



Peninsula Clean Energy Board of Directors Meeting

August 26, 2021

Agenda

- Call to Order / Roll Call
- Public Comment (for items not on the Agenda)
- Action to set the Agenda and Approve Consent Items 1-4, 6
 - Consent Public Comment



7. Chair Report (Discussion)

Regular Agenda



8. CEO Report (Discussion)

Regular Agenda

Today's Updates

- Staffing Updates
- Open Positions
- DER Update
- Power On Peninsula Update
- Regulatory Update
- Legislative Update
- Upcoming Meetings

Staffing Updates

- Nelly Wogberg started July 12 as Board Clerk/Executive Assistant to CEO/Office Manager
- Vanessa Shin started July 19 as Community Outreach Specialist, SMC



Open Positions

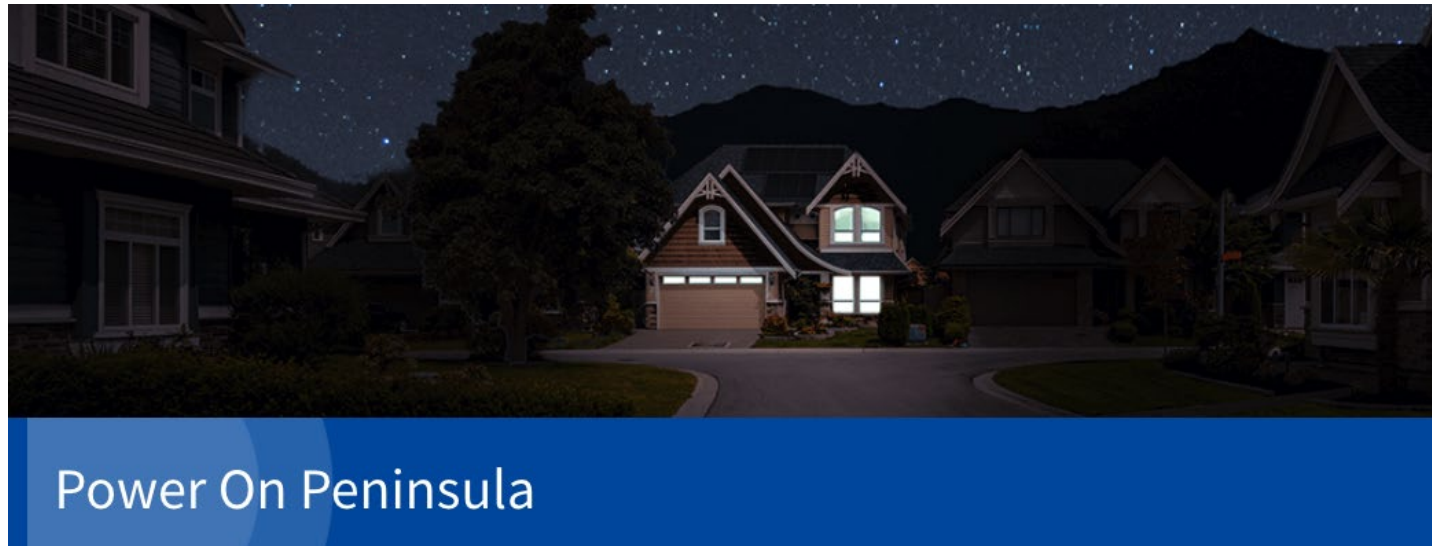
- Community Outreach Specialist, Los Banos
- Account Services Specialist/Analyst
- Buildings Program Manager – coming soon

DER Update

- Outreach to jurisdictions for the first round of DER / resilience installations:
 - County, Belmont, Brisbane, Colma, Half Moon Bay, Hillsborough, Millbrae, Pacifica, Redwood City, San Carlos, San Mateo Events Center
 - Engineering assessment complete and solar, solar+storage, or storage design created
 - Next steps:
 - Review draft financial analysis and aggregate procurement process with jurisdiction
 - Secure firm commitment from each jurisdiction to be included in aggregate procurement process

Power On Peninsula Update

- Hired Tonma, a woman and minority owned firm located in Oakland, to perform the Power On Peninsula Labor Compliance work per the agreement between PCE and Sunrun. Involves reviewing payroll, workforce development, local hiring and training.



Regulatory Update

- Disadvantaged Communities – Green Tariff (DAC-GT) – filing joint advice letter with PG&E to transfer Los Banos PG&E customers to PCE to coincide with our April 2022 enrollment in Los Banos.

