



**AGENDA
COMMUNITY ADVISORY COMMITTEE MEETING
THURSDAY, JULY 15, 2021
1:00 P.M.**

******GOVERNOR'S EXECUTIVE ORDER N-08-21******

RE CORONAVIRUS COVID-19

CONSISTENT WITH THE PROVISIONS OF THE GOVERNOR'S EXECUTIVE ORDER N-08-21 WHICH SUSPENDED CERTAIN REQUIREMENTS OF THE BROWN ACT, MEMBERS OF THE COMMUNITY ADVISORY COMMITTEE WILL PARTICIPATE IN THE JULY 15, 2021 MEETING BY TELECONFERENCE. DUE TO THE EXECUTIVE ORDER, IN-PERSON PARTICIPATION BY THE PUBLIC WILL NOT BE PERMITTED AND NO PHYSICAL LOCATION FROM WHICH THE PUBLIC MAY ATTEND THE MEETING WILL BE AVAILABLE. REMOTE PUBLIC PARTICIPATION DETAILS ARE LISTED BELOW.

Members of the public who wish to participate in the Community Advisory Committee Meeting may do so via the following webinar link or teleconference call-in number and meeting code:

- Webinar link: <https://zoom.us/j/93117897478>
- Telephone number: 1 (669) 900-9128
- Meeting ID: 931 1789 7478

PLEASE NOTE: The Sonoma Clean Power Business Office is closed and this meeting will be conducted entirely by teleconference.

How to Submit Public Comment During the Teleconference Meeting:

The Chair will request public comment during the Public Comment period for all items on the agenda. Comments may be submitted in writing (preferred) to meetings@sonomacleanpower.org or during the meeting via the webinar "raise your hand" feature. For detailed public comment instructions, [please visit this page](#).

For written comments, state the agenda item number that you are commenting on and limit to 300 words. Written comments received prior to the meeting and/or the agenda item you wish to comment on will be read into the record up to 300 words.

Staff recommendations are guidelines to the Committee. On any item, the Committee may take action which varies from that recommended by staff.

CALL TO ORDER

PUBLIC COMMENT ON MATTERS NOT LISTED ON THE AGENDA

(Comments are restricted to matters within the Committee's jurisdiction. Please be brief and limit spoken comments to three minutes, or 300 words if written.)

COMMUNITY ADVISORY COMMITTEE CONSENT CALENDAR

1. Approve June 17, 2021 Draft Community Advisory Committee Meeting Minutes (Staff Recommendation: Approve) - pg. 5
2. Recommend that the Board of Directors Approve an Extension of Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy (Staff Recommendation: Approve) - pg. 11

COMMUNITY ADVISORY COMMITTEE REGULAR CALENDAR

3. Receive Internal Operations and Monthly Financial Report and Provide Feedback as Appropriate (Staff Recommendation: Receive and File) - pg. 21
4. Integrated Resource Planning (IRP) Portfolio Scenario Modeling (Staff Recommendation: Receive and File) - pg. 33
5. Recommend that the Board of Directors Delegate Authority to the Chief Executive Officer to Execute a Three-Year Software License, Maintenance, and Support Agreement with Ascend Analytics, LLC for a Contract Total of \$557,479 and an Additional \$67,481 Spending Authority Under the Agreement (Staff Recommendation: Approve) - pg. 49
6. Receive Legislative and Regulatory Updates and Provide Feedback as Appropriate (Staff Recommendation: Receive and File) - pg. 91

COMMITTEE MEMBER ANNOUNCEMENTS

ADJOURN

DISABLED ACCOMMODATION: If you have a disability which requires an accommodation or an alternative format, please contact the Clerk of the Board at (707) 890-8491, or by email at meetings@sonomacleanpower.org as soon as possible to ensure arrangements for accommodation.

COMMONLY USED ACRONYMS AND TERMS

CAC	Community Advisory Committee
CAISO	California Independent Systems Operator
CCA	Community Choice Aggregation
CEC	California Energy Commission
CleanStart	SCP's standard service
CPUC	California Public Utility Commission
DER	Distributed Energy Resource
DR	Demand Response
ERRA	Energy Resource Recovery Account
EverGreen	SCP's 100% renewable, 100% local energy service
Geothermal	A locally-available, low-carbon baseload renewable resource
GHG	Greenhouse gas
GRC	General Rate Case
GridSavvy	The GridSavvy Community is SCP's demand response program which offers incentives on smart devices like electric vehicle chargers, smart thermostats, and heat pump water heaters. These devices can then be controlled via a signal to respond to grid needs.
IOU	Investor Owned Utility (e.g., PG&E)
IRP	Integrated Resource Plan
JPA	Joint Powers Authority
MW	Megawatt (Power = how fast energy is being used at one moment)
MWh	Megawatt-hour (Energy = how much energy is used over time)
NEM	Net Energy Metering
NetGreen	SCP's net energy metering program
PCIA	Power Charge Indifference Adjustment (<i>This fee is intended to ensure that customers who switch to SCP pay for certain costs related to energy commitments made by PG&E prior to their switch.</i>)
ProFIT	SCP's "Feed in Tariff" program for larger local renewable energy producers - Fully subscribed
RA	Resource Adequacy - a required form of capacity for compliance
RPS	The Renewables Portfolio Standard (RPS) is a California regulatory program that sets continuously escalating renewable energy procurement requirements for the state's electricity suppliers. Electricity suppliers must procure a verified percentage of total electricity through RPS-certified renewable facilities.
REC	Renewable Energy Credit - process used to track renewable energy for compliance in California.
SCP	Sonoma Clean Power
TOU	Time of Use, used to refer to rates that differ by time of day and by season

Page intentionally left blank for double-sided printing



**DRAFT MEETING MINUTES
COMMUNITY ADVISORY COMMITTEE MEETING
THURSDAY, JUNE 17, 2021
1:00 P.M.**

******GOVERNOR'S EXECUTIVE ORDER N-25-20******

******GOVERNOR'S EXECUTIVE ORDER N-29-20******

****RE CORONAVIRUS COVID-19****

CONSISTENT WITH THE PROVISIONS OF THE GOVERNOR'S EXECUTIVE ORDERS N-25-20 AND N-29-20 WHICH SUSPEND CERTAIN REQUIREMENTS OF THE BROWN ACT, AND THE ORDER OF THE HEALTH OFFICER OF THE COUNTY OF SONOMA TO SHELTER IN PLACE TO MINIMIZE THE SPREAD OF COVID-19, MEMBERS OF THE COMMUNITY ADVISORY COMMITTEE PARTICIPATED IN THE JUNE 17, 2021, MEETING BY TELECONFERENCE.

CALL TO ORDER

Chair Nicholls called the meeting to order at approximately 1:02 p.m.

Committee Members present: Chair Nicholls, Vice Chair Baldwin, and Members Fenichel, Quinlan, Dowd, Morris, and Brady.

Staff present: Geof Syphers, Chief Executive Officer; Mike Koszalka, Chief Operating Officer; Stephanie Reynolds, Director of Internal Operations; Neal Reardon, Director of Regulatory Affairs; Kate Kelly, Director of Public Relations and Marketing; Claudia Sisomphou, Communications Specialist; Scott Lawrence, Commercial Accounts Specialist; and Helen Mejia, Assistant Manager of the Advanced Energy Center.

PUBLIC COMMENT ON MATTERS NOT LISTED ON THE AGENDA

Public Comment: None

COMMUNITY ADVISORY COMMITTEE CONSENT CALENDAR

1. Approve May 20, 2021 Draft Community Advisory Committee Meeting Minutes
2. Recommend that the Board of Directors Approve and Authorize the CEO to Execute a New Contract with Sonoma Water for the Continuation of the Energy Education Program through June 30, 2023 with an Annual Not-To-

Exceed Amount of \$300,000 and Aggregate Contract Value of \$600,000

3. Recommend that the Board of Directors Approve and Authorize the CEO to Execute a Fourth Amendment to the Professional Services Agreement with EHDD for the SCP Headquarters Project
4. Recommend that the Board of Directors Approve and Authorize the CEO to Execute an Option to Extend the Lease for the Advanced Energy Center an Additional 36 Months

Public Comment: None

Motion to Approve the May 20, 2021 Community Advisory Committee Consent Calendar by Member Quinlan.

Second: Vice Chair Baldwin

Motion Passed by Roll Call Vote: 7 - 0 - 0

COMMUNITY ADVISORY COMMITTEE REGULAR CALENDAR

5. Receive Internal Operations and Monthly Financial Report and Provide Feedback as Appropriate

Stephanie Reynolds, Director of Internal Operations, began with an announcement that the Special Counsel for Sonoma Clean Power, Harriet Steiner from Best Best & Krieger, LLP. (BBK), is retiring and her colleague, Joshua Nelson, will take over for the remainder of the contract.

Recent updates to the Governor's Orders regarding public meetings allow for public agencies to continue to hold meetings remotely, via teleconference, through September 30th. Staff, along with the Board's Chair and Vice Chair, decided that the September BOD meeting will not be necessary, therefore the August Community Advisory Committee (CAC) meeting will also be skipped.

SCP welcomed another new team member, Brant Arthur, joining the Programs Department as a Programs Manager.

Geof Syphers, Chief Executive Officer, announced that a number of organizations have already scheduled tours at the Advanced Energy Center, and invited Committee Members to visit for tours as well.

Helen Mejia, Assistant Manager of the Advanced Energy Center, gave an anecdote of a family with young children that visited the Center the prior day. Center staff was able to help the family with a number of topics all during their visit.

Staff presented a video walk through of the products and services available on the Advanced Energy Center's website.

Sonoma Clean Power is sponsoring a series of movies that will be shown in the Courthouse Square during the month of July. Free popcorn will be available at the Advanced Energy Center.

Programs Department staff is working on new classes and webinars to offer in-person at the Advanced Energy Center's classroom. At the direction of the Board of Directors during the May meeting, staff developed a rider's guide for the Bike Electric program which was also published to the website.

Finally, Director Reynolds provided a brief update on the new headquarters building as well, which is progressing rapidly.

Member Fenichel asked for information on the incentives and rebates available for products at the Advanced Energy Center. Director Reynolds answered that the information is available through the Advanced Energy Center's website or interested parties can stop by The Center and speak to staff directly.

Member Fenichel also asked about bike share programs. CEO Syphers gave some background of where the model has been most successful. He and staff will continue to monitor advances in the technologies and models to determine local feasibility in the future.

Vice Chair Baldwin commented that the Electric Bike Rider's Guide was helpful with her decision to purchase an e-bike.

Chair Nicholls also inquired about a bike share program and suggested placing e-bikes at or near SCP sponsored EV charging stations. CEO Syphers added that bike shares are very successful at busy train stations and if there are ways to support our local sister agencies, such as SMART Train, it would be beneficial in many other ways.

Member Quinlan expressed ongoing concerns about his own experience with delays in contractors performing services offered through the Advanced Energy Center. CEO Syphers thanked him for sharing the details of his experiences and added that in addition to ironing out start up issues of opening a brand-new retail space, there are also overlapping issues with COVID-19 impacting the supply chains and getting contractors onboarded and attentive. Staff is actively brainstorming solutions to these issues to help ensure the success of the Advanced Energy Center.

Member Dowd requested staff bring information about long-term plans for the Advanced Energy Center to a future meeting.

Public Comment: None

6. Receive Legislative and Regulatory Updates and Provide Feedback as Appropriate

Neal Reardon, Director of Regulatory Affairs, began with a brief update on the PCIA. Due to higher energy costs this year, the PCIA exit fee that CCA customers pay are expected to be lower in 2022.

CEO Syphers gave a brief update on Senate Bill 612 and encouraged jurisdictions to send support letters to Chair Holden of the Senate Assembly.

Member Quinlan asked about the collateral requirements IOUs are requesting the CPUC require CCAs to post prior to negotiating a buyout of all remaining PCIA customer fees. Director Reardon replied that the CPUC is unlikely to approve PG&E's request of requiring hundreds of millions in a deposit.

Vice Chair Baldwin asked for a high-level overview of the Net Energy Metering reform bill (AB 1139). CEO Syphers responded that the bill has been suspended and the soonest we may see it would be next year. The Author sought to address inequities in the distribution of the solar subsidies and the extra time to work on the details of the bill is welcome.

Public Comment: None

7. Discuss the Development of a Community Engagement, Education, and Outreach Program and Provide Feedback as Appropriate

Claudia Sisomphou, Communications Specialist, provided a thorough presentation of what is known internally as the Empower Program and its goals. This program is intended to complement and fill in any gaps that the existing marketing and outreach efforts have been unable to satisfy. The priorities of the program are Building Partnerships, Customer Education, Focus on Equity, and Engaging Youth.

Public Comment: None

8. Receive Update on Mendonoma Coast EverGreen Campaign

Kate Kelly, Director of Public Relations and Marketing, along with Scott Lawrence, Commercial Accounts Specialist, showed a presentation about an

ongoing business outreach “influencer campaign” targeting the Mendonoma Coast. “Mendonoma Coast” is a name given by locals to the coastal region encompassing northern Sonoma and southern Mendocino counties and a map outlining the area is shown in the slides. This “influencer campaign” utilizes a local Mendonoma Coast business owner, Steve May of Surf Market, to help promote the benefits of EverGreen while increasing awareness of Sonoma Clean Power. Slides from the presentation can be viewed at [this link](#).

Member Brady left the meeting at approximately 2:08 p.m.

Many Committee Members spoke favorably and commended staff on these efforts.

Chair Nicholls suggested that staff connect with The Sea Ranch Homeowners Association.

Public Comment: None

COMMITTEE MEMBER ANNOUNCEMENTS

Chair Nicholls announced that the Lower Russian River Municipal Advisory Council (MAC) was meeting later that day, June 17th, at 5:30 p.m.

ADJOURN

The meeting was adjourned by unanimous consent at approximately 2:26 p.m.

Page intentionally left blank for double-sided printing



Staff Report - Item 02

To: Sonoma Clean Power Authority Community Advisory Committee

From: Erica Torgerson, Director of Customer Service

Issue: Recommend that the Board of Directors Approve an Extension of Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy

Date: July 15, 2021

Requested Action:

Recommend to the Board of Directors to approve an extension of Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy until April 1, 2022.

Background:

On March 16, 2020, Governor Newsom issued an Executive Order requesting the California Public Utilities Commission (CPUC) to monitor the consumer protections offered by the utilities in response to COVID-19. The CPUC issued a letter to the investor-owned utilities, including PG&E, on March 17, 2020, explaining that although COVID-19 has not resulted in the same disruptions or degradations to utility service as the recent wildfires, the utilities should immediately extend applicable protections provided for customers in natural disasters, such as wildfires, to the COVID-19 pandemic. See [CPUC Decision 19-07-015](#). Among other protections, it halted all disconnections for non-payment.

Based on Governor Newsom's Executive Order on March 16th, SCP staff implemented its internal "COVID-19 Emergency Consumer Protection Policy I.13" for its Residential and Non-Residential Customers.

On October 1, 2020, the Board of Directors ratified Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy. This policy went into effect the day a state of emergency proclamation was issued by California Governor Newsom's Office until December 31, 2020.

On December 3, 2020, the Board of Directors extended the protections under Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy until March 3, 2021, to match PG&E's Emergency Consumer Protection Plan.

On February 11, 2021, the Commission unanimously voted to extend protections for all utilities it regulates until June 30, 2021.

On March 4, 2021, SCPA's Board of Directors extended the protections under Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy until June 30, 2021, to match PG&E's Emergency Consumer Protection Plan.

On June 3, 2021, SCPA's Board of Directors extended the protections under Customer Service Policy A.6 - 2020 COVID-19 Emergency Consumer Protection Policy. See summary below:

- 1) **Late Payment Notice:** SCPA will halt sending modified Late Payment Notices to eligible customers starting through January 14, 2022.
 - a) **Modified Late Payment Notices:** SCP will begin sending Modified Late Payment Notices to eligible customers starting July 1, 2021. Modified Late Payment Notices will communicate to customers that their account is delinquent with SCPA and request payment.
- 2) **Transfer for Non-Payment:** SCPA will not transfer eligible customers back to PG&E for non-payment through January 14, 2022.
- 3) **Pre-Collection Notices:** SCPA will resume sending Pre-Collection Notices to eligible customers July 1, 2021. These notices are sent to customers who no longer have an account with SCPA but have an outstanding balance.
- 4) **Collections:** SCPA will resume collection activity for eligible customers July 1, 2021.

On June 24, 2021, the California Public Utilities Commission (CPUC), in ongoing efforts to ensure continued access to essential utility services during the COVID-19 pandemic, suspended disconnections of residential and small business customers for an additional three months, through September 30, 2021. This provides time for energy utilities to notify customers of a new CPUC solution to resolving COVID-19 era utility bill debt, which provides residential customers two years over which to pay off deferred energy bills, with help anticipated to become available in the California state budget. Similar relief was ordered for small businesses.

Discussion:

The Commission opened an Order Instituting Rulemaking (OIR) to address energy utility customer bill debt on February 11, 2021. The Commission opened the OIR to consider the necessity of establishing special relief mechanism(s) for customers who could not pay their energy bills during the COVID-19 pandemic to give them a better chance of becoming current on their energy bills. SCP through CalCCA has been an active member of the OIR, fighting for protections for all ratepayers and equal treatment of bundled and unbundled customers. A Proposed Decision and Redlined Proposed Decision have been issued. The Redline Proposed Decision highlights include:

- Extending the IOUs disconnection moratorium until September 30, 2021.
- Opens a Phase 2 to discuss prorated payments between IOU and CCAs.
- Automatically enrolls customers with COVID-19 arrearages into a two-year payment plan.

Staff proposes the Committee recommend to the Board of Directors the primary changes to Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy outlined below. A full redline of the entire updated Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy is attached to this presentation.

- 1) **Late Payment Notice:** SCPA will halt sending modified Late Payment Notices to eligible customers starting through April 1, 2022.
- b) **Modified Late Payment Notices:** SCP will begin sending Modified Late Payment Notices to eligible customers starting October 1, 2021. Modified Late Payment Notices will communicate to customers that their account is delinquent with SCPA and request payment.

- 2) **Transfer for Non-Payment:** SCPA will not transfer eligible customers back to PG&E for non-payment through April 1, 2022.
- 3) **Pre-Collection Notices:** SCPA will resume sending Pre-Collection Notices to eligible customers October 1, 2021. These notices are sent to customers who no longer have an account with SCPA but have an outstanding balance.
- 4) **Collections:** SCPA will resume collection activity for eligible customers October 1, 2021.

Considerations:

- By extending payment protections for SCPA customers, it is expected SCPA's accounts receivable will continue to grow.
- Only PG&E has disconnection authority and has more information about customers, thus they are better at collecting arrearages from customers than SCPA.
- Extending SCPA's customer protections will help our local community begin to recover financially from the pandemic before transferring customers to PG&E, including taking advantage of SCPA's programs to reduce their utility costs.
 - As Sonoma and Mendocino counties relax pandemic restrictions, more people will return to the workforce.

Fiscal Impact:

Unknown. By extending payment protections to customers, the risk of not recovering payments increases, however for the reasons listed in this presentation, staff believes continuing protections is good practice.

Bad Debt Allowance and Aging

- For the previous fiscal year, SCPA increased its allowance for bad debt to 1.25% due to the global pandemic.
- SCPA has not transferred a customer from SCP service to PG&E service for non-payment since mid-March 2020.
- SCPA's Accounts Receivable by Age have increase during the pandemic, see Table 1:

Table 1.

