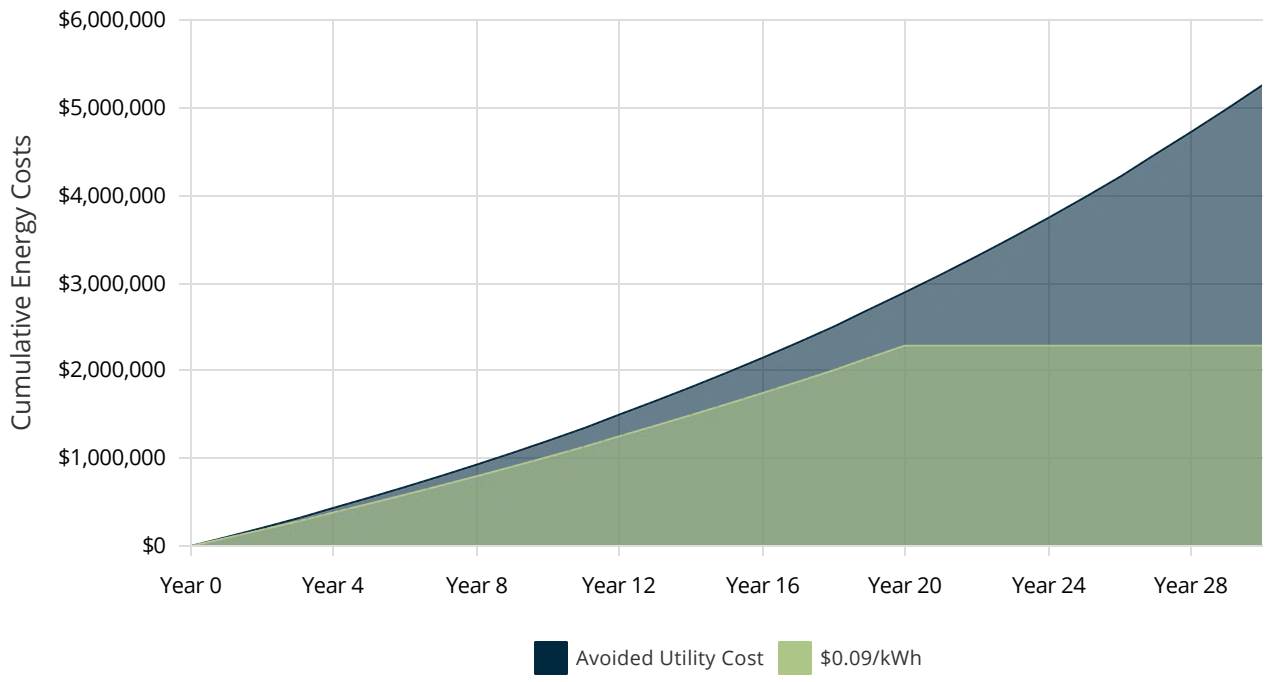
1 Project Summary

Payment Options	$0.09/kWh
PPA Escalation Rate	2.75%
Starting PPA Rate	$0.09/kWh
Upfront Payment	-
Term	20 Years
Total Payments	$2,284,570
30-Year Electric Bill Savings	$5,260,160
30-Year LCOE PV	$0.08
30-Year NPV	$1,012,201

Combined Solar PV Rating
Power Rating: 569,195 W-DC
Power Rating: 495,803 W-AC-CEC

Combined ESS Ratings
Energy Capacity: 0.0 kWh
Power Rating: 0.0 kW

Cumulative Energy Costs By Payment Option



Prepared By: Brian Hurley
P: (802) 363-9972, **E:** brian.hurley@siemens.com

2.1.1 PV System Details

General Information
Facility: Facility #1
Address: CA CA 93461

Solar PV Equipment Description
Solar Panels: (1441) Talesun TP6F72M 395 (1000V)
Inverters: (4) Sungrow SG 125HV

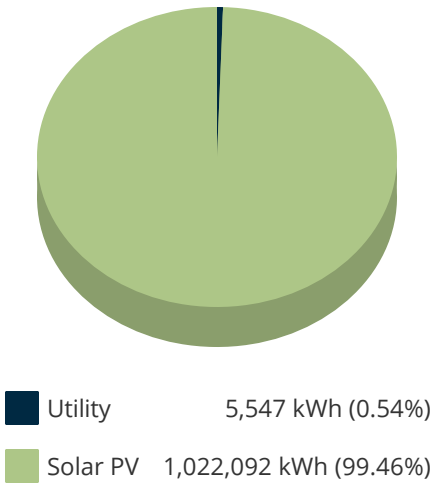
Solar PV Equipment Typical Lifespan
Solar Panels: Greater than 30 Years
Inverters: 15 Years

Solar PV System Cost And Incentives

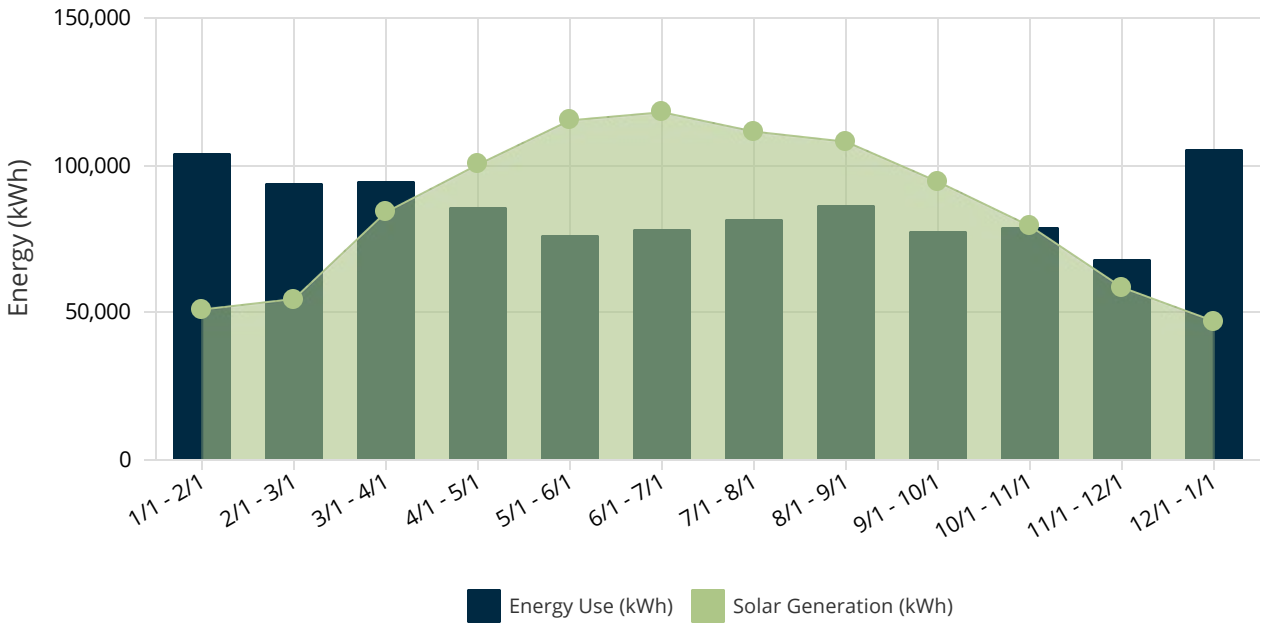
Solar PV System Cost	$1,928,833
Net Solar PV System Cost:	**$1,928,833**

Solar PV System Rating
Power Rating: 569,195 W-DC
Power Rating: 495,803 W-AC-CEC

Energy Consumption Mix
Annual Energy Use: 1,027,639 kWh



Monthly Energy Use vs Solar Generation



2.1.2 Rebates and Incentives

This section summarizes all incentives available for this project. The actual rebate and incentive amounts for this project are shown in each example.

Prepared By: Brian Hurley
P: (802) 363-9972, **E:** brian.hurley@siemens.com

2.1.3 Utility Rates

You have the option to remain on your current rate schedule (E-19, Secondary (PROPOSED)) or switch to an alternative rate schedule (E-19 Option R, Secondary (PROPOSED)). The rates for each are shown below and your estimated electric bills are shown on the following page for each rate schedule.