Legislative Activity

- SB 612 (Portantino) – CalCCA bill on PCIA Working Group 3
 - June 30 hearing in Assembly Committee on Utilities and Energy – bill was pulled by Chair Holden
 - A number of possible options ...
- SB 68 (Becker) – Removing Barriers to Electrification
 - Hearing in Assembly Committee on Utilities and Energy on June 30
 - PCE provided testimony
 - Passed Assembly Appropriations Committee today
 - Next step – vote on Assembly Floor
- AB 843 (Aguiar-Curry) – BioMat
 - Passed Senate Appropriations Committee today
 - Next step – vote on Senate Floor

Upcoming Meetings

- Executive Committee:
 - September 13 at 10:00 am (Zoom)
- Citizens Advisory Committee:
 - Sept 9 at 6:30 p.m. (Zoom)
- Board of Directors:
 - Sept 25 at 9:00 a.m. (Annual Retreat – Zoom - remote only)





9. Citizens Advisory Committee Report (Discussion)

Regular Agenda

9. Citizens Advisory Committee Report (Discussion)

- Public Comment

10. Authorize Agreements for the Geysers Geothermal

Chelsea Keys, Senior Manager, Power Resources

Board of Directors

August 26, 2021

Agenda

- RFP for Long-term RE + Storage
- Project Overview
- Contract Structure
- Generation Profile
- Fit with Portfolio



Sonoma Project - Photo provided courtesy of Calpine Corporation & Geysers Power Company, LLC.

Recommendation

Approve Resolution Delegating Authority to Chief Executive Officer to Execute Agreements for Renewable Supply and Resource Adequacy with Geysers Power Company, LLC, and any necessary ancillary documents with a Resource Adequacy Term beginning January 1, 2022 and a Power Delivery Term beginning July 1, 2022, both ending June 30, 2032, in an amount not to exceed \$210 million (Action).

Long-term RE + Storage RFP

- Peninsula Clean Energy published an RFP soliciting contract proposals of ≥ 10 years in term length
- One of our Strategic IRP Targets is diversity in term lengths in our resource portfolio
- Staff received offers for solar + storage, wind, and offers for geothermal from three counterparties
- Procuring geothermal out of this RFP was a high priority to staff, because it serves as a baseload resource – providing around-the-clock generation, which will help to meet Peninsula Clean Energy's goal to provide renewable energy on a 24/7 basis

Geysers Geothermal – Project Overview

Counterparty / Owner	Geysers Power Company, LLC
Location	Sonoma and Lake Counties
Capacity	PCE Portion: 35 MW Total: 725 MW (13 projects)
Capacity Factor	100% - Baseload resource producing power around the clock
Annual Generation	306,600 MWh
Term	~10 years
Delivery Start	January 2022 – Resource Adequacy July 2022 – Energy
Labor	~300 employed full-time by The Geysers, local residents fill the majority of jobs ~150 full-time
Notes	World's single-largest geothermal resource developed for electric generation