Aging Date	60 - 90 Days	90 - 120 Days	120+ Days
January 2020	869,999	569,212	6,374,328
April 2020	874,041	581,642	6,890,917
July 2020	1,103,286	934,671	8,006,565
October 2020	1,272,968	942,371	9,148,347
January 2021	1,533,603	1,144,108	9,949,990
April 2021	1,399,537	1,109,659	11,016,571
July 2021	1,127,335	1,030,373	12,161,430

Attachments:

- Redline version of Customer Service Policy A.6a

Customer Service Policy A.6a 2020 Covid-19 Emergency Consumer Protection Policy

Purpose:

On March 16, 2020 Governor Newsom issued an Executive Order requesting the California Public Utilities Commission (CPUC) to monitor the consumer protections offered by the utilities in response to COVID-19. The CPUC issued a letter to the investor-owned utilities, including PG&E, on March 17, 2020 explaining that although COVID-19 has not resulted in the same disruptions or degradations to utility service as the recent wildfires, the utilities should immediately extend applicable protections provided for customers in natural disasters, such as wildfires, to the COVID-19 pandemic. See CPUC Decision 19-07-015.

Based on Governor Newsom's Executive Order on March 16th, SCPA implemented its internal "COVID-19 Emergency Consumer Protection Policy I.13" for its Residential and Non-Residential Customers experiencing financial hardship due to the COVID-19 pandemic. This Policy is consistent with and continues the policies set forth in Policy I.13.

On February 11, 2021, the CPUC voted to extend consumer protections for all utilities it regulates until June 30, 2021.

On March 4, 2021, SCPA's Board of Directors extended the protections under Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy until June 30, 2021 to match PG&E's Emergency Consumer Protection Plan.

Definitions:

For purposes of this Policy, the following definitions apply:

- a) **Residential Customer**¹: Class of customers whose dwellings are single-family units, multi-family units, mobile homes or other similar living establishments. A customer who meets the definition of a Residential Customer will be served under a residential rate schedule if 50% or more of the annual energy use on the meter is for residential end-uses. PG&E's tariff eligibility requirements will determine customer eligibility for this rate class.
- b) **Non-Residential Customer**²: Small and medium business customers that take service on a commercial, industrial, or agricultural rate. This definition does not include Non-Residential Customers who are on a fixed usage or unmetered usage rate schedule³.

¹ PG&E Electric Rule No. 1: Definitions, Sheet 30

² PG&E Advice Letter 4014-G/5378-E. Dated Sept. 7, 2018.

³ PG&E Electric Rule No. 1: Definitions, Sheet 31

Ratified: October 1, 2020

Amended: December 3, 2020, March 4, 2021, June 3, 2021,
[XXXX, XX, XXXX](#)

1

sonomacleanpower.org

- c) **SCPA Service Area:** As defined by SCPA's Joint Powers Agreement⁴.
- d) **Impacted Customers:** Customers that are in located in the area designated by California Governor's Office or the President of the United States as a state of emergency.

Background:

On March 4, 2020, Governor Newsom declared a statewide emergency due to COVID-19. In response, PG&E suspended disconnections and implemented flexible payment plans for all residential and small business customers.

As adopted, D.19-07-015 requires PG&E to implement the emergency disaster relief program "in the event the Governor of California or a President of the United States declares a state of emergency because a disaster has either resulted in the loss or disruption of the delivery or receipt of utility service and/or resulted in the degradation of the quality of utility service."

Although COVID-19 has not resulted in the loss or disruption of the delivery or receipt of gas and electrical service and/or in the degradation of the quality of gas and electrical service, SCPA understands that customers may be affected financially, whether diagnosed with the virus or not.

On March 16, 2020 Governor Newsom issued an Executive Order requesting the Commission to monitor the consumer protections offered by the utilities in response to COVID-19. The Commission issued a letter to the investor-owned utilities on March 17, 2020 explaining that although COVID-19 has not resulted in the same disruptions or degradations to utility service as the recent wildfires, the utilities should immediately extend applicable protections provided for in D.19-07-015 to Impacted Customers.

Based on Governor Newsom's Executive Order on March 16th, SCPA implemented its internal "COVID-19 Emergency Consumer Protection Policy I.13" for its Residential and Non-Residential Customers experiencing financial hardship during the COVID-19 pandemic.

On October 1, 2020, the Board of Directors ratified Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy. This policy went into effect the day a state of emergency proclamation has been issued by the California Governor Newsom's Office until December 31, 2020.

On December 3, 2020, the Board of Directors extended the protections under Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy until March 3, 2021 to match PG&E's Emergency Consumer Protection Plan.

⁴ Sonoma Clean Power Authority Joint Powers Authority. <https://sonomacleanpower.org/uploads/documents/Third-Amended-JPA-FinalApproved-10-13-16-with-updated-Ex-C.pdf>

Ratified: October 1, 2020

Amended: December 3, 2020, March 4, 2021, June 3, 2021,
[XXXX, XX, XXXX](#)

2

sonomacleanpower.org

On February 11, 2021, the Commission unanimously voted to extend protections for all utilities it regulates until June 30, 2021.

On March 4, 2021, SCPA's Board of Directors extended the protections under Customer Service Policy A.6a - 2020 COVID-19 Emergency Consumer Protection Policy until June 30, 2021 to match PG&E's Emergency Consumer Protection Plan.

On June 3, 2021, SCPA's Board of Directors extended the protections under Customer Service Policy A.6 - 2020 COVID-19 Emergency Consumer Protection Policy. See summary below:

- 1) **Late Payment Notice:** SCPA will halt sending modified Late Payment Notices to eligible customers starting through January 14, 2022.
 - a) **Modified Late Payment Notices:** SCP will begin sending Modified Late Payment Notices to eligible customers starting July 1, 2021. Modified Late Payment Notices will communicate to customers that their account is delinquent with SCPA and request payment.
- 2) **Transfer for Non-Payment:** SCPA will not transfer eligible customers back to PG&E for non-payment through January 14, 2022.
- 3) **Pre-Collection Notices:** SCPA will resume sending Pre-Collection Notices to eligible customers July 1, 2021. These notices are sent to customers who no longer have an account with SCPA but have an outstanding balance.
- 4) **Collections:** SCPA will resume collection activity for eligible customers July 1, 2021.

On June 24, 2021, the California Public Utilities Commission (CPUC), in ongoing efforts to ensure continued access to essential utility services during the COVID-19 pandemic, today suspended disconnections of residential and small business customers for an additional three months, through September 30, 2021. This provides time for energy utilities to notify customers of a new CPUC solution to resolving COVID-19 era utility bill debt, which provides residential customers two years over which to pay off deferred energy bills, with help anticipated to become available in the California state budget. Similar relief was ordered for small businesses.

Eligibility for COVID-19 Emergency Consumer Protection Plan:

Due to potential financial hardship from COVID-19, a customer will be eligible for SCPA's 2020 Covid-19 Emergency Consumer Protection Plan if the following criteria has been met:

- a. A state of emergency proclamation has been issued by the California Governor's Office or the President of the United States due to the health emergency in SCPA's Service Territory; and

Ratified: October 1, 2020

Amended: December 3, 2020, March 4, 2021, June 3, 2021,
XXXX, XX, XXXX

3

sonomacleanpower.org

- b. The customer is a Residential Customer or Non-Residential Customer of SCPA.

2020 COVID-19 Emergency Consumer Protection Plan:

SCPA's Emergency Consumer Protection Plan goes into effect the day a state of emergency proclamation has been issued by the California Governor's Office or the President of the United States due to a disaster in SCPA's Service Territory and includes the measures and parameters outlined below:

- a. **Late Payment Notice:** SCPA will halt sending Late Payment Notices to eligible customers through ~~January 14, 2022~~April 1, 2022.
 - i. **Modified Late Payment Notice:** SCPA will begin sending Modified Late Payment Notices to eligible customers starting ~~July 1, 2021~~October 1, 2021.
- b. **Transfer for Non-Payment:** SCPA will not transfer eligible customers back to PG&E for non-payment through ~~January 14, 2022~~ April 1, 2022.
- c. **Pre-Collection Notices:** SCPA will resume sending Pre-Collection Notices to eligible customers ~~July 1, 2021~~ October 1, 2021.
- d) **Collections:** SCPA will resume collection activity for eligible customers on ~~July 1, 2021~~October 1, 2021.

SCPA's Board of Directors may change or extend these measures at its sole discretion.

Ratified: October 1, 2020

Amended: December 3, 2020, March 4, 2021, June 3, 2021,
XXXX, XX, XXXX

4

sonomacleanpower.org

Page intentionally left blank for double-sided printing



Staff Report - Item 03

To: Sonoma Clean Power Authority Community Advisory Committee

From: Stephanie Reynolds, Director of Internal Operations
Mike Koszalka, Chief Operating Officer

Issue: Receive Internal Operations and Monthly Financial Report and Provide Feedback as Appropriate

Date: July 15, 2021

PUBLIC MEETING TRANSITION

SCP staff is continuing to research options for hybrid meetings for smaller groups and potentially larger public meetings. Currently Executive Order N-08-21 allows for the continuation of video and telephonic meetings through September 30, 2021 (<https://www.gov.ca.gov/wp-content/uploads/2021/06/6.11.21-EO-N-08-21-signed.pdf>).

SCP HEADQUARTERS PROJECT UPDATE

Construction on the headquarters building nears completion and the artwork should be installed by the time of this meeting. Staff continues to prepare to move into the space, completing cabling and finish work during the first part of July. We do plan to utilize the space prior to completion of the battery system and microgrid.

ADVANCED ENERGY CENTER UPDATE

Staff are preparing the Advanced Energy Center for in-person events. Early expectations are that events, not foot traffic, will result in the majority of attendance at the Center. Already we have received 44 tour reservations through the Advanced Energy Center Website and an average daily attendance of 19 people per day. Key stakeholders that have toured the Center are the California Energy Commission, Local 551 Electrical Union, Jobs with Justice, The Regional Climate Protection

Agency, Building Decarbonization Coalition, Petaluma City Council and staff, a number of SCP's own Board and Committee members and various contractors, engineering, and architectural firms.

Staff have quickly found The Advanced Energy Center to be a fun and exciting way to transition back into the workplace after months of working from home.

Education/Training

Check out our upcoming events on the [Advanced Energy Center events webpage](#). SCP Staff are excited to be planning in-person events for later this year.

July 2021 Events

- 7/14: The Building Blocks of Passive House Performance
- 7/20: Advanced Energy Center Contractor Course: Heating and Cooling with Hydronic Heat Pumps

The [Advanced Energy Center Education Hub](#) has education that inspires action, including past event recordings and informational articles.

MONTHLY COMPILED FINANCIAL STATEMENTS

The year-to-date growth in net position is better than projections due primarily to greater than expected revenues. Revenue from electricity sales is approximately 1% more than amended budget projections, and cost of energy is slightly under expectations by approximately 1%. Year-to-date electricity sales reached \$174,393,000.

SCP maintains a balanced portfolio by procuring electricity from multiple sources. Net position reached a positive \$106,152,000, which indicates healthy growth as SCP continues to make progress towards its reserve goals. In addition to Net Position, SCP maintains an Operating Account Fund of \$22,000,000 at the end of the period. Approximately \$72,496,000 is set aside for reserves (Operating Reserve: \$59,377,000; Program Reserve: \$10,875,000; and Collateral Reserve: \$2,244,000).

Aside from cost of energy, overall other operating expenses continued near or slightly below planned levels for the year.

BUDGETARY COMPARISON SCHEDULE

The accompanying budgetary comparison includes the 2020/21 amended budget approved by the Board of Directors in April 2021.

The budget is formatted to make comparisons for both the annual and the year-to-date perspective. The first column, 2020/21 YTD Budget, allocates the Board approved annual budget at expected levels throughout the year with consideration for the timing of additional customers, usage volumes, staffing needs etc. This column represents our best estimates, and this granular approach was not part of the Board approved budget.

Revenue from electricity sales to customers is right on target with the budget by approximately 1% at the end of the reporting period.

The cost of electricity is slightly less than the budget-to-date by approximately 1%. Variation in this account is typically due to fluctuating market cost of energy on open position purchases.

Major operating categories of Data Management fees and PG&E Service fees are based on the customer account totals and are closely aligned to budget.

UPCOMING MEETINGS:

Board of Directors - August 5, 2021

August Community Advisory Committee CANCELLED

September Board of Directors CANCELLED

Community Advisory Committee - September 16, 2021

Board of Directors - October 7, 2021

ATTACHMENTS

May 2021 Financial Reports



ACCOUNTANTS' COMPILATION REPORT

Board of Directors
Sonoma Clean Power Authority

Management is responsible for the accompanying special purpose statement of Sonoma Clean Power Authority (a California Joint Powers Authority) which comprise the budgetary comparison schedule for the period ended May 31, 2021, and for determining that the budgetary basis of accounting is an acceptable financial reporting framework. We have performed a compilation engagement in accordance with Statements on Standards for Accounting and Review Services promulgated by the Accounting and Review Services Committee of the AICPA. We did not audit or review the accompanying statement nor were we required to perform any procedures to verify the accuracy or completeness of the information provided by management. Accordingly, we do not express an opinion, a conclusion, nor provide any assurance on this special purpose budgetary comparison statement.

The special purpose statement is prepared in accordance with the budgetary basis of accounting, which is a basis of accounting other than accounting principles generally accepted in the United States of America. This report is intended for the information of the Board of Directors of Sonoma Clean Power Authority.

Management has elected to omit substantially all of the note disclosures required by accounting principles generally accepted in the United States of America in these interim financial statements. Sonoma Clean Power Authority's annual audited financial statements include the note disclosures omitted from these interim statements. If the omitted disclosures were included in these financial statements, they might influence the user's conclusions about the Authority's financial position, results of operations, and cash flows. Accordingly, these financial statements are not designed for those who are not informed about such matters.

We are not independent with respect to the Authority because we performed certain accounting services that impaired our independence.

Maher Accountancy

San Rafael, CA
June 24, 2021

**SONOMA CLEAN POWER AUTHORITY
OPERATING FUND
BUDGETARY COMPARISON SCHEDULE
July 1, 2020 through May 31, 2021**

	2020-21 YTD Amended Budget	2020/21 YTD Actual	2020/21 YTD Amended Budget Variance (Under) Over	2020/21 YTD Actual / Amended Budget %	2020/21 Amended Budget	2020/21 Amended Budget Remaining
REVENUE AND OTHER SOURCES:						
Electricity (net of allowance) *	\$ 171,902,864	\$ 172,939,522	\$ 1,036,658	101%	\$ 188,347,000	\$ 15,407,478
Evergreen Premium (net of allowance)	1,361,325	1,453,156	91,831	107%	1,488,000	34,844
Inflow from Operating Account Fund Reserves	-	-	-	0%	4,630,000	4,630,000
CEC Grant	2,726,167	1,874,488	(851,679)	69%	2,974,000	1,099,512
BAAQMD grant	50,000	225,200	175,200	450%	50,000	(175,200)
Interest income	689,000	622,214	(66,786)	90%	750,000	127,786
Miscellaneous Income	-	7,009	7,009	0%	-	(7,009)
Total revenue and other sources	176,729,356	177,121,589	392,233	100%	198,239,000	21,117,411
EXPENDITURES AND OTHER USES:						
CURRENT EXPENDITURES						
Cost of energy and scheduling	152,336,451	150,233,162	(2,103,289)	99%	167,024,000	16,790,838
Data management	2,928,750	2,929,754	1,004	100%	3,195,000	265,246
Service fees- PG&E	888,128	885,883	(2,245)	100%	969,000	83,117
CCPower JPA	57,000	56,098	(902)	98%	57,000	902
Personnel	5,085,000	4,470,312	(614,688)	88%	5,623,000	1,152,688
Outreach and communications	1,035,837	727,978	(307,859)	70%	1,130,000	402,022
Customer service	367,261	268,682	(98,579)	73%	383,000	114,318
General and administration	563,750	476,869	(86,881)	85%	615,000	138,131
Legal	342,000	325,959	(16,041)	95%	360,000	34,041
Regulatory and compliance	363,917	98,587	(265,330)	27%	397,000	298,413
Accounting	200,913	186,750	(14,163)	93%	217,000	30,250
Legislative	25,667	-	(25,667)	0%	28,000	28,000
Other consultants	171,663	176,588	4,925	103%	185,000	8,412
CalCCA Trade Association	348,337	319,881	(28,456)	92%	380,000	60,119
Program implementation	2,932,417	2,711,214	(221,203)	92%	3,199,000	487,786
Program - CEC grant	5,361,000	3,867,475	(1,493,525)	72%	5,561,000	1,693,525
Total current expenditures	173,008,091	167,735,192	(5,272,899)	97%	189,323,000	21,587,808
OTHER USES						
Capital outlay	8,173,000	7,377,301	(795,699)	90%	8,916,000	1,538,699
Total Expenditures, Other Uses and Debt Service	181,181,091	175,112,493	(6,068,598)	97%	198,239,000	23,126,507
Net increase (decrease) in available fund balance	\$ (4,451,735)	\$ 2,009,096	\$ 6,460,831		\$ -	\$ (2,009,096)
* Represents sales of approximately 1,786,000 MWh for 2020/21 YTD actual.						
RESERVES						
Operating Cash Reserve	\$ 59,377,000	64%	\$ 92,133,000			
Program Cash Reserve	10,875,000	59%	18,426,600			
Collateral Cash Reserve	2,244,000	14%	15,943,600			
	\$ 72,496,000	57%	\$ 126,503,200			

SONOMA CLEAN POWER AUTHORITY
OPERATING FUND
BUDGET RECONCILIATION TO STATEMENT OF
REVENUES, EXPENSES AND CHANGES IN NET POSITION
July 1, 2020 through May 31, 2021

Net increase (decrease) in available fund balance per budgetary comparison schedule:	\$ 2,009,096
Adjustments needed to reconcile to the changes in net position in the Statement of Revenues, Expenses and Changes in Net Position:	
Subtract depreciation expense	(200,129)
Add back capital asset acquisitions	<u>9,359,106</u>
Change in net position	<u><u>\$ 11,168,073</u></u>



ACCOUNTANTS' COMPILATION REPORT

Management
Sonoma Clean Power Authority

Management is responsible for the accompanying financial statements of Sonoma Clean Power Authority (a California Joint Powers Authority) which comprise the statement of net position as of May 31, 2021, and the related statement of revenues, expenses, and changes in net position, and the statement of cash flows for the period then ended in accordance with accounting principles generally accepted in the United States of America. We have performed a compilation engagement in accordance with Statements on Standards for Accounting and Review Services promulgated by the Accounting and Review Services Committee of the AICPA. We did not audit or review the accompanying statements nor were we required to perform any procedures to verify the accuracy or completeness of the information provided by management. Accordingly, we do not express an opinion, conclusion, nor provide any assurance on these financial statements.

Management has elected to omit substantially all of the note disclosures required by accounting principles generally accepted in the United States of America in these interim financial statements. Sonoma Clean Power Authority's annual audited financial statements include the note disclosures omitted from these interim statements. If the omitted disclosures were included in these financial statements, they might influence the user's conclusions about the Authority's financial position, results of operations, and cash flows. Accordingly, these financial statements are not designed for those who are not informed about such matters.