Fixed Charges			Energy Charges			Demand Charges		
Type	E-19, Secondary (PROPOSED)	E-19 Option R, Secondary (PROPOSED)	Type	E-19, Secondary (PROPOSED)	E-19 Option R, Secondary (PROPOSED)	Type	E-19, Secondary (PROPOSED)	E-19 Option R, Secondary (PROPOSED)
W1 Daily	$23.66	$23.66	W1 Part Peak	$0.12635	$0.14197	W1 NC	$19.45	$19.45
W2 Daily	$23.66	$23.66	W1 Off Peak	$0.09966	$0.09966	W2 NC	$19.45	$19.45
S Daily	$23.66	$23.66	W2 Part Peak	$0.12635	$0.14197	S NC	$19.45	$19.45
			W2 Off Peak	$0.09966	$0.09966	W1 Part Peak	$1.48	
			W2 Super Off Peak	$0.06384	$0.06384	W2 Part Peak	$1.48	
			S On Peak	$0.14213	$0.31920	S On Peak	$18.35	$1.48
			S Part Peak	$0.11729	$0.14692	S Part Peak	$2.85	$0.26
			S Off Peak	$0.09973	$0.09973			

2.1.4 Current Electric Bill

The table below shows your annual electricity costs based on the most current utility rates and your previous 12 months of electrical usage.

Rate Schedule: PG&E - E-19, Secondary (PROPOSED)

Time Periods	Energy Use (kWh)				Max Demand (kW)			Charges				
Bill Ranges & Seasons	On Peak	Part Peak	Off Peak	Super Off Peak	NC / Max	On Peak	Part Peak	Other	NBC	Energy	Demand	Total
1/1/2019 - 2/1/2019 W1	0	21,441	82,224	0	192	0	187	$733	$2,592	$8,312	$4,011	$15,648
2/1/2019 - 3/1/2019 W1	0	19,493	74,260	0	194	0	187	$662	$2,344	$7,520	$4,050	$14,576
3/1/2018 - 4/1/2018 W2	0	19,175	56,096	19,134	185	0	178	$733	$2,360	$6,875	$3,862	$13,830
4/1/2018 - 5/1/2018 W2	0	16,647	51,021	17,557	204	0	180	$710	$2,131	$6,178	$4,234	$13,253
5/1/2018 - 6/1/2018 W2	0	16,159	46,863	13,248	190	0	180	$733	$1,907	$5,651	$3,962	$12,253
6/1/2018 - 7/1/2018 S	16,767	13,208	47,794	0	178	168	175	$710	$1,944	$6,755	$7,044	$16,452
7/1/2018 - 8/1/2018 S	17,751	13,675	50,060	0	175	175	151	$733	$2,037	$7,082	$7,045	$16,898
8/1/2018 - 9/1/2018 S	18,561	14,587	52,728	0	168	168	166	$733	$2,147	$7,461	$6,824	$17,164
9/1/2018 - 10/1/2018 S	17,104	12,826	47,450	0	166	166	154	$710	$1,935	$6,733	$6,714	$16,091
10/1/2018 - 11/1/2018 W1	0	17,059	61,755	0	173	0	156	$733	$1,970	$6,340	$3,596	$12,639
11/1/2018 - 12/1/2018 W1	0	14,389	53,636	0	190	0	190	$710	$1,701	$5,463	$3,977	$11,850
12/1/2018 - 1/1/2019 W1	0	22,166	82,804	0	197	0	194	$733	$2,624	$8,429	$4,119	$15,905
Totals:	70,183	200,825	706,691	49,939	-	-	-	$8,634	$25,691	$82,797	$59,436	$176,559

2.1.5 New Electric Bill

Rate Schedule Option 1: PG&E - E-19, Secondary (PROPOSED)

Time Periods	Energy Use (kWh)				Max Demand (kW)			Charges				
Bill Ranges & Seasons	On Peak	Part Peak	Off Peak	Super Off Peak	NC / Max	On Peak	Part Peak	Other	NBC	Energy	Demand	Total
1/1/2019 - 2/1/2019 W1	0	19,783	32,844	0	192	0	187	$733	$1,835	$4,457	$4,011	$11,036
2/1/2019 - 3/1/2019 W1	0	16,523	22,599	0	194	0	187	$662	$1,587	$3,362	$4,050	$9,662
3/1/2018 - 4/1/2018 W2	0	7,309	32,874	-29,862	185	0	178	$733	$1,454	$2,035	$3,862	$8,084
4/1/2018 - 5/1/2018 W2	0	76	21,670	-36,762	204	0	180	$710	$1,202	$198	$4,234	$6,343
5/1/2018 - 6/1/2018 W2	0	-3,310	12,559	-48,230	190	0	180	$733	$1,089	-$1,271	$3,962	$4,513
6/1/2018 - 7/1/2018 S	-4,591	-11,935	-23,713	0	178	165	175	$710	$966	-$3,411	$6,989	$5,253
7/1/2018 - 8/1/2018 S	-2,766	-10,364	-16,831	0	175	175	151	$733	$1,015	-$2,538	$7,045	$6,256
8/1/2018 - 9/1/2018 S	-13	-9,688	-12,412	0	168	168	166	$733	$1,127	-$1,823	$6,824	$6,860
9/1/2018 - 10/1/2018 S	4,140	-8,935	-12,228	0	166	166	139	$710	$1,077	-$1,253	$6,671	$7,204
10/1/2018 - 11/1/2018 W1	0	8,639	-9,188	0	173	0	156	$733	$1,203	$190	$3,596	$5,722
11/1/2018 - 12/1/2018 W1	0	13,182	-3,701	0	190	0	190	$710	$1,139	$1,060	$3,977	$6,885
12/1/2018 - 1/1/2019 W1	0	21,458	36,421	0	197	0	193	$733	$1,914	$4,894	$4,117	$11,659
Totals:	-3,230	42,738	80,894	-114,854	-	-	-	$8,634	$15,608	$5,898	$59,337	$89,478

New Rate Schedule Option 2: PG&E - E-19 Option R, Secondary (PROPOSED)

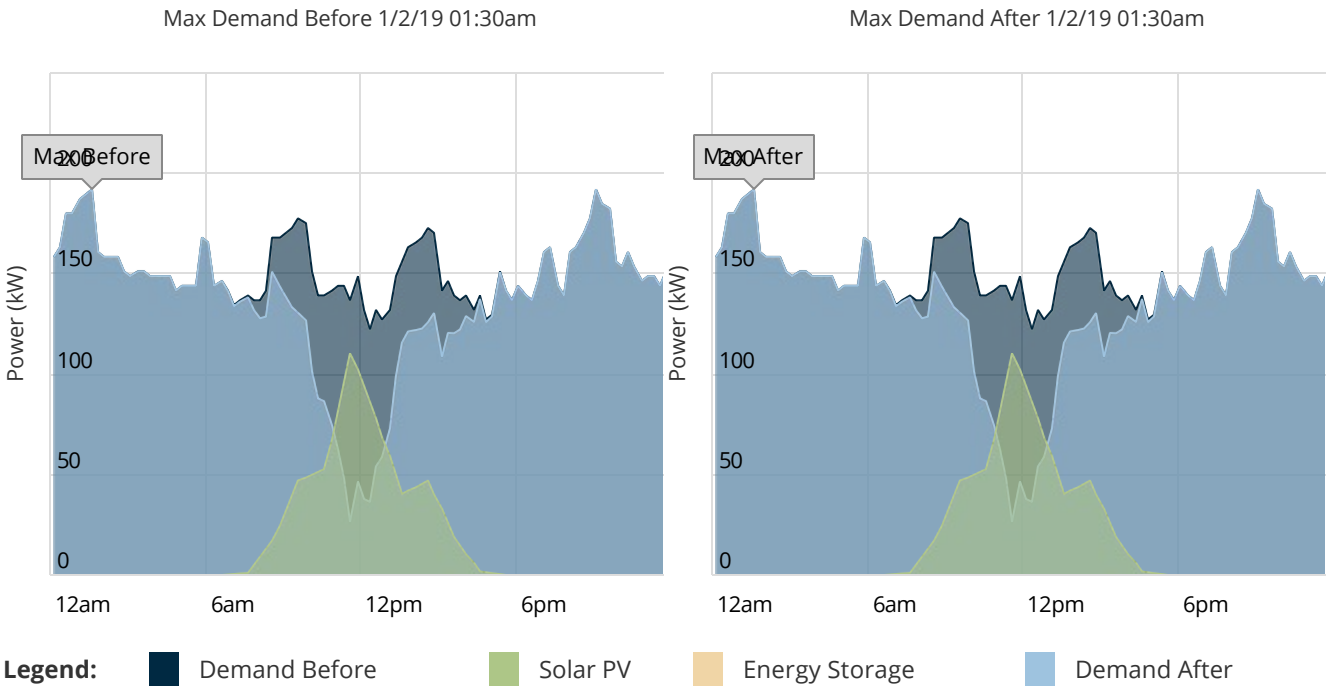
Time Periods	Energy Use (kWh)				Max Demand (kW)			Charges				
Bill Ranges & Seasons	On Peak	Part Peak	Off Peak	Super Off Peak	NC / Max	On Peak	Part Peak	Other	NBC	Energy	Demand	Total
1/1/2019 - 2/1/2019 W1	0	19,783	32,844	0	192	0	0	$733	$1,835	$4,766	$3,734	$11,069
2/1/2019 - 3/1/2019 W1	0	16,523	22,599	0	194	0	0	$662	$1,587	$3,620	$3,773	$9,643
3/1/2018 - 4/1/2018 W2	0	7,309	32,874	-29,862	185	0	0	$733	$1,454	$2,149	$3,598	$7,935
4/1/2018 - 5/1/2018 W2	0	76	21,670	-36,762	204	0	0	$710	$1,202	$199	$3,968	$6,078
5/1/2018 - 6/1/2018 W2	0	-3,310	12,559	-48,230	190	0	0	$733	$1,089	-$1,323	$3,696	$4,195
6/1/2018 - 7/1/2018 S	-4,591	-11,935	-23,713	0	178	165	175	$710	$966	-$4,578	$3,752	$850
7/1/2018 - 8/1/2018 S	-2,766	-10,364	-16,831	0	175	175	151	$733	$1,015	-$3,335	$3,702	$2,116
8/1/2018 - 9/1/2018 S	-13	-9,688	-12,412	0	168	168	166	$733	$1,127	-$2,113	$3,559	$3,307
9/1/2018 - 10/1/2018 S	4,140	-8,935	-12,228	0	166	166	139	$710	$1,077	-$785	$3,511	$4,512
10/1/2018 - 11/1/2018 W1	0	8,639	-9,188	0	173	0	0	$733	$1,203	$325	$3,365	$5,626
11/1/2018 - 12/1/2018 W1	0	13,182	-3,701	0	190	0	0	$710	$1,139	$1,266	$3,696	$6,810
12/1/2018 - 1/1/2019 W1	0	21,458	36,421	0	197	0	0	$733	$1,914	$5,229	$3,832	$11,708
Totals:	-3,230	42,738	80,894	-114,854	-	-	-	$8,634	$15,608	$5,420	$44,185	$73,848