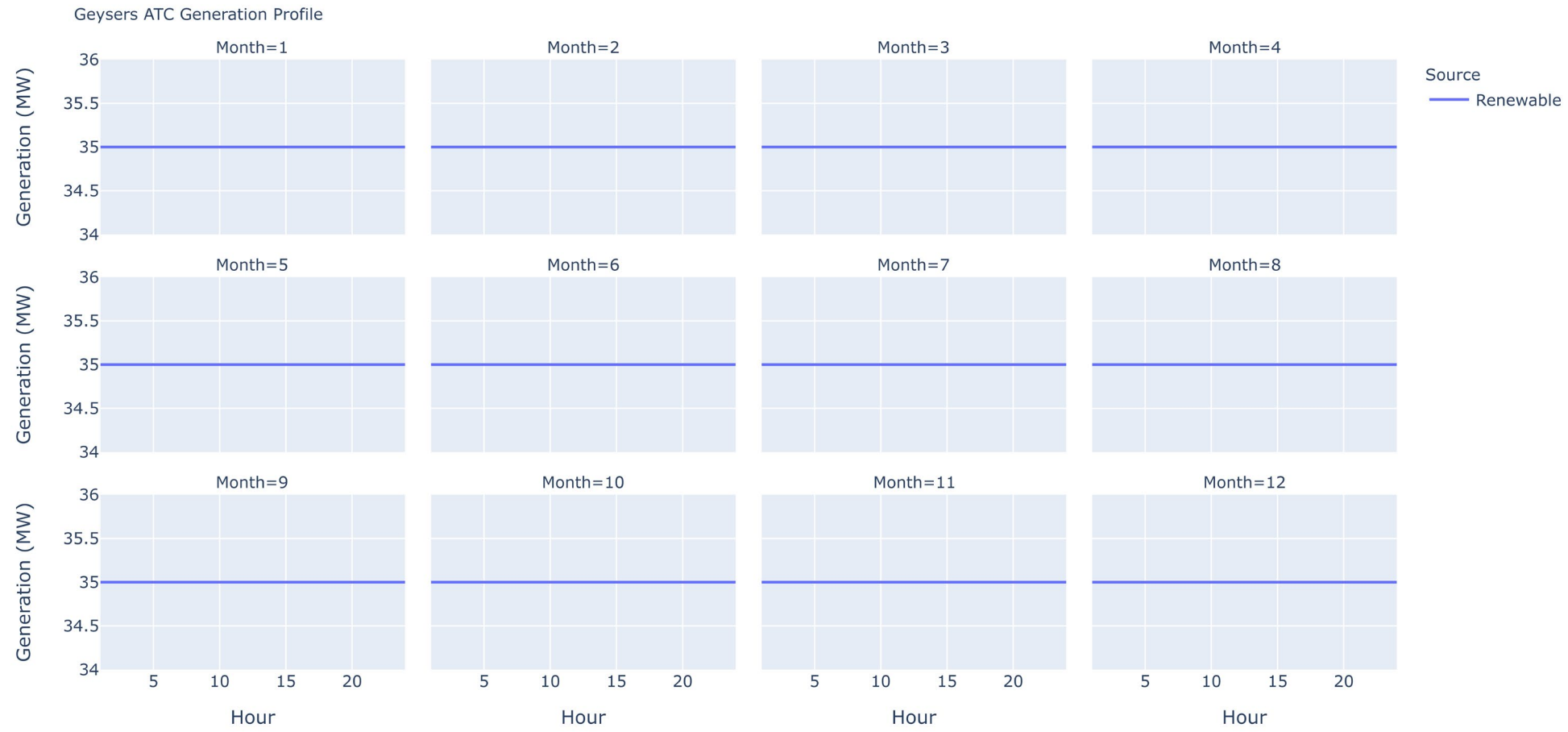
Located 70 mi north of San Francisco

Contract Structure

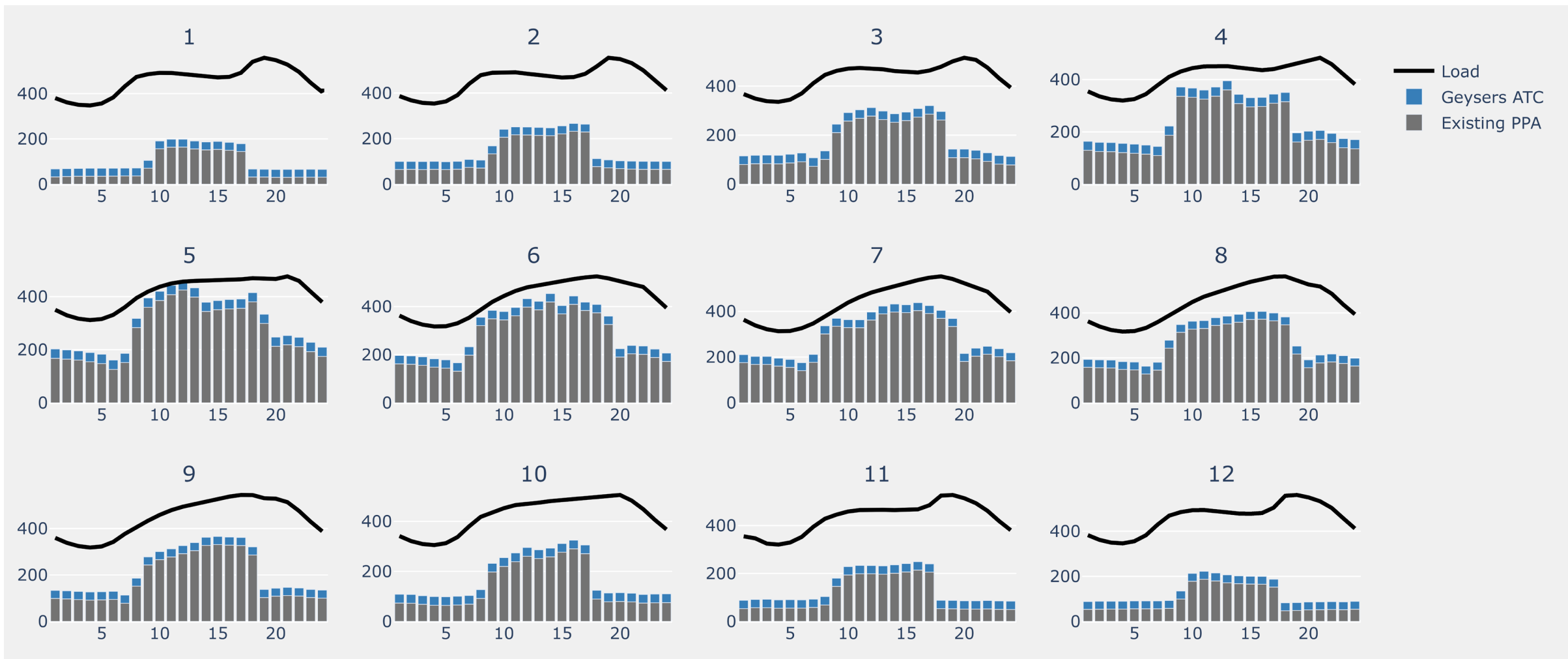
- Contracting with Geysers Power Company (GPC), an indirectly, wholly owned subsidiary of Calpine Corporation (Calpine), a long-term owner/operator of power generation
 - GPC will provide a performance security and Calpine will serve as the guarantor, providing a guarantee to Peninsula Clean Energy
- Two Contracts: (1) Energy paired with RECs; (2) Resource Adequacy
 - Fixed rates – Energy at \$/MWh, Capacity at \$/kW-month
- The contract for Energy and RECs is firm, meaning GPC would have to make a force majeure claim to excuse deliveries that fall short of their flat 35 MW 24x7 delivery obligation
- Calpine Energy Services will be the scheduling coordinator
- Power will be delivered to the CAISO NP-15 trading hub through Inter-SC Trades