We are not independent with respect to the Authority because we performed certain accounting services that impaired our independence.

Maher Accountancy

San Rafael, CA
June 24, 2021

SONOMA CLEAN POWER AUTHORITY

STATEMENT OF NET POSITION

As of May 31, 2021

ASSETS

Current assets	
Cash and cash equivalents	\$ 69,706,010
Accounts receivable, net of allowance	17,873,090
Other receivables	1,324,724
Accrued revenue	7,234,653
Prepaid expenses	1,209,941
Deposits	799,163
Restricted cash	147,000
Total current assets	<u>98,294,581</u>
Noncurrent assets	
Unrestricted cash in Rate Stabilization Fund	22,000,000
Land and construction-in-progress	12,767,238
Capital assets, net of depreciation	4,600,948
Deposits	6,260,922
Total noncurrent assets	<u>45,629,108</u>
Total assets	<u>143,923,689</u>

LIABILITIES

Current liabilities	
Accrued cost of electricity	12,245,595
Accounts payable	2,074,625
Other accrued liabilities	1,007,082
User taxes and energy surcharges due to other governments	443,920
Total current liabilities	<u>15,771,222</u>

DEFERRED INFLOWS OF RESOURCES

Rate Stabilization Fund	22,000,000
-------------------------	------------

NET POSITION

Restricted	147,000
Investment in capital assets	17,368,186
Unrestricted	88,637,281
Total net position	<u><u>\$ 106,152,467</u></u>

SONOMA CLEAN POWER AUTHORITY
STATEMENT OF REVENUES, EXPENSES
AND CHANGES IN NET POSITION
July 1, 2020 through May 31, 2021

OPERATING REVENUES

Electricity sales, net	\$ 172,939,522
Evergreen electricity premium	1,453,156
Grant revenue	2,099,688
Total operating revenues	<u>176,492,366</u>

OPERATING EXPENSES

Cost of electricity	150,233,162
Contract services	8,453,728
Staff compensation	4,470,312
General and administration	1,282,764
Program rebates and incentives	1,313,421
Depreciation	200,129
Total operating expenses	<u>165,953,516</u>
Operating income	<u>10,538,850</u>

NONOPERATING REVENUES (EXPENSES)

Interest income	622,214
Other nonoperating revenue	7,009
Nonoperating revenues (expenses), net	<u>629,223</u>

CHANGE IN NET POSITION

	11,168,073
Net position at beginning of period	<u>94,984,394</u>
Net position at end of period	<u>\$ 106,152,467</u>

SONOMA CLEAN POWER AUTHORITY

STATEMENT OF CASH FLOWS

July 1, 2020 through May 31, 2021

CASH FLOWS FROM OPERATING ACTIVITIES

Receipts from customers	\$ 183,486,989
Receipts from grantors	3,898,027
Other operating receipts	1,186,797
Payments to electricity suppliers	(154,679,146)
Payments for other goods and services	(9,425,576)
Payments for staff compensation	(4,412,920)
Tax and surcharge payments to other governments	(2,477,863)
Payments for program rebates and incentives	(2,432,518)
Net cash provided (used) by operating activities	<u>15,143,790</u>

CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES

Payments to acquire capital assets	<u>(9,490,001)</u>
------------------------------------	--------------------

CASH FLOWS FROM INVESTING ACTIVITIES

Interest income received	817,062
Proceeds from certificates of deposit matured	<u>20,291,718</u>
Net cash provided (used) by investing activities	<u>21,108,780</u>

Net change in cash and cash equivalents	26,762,569
Cash and cash equivalents at beginning of year	<u>65,090,441</u>
Cash and cash equivalents at end of period	<u>\$ 91,853,010</u>

Reconciliation to the Statement of Net Position

Unrestricted cash and cash equivalents (current)	\$ 69,706,010
Restricted cash and cash equivalents (current)	147,000
Unrestricted cash and cash equivalents (noncurrent)	<u>22,000,000</u>
Cash and cash equivalents	<u>\$ 91,853,010</u>

SONOMA CLEAN POWER AUTHORITY
STATEMENT OF CASH FLOWS (continued)
July 1, 2020 through May 31, 2021

**RECONCILIATION OF OPERATING INCOME TO NET
CASH PROVIDED BY OPERATING ACTIVITIES**

Operating income	\$ 10,538,850
Adjustments to reconcile operating income to net cash provided (used) by operating activities	
Depreciation expense	200,129
Revenue adjusted for allowance for uncollectible accounts	2,207,500
(Increase) decrease in:	
Accounts receivable	1,573,361
Other receivables	1,298,851
Accrued revenue	2,960,805
Prepaid expenses	(131,694)
Deposits	(843,764)
Increase (decrease) in:	
Accrued cost of electricity	(4,263,288)
Accounts payable	602,703
Advance from grantors	(188,875)
Accrued liabilities	1,314,433
User taxes due to other governments	(125,221)
Net cash provided (used) by operating activities	<u><u>\$ 15,143,790</u></u>

Page intentionally left blank for double-sided printing



Staff Report - Item 04

To: Sonoma Clean Power Authority Community Advisory Committee

From: Ryan Tracey, Senior Energy Analyst
Rebecca Simonson, Director of Planning & Analytics
Geof Syphers, CEO
Mike Koszalka, COO

Issue: Integrated Resource Planning (IRP) Portfolio Scenario Modeling

Date: July 15, 2021

Recommended Actions

No action. Staff will present the Integrated Resource Planning (IRP) portfolio scenario modeling process to the Community Advisory Committee (CAC).

Background

Integrated Resource Planning (IRP) evaluates future customer electricity needs and lays out a plan to supply those future needs with demand side and generation resources.

SCP participates in the mandatory CPUC IRP filing that began in 2018 and that is currently required every two years. Recognizing the CPUC process is compliance driven and not specific to SCP goals and methods, SCP also began developing our own internal IRP process in 2018. For the 2021 Internal IRP, SCP is dedicating significant time and resources to rebuild the IRP with the objective of identifying the best mix of generation assets to meet SCP's emissions targets. This plan will balance low carbon emissions, renewable resources, low cost with the associated resource plan risks.

The portfolio selected from SCP's internal IRP process will be used in the next year's (2022) compliance IRP process. SCP will use the internal IRP process to benchmark Board adopted goals and progress toward those goals.

Staff has previously provided to the CAC and the Board the following IRPs:

1. 2018 Compliance IRP for the California Public Utilities Commission (CPUC) process.
2. 2018 Internal IRP following SCP methodologies and assumptions.
3. 2020 Compliance IRP for the CPUC.
4. 2021 Internal SCP Local Resource Plan

Staff provided a presentation on the Introduction to IRP in the May 20, 2021 CAC meeting. [The presentation and comment period can be viewed here.](#)

Staff also issued a survey in English and Spanish to SCP's customers who signed up for email distribution and sent targeted emails to contacts we have been working with through the Programs Equity Framework. The results of the survey questions from the first 103 respondents are shown in the slide deck presented in Appendix 1. The survey will remain open through August 31, 2021. [The English and the Spanish surveys can be found here.](#)

Discussion

This presentation is the second public presentation of the SCP 2021 Internal IRP process. The first presentation held on May 20, 2021 was an introduction to the IRP process and this presentation focuses more on the technical process of modeling and evaluating energy resource portfolios. The presentation slide-deck is attached as Appendix 1 to this report.

The 2021 SCP Integrated Resource Plan current timeline is as follows:

- ✓ **05/20/2021 CAC meeting (Completed)**- Staff presented the Introduction to IRP.
- ✓ **06/03/2021 BOD meeting (Completed)**- Staff provided the BOD a summary of the Introduction to IRP presentation.
- **07/15/2021 CAC meeting**- Staff is giving a more technical presentation on energy resource portfolio modeling scenarios.
- **08/06/2021 BOD meeting**- Technical presentation summary
- **10/21/2021 CAC meeting**- Present the IRP Draft narrative and recommended preferred portfolio for feedback.

- **11/04/2021 BOD meeting-** Present the IRP Draft narrative and recommended preferred portfolio for feedback.
- **11/18/2021 CAC meeting** - IRP and preferred portfolio for CAC recommendation to the Board.
- **12/02/2021 BOD meeting** - Staff will seek approval of the IRP and preferred portfolio from Board.

Integrated Resource Plan (IRP)

PUBLIC PRESENTATION #2- IRP Scenario Modeling

sonomacleanpower.org



**Sonoma
Clean Power**

Sonoma Clean Power is turning the tide on the climate crisis, through bold ideas and practical programs.

1

Presentation Format

- Presentation will be approx. 20 minutes
- Committee comments and questions
- Public comment
 - 3 minutes allotted per commenter
 - 300 words if written to meetings@sonomacleanpower.org
- Additional Committee comment
- Survey with written comment section posted on website afterward



2

Agenda

- Purpose and Process Recap
- Survey Results
- Demand Forecasting
- Resource Forecasting
- Portfolio Scenarios
- How Public Can Help



3

Purpose & Process Recap

- IRP seeks to identify future resources to **achieve environmental performance** goals while **reducing cost and risk** through optimization of procurement
- SCP resource planning will **follow current state energy policy** and be **tested against different possible changes in future regulation**



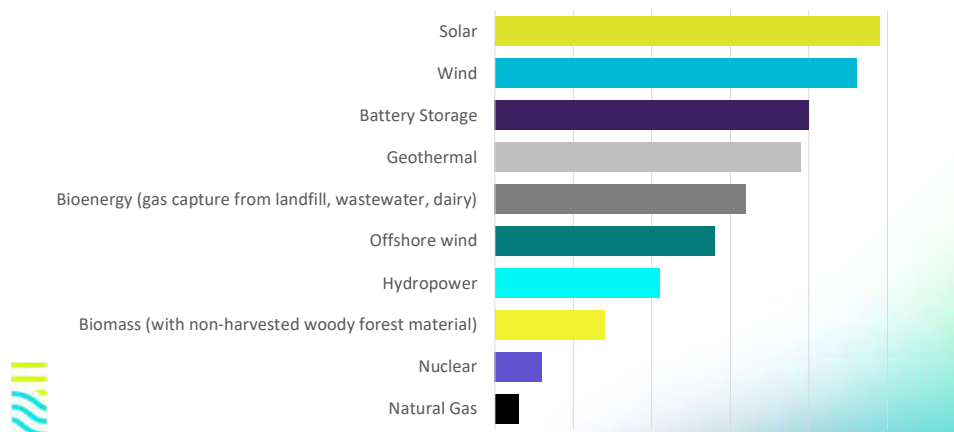
4

Survey Results



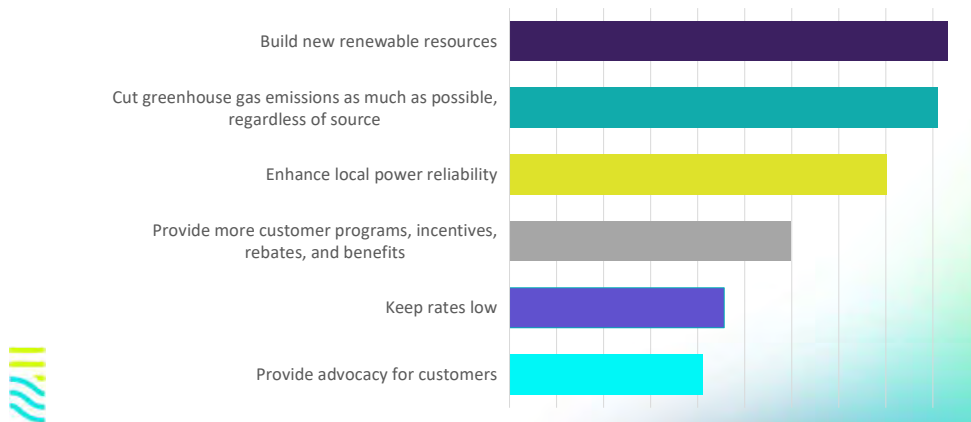
5

Which resources would you like to see as part of SCP's supply mix?



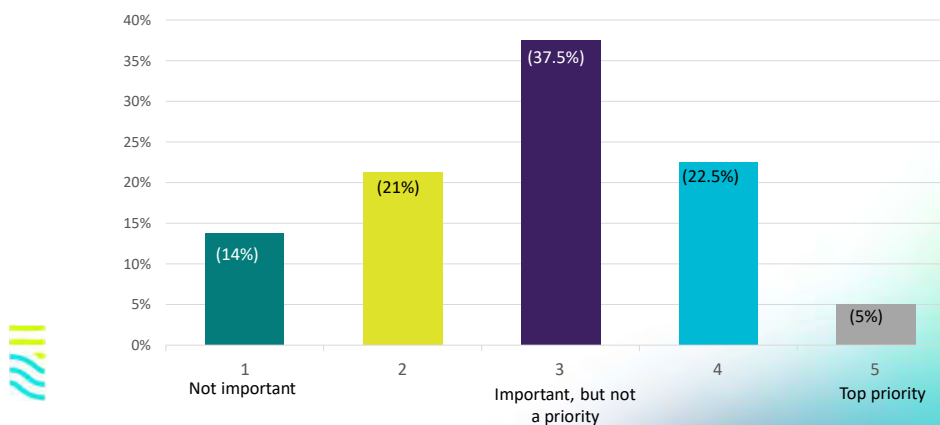
6

What are the top priorities you'd like to see in your electricity provider?



7

How important are total electricity bills in determining participation in SCP?



8

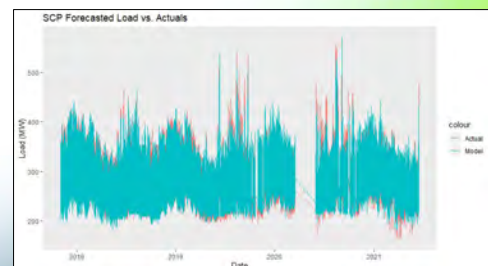
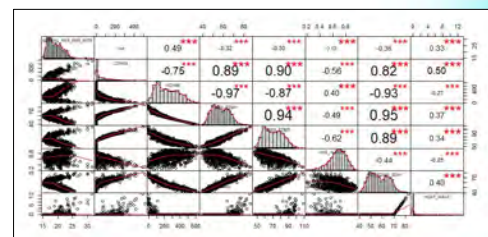
Demand Forecasting



9

Load Forecasting Model

- SCP builds and maintains an internal hourly load forecasting model using **regression and classification techniques**
- Model is trained on **historic load, meter counts, and installed behind-the-meter (BTM) solar capacity** by sector and **weather** starting in November 2017
- Model achieves both **low hourly error** and reasonable **reproduction of monthly peaks**
- Trained model used for both **day-ahead forecast validation** and **long-term forecasting** for planning

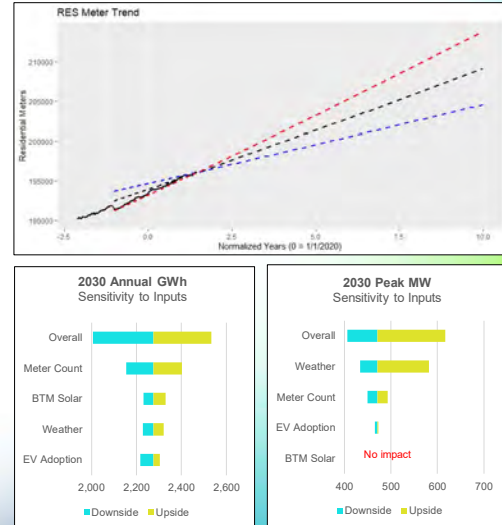


10

Demand Forecasting Inputs

SCP develops an envelope of projected demand using the forecasting model and range in the following inputs:

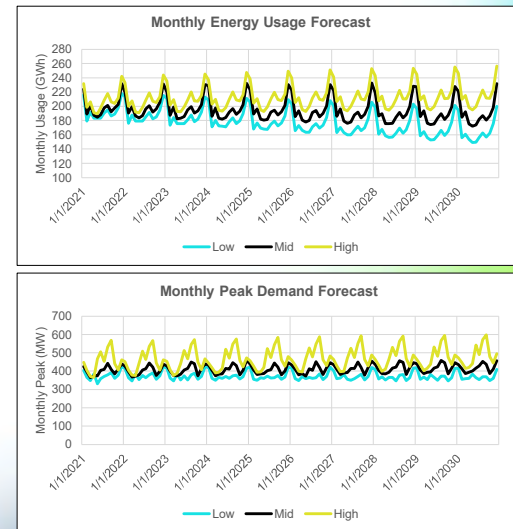
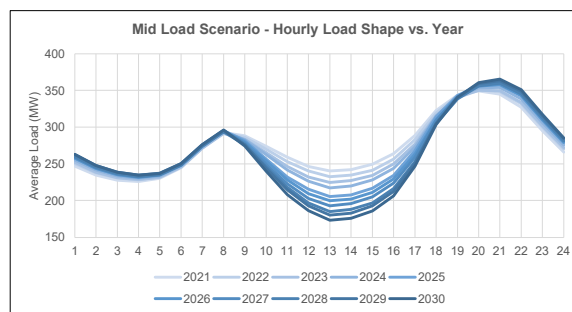
- **Weather:** load is tested against recent historic weather data from 2007 through 2020
- **Meter count:** projected based on uncertainty in historical trends by sector
- **BTM solar installation and EV adoption:** extrapolated using trends for PG&E territory from California Energy Commission (CEC)



11

Demand Forecasting Scenarios

- The range in the long-term forecast is calibrated from the output of 378 simulations
- Although the mid scenario will drive portfolio selection, the preferred resources will be tested for robustness against the low and high scenarios



12

Resources

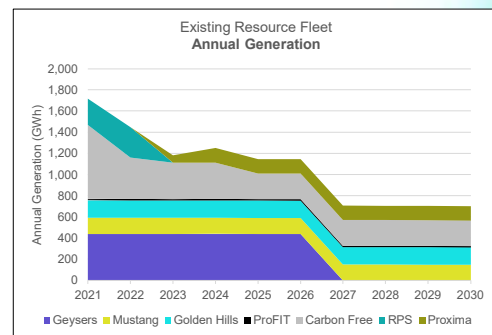


13

Existing Resources

Portfolio modeling will assume retention of SCP's current fleet of contracted resources including:

- **70 MW** Mustang solar PV project
 - Includes **75 MW** 4-hr storage (RA only starting in 2021)
- **46 MW** Golden Hills wind project
- **50 MW** Geysers geothermal contract (ends 2026)
- **6 MW** ProFIT solar projects
- **50 MW** Proxima solar PV project (starts 2023)
 - Includes **5 MW** 4-hr storage
- Various short-term RPS and carbon free contracts



14

Candidate Resources

SCP's IRP will optimize the geography and technology for future resources. Below is a list of the types of resources SCP will evaluate to provide energy and capacity in different regions of California (see map):

- Photovoltaic (PV) Solar
- Paired PV Solar + Storage
- Standalone Storage
- Standalone Long Duration Storage
- Geothermal
- Onshore Wind
- Offshore Wind
- Biomass
- Biogas
- Hydropower
- Demand Response
- Short-term Renewable Portfolio Standard (RPS) contracts
- Short-term Carbon Free contracts
- Short-term Resource Adequacy contracts