Annual Electricity Savings: $102,711

2.1.6 Demand Profiles

Date Range: 1/1/2019 - 2/1/2019

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.



Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

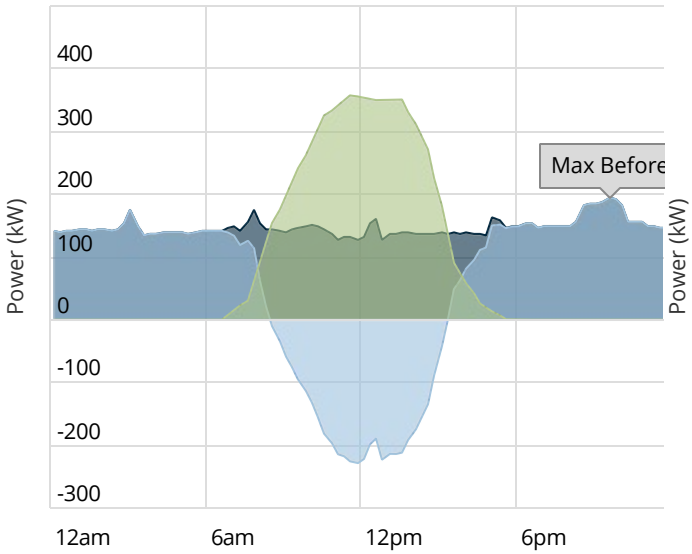
Charts Not Applicable

Demand Profiles

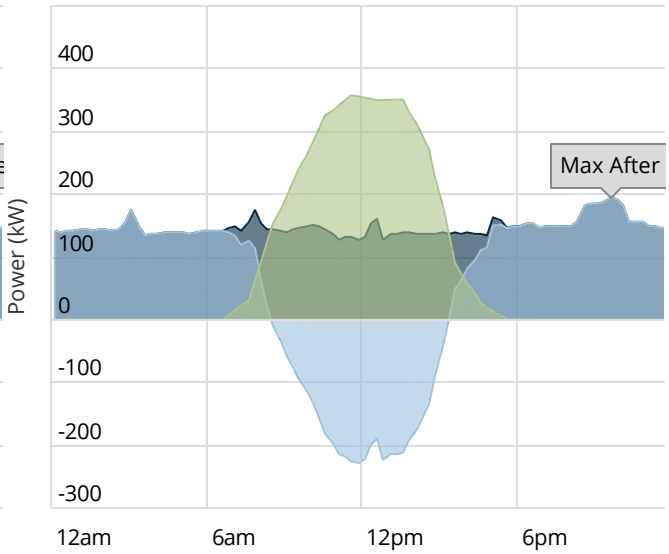
Date Range: 2/1/2019 - 3/1/2019

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 2/4/19 09:30pm



Max Demand After 2/4/19 09:30pm



Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Charts Not Applicable

Prepared By: Brian Hurley
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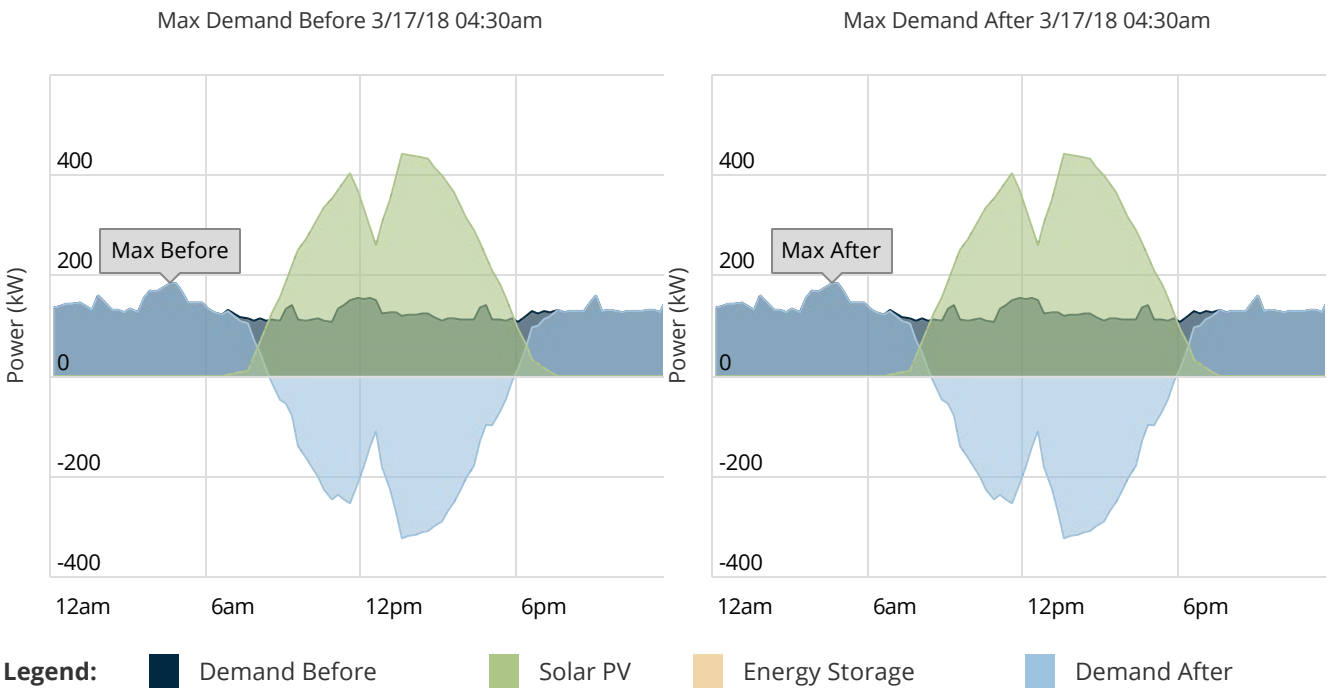
Demand Profiles

Date Range: 3/1/2018 - 4/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.