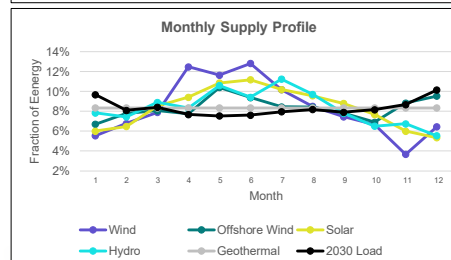
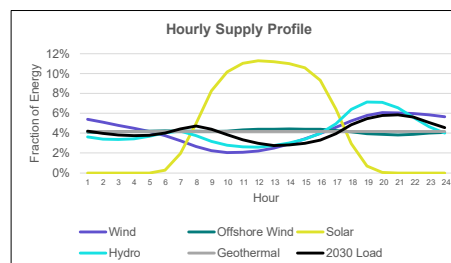
Ascend Basis Zones for Modeling



15

Resource Profiles & Capacity

- Hourly and seasonal generation capability of resources will be calibrated on available historic data or public datasets
- Dispatchable resources (storage, DR, biofuel) will be triggered by economic modeling
- Capacity value of resources valued based on technology and results of Ascend's CAISO system model



2030 Capacity Value by Resource Technology

Technology	Capacity Value
4-hr Storage	65%
8-hr Storage	100%
Solar PV	0%
Wind	19%
Hydro	0%
Geothermal	100%
Biofuel	100%

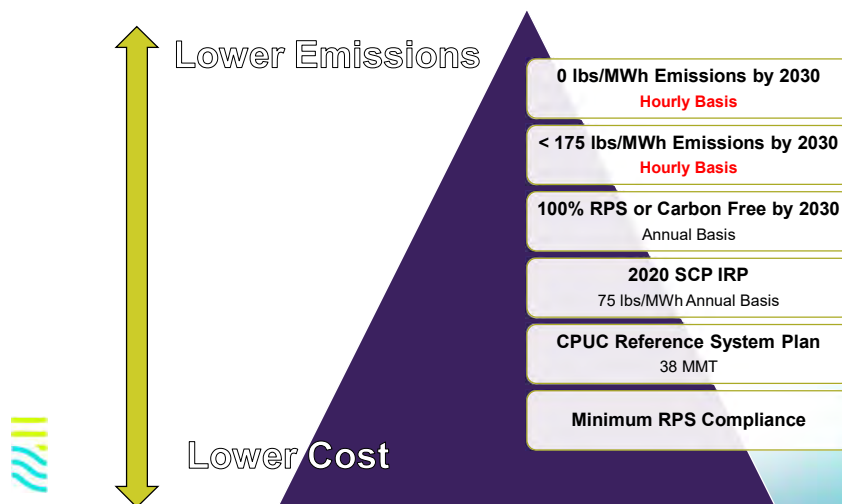
16

Portfolio Scenarios



17

Portfolio Scenarios



18

Value Measures

The IRP will compare portfolio performance using the following value measures:

Value Measure	Methodology
GHG Emissions	Hourly emissions accounting incorporating projected renewable curtailment and grid power emissions
Reliability	Net Qualifying Capacity of resources vs. Planning Reserve Margin with comparison of open position vs. projected market availability
Cost	Cost of supply including energy, capacity, and attributes through 2030
Shape	Net MWh of hourly energy surplus minus storage charging
Marginal Abatement Cost	Cumulative difference of emissions (hourly basis) over incremental cost through 2030
Risk & Upside	Difference in metrics listed above for low/high price scenarios and low/high load scenarios

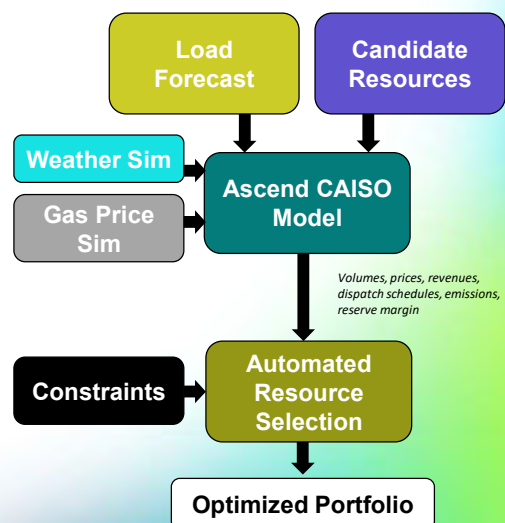


19

Portfolio Modeling

SCP will utilize Ascend's PowerSimm product for modeling performance output which will involve the following steps:

1. Inputting SCP's load forecast and specifying candidate resources
2. Stochastically modeling dispatch and energy deliveries based on weather and gas price simulations
3. Selecting a co-optimized portfolio with strongest financial performance given constraints



20

How Public Can Help

What? How?



21

What and How

- Attend public meetings and provide comments or submit written comments on priorities and resource preferences
- Complete IRP online survey on SCP Integrated Resource Plan webpage

<https://sonomacleanpower.org/integrated-resource-plan>



SCP Customer benefits



22

Next Steps

The current IRP public process timeline is as follows (subject to change):

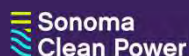
- ✓ **05/20/2021 CAC meeting (Completed)**- Staff presented the Introduction to IRP.
- ✓ **06/03/2021 BOD meeting (Completed)**- Staff provided the BOD a summary of the Introduction to IRP presentation.
- **07/15/2021 CAC meeting**- Staff is giving a more technical presentation on energy resource portfolio modeling scenarios.
- **08/06/2021 BOD meeting**- Technical presentation summary
- **10/21/2021 CAC meeting**- Present the IRP Draft narrative and recommended preferred portfolio for feedback.
- **11/04/2021 BOD meeting**- Present the IRP Draft narrative and recommended preferred portfolio for feedback.
- **11/18/2021 CAC meeting** - IRP and preferred portfolio for CAC recommendation to the Board.
- **12/02/2021 BOD meeting** - Staff will seek approval of the IRP and preferred portfolio from Board.



23

Thank you!

Please fill out the public survey at <https://sonomacleanpower.org/integrated-resource-plan>



24

Page intentionally left blank for double-sided printing



Staff Report - Item 05

To: Sonoma Clean Power Authority Community Advisory Committee

From: Rebecca Simonson, Director of Planning & Analytics
Ryan Tracey, Senior Energy Analyst
Carole Hakstian, Senior Risk Officer
Geof Syphers, CEO
Mike Koszalka, COO

Issue: Recommend that the Board of Directors Delegate Authority to the Chief Executive Officer to Execute a Three-Year Software License, Maintenance, and Support Agreement with Ascend Analytics, LLC for a Contract Total of \$557,479 and an Additional \$67,481 Spending Authority Under the Agreement

Date: July 15, 2021

Recommended Actions

Staff are requesting that the Committee Advisory Committee ("CAC") recommend that the Board of Directors ("Board") authorize the CEO to execute a three-year Software License, Maintenance and Support Agreement ("SLA") with Ascend Analytics, LLC for the use of the PowerSimm software tool. The total contract cost is \$557,479 over three years with further options for customization. SCP is also seeking the authority to utilize up to \$67,481 additional spending authority under this contract.

Background

If the PowerSimm SLA is approved by the Board, it will be SCP staff's primary tool for establishing a recommended Integrated Resource Plan ("IRP") portfolio and for valuing energy and capacity contracts and potential projects going forward. It will

also be used as part of SCP's internal risk assessment process. PowerSimm has already been used to evaluate the California Community Power long duration storage proposals, of which SCP staff has been heavily involved in the proposal evaluation stage. PowerSimm (in its trial environment) has also been instrumental in evaluating another potential battery storage resource for SCP's portfolio.

SCP completed IRPs in 2018 and 2020 to fulfill California Public Utilities Commission ("CPUC") regulatory requirements. The primary objective of these IRPs was to demonstrate attainment of the CPUC's 2030 GHG emissions benchmark and conformance with the statewide Reference System Portfolio ("RSP"). Although SCP's selected portfolio satisfied regulatory requirements, achieved SCP's renewable and emissions goals, closely matched SCP's load, and respected the RSP, the portfolio was not optimized for various forward cost projections or tested against the range of possible market and regulatory outcomes.

For the 2021 Internal IRP, SCP is dedicating significant time and resources to rebuild the IRP with the objective of targeting demand-side load resources and identifying the best mix of generation assets to meet SCP's emissions targets. The internal tools developed for past IRPs cannot effectively model changing variables in a probabilistic manner to determine the optimized cost and risk of a resource or portfolio against constraints. SCP needs a stochastic model that can iteratively model and forecast the probability of outcomes under varying conditions. Long-term planning that can analyze changing market conditions and co-optimize for cost, hourly emissions, reliability, hourly demand matching and regulatory risk and compliance is essential for SCP's procurement decision-making process and strategy. SCP's resource portfolio is the largest expense for SCP and strongly impacts customer rates. Careful planning and understanding of probabilistic outcomes will assist in lowering costs and exposure to risk.

SCP issued a Request for Proposals ("RFP") on January 21, 2021 for a stochastic portfolio evaluation platform to develop the next version of SCP's IRP, identify the appropriate energy and capacity resources to serve its customers long-term, target a long-term procurement timeline, and evaluate prospective opportunities that arise in the short-term.

Sophisticated software for resource planning is already utilized by the Investor-Owned Utilities ("IOUs") in California, the CPUC, CAISO, various municipal electricity suppliers, some CCAs, and utilities across the country and internationally. SCP expects that most CCAs will be utilizing some form of stochastic modeling software in the next IRP cycle.

Discussion

SCP issued the RFP in January 2021. SCP received 5 responses and shortlisted 2 respondents for a detailed interview and software tool demonstration.

Ascend Analytics, LLC was selected for their PowerSimm tool. PowerSimm is an energy resource portfolio planning tool that analyzes specific resources and portfolios in terms of cost and risk to inform procurement and planning decisions.

SCP staff intends to interface directly with this platform and maintain it going forward for use in future opportunity evaluation and biennial IRP updates. SCP staff will use this tool to evaluate future contracts for a variety of technologies including solar, utility storage with dispatch capabilities, geothermal, long-duration storage, offshore wind, and others.

SCP staff is currently in a 90-day trial period that started on May 1, 2021 to determine if the tool suits our needs prior to executing this 3-year contract provided in Attachment 1.

PowerSimm is a powerful tool that provides:

- Market Intelligence
 - Hourly and sub-hourly (every 5-min) energy price forecasts, ancillary services and volatility at trading hubs and selected pricing nodes.
 - Captures the value of real-time price spikes and volatility.
 - Stochastic results given changes in influential assumptions such as low/high natural gas prices and weather.
 - Monthly Resource Adequacy price forecasts with anticipated effective capacities for each technology type
 - Prospective PPA price forecasts by technology and geography
 - Forecasts on system resource mix, customer solar, EV adoption, and regulatory policy
 - Forecasts can be adjusted to run alternate scenarios.
- Resource and Load Modeling
 - Hourly and sub-hourly energy forecasts for resources, weather-normalized and technology and location specific
 - Hourly load forecast to account for all customer load and customer-sited resources
 - Modeling of utility-scale battery storage, long-duration storage, and customer-sited storage resources, optimizing charge and discharge

cycles to minimize overall cost, curtailment, or emissions including technology or contract limitations.

- Hourly and sub-hourly modeling of CAISO system resources to determine the type of unit on margin, potential curtailment, and associated emissions.
- Portfolio Evaluation
 - Net cost to serve load by resource type including PPA cost, value of capacity and renewable attributes, and revenues from day-ahead market, real-time imbalance and arbitrage, and ancillary services.
 - CO2 emissions from serving load respecting expected resource curtailments and unit on margin for CAISO system.
 - Portfolio comparison including contracted resources and prospective resources based on emissions, costs, reliability, and regulatory constraints.
 - Portfolio optimization engine for prioritization of constraints (e.g. lowest cost, lowest emissions, etc).
- Risk Evaluation
 - Net position by year
 - On- and Off-peak position by year
 - Current gross margin at risk
 - Potential future exposure
 - Forward cash flow uncertainty
 - Margin Probability
 - PPA and Counterparty Mark to Market Report
 - Forward price probability simulations
 - Probabilistic RPS and Carbon Free open position

Ascend Analytics provided the following chart in their proposal to demonstrate the capability of PowerSimm compared to other resource planning stochastic models available.

Capability	Legacy Models	PowerSimm
Hourly dispatch optimization	✓	✓
Sub-hourly optimization for flexible resource valuation	X	✓ +
Substantiate "meaningful uncertainty" with simulated weather, load, renewables, prices	X	✓ +
Select the best resource portfolio, including DERS, over all conditions	X	✓ +
Monetize the value of risk	X	✓ +
Value stack energy storage across ancillary services, energy, and capacity	X	✓ +
Optimize the portfolio based on carbon limits	✓ -	✓
Evaluate both supply and demand side options on level playing field	✓ -	✓

Fiscal Impact

The contract is priced to allow for 3 full-access SCP staff users and 2 report-tool users as follows:

	Year 1	Year 2	Year 3	Total
Implementation	\$50,000			\$50,000
PowerSimm Software Platform	\$120,000	\$123,000	\$126,075	\$369,075
Hosting	\$25,000	\$25,625	\$26,266	\$76,891
Ascend Market Intelligence Service	\$20,000	\$20,500	\$21,013	\$61,513
Ascend Support	\$25,000	\$25,750	\$26,522	\$77,272
Ascend Support Credit	-\$25,000	-\$25,750	-\$26,522	-\$77,272
Total	\$215,000	\$169,125	\$173,354	\$557,479

The Board approved Fiscal Year 2021-2022 budget and the 5-year budget outlook for Fiscal Years 2022-2023 and 2023-2024 includes a total budgeted amount of \$624,960 for this use. Therefore, staff is requesting the CAC recommend that the Board authorize the CEO to execute the three-year SLA of \$557,479 and the authority to utilize up to \$67,481 additional spending under this contract for additional Ascend support beyond allocated support credit amounts listed above, any necessary technical consulting, running customized CAISO system scenarios, and providing

market intelligence on additional pricing nodes not already accounted for in the contract allowance.

By utilizing this tool, SCP staff can appropriately value the net costs of various resources and portfolios against each other, thus saving costs in the long-term. For example, if SCP was looking for a 30MW solar + 20 MW 4-hour storage project and received several project proposals, SCP could model the contract net values against each other to determine the resource with the probabilistic best net value. If SCP could identify a net value increase of just 10 cents/MWh and 10 cents per kW-mo on a 20-year 30 MW solar + 20 MW 4-hour battery storage, this would equate to \$627,000 savings for the contract delivery term in today's dollars, returning the value of the 3-year Software License Agreement.

Attachments

Attachment 1- Software License, Maintenance and Support Agreement with Ascend Analytics, LLC.

SOFTWARE LICENSE, MAINTENANCE AND SUPPORT AGREEMENT

This Software License, Maintenance and Support Agreement ("**SLA**") is made and effective on the 9th day of August 2021 ("Effective Date") by and between Ascend Analytics LLC ("**Licensor**" or "**Ascend**") and Sonoma Clean Power ("**Licensee**" or "**SCP**") (each individually a "**Party**" or jointly the "**Parties**").

Licensor has developed and licenses to users certain software programs and software tools marketed under the name **PowerSimm** (as configured, customized, supplemented and/or modified under this SLA, the "**Software**").

The Parties desire that Licensor provide a non-exclusive license of the Software to Licensee pursuant to Section 1 below, implement configurations to the Software pursuant to Appendices A and B hereto, and host and support the functionality of said Software, for the consideration and under the terms and conditions set forth in this SLA;

NOW, THEREFORE, in consideration of the mutual promises, terms and conditions set forth in this SLA, Licensor and Licensee agree as follows:

1. License and Services

Licensor hereby grants to Licensee a non-exclusive license ("**License**") to use the Software:

- (a) For implementation purposes in accordance with Section 4.3 hereof and Appendices A and D hereto ("**Implementation**"), from the Effective Date until Implementation Completion (defined in Section 4.3 below); and
- (b) For risk, resource planning, and portfolio management purposes, after Implementation Completion through the duration of the Term (defined in Section 3 below).

In consideration for payment of all fees, charges, and invoices required under this SLA, Licensor will provide the following services ("**Services**") during the Term:

- (a) Software Implementation services in accordance with Section 4.3 below and Appendices A and D ("**Implementation Services**");
- (b) Hosting of the Software after Implementation Completion in accordance with Section 4.3 below and Appendices E and F hereto ("**Hosting**"); and
- (c) Deployment and maintenance of the functionality of the Software after Implementation Completion pursuant to Section 4.5 below ("**Support Services**").

Licensors' provision of the License and Services hereunder is conditioned on and in consideration of Licensee's full performance of its obligations under this SLA (including without limitation full and timely payment by Licensee of all fees, charges, and costs required to be paid to Licensor under Sections 4 and 5 below). Licensee shall have no right to use the Software or Hosting equipment or resources, or to receive Services from Licensee, absent full payment of all fees and costs then due and owing under this SLA pursuant to Sections 4 and 5 below.

The Parties acknowledge that Software configuration and support are iterative processes, such that Licensor's deliverables and their timing will be affected by interactions with and information or data from Licensee or third parties. Accordingly, the Parties acknowledge and agree that any and all of each Party's deliverable dates under this SLA are targets rather than firm due dates, as to which both parties will use reasonable commercial efforts to achieve. In the event a delivery target is missed, Licensor shall notify the Licensee of the reason for the delay, provide a remediation plan and a revised schedule for completion, no later than 60 days past the prior target date. Licensor shall not be responsible for any delays or problems with the Software caused by Licensee or by other forces outside Licensor's reasonable control.

2. Use Restrictions

Licensee shall not copy, duplicate, reproduce, license or sublicense the Software or coding therein, or transfer or convey the Software or coding thereon or documentation thereof or any right in the Software to anyone else (including without limitation any person or entity that acquires any ownership or financial interest in Licensee) except as specifically provided herein, without the prior written consent of Licensor. Licensee acknowledges and agrees that the Software and documentation associated therewith consists of proprietary, unpublished products of Licensor, protected under U.S. copyright law and trade secret laws of general applicability. Licensee further acknowledges and agrees that all rights, title and interest (including all intellectual property rights) in and to the source code and documentation shall remain with Licensor. Licensee agrees that such proprietary rights are retained by and valuable to Licensor and that Licensee shall continuously control the use and disclosure of the Software and related documentation and shall keep the Software and related documentation of user manuals, training materials, and documentation of model techniques confidential. Nothing in this paragraph shall waive or estop Licensee's rights to Licensee Data pursuant to and defined in Section 9.

3. Term

The "**Term**" of this SLA shall begin on the Effective Date. Each successive twelve (12) month period of the Term is a "**License Year**". The last effective date of the Term is the "**Termination Date**." This SLA shall automatically renew on the anniversary of the Effective Date for up to two (2) successive License Years (each a "**Renewal License Year**").

3.1 Early Termination

Licensee may terminate early ("Licensee's Early Termination") without any fault of Licensee or Licensor. An early termination notice must be delivered to Licensor in writing specifying the reason for early termination. An Early Termination fee of \$25,000 shall be paid by the Licensee within 30 days of the notice of termination in addition to the early termination fees for hosting specified in Section 5.5.

If Licensor materially defaults in its obligations to provide Services under this SLA for reason other than any Licensee-Caused Fault (defined in Section 4.6 below), Licensee shall provide Licensor with written notice specifying the material default. On receipt of said notice, Licensor shall have a reasonable opportunity of thirty (30) days to cure the specified material default.