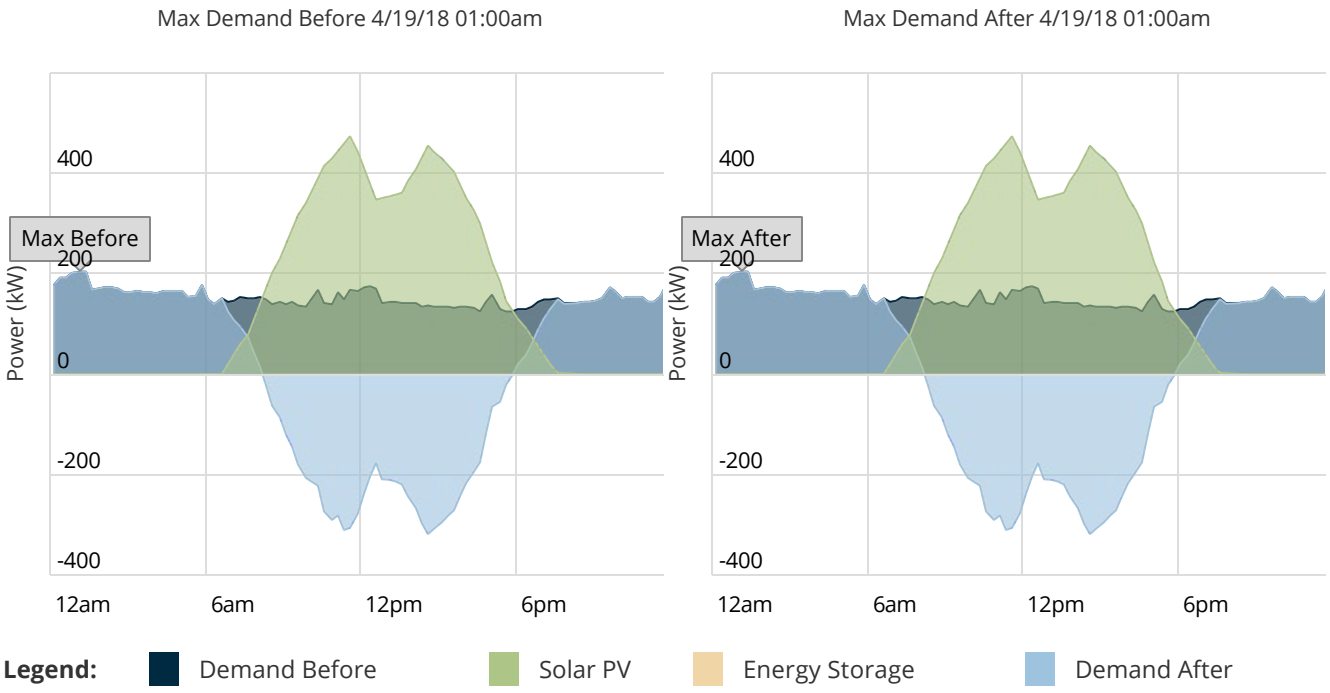
Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Charts Not Applicable

Demand Profiles

Date Range: 4/1/2018 - 5/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.



Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

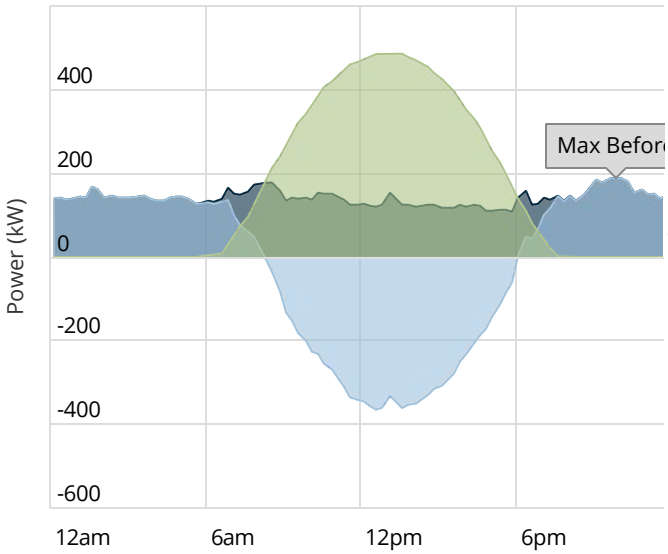
Charts Not Applicable

Demand Profiles

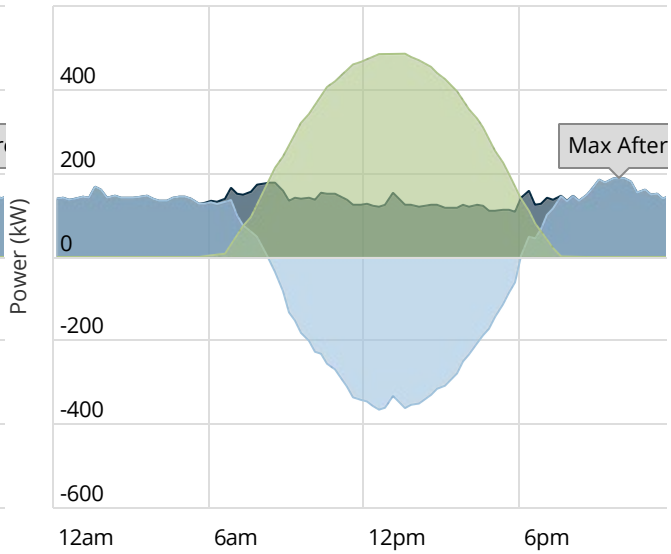
Date Range: 5/1/2018 - 6/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 5/2/18 09:45pm



Max Demand After 5/2/18 09:45pm



Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Charts Not Applicable

Prepared By: Brian Hurley
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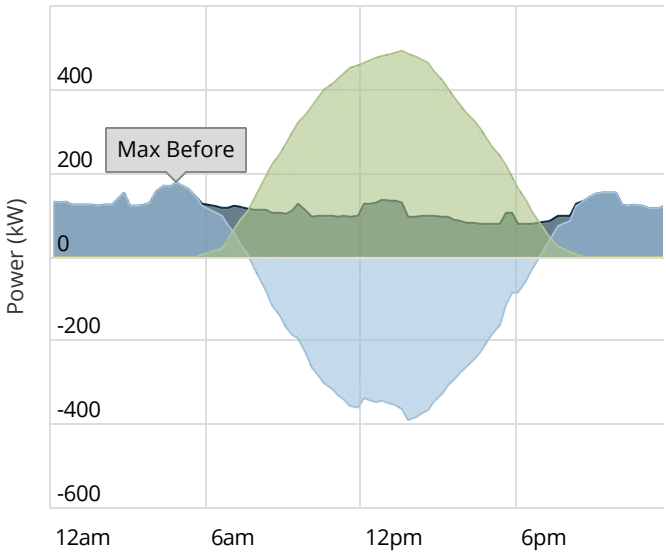
Demand Profiles

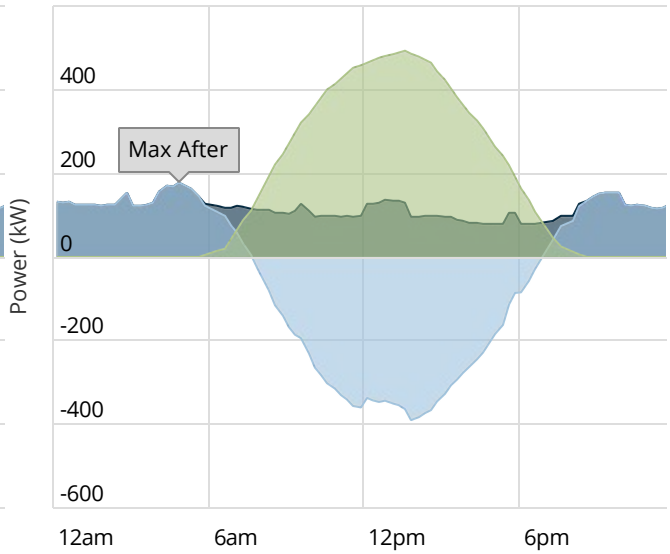
Date Range: 6/1/2018 - 7/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 6/17/18 04:45am



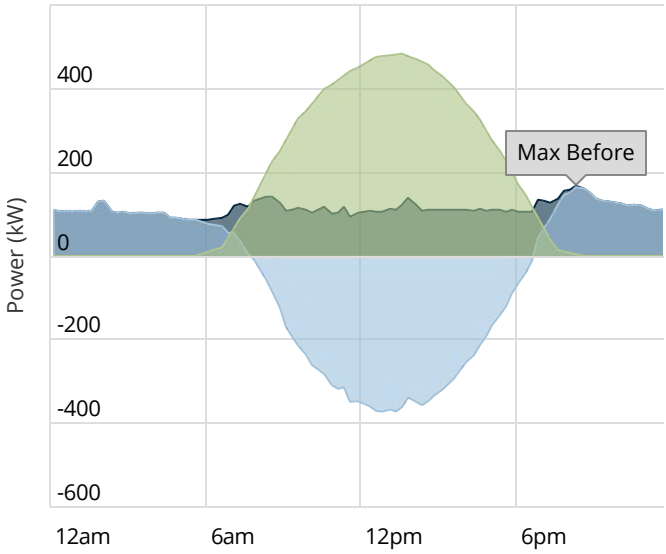
Max Demand After 6/17/18 04:45am



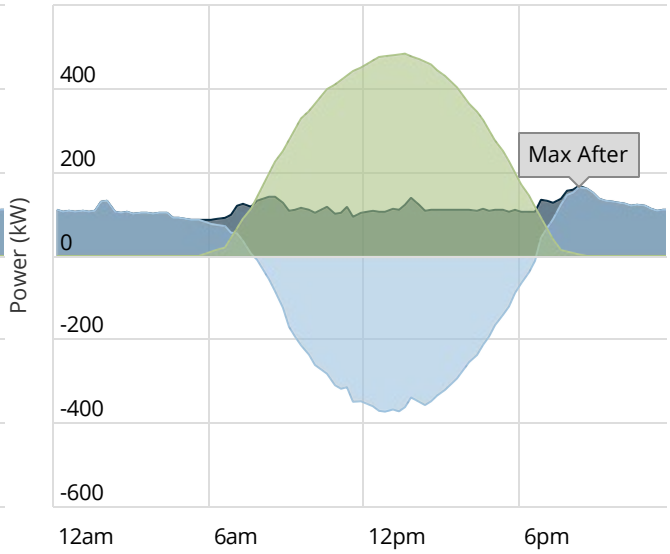
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 6/22/18 08:15pm



Max Demand After 6/22/18 08:15pm



Legend: Demand Before | Solar PV | Energy Storage | Demand After

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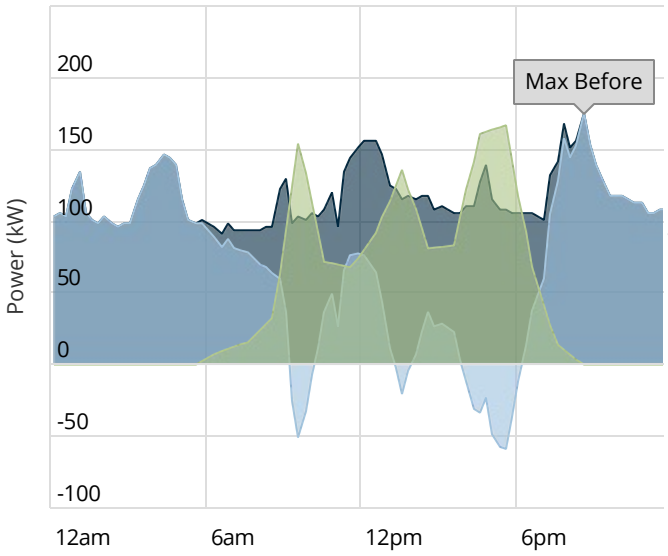
Demand Profiles

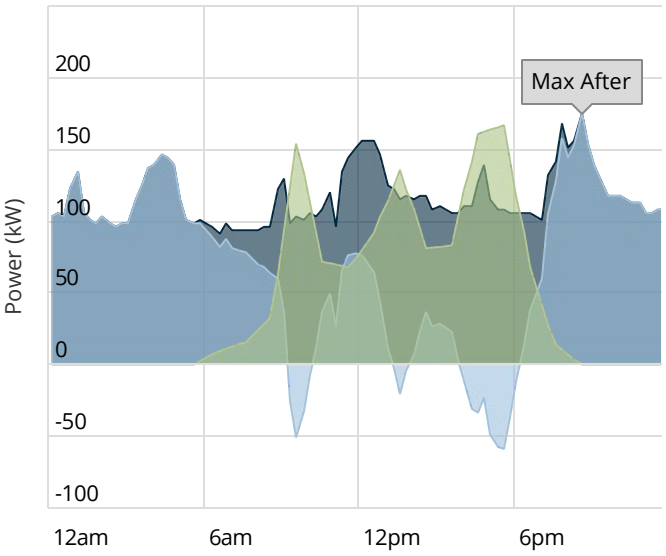
Date Range: 7/1/2018 - 8/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 7/23/18 08:30pm



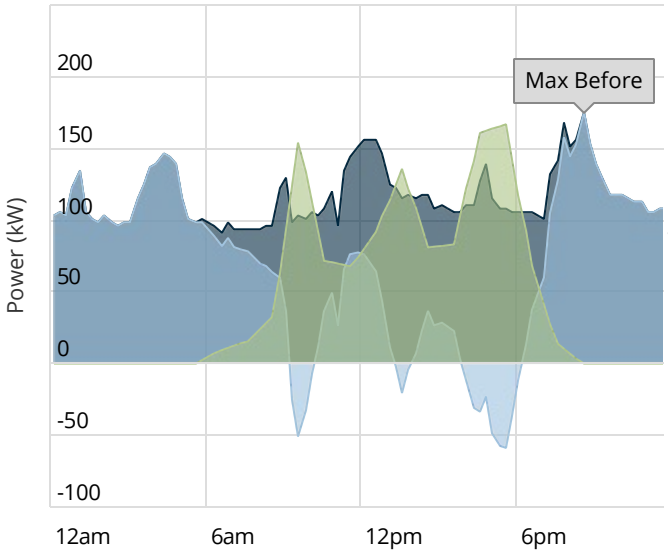
Max Demand After 7/23/18 08:30pm



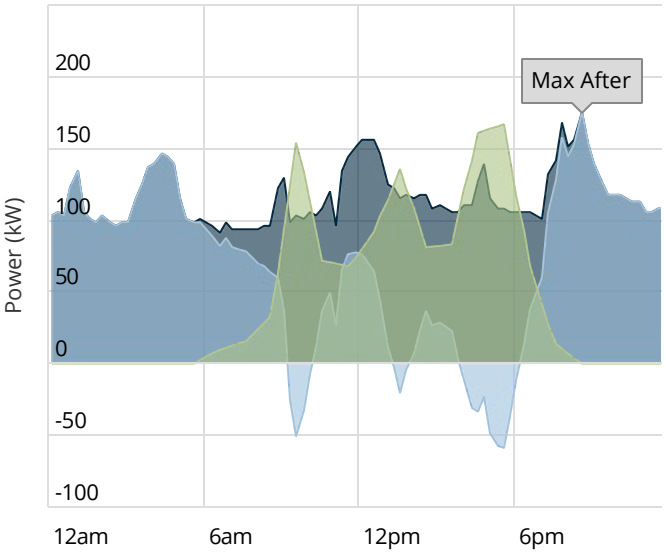
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 7/23/18 08:30pm



Max Demand After 7/23/18 08:30pm



Legend: Demand Before | Solar PV | Energy Storage | Demand After

Prepared By: Brian Hurley
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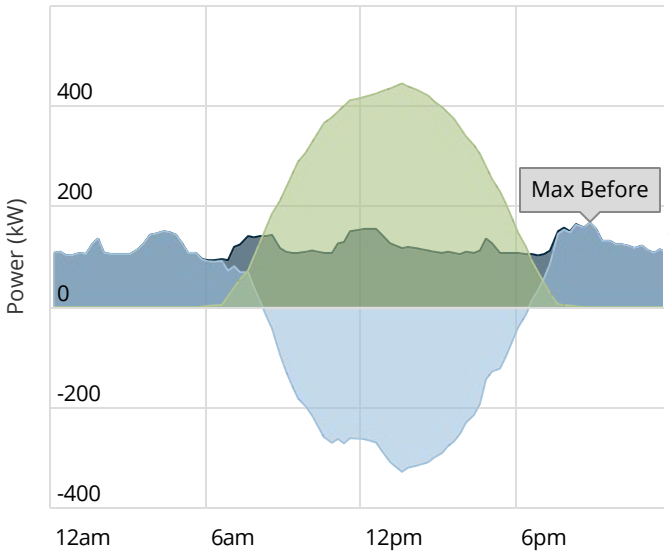
Demand Profiles

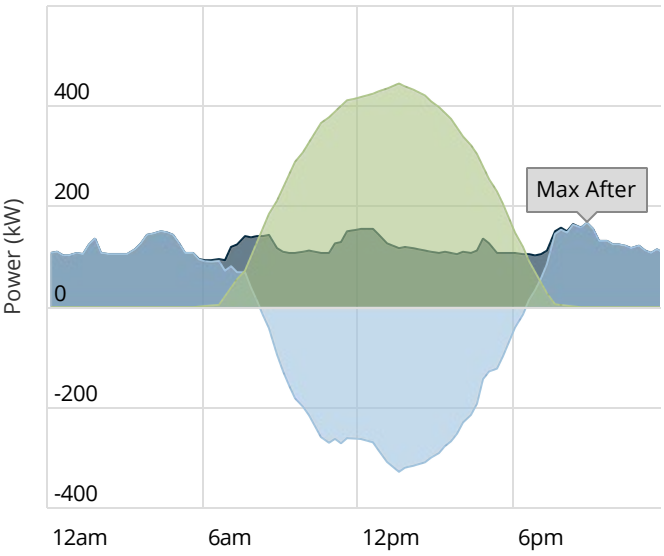
Date Range: 8/1/2018 - 9/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 8/3/18 08:45pm