If, after said notice and reasonable opportunity of fourteen (14) days to cure, Licensor remains in material breach of this SLA ("**Licensor's Uncured Breach**"), thereafter Licensee shall have the

option to terminate the License and this SLA for cause by providing separate notice of its intent to terminate, at least 30 days in advance of the noticed termination date. Nothing in this paragraph shall waive or estop Licensee's indemnity rights under Section 7.

If, for reason other than Licensor's Uncured Breach and as permitted per Section 5, Licensee fails to timely pay any fee or cost due and owing Licensor pursuant to Section 5 -- or otherwise materially defaults under this SLA and fails to cure said default after written notice from Licensor and a reasonable opportunity to cure -- then Licensor shall have the option to terminate this SLA ("**Licensor's Early Termination**" and, jointly with Licensee's Early Termination, "**Early Termination**") by providing separate notice of its intent to terminate, at least 30 days in advance of the noticed termination date. Nothing in this paragraph shall waive or estop (a) Licensor's rights to full payment from Licensee under Sections 4 and 5 below, or (b) Licensor's indemnity rights under Section 7.

The effective date of any Early Termination is 30 days after delivery of the termination notice required in this Section 3.3.

4. Fees and Charges

4.1 License Fees

On the Effective Date each year, Licensee shall pay Licensor a License Fee according to the following schedule:

	Year 1	Year 2	Year 3
PowerSimm Software Platform	\$120,000	\$123,000	\$126,075

4.2 Hosting Fees

On the Effective Date, Licensee shall pay Licensor a Hosting Fee. The Hosting Fee schedule is as follows:

	Year 1	Year 2	Year 3
Hosting	\$25,000	\$25,625	\$26,266

Subject to full payment by Licensee to Licensor of the Hosting Fees and all time and materials charges then due and owing and not offset by the Support Credit, Licensor will provide Licensee with the Hosting environment and resources set forth in Appendices E and F. Notwithstanding the foregoing sentence, Licensor shall have no obligation to host Software with Licensee-Caused Faults that Licensor determines, in Licensor's sole discretion, could damage Licensor's hosting environment or resources.

In the event of any Licensor's Uncured Breach involving cessation of its Hosting Services obligations hereunder, in addition to the early termination remedy set forth in Section 3.1 above and 5.4 below, Licensor shall refund to Licensee a portion of the Hosting Fee previously paid by Licensee for the then-current License Year, prorated to refund the portion attributable to the period in which Hosting Services ceased or remained uncured.

4.3 Ascend Market Intelligence Subscription Service for CAISO

SCP shall subscribe to Ascend’s Market Intelligence Service as part of their software package. This service includes Ascend’s 20-year fundamental power price forecasts, refreshed at least once per year and automatically uploaded into SCP’s PowerSimm model. SCP also receives Power Point documentation with each forecast update and an annual written market report which includes key market insights and documentation of Ascend’s assumptions behind the forecasts, such as resource expansions, transmission system changes, congestion/basis price implications, retirements, average hourly price shapes, hourly price volatility, sub-hourly price dynamics, and more. The subscription fee is as follows:

	Year 1	Year 2	Year 3
Ascend Market Intelligence Service	\$20,000	\$20,500	\$21,013

Ascend Market Intelligence includes twice per year updates of the NP-15 power price and SCP base portfolio power prices (including real-time) forecast plus 3 LMPs of SCP’s choosing. Additional nodes can be forecast at \$2,500 per node for the first five (5) nodes, and \$1,500 for each additional node thereafter. Scenarios with alternate macro level assumptions (e.g. policy, carbon price, electrification, etc.) are scoped separately with SCP. Alternative Scenarios typically range from \$2,500 to \$10,000 per forecast depending on complexity. Alternative Scenarios will be billed on a time and material basis with not to exceed amounts. Hours from the Support Credit can be used to offset costs associated with Alternative Scenarios. SCP may request a package of nodes via email to the Ascend point of contact. Ascend will provide an estimate on turnaround time for the forecast. SCP should allow at least six weeks of lead time for forecast requests.

4.4 Software Implementation Services Charged on Time and Materials Basis

Licensors shall provide Software “Implementation Services” for initial configurations, customizations, modifications, and development of the Software pursuant to Appendix A (“SOW”), Appendix D (“**Implementation Criteria**”), and this Section 4.3. Licensors shall provide Implementation Services from the Effective Date until Implementation Completion. An amount not to exceed **\$50,000** shall be allocated to cover “Implementation Services.”

Appendix D contains basic initial goals, parameters, and validating testing for Software Implementation (“**Implementation Criteria**”). During Implementation, Licensors may refine, expand and revise said Implementation Criteria, pursuant to the iterative coordination process with Licensee set forth in Appendix D (“**Criteria Amendments**”). Licensors shall provide Criteria Amendments based on its professional judgment that said Amendments would help determine when the Software can be first effectively deployed by Licensee (through its Designated Users) for risk, resource planning, and portfolio management purposes. Licensors may determine that Criteria Amendments are necessary or useful based on information obtained during or as part of Implementation, including without limitation information obtained during Implementation concerning market dynamics, regional conditions, benchmarking variables, or documents and deliverables from Licensee during Implementation under Appendix D.

Licensee may, on its own initiative, request additional or revised Criteria Amendments (“**Proposed Criteria Changes**”) by providing written notice thereof to Licensors. If Licensors provides written signed consent to Proposed Criteria Changes within seven (7) days of receipt, said consented-to Proposed Criteria Changes shall be incorporated into the Implementation Criteria as Criteria Amendments. Licensors shall not unreasonably withhold or delay its consent to Proposed Criteria Changes. Licensors shall not submit any new Proposed Criteria Changes after Implementation Completion Notice (defined in the immediately following paragraph). In recognition of the time and staffing burden imposed by last minute adjustments to the Implementation Criteria, Licensors shall have no obligation to review or consent to Proposed Criteria Changes first noticed by Licensee less than 30 days before Licensee issues the Implementation Completion notice.

Licensors shall provide written notice to Licensee when it determines, based on its professional judgment, that the Software materially meets the Implementation Criteria, such that it is ready for initial deployment (“**Implementation Completion**”). After Implementation Completion and deployment, Licensors will provide “Support Services” that include certain further fine-tuning configuration adjustments and repairs to the Software, as more specifically set forth in Section 4.5 below. Also, pursuant to Section 4.6 below, Licensors shall provide Support Services for any Software “Material Faults” (defined in Section 4.6) at Licensors’s expense, without charge to Licensee.

If Licensee disputes Licensors’s determination that Implementation Completion has been achieved, Licensee shall provide Licensors with written notice of the particular tests, test results, and/or functionalities of the Software at issue (“**Dispute Notice**”), within 30 days after issuance of Licensors’s Implementation Completion notice. The Parties shall conduct good faith negotiations to resolve the issues identified in the Dispute Notice within 30 days after the Dispute Notice, before pursuing any other form of relief or remedy. Licensee’s use of the Software for any business decision automatically waives any challenge to Licensors’s Implementation Completion determination.

Each Party shall cooperate fully and promptly with Implementation efforts. Said cooperation by Licensee includes, without limitation, the following:

- Licensee shall provide Licensors as soon as reasonably possible all data and information necessary or useful for Implementation, including without limitation the data and information identified in Appendix D.
- Each Party shall use commercially reasonable efforts to meet any time periods for any Implementation deliverables set forth in Appendix A or Appendix D, and to otherwise complete the Implementation process.
- Neither Party shall unreasonably withhold or obstruct Implementation Completion testing or first production use of the configured Software.
- Licensee shall not withhold any payments of any fees or charges due and owing to Licensors during Implementation based on Licensors’s refusal to “consent” to any of Licensee’s Proposed Criteria Changes.

Licensee shall pay Licensors for Implementation Services on a time and materials basis at Licensors’s “Standard Commercial Rates” defined in Appendix B hereto.

Notwithstanding the foregoing, Licensor shall first apply the first year's Support Credit to all time and materials charges for Implementation Services otherwise payable by Licensee, until exhausted. Licensee also shall be responsible for reimbursement of all pre-approved actual and reasonable out-of-pocket expenses incurred by Licensor in connection with its Implementation Services. While not all-inclusive, Appendix B contains examples of reimbursable expenses and expense caps. Licensor will provide detailed backup documentation with the invoice for all pre-approved time and materials charges and pre-approved expenses, and Licensee reserves the right to reject any expense that was not pre-approved in writing or is deemed non-business related. Payment timing and invoicing procedures are set forth in Section 5 below.

4.5 User Fees

Prior to any use of the deployed Software after Implementation Completion, Licensee shall designate up to **3** power access users and **2** report-tool users of the Software License, by written advance notice to Licensor ("**Pre-designated Users**"). Licensee shall have the right to designate additional users ("**Additional Users**" and, collectively with the Pre-designated Users, "**Designated Users**"), by both: (a) providing written notice of the names and contact information of each Additional User to Licensor and (b) paying the following fees in advance of each Additional User's use of the Software under the License ("**User Fees**"): **\$3,500** per License Year for each additional power-user and **\$1,500** per License Year for each report-user. After Licensee's initial designation and payment for Additional Users, Licensee shall pay Licensor the associated User Fees at the same time as the annual Hosting Fee. Licensee shall have the right to remove any Designated Users by providing Licensor with 7 days advance written notice thereof and shall be entitled to designate an Additional User for the remainder of such License Year without payment of any additional User Fees.

4.6 Software Support Services Credits and Charges

Licensor shall grant Licensee an annual "**Support Credit**" on the following schedule:

	Year 1	Year 2	Year 3
Ascend Support Credit	\$25,000	\$25,750	\$26,522

The Support Credit is used for additional model implementation activities and consulting services. Support Services are be used at Licensee's discretion. Rates counting against the Support Credit on a time and materials basis are shown in Appendix B. After the exhaustion of Support Credit funds, Ascend staff support shall be billed at the rates shown in Appendix B. Any remaining Support Credit at the end of the contract year shall be rolled over into the subsequent year until the Termination Date.

Licensor will provide the following support services ("**Support Services**") in accordance with the credits and hourly rates described above:

- Deployment of the Software for use by Licensee and its Designated Users for risk, resource planning, and portfolio management;
- Fine-tuning configurations and repairs to maintain the Software pursuant to the SOW and associated testing;

- Deployment of routine PowerSimm Software upgrades (including patches, service packs, and other modules) developed by Licensor, at Licensor's sole and absolute discretion, for Licensor's standard PowerSimm software licensees, to the extent compatible with any customized modifications to the Software under this SLA ("**Licensor's Upgrades**");
- Any custom configurations or functionalities to the Software base code for Licensee not included in the SOW that have been mutually approved by the Parties for inclusion in the Software base code, and fine-tuning configurations for Software Upgrades, provided that said upgrades can be automatically incorporated into all future Licensor's Upgrades (said upgrades, together with Licensor's Upgrades, "**Upgrades**");
- Any other training, consulting, or other support related to the Software mutually agreed in writing by the Parties.

Notwithstanding any contrary provision herein, Licensor shall not be obligated to repair, address or otherwise support any faults in the operation of the Software determined with certainty to have been caused or materially contributed to by (a) Licensee's breach of this SLA, (b) modification of the Software by anyone provided access to Software coding by Licensee (other than Licensor), or (c) Licensee's unauthorized use of the Software on an operating environment outside Licensor's Hosting environment (collectively, "**Licensee-Caused Faults**"). If Licensor determines, at Licensor's discretion, to provide Support Services for Licensee-Caused Faults, said Support Services shall be charged to Licensor on a time and materials basis (as set forth in Section 5 below) without first applying any Support Credit.

From the date of Implementation Completion to the Termination Date, Licensor shall have available Support Services Monday through Friday for 8:30 a.m. to 5:00 p.m. Mountain Standard Time, subject to the provisions in Appendix C regarding reporting and remediation of Software faults.

Licensor will first provide web meeting support after notice/reporting of Support needs by Licensee in accord with Appendix C. In the event that a Software system support issue cannot be reasonably resolved via telephone or "Web" meeting, Licensor will provide on-site support at the request of Licensee. Licensor will make reasonable efforts to arrive within twenty-four hours of being unable to resolve such system support issue via other means. Licensee will pay for Licensor's pre-approved actual and reasonable travel costs for such on-site support activities. Such reimbursements will be consistent with the Licensee's Travel & Reimbursement Policy. Licensor will provide detailed backup documentation with the invoice for all pre-approved expenses and Licensee reserves the right to reject any expense that was not pre-approved or is deemed non-business related.

At no cost to Licensee and no draw-down on the annual Support Credit, Licensor shall fix material defects in essential functionalities of the Software excluding any Licensee-Caused Faults ("**Material Faults**"), subject to the notice, response, and other protocols set forth in Appendix C.

Licensee shall pay Licensor for all Support Services on a time and materials basis at Licensor's Standard Commercial Rates, unless expressly not required to be paid for by Licensor under this Section 4.5. Notwithstanding the foregoing, in each License Year, Licensor shall first apply the annual Support Credit to all time and materials charges for Support Services otherwise payable by

Licensee, until exhausted. Licensee also shall be responsible for reimbursement of all pre-approved actual and reasonable out-of-pocket expenses incurred by Licensor in connection with its Support Services. Such reimbursements will be consistent with the Licensee's Travel & Reimbursement Policy. Licensor will provide detailed backup documentation with the invoice for all pre-approved time and materials charges and pre-approved expenses, and Licensee reserves the right to reject any expense that was not pre-approved or is deemed non-business related. Payment timing and invoicing procedures are set forth in Section 5 below.

5. Procedures for Invoicing and Other Payment Provisions

5.1 Payment for Implementation, Support, and Change Order Services

Licensor shall invoice Licensee monthly, on a time and materials basis, for (a) Implementation Services (taking into account the Support Credit set forth in Section 4.5 above); (b) Support Services (taking into account the Support Credit and any other limitations explicitly set forth in Section 4.5 above); and (c) all other Licensor services to be charged on a time and materials basis under change order(s) approved by both Parties. Licensee shall also invoice reimbursable charges on a monthly basis. Licensee shall pay Licensor the invoiced charges within forty-five (45) days of the date of the invoice.

5.2 Late Payment Charges

All amounts not paid within 30 days of the applicable due date under this Section 5 are subject to a late payment charge of one and a half percent (1.5%) per month on any overdue amount. Said late payment charge shall not apply to any disputed amounts that ultimately are written off by Licensor.

5.3 Withheld Payments

Licensee must submit a written notice to Licensor prior to or upon withholding any payment, detailing the specific reason(s) for the withholding, within 60 days of invoice. Upon receipt of notice, both parties will make best efforts in the following sixty (60) day period to resolve the noticed issue, only after which both parties may pursue remedies, claims, and relief pursuant to other provisions of this SLA.

5.4 Effect of Early Termination on Fee Payments

Licensor has made or will make upfront investments in anticipation and consideration of full payment by Licensee of all License and Hosting Fees throughout the Term. All License, Hosting, and User Fees during the Term are mandatory and cannot be avoided by Licensee's nonpayment, assignment, acquisition, or default prior to the later of the end of the full Term, except as provided in this Section 5.4 due to Licensor's breach. In the event of Licensor's Early Termination during the Initial Term, all License and Hosting Fees for the Initial Term not yet paid will be automatically due and payable by Licensee to Licensor, whether or not then otherwise due and payable. Licensee's payment obligations shall survive termination of this SLA. In the event of Licensee's Early Termination due to Licensor's Uncured Breach as provided in Section 3.3, Licensor shall refund to Licensee the prorated portion of the License, Hosting and User Fees associated with the remaining period of the Term.

5.5 Termination of Hosting Services

Licensee shall have the right to terminate Hosting Services without cause after one year of service by giving sixty (60) days written notice to Licensor. If Licensee elects to terminate Hosting Services without cause after twelve months (12), Licensee will pay to Licensor a Hosting Services termination fee of **\$10,000**, and after twenty-four months (24), this fee will be **\$5,000**. If Licensee completes thirty-six months (36) or more of Hosting Services in good standing, there shall be no termination fee. Said Hosting Services termination fees do not apply in the event of Licensee's Early Termination of this SLA due to Licensor's Uncured Breach as provided in Section 3.3. Said Hosting Services termination fee is in addition to any other fees provided hereunder. Licensee shall have the right to terminate the Hosting Services for cause for any material breach by Licensor or the Hosting Facility of Appendices E and F or of the minimum service levels, standards of performance, or minimum security requirements set forth in the Appendix E. Upon such termination, Licensee shall be entitled to a pro-rata refund of the Annual Hosting Fee. Termination of the Hosting Services, for any reason or no reason, shall not terminate any other rights or obligations of the Parties under the SLA. Licensor shall reasonably cooperate with Licensee to transfer hosting of the Software to any third party selected by Licensee.

6. Warranty of Title

Licensor hereby represents and warrants to Licensee that Licensor is the owner of the Software or otherwise has the right to grant to Licensee the rights set forth in this SLA. In addition to any other remedy that Licensee may be entitled under applicable law, in the event of breach of the foregoing representation and warranty, Licensor shall: i) procure, at Licensor's expense, the right to use the Software, ii) replace the Software or any part thereof that is in breach and replace it with Software of comparable functionality that does not cause any breach, or iii) refund to Licensee the prorated portion of the License, Hosting and User Fees associated with the remaining period of the Term.

7. Indemnities and Liability Limitations.

This Section 7 shall survive any termination of this SLA.

7.1 Indemnities.

Licensor shall indemnify and defend Licensee against any third party claim for proprietary rights infringement with respect to the Software; provided, however, that to the extent permitted by law, Licensee shall indemnify and hold Licensor harmless against any third party claim for proprietary rights infringement with respect to (a) any software coding first developed or acquired by Licensee and deployed or otherwise incorporated into the Software as part of Software Implementation under a change order requested by Licensee and accepted by Licensor; and (b) any third party claims related to any breach by Licensee or its Agents of this SLA, including without limitation the confidentiality provisions of Section 16 below.

7.2 Liability Limitations.

(a) Any and all liability of each Party and its Agents for damages or alleged damages whether arising from breach of this SLA, breach of warranty, tort, or otherwise, with respect to the Software and documentation or other products or services provided hereunder, is limited to and will not exceed the aggregate License Fees and Hosting Fees paid to Licensee together with all such fees due and payable as of the time the claim first arises; and (b) neither Party nor its Agents will be liable to the other Party or said other Party's Agents under any provision of this SLA for indirect,

incidental, special, or consequential damages, including but not limited to lost profits or lost savings, even if such Party has been advised as to the possibility of such damages.

8. Warranty

Licensor warrants that, on final delivery by Licensor, the Software will materially conform to any agreed functional requirements set forth in the SOW. In the event the Software does not conform to the agreed functional requirements set forth in the SOW, Licensor will make commercially reasonable efforts to correct any deficiencies in the Software that do not material conform to any agreed functional requirements set forth in the SOW or Licensor will refund Licensee all amounts paid under this SLA. All Services by Licensor shall be in accordance with this SLA or Licensor will refund Licensee all amounts paid under this SLA.