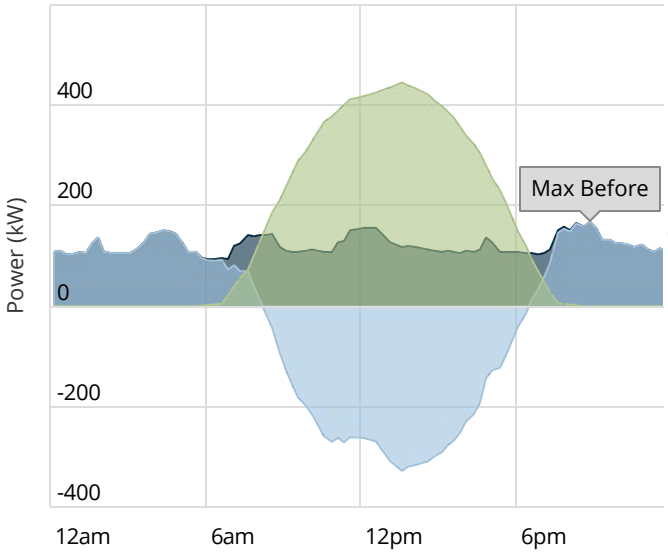
Max Demand After 8/3/18 08:45pm



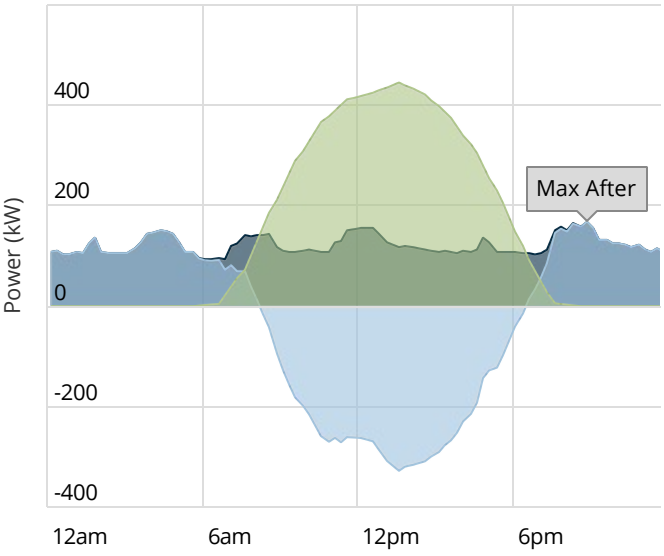
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 8/3/18 08:45pm



Max Demand After 8/3/18 08:45pm



Legend: Demand Before | Solar PV | Energy Storage | Demand After

Prepared By: Brian Hurley
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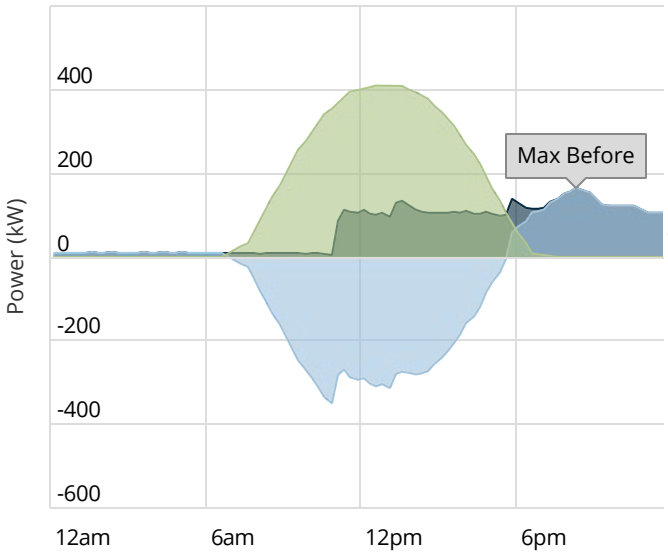
Demand Profiles

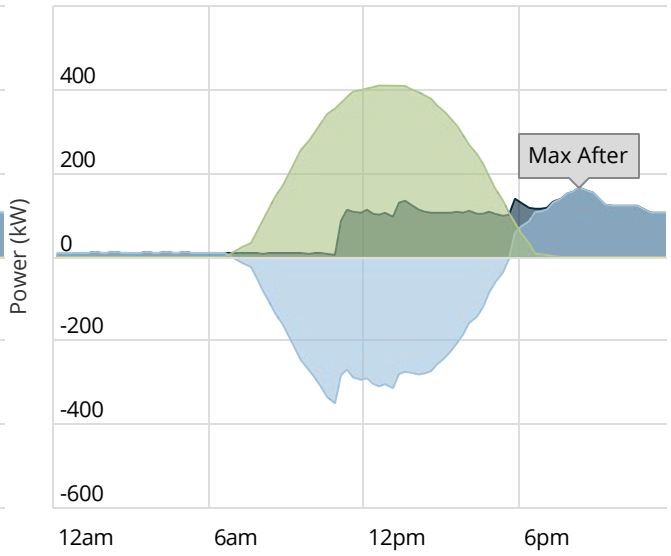
Date Range: 9/1/2018 - 10/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 9/27/18 08:15pm



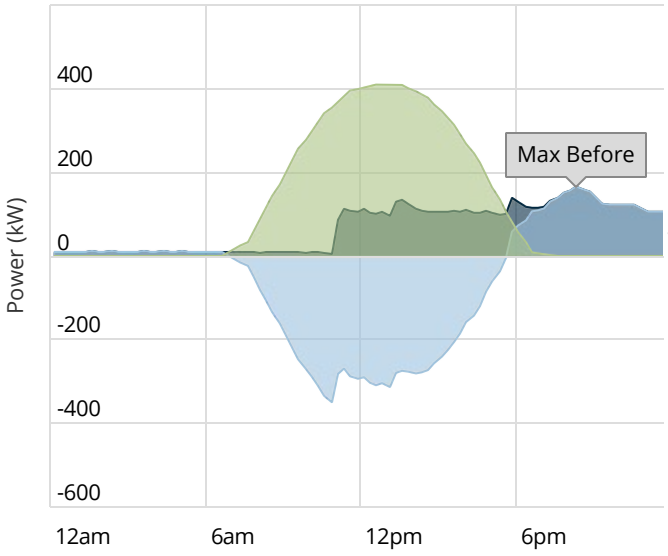
Max Demand After 9/27/18 08:15pm



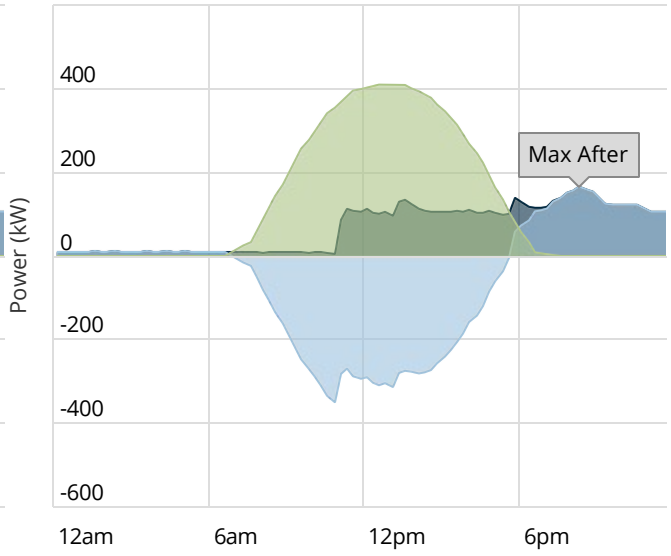
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 9/27/18 08:15pm



Max Demand After 9/27/18 08:15pm



Legend: Demand Before | Solar PV | Energy Storage | Demand After

Prepared By: Brian Hurley
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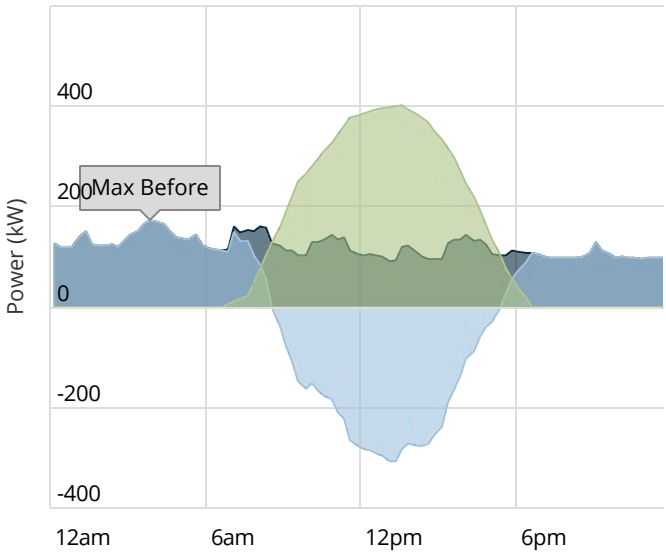
Demand Profiles

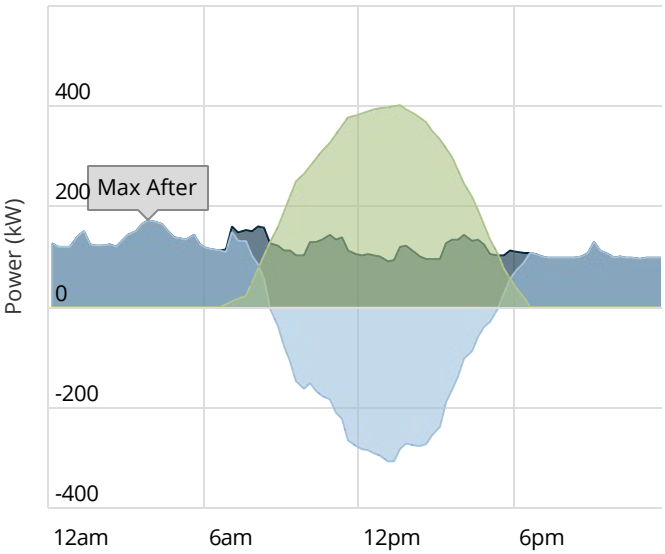
Date Range: 10/1/2018 - 11/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 10/11/18 03:45am



Max Demand After 10/11/18 03:45am



Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Charts Not Applicable

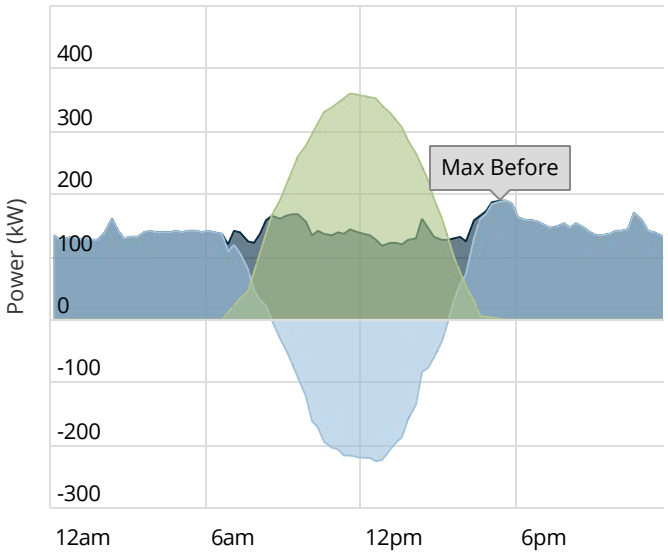
Prepared By: Brian Hurley
P: (802) 363-9972, **E:** brian.hurley@siemens.com

Demand Profiles

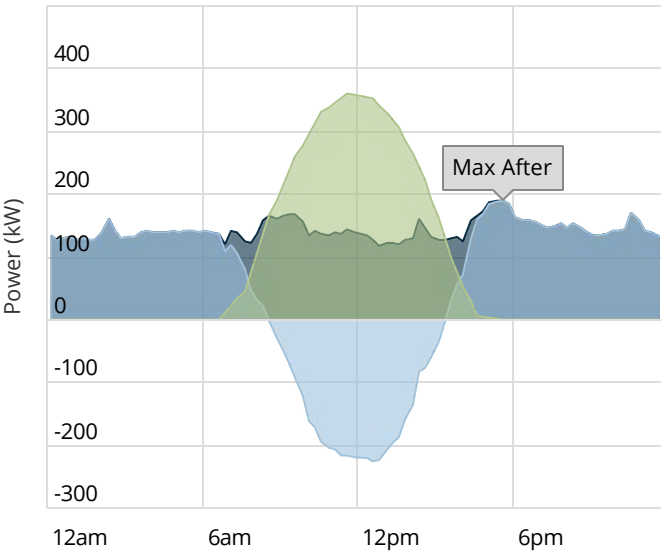
Date Range: 11/1/2018 - 12/1/2018

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 11/29/18 05:15pm



Max Demand After 11/29/18 05:30pm



Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Charts Not Applicable

Prepared By: Brian Hurley
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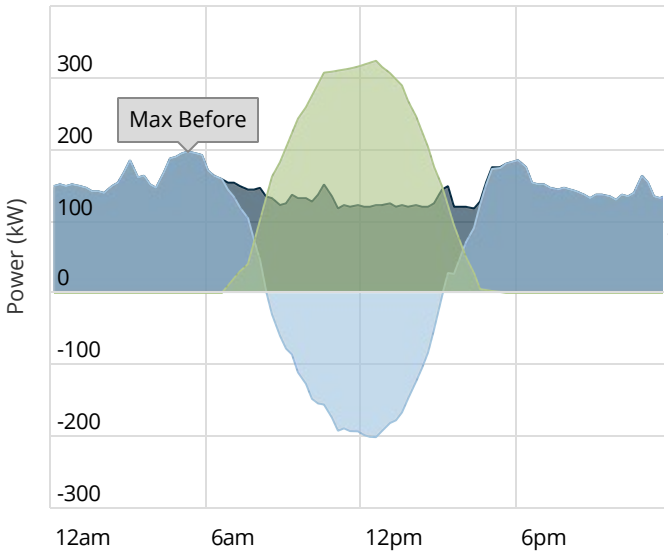
Demand Profiles

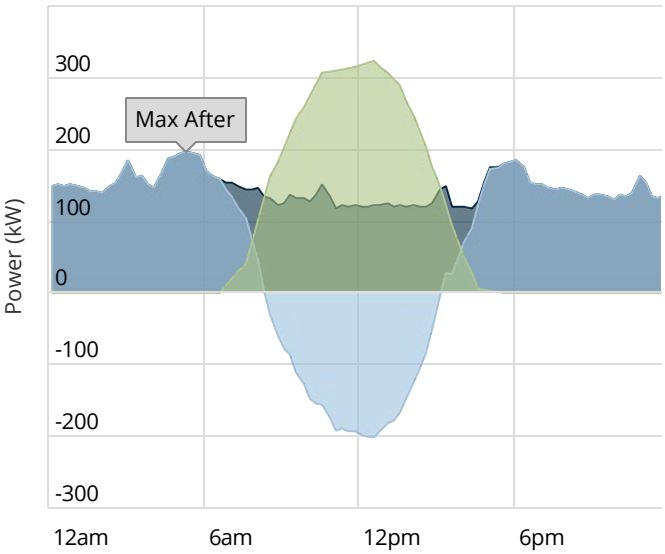
Date Range: 12/1/2018 - 1/1/2019

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 12/3/18 05:15am



Max Demand After 12/3/18 05:15am



Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Charts Not Applicable

Prepared By: Brian Hurley
P: (802) 363-9972, **E:** brian.hurley@siemens.com

3.1 $0.09/kWh

Inputs and Key Financial Metrics

End of Term Buyout Payment	$0	Term	20	Electricity Escalation Rate	4%
PPA Escalation Rate	2.75%	Total Payments	$2,284,570	Federal Income Tax Rate	0%
Starting PPA Rate	$0.09	PV Degradation Rate	0.5%	State Income Tax Rate	0%
Upfront Payment	$0				

Years	PPA Payments	Electric Bill Savings	Total Cash Flow	Cumulative Cash Flow
Upfront	-	-	-	-
1	-$91,988	$102,711	$10,723	$10,723
2	-$94,045	$106,285	$12,240	$22,963
3	-$96,146	$109,981	$13,835	$36,798
4	-$98,291	$113,803	$15,512	$52,309
5	-$100,481	$117,754	$17,273	$69,582
6	-$102,718	$121,839	$19,122	$88,704
7	-$105,001	$126,063	$21,062	$109,765
8	-$107,333	$130,430	$23,097	$132,863
9	-$109,713	$134,944	$25,231	$158,094
10	-$112,143	$139,611	$27,468	$185,562
11	-$114,624	$144,435	$29,812	$215,374
12	-$117,156	$149,422	$32,266	$247,640
13	-$119,741	$154,577	$34,836	$282,476
14	-$122,379	$159,905	$37,526	$320,002
15	-$125,072	$165,412	$40,339	$360,341
16	-$127,821	$171,103	$43,283	$403,624
17	-$130,626	$176,986	$46,360	$449,983
18	-$133,489	$183,065	$49,576	$499,559
19	-$136,410	$189,347	$52,937	$552,496
20	-$139,391	$195,839	$56,447	$608,943
21	-	$202,547	$202,547	$811,490
22	-	$209,479	$209,479	$1,020,969
23	-	$216,641	$216,641	$1,237,610
24	-	$224,041	$224,041	$1,461,650
25	-	$231,686	$231,686	$1,693,336
26	-	$239,584	$239,584	$1,932,920
27	-	$247,744	$247,744	$2,180,664
28	-	$256,173	$256,173	$2,436,837
29	-	$264,880	$264,880	$2,701,717
30	-	$273,873	$273,873	$2,975,590
Totals:	-$2,284,570	$5,260,160	$2,975,590	-