9. Licensee Data

Licensee owns all rights, title and interest in and to all data that is owned, licensed, leased or developed by or on behalf of Licensee, whether provided to Licensor by Licensee or provided by a third party to Licensor in connection with Licensor's provision of Services to Licensee, including any such data that is loaded into, or located in, any data files, tables, objects or other storage medium developed or maintained by or on behalf of Licensor, including related data that results from Implementation Services performed by or on behalf of Licensor (“**Licensee Data**”). During the Term, Licensee grants Licensor a non-exclusive, royalty-free, non-sublicensable (except as needed to provide the Service), non-transferable right to access and use the Licensee Data to provide the Services to Licensee and to monitor and improve the Software. Licensor shall back up Licensee Data during the Term. Upon any termination of this SLA, Licensee has the right to retrieve Licensee Data or have Licensor provide a backup copy of Licensee Data within 14 days by written request. Licensor may not disable Licensee’s access to the Software and Licensee Data until Licensee has confirmed receipt of the backup of Licensee Data upon any termination of this SLA.

10. Independent Contractor

Nothing herein shall be construed to make Licensor an agent or employee of Licensee for any purpose. Licensor shall in all respects be an independent contractor of Licensee in its performance of the Services. Licensor and its employees shall in no way represent themselves to third parties as agents or employees of the Licensee in performance of the Services.

11. Use of Licensee Obtained Software

When accessing and using any software in connection with the Services, Licensor acknowledges and agrees to be bound by the terms and conditions of the applicable licensing agreement and all other applicable terms and conditions related to the use of the software. Additionally, any use of Licensee obtained software shall be limited to performing the Services and for no other purpose. Further, Licensor will notify and require compliance from Licensor’s employees, contractors, and agents on the duties, obligations, representations, restrictions, and covenants, including use restrictions and nondisclosure obligations imposed on Licensee by any software licenses (excluding payment obligations). Notwithstanding the foregoing, Licensor’s obligations in this Article 10 are conditioned on such software licensing terms and conditions are available to Licensor for review or Licensor has accepted any end user license for such software.

12. Insurance

Licensors, at its own cost and expense, will at all times maintain insurance coverages in the minimum amounts specified herein, to protect the Licensee and Licensors from claims for injury or death to persons or damage to property that may in any way arise from or be occasioned by the performance of the Services. Licensors are responsible for consulting with its own insurance advisors to ensure that it has adequate insurance coverage to meet the obligations of this SLA and its business operation. Licensee reserves the right to require different or additional coverage as it determines necessary from time to time. Licensors will furnish certificates, policies, and related documentation for all such insurance to the Licensee before commencing the Services and as reasonably requested by Licensee from time to time, within ten (10) days of Licensee's written request for the certificates, policies and/or related documentation.

- (a) At its own expense, Licensors shall acquire and maintain in effect for the term of the SLA and/or any renewal, insurance providing the following coverages:
 - (i) Commercial General Liability Insurance on an occurrence basis. This coverage shall include Personal Injury, Contractual Liability, and Products/Completed Operations insurance. The limit of liability shall be at least \$1,000,000 combined single limit for bodily injury and property damage. There shall be no exclusion for work within any distance of railroad property. There shall be coverage for explosion, collapse, and underground hazards (x, c, & u coverage).
 - (ii) Automobile liability insurance with residual liability limit of at least \$1,000,000 combined single limit for bodily injury and property damage. There shall be coverage for owned, hired, and non-owned vehicles.
 - (iii) Network Security & Privacy (Cyber) Insurance with an aggregate limit of liability not less than \$1,000,000. Such insurance shall include coverage for claims and Losses with respect to network security & privacy risks including data breaches, unauthorized access/use, ID theft, invasion of privacy, damage/Loss/theft of data, degradation, downtime, forensic & notification costs, etc. The retroactive coverage date shall be no later than the effective date of this SLA. Licensors shall maintain an extended reporting period providing that claims first made and reported to the insurance company within two (2) years after termination of the SLA will be deemed to have been made during the policy period.
 - (iv) Worker's compensation insurance as required by California law with waiver of subrogation in favor of SCP;
 - (v) Professional Liability Insurance in an amount not less than \$1,000,000; and
 - (vi) Employment Practices Liability Insurance, with 3rd party extension coverage, for not less than \$ 1,000,000 per claim (Claims made policy form).
- (b) Licensors shall purchase insurance from companies rated A- or better by A.M. Best and authorized to do business in California. The A.M. Best website can be found at: <http://www.ambest.com>.
- (c) Licensors shall ensure that coverage will not be canceled nor any changes made, at any given time during the term of the SLA, which alters, restricts or reduces the insurance provided or changes the name of the insured, without first giving thirty (30) days notice in writing to the Licensee.

- (d) Licensor shall name the “Sonoma Clean Power, its employees, Board Members, and officers” as additional insureds on the automobile and commercial general liability policies. Required additional insured forms are the CG 2010 and CG 2037 10 01 or equivalent.
- (e) The coverage granted to the Licensee as an additional insured shall apply on a primary/non-contributory basis. The Licensee’s coverage shall be excess.
- (f) Deductibles and retentions shall be clearly stated on any certificate of insurance and shall be the responsibility of Licensor and not the Licensee.
- (g) If liability policies do not contain the ISO separation of insureds provision, the policies shall be endorsed to provide cross-liability coverage.
- (h) Neither the issuance of any insurance policy required by this provision, nor the minimum limits specified with respect to any insurance coverage, shall be deemed to limit or restrict in any way the liability of Licensor or its subcontractors arising under or out of this SLA.
- (i) **BEFORE PERFORMING ANY WORK**, Licensor shall provide copies of the applicable insurance certificates to the Buyer designated in the purchase order. **ANY WORK PERFORMED PRIOR TO PRESENTMENT OF AN ACCEPTABLE INSURANCE CERTIFICATE MAY NOT BE COMPENSABLE. LICENSOR PERFORMS SERVICES PRIOR TO THE PRESENTMENT OF ACCEPTABLE INSURANCE CERTIFICATE AT THEIR OWN RISK.**
- (j) Licensor waives all rights against the SCP, its employees, Board Members, and officers for recovery of damages and expenses to the extent that these damages and expenses are covered by any of Licensor’s insurance coverages.

13. Intentionally omitted.

14. Limitation of Liability

Licensee shall use its own discretion on business decisions based all or in part on Software runs and outputs and relies thereon at Licensee’s own risk. The provisions of this Section survive termination of the SLA.

15. Notices

Notices provided by a Party under this SLA must be given in writing to the individuals listed below via email, hand delivery, prepaid certified US Mail, or a nationally recognized overnight courier service, except as otherwise specifically provided above.

If to Licensor: Gary Dorris
 President
 Ascend Analytics, LLC
 1877 Broadway Street, Suite 706
 Boulder, CO 80302
 gdorris@ascendanalytics.com

If to Licensee: Sonoma Clean Power

Attn: Contract Administration
P.O. Box 1030
Santa Rosa, CA 95402
invoices@sonomacleanpower.org

16. Governing Law

This SLA shall be construed and enforced in accordance with the laws of the State of California, without regard for choice of law principles. Venue and jurisdiction of any dispute under the SLA shall be with the County of Sonoma in the State of California or, if federal diversity jurisdiction is available and sought by either party, federal court within the federal Northern District of California.

17. Records, Access, Audit

Licensors shall maintain records of performance under this SLA and make these records available for inspection, audit, and reproduction by the Licensee.

Audits conducted pursuant to this Article shall be in accordance with generally accepted auditing standards and established procedures and guidelines of the reviewing or auditing agency.

Records maintained under terms of the above shall be maintained and made available during performance of services under this SLA and until four years from the Termination Date. In addition, those records which relate to any dispute, appeal, litigation, or the settlement of claims arising out of such performance or costs of items to which an audit exception has been taken shall be maintained and made available until the date of full and final resolution of such appeal, litigation, claim, or exception, or if longer one year from the Termination Date.

18. Attorneys' Fees

If any party employs counsel to enforce or defend its rights under this SLA, the prevailing party shall be entitled to recover its costs and expenses, including reasonable attorneys' fees, from the other party.

19. No Assignment

Neither this SLA nor any interest in this SLA may be assigned by a party without the prior express written approval of the other party.

Under no circumstances, whether upon one or more renewals, or change of ownership of Licensor or Licensee, or whether through merger, acquisition, name change, by operation of law or otherwise of Licensor or Licensee, or assign ability or sublicense by Licensee, may Licensor or any of its successors-in-interest impose any new terms and conditions, or change to the pricing terms, including but not limited to any maintenance agreement or other collateral agreements by and between Licensor and Licensee, whether through written documentation and/or reference to Licensor's terms and conditions on-line and/or through Licensor's website, unless the prior consent of Licensee is obtained or is otherwise expressly provided in any prior contracts between

the predecessors-in-interest of Licensee and Licensor, and except as otherwise provided Section 2 above.

20. Confidentiality

The parties acknowledge that information and materials exchanged during the term of this SLA contain proprietary and confidential information (“**Confidential Information**”) of the disclosing Party, except as provided herein. Confidential Information includes, without limitation, the Software and all coding therein; and Licensee Data. Licensee shall not make, or permit any persons given access to the Software by Licensee (other Licensor) (“Agents”) to make, any disclosure that removes or damages Licensor’s proprietary interest in the Software or the proprietary or patented interest in any underlying software therein. Licensee warrants and represents to Licensor that Licensee and its Agents shall keep the Software and associated base coding therein strictly confidential. Licensor will retain in strictest confidence all information and data furnished by Licensee and the results of any investigation, reports or studies conducted as a result of this SLA, along with all supporting work papers and any other substantiating documents. Licensor will not disclose such information to others without the prior written consent of Licensee, or as may be required by law. The Licensee may in a contemporaneous writing agree to retain information supplied by the Licensor in confidence, to the extent it doesn’t conflict or prevent Licensee from adhering to its disclosure obligations under the Public Records Act or similar law (“PRA”). The Parties acknowledge and understand that the Licensee is a joint powers authority subject to the PRA. As such, compliance with the PRA is not considered a breach of this SLA.

Confidential Information shall specifically exclude any information which the receiving Party can show (a) was known to or was independently developed by the receiving Party without access to or use of the Confidential Information of the disclosing Party, (b) was disclosed to the receiving Party in good faith by a third party (not an Agent of any Party hereto) who had the right to make such disclosure, (c) was made public by the disclosing Party, or was established to be part of the public domain, other than as a consequence of a breach of the SLA by the receiving Party, (d) is independently legally developed by the receiving Party without use of the disclosing Party’s Confidential Information as shown by documents and other competent evidence in the receiving Party’s possession, or (e) is required to be disclosed by law. The provisions of this Section shall survive termination of the SLA.

21. Final Agreement

This SLA terminates and supersedes all prior understandings or agreements on the subject matter hereof. In the event of a conflict with any concurrent agreement among the Parties, this SLA is controlling. This SLA may be modified only by a further writing that is duly executed by both Parties.

22. Severability

If any term of this SLA is held by a court of competent jurisdiction to be invalid or unenforceable, then this SLA, including all of the remaining terms, will remain in full force and effect as if such invalid or unenforceable term had never been included.

23. Headings

Headings used in this SLA are provided for convenience only and shall not be used to construe meaning or intent.

24. Intentionally Omitted

25. Authority

The undersigned Party representative, by his/her signature below, represents and warrants that he/she is duly authorized to execute this legally binding SLA for and on behalf of Licensee.

IN WITNESS WHEREOF, Licensor and Licensee have executed this Software License SLA to be effective on the day and year first above written.

LICENSEE
Sonoma Clean Power

LICENSOR
Ascend Analytics, LLC.

[Name]

David Millar

[Title]

Director of Resource Planning Consulting

Date

Date

DRAFT

APPENDIX A

SOFTWARE DESCRIPTION, USE, AND RESTRICTIONS

Ascend Analytics will deliver the following Software modules to Licensee, configured with Licensee's data:

Software Product	Software Description	Software Use
PowerSimm Analytic Framework	<p><u>Simulation Engine</u></p> <ul style="list-style-type: none"> • Forecasted Forward Prices for Energy and Currencies • Weather • Load • Transmission Availability • Spot Prices • Renewables (Wind & Solar) • Generation dispatch battery valuation • Transmission modeling • Conservation programs (energy efficiency, demand response, pricing programs, etc.) <p>Simulation of wind and solar production based on weather as the explanatory factor of volumetric uncertainty</p> <p><u>Analytic Framework</u></p> <ul style="list-style-type: none"> • Dispatch optimization • Validation reporting • Job management system 	<p><u>Analysis</u></p> <ul style="list-style-type: none"> • Evaluation of portfolio risks by region with drill down capabilities into key risk factors • Simulation details utilized by all PowerSimm modules • Integrated portfolio modeling for physical assets, hedge instruments, loads, and SCP's contracts • Enterprise level job management system & process flow editor • Portfolio risk management reporting services including producing customized Risk Dashboard, risk charts and reports as determined between Licensor and Licensee. <p><u>Commodities Modeled</u></p> <ul style="list-style-type: none"> • Power including energy and ancillary services • Natural Gas • Oil • Coal • Emissions (CO2, NOx, SO2) • RECs • Capacity • Other Asset Related Components <p><u>Assets Modeled</u></p> <ul style="list-style-type: none"> • Thermal • All CEC Eligible Renewables • Conservation programs

		<ul style="list-style-type: none"> • Behind the meter resources • Batteries • Future SCP Renewable Projects • Control area solar • Annual wind farm balancing • <u>Transmission Modeling</u> Modeling of transmission details including: <ul style="list-style-type: none"> • Losses • Costs • Flows <u>Geographic Regions</u> <ul style="list-style-type: none"> • CAISO • Resources and utilities related to SCP <u>Spot & Forward/Forecast Prices</u> <ul style="list-style-type: none"> • Markets for energy •
Software Product	Software Description	Software Use
PowerSimm Planner	<u>Portfolio Planning</u> <ul style="list-style-type: none"> • Output of PowerSimm portfolio variables for long term analytics <ul style="list-style-type: none"> ○ Generation Modeling ○ Fuel Modeling ○ Cost of Supply ○ Market Purchase & Sales ○ Transmission analysis ○ Annual and Hourly emissions including CAISO unit on margin ○ Hourly marginal cost of supply ○ Shadow prices of energy and ancillary services ○ Battery storage analysis ○ Sub-hourly analysis <p>PS Planner will provide insight into the impact to both physical and financial positions.</p>	<u>Analysis Time Frame</u> <ul style="list-style-type: none"> • Use the Software for: long term planning (defined as simulations horizon of intermediate term to 30 years and beyond hedging, portfolio balancing, portfolio management reports) • Ability to evaluate impact of new projects <u>Portfolio Reporting Base Configuration</u> <ul style="list-style-type: none"> • Financial views • Budget views • Emissions views
Software Product	Software Description	Software Use

PowerSimm PowerCube – as a reporting tool for PowerSimm output	<u>Portfolio Planning Output</u> <ul style="list-style-type: none"> • OLAP cube reporting to Excel • OLAP cube export to the PowerSimm Dashboard <p>Complete relational data cube which is seamlessly integrated into Microsoft Excel</p>	<u>Analysis</u> <ul style="list-style-type: none"> • Output reporting for distribution of standard reports, generation of ad-hoc reports, and drill down to examine individual risk factors • Output reporting should not be limited so long as data is within PowerSimm.
Software Product	Software Description	Software Use
PowerSimm Automatic Resource Selection	<u>Portfolio Risk and Management</u> Uses “Robust Optimization” techniques to optimize future expansion plans across all simulations that minimize costs and maintain system reliability	<u>Optimization Analysis</u> <ul style="list-style-type: none"> • Expansion planning • Applies “Robust Optimization” to optimize future expansion plans simultaneously across all future states. • Minimizes costs and maintains system reliability. • Incorporates stage project expansion • Evaluates generation retirements • Accounts for hourly attributes of generation including start-up costs and efficiency curves for thermal and hydro • Accounts for hourly generation emissions. • Accounts for ancillary services <u>Constraints</u> <ul style="list-style-type: none"> • Cost • Annual carbon emissions • Renewable percentage • System power use • Asset operations (e,g, battery state of charge, cycle limitations, throughput, etc) • Risk

APPENDIX B
GENERIC COMMERCIAL RATES AND TRAVEL EXPENSE POLICY

Project Role	Rate 2021	Description of Involvement
Analyst	\$ 225/hour	Data management, model set up, basic troubleshooting
Senior Analyst	\$ 250/hour	Study design, results interpretation, advanced troubleshooting
Project Manager	\$ 275/hour	Project tracking, invoicing
Senior Project Manager	\$ 300/hour	Issue resolution, project planning, client calls
Principal Analyst	\$ 350/hour	Special circumstances requiring a more experienced analyst
Engagement Director	\$ 600/hour	Complicated issue resolution.

Subject to annual increase of 2.5% (by Contract Year)

Rates shown above are for generic job levels. Specific staff are billed at their personal standard billing rates.

Pre-Approved Travel Expenses and Expense Caps

Item	Rate Cap
Lodging	\$300/room-night
Breakfast	\$25/person
Lunch	\$30/person
Dinner	\$50/person
Incidentals	\$25/day
Rental Car/Ride Share	\$200/day
Airfare	\$500 R/T Fare

Anticipated expenses above the rates shown above must be approved by SCP in writing prior to accrual.

APPENDIX C

RESPONSE MATRIX

Periodic Reports

Summary reports of usage problems by Licensor's other Licensees will be available to Licensee upon request.

Software Fault Limitations

Licensor support service obligations under this SLA shall not apply to address faults in the operation of the Software caused by Licensee's modification of the Software or if used improperly on an operating environment not approved by Licensor. Reported fault caused by Licensee's modification(s) of the Software and that support from Licensor will fall under standard software support provisions.

Severity Levels

When a support service request is received, it will first be assigned a severity level. The severity level will be assigned by mutual SLA between Licensee and Licensor. The severity levels are defined on the following page:

Remainder of page intentionally left blank.

Severity Level	Support Description	Resolution Method
CRITICAL	Licensed Software is inoperative or unusable. Critical or material impact on normal business operations.	Response will be within twenty-four hours during regular support hours and continuous until the problem is resolved and subject to conditions of Force Majeure. Licensor will diagnose and correct problem as soon as reasonably possible. Licensor will continue to use reasonable endeavors to resolve fault as soon as possible. Resolution may include software patches or other approaches as required.
HIGH	Licensed Software is partially inoperative, and there are no work-arounds available. Less critical but severely restrictive impact on normal business operations.	<p>Response will be within thirty-six hours to respond during regular support hours and continuous until the problem is resolved and subject to conditions of Force Majeure. Licensor will diagnose and correct problem as soon as reasonably possible. Licensor will continue to use reasonable endeavors to resolve fault as soon as possible. Resolution may include software patches or other approaches as required. If a new software release is not made commercially available within 6 months, the fix will be integrated into the current release at no charge.</p> <p>If the Licensee determines they do not want the suggested Licensor software release or resolution, the Licensee has the option to have the fix integrated into the current release. If Licensee selects this option, the provisions of Software Maintenance, Section 7, for support hours are applicable unless alternative consulting rates are mutually agreed upon otherwise.</p>
MEDIUM	Licensed Software is usable with limited functions. Work-around exists to prevent impact on business operations.	Within 45 calendar days of the reported problem, Licensee will be notified by Licensor of a determination plan to fix the problem in a subsequent standard software release. Licensee has the option to have the fix integrated into the current release. If Licensee selects this option, current applicable time and material rates as listed in Appendix A will be charged unless mutually agreed upon otherwise. If a new software release is not made commercially available within 6 months, the fix will be integrated into the current release at no charge.
LOW	Licensed Software is usable, but problem has been identified and correction is required.	Within 90 calendar days of the reported problem, Licensee will be notified by Licensor of a determination plan to fix the problem in a subsequent standard software release. Licensee has the option to have the fix integrated into the current release. If Licensee selects this option, current applicable time and material rates as listed in Appendix A will be charged unless mutually agreed upon otherwise. If a new software release is not made commercially available within 6 months, the fix will be integrated into the current release at no charge.
CHANGE	Licensed Software is usable and is functioning properly. A change or enhancement has been identified, and is required.	Licensor and Licensee will mutually agree on a resolution method.

1. Resolution Method and Timing

Licensors will use commercially reasonable efforts to correct problems in the Licensed Software that are reported by Licensee in accordance with problem severity levels as described in this support services description and subject to software fault limitations. Support service requests that are submitted will, during designated support hours, immediately be assigned an incident number. The incident number will be reported to Licensee and used as a means to track support status in a bug tracking database. Licensors will maintain a bug tracking database of incidents, defects, enhancements request and the like and will provide review access to the database to Licensee from on request.

2. Revising Severity Levels

In some cases, it may be appropriate to upgrade or downgrade the severity level from the initially assigned severity level. Upgrading or downgrading of service request severity levels will be by mutual SLA between Licensors and Licensee. For example, if a work-around is identified and implemented for a Critical Level problem, the severity level will be downgraded to a Medium Level.

3. Problem Escalation

Licensee has the option to consult with Licensors for support services to increase the priority so that the problem is fixed sooner. Specific problem resolution completion dates will be based on a prior mutual SLA by both parties. The time spent investigating and/or assisting with this effort will be charged to Licensee at current applicable Time and Materials rates as listed in Appendix A, unless mutually agreed upon otherwise.

4. Coordination

In the event of problem escalation, Licensee will designate a management representative who will be responsible for coordinating all escalated resolution efforts with Licensors's designated management representative.

In the event that multiple concurrently open problems or changes are identified in an overlapping time period, Licensee and Licensors will jointly prioritize and schedule remaining work covered under this SLA.

5. Resolution Procedure

With all best efforts on the part of Licensors and Licensee, problem determination and/or problem resolution may exceed the stated timelines. Recognizing this possibility, both parties will designate a management representative responsible for arbitration of such an occurrence. These representatives will work together to assess the situation, and to determine an appropriate plan and schedule for resolution.

6. Testing

Licensors is responsible for unit and system testing, to insure that delivered software meets Licensee's operational and/or functional requirements. Licensors will provide software that has passed Factory Implementation Completion Testing and will be responsible for new software releases operating consistently under client configurations. Once the software update is deemed ready for delivery, it will then be delivered to Licensee.

7. Changes and Enhancements

Change service requests will not be included in the base charge for support services. All change work will be charged to Licensee at current applicable time and materials (T&M) rates as listed in Appendix A. Licensor will analyze the request and its impact, delivering a T&M proposal to Licensee for Implementation Completion. Licensee Implementation Completion will be indicated by the presentation of a purchase order to Licensor, authorizing work to commence. In some cases, significant Licensor pre-engineering work may be required for analysis of a change service request. When that is the case, pre-engineering analysis work may be charged to Licensee at T&M rates as listed in Appendix A, based on a prior mutual SLA by both parties.

Remainder of page intentionally left blank.

APPENDIX D

IMPLEMENTATION

1. **Implementation Labor Requirements**

Implementation of the software, validation, and additional user training will be billed on time & materials and is currently budgeted for 200 hours and not to exceed \$50,000.

2. **Deliverables and Milestone Targets**

Licensors shall provide technical support to fully implement these PowerSimm suite software modules: PowerSimm Planner, Automatic Resource Selection, PowerCube, risk reports and data integration. Specific deliverables include these items listed below. The dates are targets with a high probability of successful delivery, but not absolute deadlines.

#	Milestone	Delivery Date
1	PowerSimm Planner	September 10
2	PowerCube	September 10
3	Automatic Resource Selection	October 29
4	Risk reports	September 10
5	Data integration	November 26

3. **Implementation Criteria**

The following criteria will be used to determine the acceptability of PowerSimm functionality. It will be the licensee's responsibility to sign off on the tests; Ascend will help in the configuration of tests as necessary. In addition to the following criteria, Licensee will not sign off on Implementation until

- Licensee is satisfied with integration with Licensee's systems (VPN tunnel to enable Licensee's AWS server to directly query the Oracle database).
- Licensee is satisfied that PowerSimm models and analyzes hourly system emissions based on the marginal system unit.

Table. Validation criteria and explanations

Simulation Module	Attribute	Information Used to Evaluate	Expectation
Weather	Seasonal fluctuation in temperature	Confidence intervals by month	Simulated confidence intervals reasonably match historical confidence intervals.
	Seasonal fluctuation in temperature	Confidence intervals by day of year	Simulated confidence intervals reasonably match historical confidence intervals.
	Extreme events	Frequency of occurrence	Extreme events occur with a frequency consistent with historical record.
	Extreme events	Deviation from historical record	Simulations will display extreme events not observed in historical record.
	Time series pattern	Time series pattern between weather stations	Simulated time series patterns reasonably match those of the historical record.

Simulation Module	Attribute	Information Used to Evaluate	Expectation
	Time series pattern	Time series pattern for a single weather station	Simulated time series patterns reasonably match those of the historical record.
	Automated Surface Observing System (ASOS) measurement bias	Input weather data treated for bias	Measurement and time of observation bias accounted for in input weather data older than 25 years.
Load	Seasonal load profile	Confidence intervals for daily average load by month	Simulated confidence intervals reasonably match historical confidence intervals.
	Hourly load profile	Confidence intervals for hourly load	Simulated confidence intervals reasonably match historical confidence intervals.
	Seasonal change in hourly load profile	Confidence intervals for hourly load by month	Simulated confidence intervals reasonably match historical confidence intervals.
	Expected energy	Mean simulated energy by month	Simulated values match forecasted values for expected energy.
	Expected peak demand	Mean simulated peak demand by month	Simulated values match forecasted values for peak demand.
	Correlation with Weather	Weather-load scatterplot	Simulated relationship between weather and load reasonably matches that of the historical record.
	Time series pattern	Simulated load paths	Simulated time series patterns reasonably match those of the historical record.
Forward Price	Uncertainty in future prices	Confidence intervals by delivery month	Uncertainty grows initially as the square root of time, and then levels off. Uncertainty should not grow indefinitely.
	Uncertainty in future prices	Confidence intervals by delivery month	Price ranges are consistent with market expectation and historical perspective of forward price uncertainty.
	Uncertainty in future prices	Confidence intervals by delivery month	Spread of P95-mean may be greater than spread of mean-P5, depending on amount of mean reversion present for a particular market.
	Mean reversion of prices	Simulated price paths	Simulated price paths reasonably match historically observed mean reversion behavior.
	Correlation of related commodities	Forward implied heat rate confidence intervals	Simulated forward implied heat rates match expected seasonal trends, and are consistent with historical trends.
	Correlation of related commodities	Forward implied heat rate confidence intervals	In Typical markets, the on peak heat rate is greater than or equal to the off peak heat rate for delivery months.
	Correlation of related commodities	Forward implied heat rate confidence intervals	Simulated heat rate confidence intervals display seasonal fluctuations, according to market expectation.
	Correlation of related commodities	Price paths across delivery dates	Natural gas and power demonstrate correlated forward price paths across delivery dates.
	Contract volatility	Simulated monthly option values	Simulated option values reasonably match current market expectations.
	No arbitrage	Mean simulated forward price by delivery month	Mean simulated price equals current market expectation for each delivery month.

Simulation Module	Attribute	Information Used to Evaluate	Expectation
Spot Price	Seasonal spot price profile	Confidence intervals for monthly average spot prices	Simulated confidence intervals reasonably match historical confidence intervals.
	Hourly spot price profile	Confidence intervals for hourly average spot prices	Simulated confidence intervals reasonably match historical confidence intervals.
	Seasonal change in hourly spot price profile	Confidence intervals for hourly average spot prices by month	Simulated confidence intervals reasonably match historical confidence intervals.
	Time series pattern	Time series pattern in simulated spot prices	Simulated time series patterns reasonably match those of the historical record.
	Seasonal change in correlation of related commodities.	Simulated hourly heat rate confidence intervals by month.	Simulated confidence intervals reasonably match historical confidence intervals.
	Relationship of spot electricity prices with load	Spot price-load scatterplot	Simulated relationship between spot electricity prices and load reasonably matches that of the historical record.
	Relationship of spot gas prices with weather (where appropriate)	Spot price-load scatterplot	Simulated relationship between spot gas prices and temperature reasonably matches that of the historical record. This test may not be appropriate in every markets.
	No arbitrage	Mean simulated spot price by delivery month	Min simulated spot price equals the mean simulated forward price of the same commodity for every month.
Wind	Generation profile	Confidence intervals for wind generation	Simulated confidence intervals reasonably match historical confidence intervals.
	Time series pattern	Time series pattern in simulated wind generation	Simulated time series patterns reasonably match those of the historical record.
	Correlation with weather and load	Simulated hourly wind generation	Correlations between hourly wind generation, weather, and load reasonably match those of the historical record.
Dispatch	Fixed cost	Optimized dispatch	Fixed cost is reported as specified.
	Startup cost	Optimized dispatch	Startup cost agrees with specified input and number of unit starts.
	Startup time	Optimized dispatch	Unit generates zero MWh at startup for specified number of hours.
	Min up time	Optimized dispatch	Unit persists in ON state for specified number of hours, except for occurrence of forced outages
	Shutdown time	Optimized dispatch	Unit generates zero generation at shutdown for specified number of hours
	Min down time	Optimized dispatch	Unit persists in OFF state for specified number of hours after shutdown
	Ramp up rate	Optimized dispatch	Unit generation level does not increase at rate greater than specified.
	Ramp down rate	Optimized dispatch	Unit generation level does not decrease at rate less than specified.

Simulation Module	Attribute	Information Used to Evaluate	Expectation
	Startup Fuel Type / Startup MMBtu	Optimized dispatch	Unit consumes specified MMBtu of specified fuel at startup
	Startup Fuel Delivery Cost	Optimized dispatch	Cost of specified startup fuel reflects specified delivery cost
	Dispatch type: "Economic Dispatch"	Optimized dispatch	Unit dispatch behavior is optimized to maximize total net revenue in response to market prices, subject to outages and operational constraints.
	Dispatch type: "Economic Load Limited Dispatch"	Optimized dispatch	Unit dispatch behavior is optimized to maximize net revenues the same as for "Economic Dispatch"-type units, with the additional requirement that the unit may not generate power that would cause the collective generation of all the units in the portfolio to exceed portfolio load
	Dispatch type: "Load Dispatch"	Optimized dispatch	Unit dispatch behavior is optimized to maximize net revenue with the additional requirement that all such units in the portfolio must collectively serve portfolio load exactly, less total generation accounted for by non-'Load Dispatch' type units.
	Must run	Optimized dispatch	Unit generation level must meet or exceed specified value except during forced or scheduled outages or Linked-Resource requirements, or during startup/shutdown in response to outages or Linked Resource requirements.
	Max Number Starts	Optimized dispatch	Unit starts may not exceed specified value, as scaled to the duration of the date period.
	Max Continuous Runtime	Optimized dispatch	Unit may never persist in the ON state continuously for longer than the specified value.
	Max Generation	Optimized dispatch	Unit's total generation may not exceed the specified value, as scaled to the duration of the date period.
	Max SO2 Emissions	Optimized dispatch	Unit's total emission of SO2 may not exceed the specified value, as scaled to the duration of the date period.
	Max NOx Emissions	Optimized dispatch	Unit's total emission of NOX may not exceed the specified value, as scaled to the duration of the date period.
	Max CO2 Emissions	Optimized dispatch	Unit's total emission of CO2 may not exceed the specified value, as scaled to the duration of the date period.
	Expected forced outage rate	Optimized dispatch	The total duration of forced outages for the unit, collectively across all simulations, as a percentage of the total duration of the date period, must equal the specified value.
	Outage mean	Optimized dispatch	The mean duration of all the unit's forced outages, across all simulations, must equal the specified value

Simulation Module	Attribute	Information Used to Evaluate	Expectation
	Outage variance	Optimized dispatch	The standard deviation in the duration of the unit's forced outages, across all simulations, must equal the specified value
	Probability of a one-day outage	Optimized dispatch	The frequency of 1-day outages as a percentage of all outages must equal the specified value
	Min outage duration	Optimized dispatch	No forced outage may have a duration less than the specified value
	Max outage duration	Optimized dispatch	No forced outage may have a duration greater than the specified value.
	Percent outage	Optimized dispatch	The generation output-level of the unit may not exceed the % reduction specified during the scheduled outage.
	Fuel switching	Optimized dispatch	The unit may not change fuels in a number of hours less than the value specified.
	Fuel cost multiplier	Optimized dispatch	Unit dispatch behavior and reported fuel costs must reflect the specified value.
	Fuel delivery cost	Optimized dispatch	Unit dispatch behavior and reported fuel costs must reflect the specified value.
	Variable operations & maintenance cost	Optimized dispatch	Unit dispatch behavior and operational costs must reflect the specified value.
	Costless adder	Optimized dispatch	Unit dispatch behavior must reflect the specified value but this value must not show up in reported operational costs.
	SO2 emission rate	Optimized dispatch	Unit generation and SO2 emissions must be consistent with the specified value.
	NOx emission rate	Optimized dispatch	Unit generation and NOX emissions must be consistent with the specified value.
	CO2 emission rate	Optimized dispatch	Unit generation and CO2 emissions must be consistent with the specified value.
	Min capacity	Optimized dispatch	The unit must generate at or above the specified level when ON unless as required during startup time, shutdown time, or ramping up/down to/from the OFF state.
	Max capacity	Optimized dispatch	The unit must never generate more than the specified value under any circumstances.
	Power cost	Optimized dispatch	The unit's operational costs must reflect the specified value
	Heat rate curve	Optimized dispatch	Unit dispatch behavior and operational costs must reflect the specified heat rate curve.

Remainder of page intentionally left blank.

DRAFT

APPENDIX E

HOSTING ENVIRONMENT

Ascend Analytics, LLC operates within a high-availability and fault-tolerant environment, providing access both internally and externally to a wide array of applications. The high-availability requirement provided to external systems requires a strict security policy to ensure the integrity of data and systems within the infrastructure.

One (1) TB of total storage across environments will be allocated to Licensee. Additional storage can be purchased at then current rates. This is **\$2,000** for 1 Terabyte for “fast storage” and **\$500** for “slow storage” per contract year at the time of SLA execution. Typically, “slow storage” is sufficient for resource planning type studies, whereas time-critical studies for market trading activities require “fast” storage.

Ascend Analytics periodically updates its network requirements for hosted clients and reserves the right to maintain the Software using comparable or better computing resources, network infrastructure, user access tools, or other technical items.

SYSTEM OVERVIEW

The system architecture consists of three primary components:

- 1) Analytic computing workstations performs all the data analysis and manipulation running compiled code and SAS code
 - 2) OLAP Cube server running MSSQL Analysis Services supported by RAID array storage system
 - 3) Oracle database for storage of all input and output data supported by RAID array storage system
-

ANALYTIC WORKSTATION

Ascend will provide and support at least **two** analytic computing workstations. SCP may benefit from additional computing capacity in a pooled computing environment with other Ascend clients if bandwidth is available. An additional dedicated workstation may be requested for an additional **\$10,000** per year for added processing power and speed via a contract amendment. Requests to add a computer may take up to six weeks for implementation.

Workstation(s) will be similar to these specifications/configurations:

DELL R610 1U with Windows 7 64 bit

Processor - 2 X Intel® Xeon® X5690, 3.46Ghz, 12M Cache, Turbo, HT, 1333MHz Max Mem
Memory - 96GB Memory (12x4GB), 1333MHz Dual Ranked RDIMMs for 2 Processors, Optimized
Hard Drive Configuration - RAID 1 for H700 for 2 disks, RAID 0 for 4 disks
Internal Controller - PERC H700 Integrated RAID Controller, 1GB Cache, x6
Hard Drives - 6 X 300GB 15K RPM Serial-Attach SCSI 6Gbps 2.5in Hotplug Hard Drive
Power Supply - High Output Power Supply, Redundant, 870W
Embedded Management - iDRAC6 Express
Network Adapter - Broadcom 5709 Dual Port 1GbE NIC w/TOE iSCSI, PCIe-4
Rails - Sliding Ready Rails Without Cable Management Arm
Bezel - Bezel

DATABASE HARDWARE REQUIRMENTS (SHARED RESOURCES)

- **Oracle Server** - 2 x Dell R610/710 Servers
- **Oracle Storage** - 1 x Dell MD3200 dual controller (4 dual port HBA's for servers) with #x600GB 15K SAS HDD's in RAID 10
- **PowerCube Reporting Server** - 2 x Dell R710 Server
- **PowerCube Storage** - 1 x Dell MD 3200 dual controller (4 dual port HBA's for servers) with #x600GB 15K SAS HDD's in RAID 10

OLAP CUBE HARDWARE (SHARED HARDWARE RESOURCE)

OLAP Cube hardware will be similar to these specifications/configurations:

DELL R710 (X2) for OLAP Cube Reporting Server

Processor - 2 X Intel® Xeon® X5660, 2.80Ghz, 12M Cache, Turbo, HT, 1333MHz Max Mem
Memory - 24GB Memory (6x4GB), 1333MHz Dual Ranked RDIMMs for 2 Processors, Optimized
Hard Drive Configuration - RAID 1 for H700
Internal Controller - PERC H700 Integrated RAID Controller, 512MB Cache, x6
Hard Drives - 2 X 300GB 15K RPM Serial-Attach SCSI 6Gbps 3.5in Hotplug Hard Drive
Power Supply - High Output Power Supply, Redundant, 870W
Embedded Management - iDRAC6 Express
Network Adapter - Broadcom 5709 Dual Port 1GbE NIC w/TOE iSCSI, PCIe-4
Rails - Sliding Ready Rails Without Cable Management Arm
Bezel - Bezel
Internal Optical Drive DVD+/-RW, SATA, Internal

DELL MD3200 for OLAP Cube Storage

PowerVault MD3200 - PV MD3200, RKMNT, SAS, 12 Bay, Dual Controller
Server Connectivity - 4 X 6Gb SAS HBA, Dual Port (2 for each server)
Bezel - MOD, BZL, ASSY, MD3200
Hard Drives - 6 X 600GB SAS 6GB, 15K, 3.5 HDD
Rails - Rapid Rails for Dell Rack
Power Cords - 2x C13 to C14, PDU Style, 12 AMP, 6.5 Ft., Power Cords for Redundant PSUs
Cables - 4 x 6Gb SAS Cable, 1M

ORACLE RAC (SHARED HARDWARE RESOURCE)

Ascend will follow best practices and recommended configurations from Oracle regarding their Real Application Clustered systems to provide the best overall system configuration, balancing performance, stability, and scalability for your Ascend software.