4.1 $0.09/kWh

Inputs and Key Financial Metrics

End of Term Buyout Payment	$0	Upfront Payment	$0	PV Degradation Rate	0.5%	State Income Tax Rate	0%
PPA Escalation Rate	2.75%	Term	20	Electricity Escalation Rate	4%		
Starting PPA Rate	$0.09	Total Payments	$2,284,570	Federal Income Tax Rate	0%		

Years	Upfront	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash											
PPA Payments	-	-$91,988	-$94,045	-$96,146	-$98,291	-$100,481	-$102,718	-$105,001	-$107,333	-$109,713	-$112,143
Electric Bill Savings	-	$102,711	$106,285	$109,981	$113,803	$117,754	$121,839	$126,063	$130,430	$134,944	$139,611
Cash	-	$10,723	$12,240	$13,835	$15,512	$17,273	$19,122	$21,062	$23,097	$25,231	$27,468
Total Cash Flow	-	$10,723	$12,240	$13,835	$15,512	$17,273	$19,122	$21,062	$23,097	$25,231	$27,468
Cumulative Cash Flow	-	$10,723	$22,963	$36,798	$52,309	$69,582	$88,704	$109,765	$132,863	$158,094	$185,562

4.1 $0.09/kWh

Inputs and Key Financial Metrics

End of Term Buyout Payment	$0	Upfront Payment	$0	PV Degradation Rate	0.5%	State Income Tax Rate	0%
PPA Escalation Rate	2.75%	Term	20	Electricity Escalation Rate	4%		
Starting PPA Rate	$0.09	Total Payments	$2,284,570	Federal Income Tax Rate	0%		

Years	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21
Cash											
PPA Payments	-$114,624	-$117,156	-$119,741	-$122,379	-$125,072	-$127,821	-$130,626	-$133,489	-$136,410	-$139,391	-
Electric Bill Savings	$144,435	$149,422	$154,577	$159,905	$165,412	$171,103	$176,986	$183,065	$189,347	$195,839	$202,547
Cash	$29,812	$32,266	$34,836	$37,526	$40,339	$43,283	$46,360	$49,576	$52,937	$56,447	$202,547
Total Cash Flow	$29,812	$32,266	$34,836	$37,526	$40,339	$43,283	$46,360	$49,576	$52,937	$56,447	$202,547
Cumulative Cash Flow	$215,374	$247,640	$282,476	$320,002	$360,341	$403,624	$449,983	$499,559	$552,496	$608,943	$811,490

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4.1 $0.09/kWh

Inputs and Key Financial Metrics

End of Term Buyout Payment	$0	Upfront Payment	$0	PV Degradation Rate	0.5%	State Income Tax Rate	0%
PPA Escalation Rate	2.75%	Term	20	Electricity Escalation Rate	4%		
Starting PPA Rate	$0.09	Total Payments	$2,284,570	Federal Income Tax Rate	0%		

Years	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Totals
Cash										
PPA Payments	-	-	-	-	-	-	-	-	-	-$2,284,570
Electric Bill Savings	$209,479	$216,641	$224,041	$231,686	$239,584	$247,744	$256,173	$264,880	$273,873	$5,260,160
Cash	$209,479	$216,641	$224,041	$231,686	$239,584	$247,744	$256,173	$264,880	$273,873	$2,975,590
Total Cash Flow	$209,479	$216,641	$224,041	$231,686	$239,584	$247,744	$256,173	$264,880	$273,873	$2,975,590
Cumulative Cash Flow	$1,020,969	$1,237,610	$1,461,650	$1,693,336	$1,932,920	$2,180,664	$2,436,837	$2,701,717	$2,975,590	-

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CENTRAL COAST WATER AUTHORITY

MEMORANDUM

July 1, 2020

TO: CCWA Operating Committee

FROM: Lisa Long
Controller

SUBJECT: Additional Revision to Payment Schedule for FY 2020/21 DWR Fixed Costs

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DISCUSSION

When the CCWA Annual budget is prepared and presented to the Board for approval, certain assumptions regarding DWR costs must be made because DWR bills on a calendar year and actual charges are not known until after Board approval of the final CCWA budget.

At the April Board Meeting, when approving the CCWA budget for FY 2020/21 the CCWA Board of Directors approved a special one-time revision to the payment schedule for the FY 2020/21 in light of significant decreases in revenues associated with lower water usage some CCWA project participants were experiencing due to the COVID-19 pandemic. This revision allowed for a portion of the DWR fixed costs to be paid June 1, 2020 for those costs to be paid to DWR between July 2020 to December 2020 and the remaining portion to be paid on December 1, 2020 for those fixed costs to be paid to DWR between January 2021 and June 2021.

CCWA has now received the 2021 Statement of Charges (SOC) from DWR detailing the costs for the calendar year 2021, which is the second half of CCWA's fiscal year 2020/2021. As a result, several of the charges on the 2021 SOC varied significantly from the estimates used for the budget, resulting in an overall reduction of approximately $3.5 million. CCWA staff performed an analysis of each component of the DWR Fixed Costs, and will be requesting the Board to consider an additional revision to the approved payment schedule, which would reflect the changes in the DWR Fixed costs as received.

The following table shows the changes and how each CCWA participant would be affected if the Board approves this request.

	A	B	C	D	E (B+C+D)	F	G (E+F)	H (E-A)
DWR Fixed Charges FY 2020/2021								
		Revised Budget				Paid on	To Be Paid	Difference
Participant	**Original Budget**	**Jul-Dec '20**	**Jan-Jun '21**	**(Credits) Due**	**Total**	**June 1, 2020**	**Dec 1, 2020 (2)**	**From Orig. Budget**
Guadalupe	$ 571,063	$ 292,242	$ 254,318	$ (18,853)	$ 527,707	$ (269,401)	$ 258,306	$ (43,356)
Santa Maria	17,374,105	9,180,954	7,656,384	(746,659)	16,090,680	(8,373,726)	7,716,954	(1,283,425)
Golden State Water	536,982	283,619	236,561	(22,533)	497,648	(258,800)	238,848	(39,335)
Vandenberg AFB (1)	6,218,124	3,443,354	2,698,733	(345,488)	5,796,599	(6,228,765)	(432,167)	(421,525)
Buellton	654,795	362,238	283,981	(35,577)	610,642	(325,615)	285,027	(44,153)
Solvang (Billed to SY)	1,658,593	919,398	718,323	(92,580)	1,545,141	(826,088)	719,053	(113,453)
Santa Ynez ID#1 (1)	591,384	315,382	247,513	(47,070)	515,824	(589,751)	(73,927)	(75,560)
Goleta	5,415,936	2,885,394	2,273,928	(467,385)	4,691,936	(2,656,075)	2,035,861	(723,999)
Morehart Land Co.	225,712	125,068	97,990	(12,859)	210,199	(112,267)	97,932	(15,513)
La Cumbre	1,130,112	625,653	490,276	(63,632)	1,052,297	(562,049)	490,249	(77,815)
Raytheon (1)	57,546	31,509	24,735	(2,733)	53,511	(57,642)	(4,131)	(4,034)
Santa Barbara	3,389,954	1,877,770	1,471,616	(189,299)	3,160,086	(1,685,973)	1,474,114	(229,868)
Montecito	3,322,901	1,779,500	1,384,729	(272,571)	2,891,658	(1,638,905)	1,252,753	(431,243)
Carpinteria	2,218,404	1,187,724	924,685	(180,100)	1,932,309	(1,093,966)	838,343	(286,095)
TOTALS	**$ 43,365,611**	**$ 23,309,805**	**$ 18,763,772**	**$ (2,497,340)**	**$ 39,576,237**	**$ (24,679,022)**	**$ 14,897,215**	**$ (3,789,375)**

(1) Participants who elected to receive one Fixed invoice rather than two.

(2) Invoices to be issued November 1, 2020 with payment due no later than December 1, 2020. The Fixed Invoice for FY 2021/2022 will include any credits.

The following is an explanation of the various columns in the Table above:

Column A: "Original Budget" – represents the original DWR fixed cost in the CCWA FY 2020/21 Budget.

Column B&C: "Revised Budget"- Represents the "revised" DWR budget taking into account the actual DWR calendar year 2021 Statement of Charges received on July 1, 2020.

Column D: "(Credits)/Due"-Represents credits to be received from DWR for various fixed cost components during FY 2020/21.

Column E: "Total" – Represents the total revised FY 2020/21 DWR budget based on the actual DWR calendar year 2021 Statement of Charges.

Column F: "Paid on June 1, 2020"-Represents actual payments already received by CCWA for the DWR FY 2020/21 fixed costs.

Column G: "To be Paid Dec. 1, 2020" – represents the remaining amount to be paid by December 1, 2020 for the FY 2020/21 DWR fixed costs.

Column H: "Difference from Original Budget" – represents the change (decrease/savings) from the original DWR FY 2020/21 fixed cost budget.