RAC hardware will be similar to these specifications/configurations:

DELL R610/R710 (X2) for Oracle 11g R2 RAC

Processor - 2 X Intel® Xeon® X5680, 3.33Ghz, 12M Cache, Turbo, HT, 1333MHz Max Mem
Memory - 96GB Memory (6x16GB), 1333MHz Dual Ranked RDIMMs for 2 Processors, Optimized
Hard Drive Configuration - RAID 1 for H700

Internal Controller - PERC H700 Integrated RAID Controller, 512MB Cache, x6
Hard Drives - 2 X 300GB 15K RPM Serial-Attach SCSI 6Gbps 3.5in Hotplug Hard Drive
Power Supply - High Output Power Supply, Redundant, 870W
Embedded Management - iDRAC6 Express
Network Adapter - Broadcom 5709 Dual Port 1GbE NIC w/TOE iSCSI, PCIe-4
Rails - Sliding Ready Rails Without Cable Management Arm
Bezel - Bezel
Internal Optical Drive DVD+/-RW, SATA, Internal

DELL MD3200 for Oracle

PowerVault MD3200 - PV MD3200, RKMNT, SAS, 12 Bay, Dual Controller
Server Connectivity - 4 X 6Gb SAS HBA, Dual Port (2 for each server)
Bezel - MOD, BZL, ASSY, MD3200
Hard Drives - 12 X 600GB SAS 6GB, 15K, 3.5 HDD
Rails - Rapid Rails for Dell Rack
Power Cords - 2x C13 to C14, PDU Style, 12 AMP, 6.5 Ft., Power Cords for Redundant PSUs
Cables - 4 x 6Gb SAS Cable, 1M

EXTERNAL ACCESS/CONNECTIVITY

Ascend Analytics has a hardware redundant internet connection through Sonicwall NSA3500 devices in the Bozeman Datacenter and Sonicwall devices at branch offices. There are 2 primary methods allowing access to internal resources when users are in sites not physically connected to an Ascend Analytics site.

1. VPN Tunnel

- Preferred connectivity is through a site-to-site VPN Tunnel. The tunnel is created with predetermined services available on both sides, allowing for a seamless interface for users and applications.

2. Microsoft Unified Access Gateway

- Unified Access Gateway is Microsoft's implementation of a web portal to run various services and applications within the Ascend network. Typically, the allowed resources will include the PowerSim/CurveDeveloper applications, Internet Explorer, and the Remote Desktop Connection for direct access to internal servers.

Remainder of page intentionally left blank.

APPENDIX F

HOSTING SERVICES & IT RESOURCES

Definitions: For the purposes of this Appendix F, the following terms shall have the meaning described below. Terms not otherwise defined in this Appendix F shall have the meaning as defined in the SLA.

“Computing Resources” are the computers being used to deliver Software to Licensee under this SLA, that correspond to the job processing performance and hardware specifications listed in the scoping document.

“Hosting Environment” shall mean the Hosting Facility (together with suitable telecommunications connectivity, power and HVAC – Heating, Ventilation and Air Conditioning), telecommunications and network monitoring, the Computing Resources, and other physical infrastructure used by Licensor to provide the Hosting Services.

“Hosting Facility” is located the State of Montana, or other suitable facility selected by Licensor in its sole discretion.

“Hosting Services” shall mean the following services to be provided after Implementation Completion until the Termination Date:

- a) Deploy, host and maintain the Software in the Hosted Environment;
- b) Provide Licensee with 24 hour, 7 days per week access to the Software through the Hosted Environment;
- c) Maintain the Computing Resources in a manner designed to ensure proper functioning and availability of the Software;
- d) Maintain the Hosting Environment in accordance with generally accepted industry practices, methods and techniques;
- e) Monitor the Hosting Environment utilizing a monitoring system that will provide notification of any critical problems with the Hosting Environment;
- f) Provide internet bandwidth for connection to the Computing Resources through a high-availability commercial provider, with a 99.99% core network reliability;
- g) Provide Licensee with no less than 48 hours advance notice of discretionary maintenance that could impact availability of the Software;
- h) Licensor shall daily back-up Licensee input and analytic study settings, and Licensee Data, in the form of meta-data as off-site back-up;
- i) Repair or replace any failed Computing Resource at no cost to Licensee.
- j) The Software output and PowerCube will be backwards compatible with Microsoft Office 2010, unless prior consent is granted by the Licensee.

Notwithstanding any contrary provision in this Appendix and SLA, Hosting Services shall not include any Software Implementation Services and Support Services. In the event of a conflict, the Services at issue shall be deemed Implementation or Support Services and not Hosting Services.

Performance Standard for Hosting Services

Licensor shall use commercially reasonable efforts to provide the Hosting Services on a twenty-four (24) hours a day, seven (7) days a week basis after Implementation Completion until the Termination Date. Notwithstanding any contrary provision in this SLA, Licensor shall have no obligation to provide Hosting Services to the extent prevented or impaired by any of the following (collectively, “**Downtime Exceptions**”):

- a) Actions of the Licensee or others authorized by Licensee to use the Software or Hosting Service under the SLA;
- b) Periodic maintenance procedures or repairs that Licensor or any third-party network or power provider may undertake from time to time;
- c) Any force majeure or other causes beyond the control of Licensor or that are not reasonably foreseeable by Licensor, including, without limitation, interruption or failure of telecommunication or digital transmission links, hostile network attacks, network congestion, power failure or other failure of any network internet infrastructure now owned or managed by Licensor, denial of service attack, hacker activity, or other malicious event or code targeted against Licensor or Licensee by any third party; or
- d) Periods in which Licensee has scheduled upgrades or downgrades to the Computing Resources.

Hosting Environment Maintenance Standards

Licensor shall maintain the Hosting Environment in accordance with current generally accepted industry practices, methods and techniques. Licensor will install and maintain versions of software on the Computing Resources. Licensor will install and maintain Oracle, SAS, and MS Office software onto the hosted Computing Resources (including any upgrades or updates). Licensor shall be responsible for Software maintenance and updates to virus protection, system files, operating systems, the Software, Oracle databases, SAS, and MS Office, subject to the provisions of SLA Sections 3.3, 4.3 and 4.4. Notwithstanding any contrary provision in this SLA, license costs for SAS (including without limitation costs for any annual maintenance and subscription, upgrades or updates thereof) will be borne solely by Licensee, whether procured independently by Licensee or through Licensor.

Hosting Fees

The annual Hosting Fee is set forth in Section 4 of this SLA.

Limited Designated Users

Licensee understands that Hosting Fees are based on a specific number of Pre-Designated Users, and that any Additional Users are subject to User Fees. Licensee agrees to furnish Licensor with information on each Designated User required under Section 4.4 of the SLA and to regularly maintain and update this information.

No Unlawful Use

Licensee shall not use Hosting equipment, Services, or resources for the transmission of spam (unsolicited commercial messages or communications in any form) or for the transmission of material in violation of applicable laws or regulations. This includes, but is not limited to, unauthorized transmission of copyrighted material, material protected by trade secret, or material that is otherwise deemed to be proprietary.

Security Representation

Licensor represents that the Hosting Environment, the Hosting Services and security practices used by Licensor shall meet or exceed generally accepted trade practice in the industry to appropriately safeguard the Hosting Environment, Software and Licensee's data against unauthorized access and/or interference by third parties, intrusion, theft, destruction, loss or alteration. Licensor represents that its underlying operating system and network security controls meet or exceed generally accepted trade practice in the industry to ensure the confidentiality and integrity of the Software and Licensee's data.

Licensor will maintain appropriate administrative, physical, and technical safeguards for protection of the security, confidentiality and integrity of Licensee's data. Licensor will not (a) modify Licensee's data, (b) disclose Licensee's data except after written notice to Licensee as compelled by law or as expressly permitted in writing by Licensee, or (c) access Licensee's data except to provide the services or prevent or address service of

technical problems, or at the Licensee's request in connection with Licensee's support matters. Licensor's obligation under this paragraph shall survive the termination of this SLA.

In the event that either Party determines that a security threat has occurred or is believed to have occurred, and/or that the Hosting Environment or Licensee's data is disabled, lost, corrupted, destroyed, or otherwise compromised (an "Incident"), said Party shall immediately notify the other Party of the Incident, including, in reasonable detail, the potential impact on Licensee of the Incident and the corrective action taken or to be taken by Licensor. Licensee understands that it is solely responsible for notifying Licensor in writing of Licensee staff or staff changes that impact security and user access.

Site Visits

Licensor shall permit any of Licensee's Designated Users to visit the Hosting Facility on reasonable prior notice and subject to Licensee's compliance with Licensor security procedures. In addition, if the nature and scope of a visit requires the participation of Licensor personnel outside of the normal parameters included with a site visit, Licensee shall pay time-and-materials for the time spent by Licensor personnel in connection with the visit.

Disaster Recovery

In the event of a catastrophic event that requires disaster recovery, Licensor shall work in cooperation with the Licensee to expeditiously establish a new computing environment to operate the Software. Licensor will make all reasonable efforts to restore basic Licensee data with limited Software functionality within thirty (30) days and then continue to work to restore full Software functionality within sixty (60) days. Licensee understands that physical hardware availability in the event of a catastrophic event may be constrained and this will limit Licensor's ability to set up a new Hosting Environment within a specific time period.

Remainder of page intentionally left blank.

Page intentionally left blank for double-sided printing



Staff Report - Item 06

To: Sonoma Clean Power Authority Community Advisory Committee

From: Neal Reardon, Director of Regulatory Affairs
Geof Syphers, Chief Executive Officer

Issue: Receive Legislative and Regulatory Updates and Provide Feedback as Appropriate

Date: July 15, 2021

Requested Action:

Receive Legislative and Regulatory Updates and provide feedback as appropriate.

Regulatory Update:

Power Charge Indifference Adjustment ("PCIA") Lump Sum Prepayment

SCP staff continue to advocate for the ability of CCAs to make a lump sum PCIA payment in lieu of leaving their customer exposed to volatile fees. This certainty of costs would help protect customers from rate shock and support CCA staff in planning procurement, setting budgets, and implementing rates.

Following a workshop held on May 5th to discuss terms of equitable PCIA prepayment, CPUC staff directed the IOUs to file a supplemental advice letter revising their proposal. Staff made it clear that they do not support the IOU's initial proposal that CCAs be required to post two years' worth of PCIA charges as collateral to begin prepayment negotiations.

An additional workshop on this topic was held on June 9th. IOUs were directed to file supplemental Advice Letters with a more realistic proposal for the process by which they would evaluate PCIA prepayments. These are expected in mid-August.

Power Charge Indifference Adjustment Application for Rehearing

CalCCA submitted an Application for Rehearing of the CPUC Decision denying the right of CCA customers to have equitable access to resources they are charged for in utility portfolios. This is now with the CPUC for review. If the CPUC does not elect to re-evaluate their Decision on PCIA allocations, CalCCA will have the right to bring this issue to the Court of Appeals. Historically, neither of these avenues have resulted in reversals of CPUC Decisions. However, this demonstrates the importance of equitable treatment of customers and is consistent with our advocacy on SB 612.

PG&E Energy Resource Recovery Account "ERRA" Application

On June 1, PG&E filed their annual ERRA Forecast Application. This is the single largest procedural vehicle IOUs use to propose costs which they will recoup from ratepayers in future years. Most significantly for SCP, this Application proposes the Power Charge Indifference Adjustment "PCIA" fee assessed on our customers, as well as the generation rate that PG&E will charge their customers. Our ability to offer competitive rates is dominated by these two data points: if PG&E charges our customers a higher PCIA, we reduce our generation rates to help offset that bill increase; if PG&E charges their customers a lower generation rate, we also reduce our generation rates to remain competitive. In addition to filing a protest of this Application, SCP staff are refuting PG&E's claim that our independent consultant be disallowed from accessing confidential data. The next significant update will come in November, when PG&E files an updated Application incorporating five additional months of actual expenses and revenues.

Western Community Energy "WCE" Files Notice of Deregistration

As discussed at the previous Board Meeting, WCE filed for Chapter 9 Bankruptcy protection in late May. Following that, on June 10 the WCE Board of Directors approved a resolution to file a Notice of Deregistration with the CPUC. WCE customers will be transferred back to Southern California Edison over a two-week transition period.

A press release is available here: <https://westerncommunityenergy.com/press-release-wce-files-for-deregistration>

CalCCA Exploring Joint Action to Intervene in all of PG&E's Rate Cases

With the recent notice from PG&E requesting major increases in rates over the next few years, and following a period where PG&E's rates have escalated an average of 7% each of the past several years, Northern California members of CalCCA are

exploring creating a joint team to strongly intervene on behalf of ratepayers in all of PG&E's important rate cases. If this goes forward, it would mean building CalCCA's technical, regulatory and legal team to engage in PG&E's annual ERRA and quadrennial GRC cases to advocate for fair rates, equitable investments, and to find waste and inefficiencies. Staff will report out more on this topic and CalCCA works to development the proposal.

Legislative Update:

The Capitol building has returned to mandatory masking and stricter limitations on numbers of people after at least four people got COVID-19 in one week, so in-person meetings and hearings have gotten more difficult.

CalCCA's Ratepayer Equity bill, SB 612 (Portantino) was effectively killed by Assembly Member Chris Holden in his role as Chair of the Assembly Energy and Utilities Committee. He decided not to agendize the bill for a vote, so the Author was unable to make his case for the bill and no one was allowed to vote up or down. CalCCA continues to fight to get the bill a vote this month, but it is getting quite late, so the prospects for the bill are slim.

In positive news, President Biden enacted a strong set of prohibitions on solar equipment manufactured by five firms in China that are known to use slave labor by the indigenous Uighur population. The ban is not expected to affect any of SCP's projects, but staff view this as an important policy nonetheless by sending a signal that slavery or forced labor of any kind is not acceptable.

Attachments:

CalCCA Comment Letter on Clean Energy Investments Infrastructure Package

July 8, 2021

The Honorable Dianne Feinstein
United States Senator
331 Hart Senate Office Building
Washington, DC 20510

The Honorable Alex Padilla
United States Senator
112 Hart Senate Office Building
Washington, DC 20510

Re: Comments on Clean Energy Investments in Infrastructure Package

Dear Senators Feinstein and Padilla:

The Federal government is a key partner in advancing clean energy, and we are heartened to see a renewed focus on tackling climate change. On behalf of Central Coast Community Energy, Clean Power Alliance of Southern California, Marin Clean Energy, Silicon Valley Clean Energy, San Diego Community Power, and Sonoma Clean Power, we write to provide comments on the CLEAN Future Act and future Federal infrastructure legislation.

Inclusion of CCAs as Eligible Entities for Funding

Community Choice Aggregators (CCAs) are load serving entities that play an increasing role in advancing decarbonization. CCAs are public agencies formed by local communities with the mission to provide clean electricity and advance decarbonization and electrification. In California, CCAs serve more than 200 communities and more than 11 million customers. Many CCAs invest in decarbonization programs locally and regionally ranging from electric vehicle charging station installations in multi-family and small business applications to rebates for solar plus storage installations. Additional Federal funds can help us increase the reach of existing programs and create new ones. The CLEAN Future Act has a few exciting opportunities for grant programs, but unfortunately does not explicitly call out CCAs as an eligible entity like it does for investor owned and municipal utilities. Attachment A contains redline amendments to add CCAs as an eligible applicant for these programs.

Investment Tax Credits for Stand-alone Storage

Stand-alone storage technology is critical to our ability to store renewable energy and get to 24/7 clean energy. Legislation such as S. 1298 (Wyden), H.R. 848 (Thompson), and H.R. 1684 (Doyle)/S. 627 (Martin) would help provide tax credit support to develop and strengthen this technology.

Qualified Infrastructure Bonds for State and Local Governments

Our agencies support qualified infrastructure bonds that spur clean energy investments and technology. For example, American Infrastructure Bonds (AIBs) would be permanent ways for state and local governments to finance projects for which tax-exempt financing would otherwise be available. AIBs present an important opportunity to lower the cost of renewable electricity for millions of California consumers through prepayment transactions. Prepayment transactions allow tax-exempt electricity providers the ability to pay up-front for energy from solar, wind and other renewable resources and save 10% - 15% on energy costs. By lowering the cost of existing renewable energy, AIBs will free up resources to invest in new projects. AIBs would also reduce the cost of future projects, accelerating investment in the buildout of clean energy infrastructure, which will also create much-needed jobs. Currently, market conditions do not support the use of prepayment transactions using tax-exempt debt. Taxable AIBs would immediately make prepayment transactions possible.

Focus Limited Federal Funding on Hard to Serve Communities

We recognize that climate change is a big challenge and Federal funds are limited. The Federal government should focus its investments on the hardest-to-reach sectors and communities. For example, electric vehicle charger incentives should go to multi-family, affordable housing, and small business applications. We support the **CLEAN Future Act's focus on underserved communities for electric vehicle charger** deployment. For electric vehicle incentives, we support electric vehicle purchase incentives at the point of sale. Point of sale incentives immediately bring down the cost of the vehicle and make the vehicle more affordable particularly for lower-income people. On building decarbonization efforts, any new federal funds should concentrate on retrofitting existing homes. In California, many communities are taking proactive steps on decarbonizing new construction. This new construction remains a small portion of the overall building stock, and the larger challenge will be retrofitting existing buildings, especially those where vulnerable communities live.

Increase Flexibility in Permitting and Non-financial Support

In some areas, the Federal government can help with permitting and other non-financial support including permitting for clean energy infrastructure. With these efforts the federal government can help reduce costs for our customers and speed up the transition to a low carbon electricity grid without a new outlay of precious tax dollars.

Thank you for considering our comments. We look forward to continuing to work

closely with you as conversations in DC progress.

Sincerely,

Tom Habashi
CEO
Central Coast Community Energy

Girish Balachandran
CEO
Silicon Valley Clean Energy

Ted Bardacke
Executive Director
Clean Power Alliance of Southern
California

Bill Carnahan
Interim CEO
San Diego Community Power

Dawn Weisz
CEO
Marin Clean Energy

Geof Syphers
CEO
Sonoma Clean Power

cc: Congressional Delegation for Central Coast Community Energy, Clean Power Alliance of Southern California, Marin Clean Energy, Silicon Valley Clean Energy, San Diego Community Power, and Sonoma Clean Power

Attachment – CLEAN ACT Amendment Suggestions

The following are sections where the CLEAN Act could be amended to clarify that Community Choice Aggregators (CCAs) are eligible funding recipients.

Sec. 241. DISTRIBUTED ENERGY RESOURCES, which directs the Secretary of Energy to establish a program to provide loans to eligible entities to support deployment of distributed energy systems.

“(v) an electric utility, including—

- (I) a rural electric cooperative;
- (II) a community choice aggregator;
- (III) a municipally owned electric utility; and
- (IV) an investor-owned utility.”

Sec. 440B. ELECTRIC VEHICLE CHARGING EQUITY PROGRAM. Directs the Secretary of Energy to establish a program to increase the deployment and accessibility of electric vehicle charging infrastructure in underserved or disadvantaged communities.

“(e) ELIGIBLE ENTITIES.—

(1) IN GENERAL.—To be eligible for a grant or technical assistance under the EV Charging Equity Program, an entity shall be—

(A) an individual or household that is the owner of where a project will be carried out;

(B) a State, local, Tribal, or Territorial government, or an agency or department thereof;

(C) an electric utility, including—

- (i) a municipally owned electric utility;
- (ii) a community choice aggregator;
- (iii) a publicly owned electric utility;
- (iv) an investor-owned utility; and
- (v) a rural electric cooperative...”