Generation Profile

Geothermal is a baseload resource; will deliver a flat energy profile
Annual generation contributes to ~8% of Peninsula Clean Energy's load

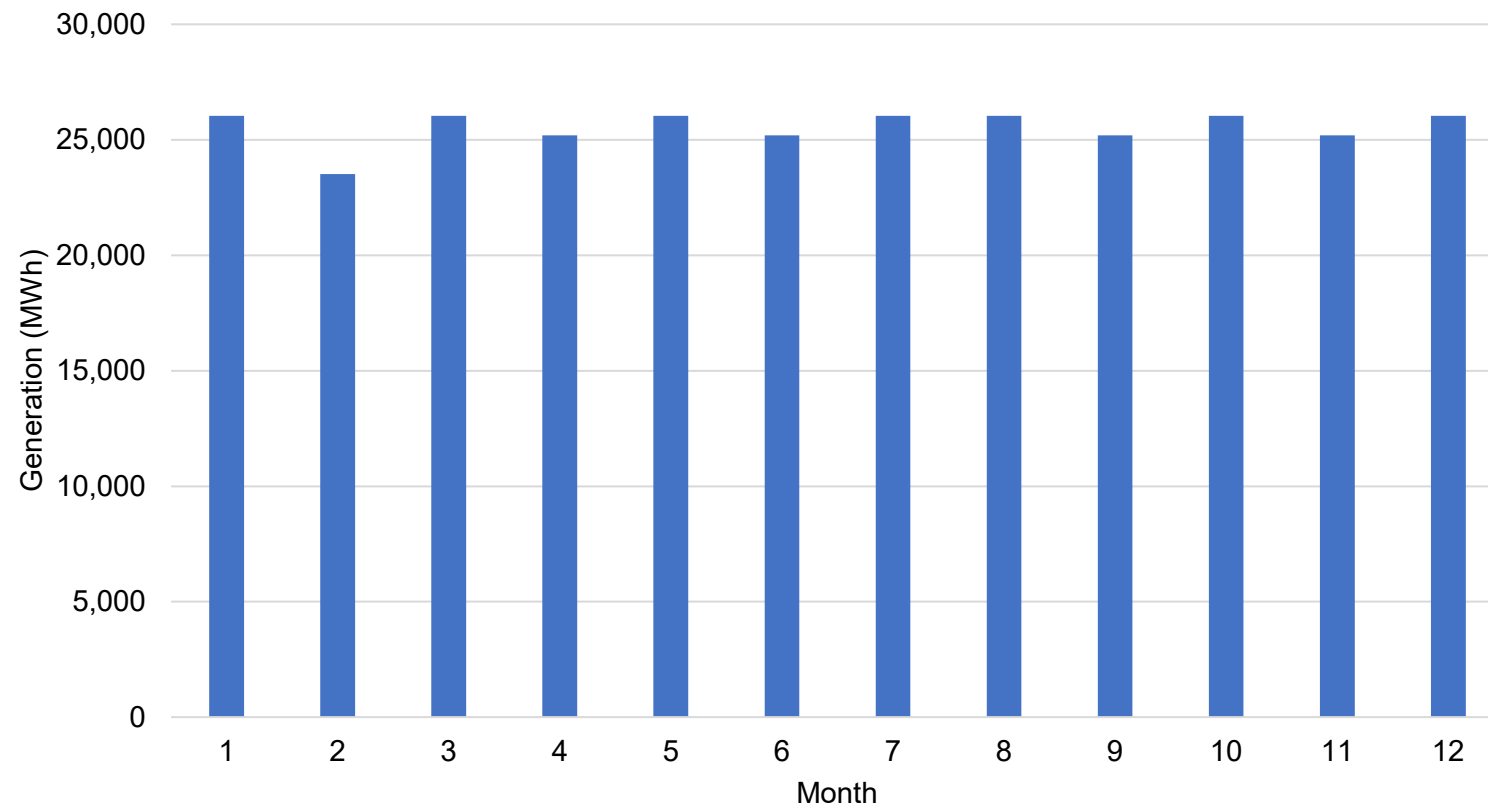


Month-Hour Shape - 2025



Year-Hour Shape

- Annual Generation – 306,600 MWh
- Capacity Factor – 100%



Fit with Strategic Plan

- Priority 1: Design a power portfolio that is sourced by 100% carbon free energy by 2025 that aligns supply and consumer demand on a 24x7 basis
- Power Resources Goal 1: Secure sufficient, low-cost, clean sources of electricity that achieve Peninsula Clean Energy's priorities while ensuring reliability and meeting regulatory mandates
 - Objective A Low Cost and Stable Power: Develop and implement power supply strategies to procure low-cost, reliable power.
 - Key Tactic 4: Secure sufficient, low-cost, clean sources of electricity that achieve Peninsula Clean Energy's priorities while ensuring reliability and meeting regulatory mandates
 - Objective B Clean Power: Design a diverse power portfolio that is 100% carbon-free by 2025 that aligns supply and consumer demand on a 24 x 7 basis.
 - Key Tactic 2: Secure additional contracts for renewable energy procurement in alignment with strategies and portfolio identified through IRP process and in compliance with risk management strategy



Socrates Project - Photo provided courtesy of Calpine Corporation & Geysers Power Company, LLC.

Recommendation

Approve resolution delegating authority to the Chief Executive Officer to execute a Power Purchase Confirmation Agreement (PPA) for Renewable Supply from the Voyager Wind project with Shell Energy North America (US), L.P., a Delaware limited partnership, and any necessary ancillary documents. Power Delivery Term: January 1, 2021 through December 31, 2028, in an amount not to exceed \$125,000,000 (Action).

10. Authorize Agreements for the Geysers Geothermal

- Public Comment



McCabe Project - Photo provided courtesy of Calpine Corporation & Geysers Power Company, LLC.

11. Expanded Pilot of School District Energy/Sustainability Dashboards

Board of Directors
August 26, 2021



Proposal to Expand Pilot

Request: Delegate Authority to CEO to finalize contract for an expanded pilot of the school district energy/sustainability dashboard project

- Background – Purpose and Benefits
- Status and findings from San Carlos School District pilot
- Expansion opportunities
- Proposed approach and budget

Schools as Learning Labs for Climate Solutions

- Integrates with other sustainability initiatives of the San Mateo County Office of Education
- Utility data can support student learning about
 - how facilities operations contribute to GHGs
 - how to develop solutions to reduce GHGs
- But utility data not accessible for students and faculty
- Solution: make facilities operations data (energy, water, waste, etc.) available in an easy-to-use, transparent manner

Benefits of the Dashboard

- Ideally benefits multiple stakeholders for learning, advocacy and action
- Administrators can analyze patterns/trends for intervention or to apply for recognition
- Teachers can use the dashboard in curricula
- Student groups can better focus their campus engagement efforts and evaluate the impact of their initiatives

San Carlos School District Pilot

- Initial pilot program implemented by San Mateo County Office of Education (SMCOE) with funding from Peninsula Clean Energy
- Initiated in 2019-2020 at a cost of \$35K
- SMCOE developed curriculum resources for various grade bands
- SMCOE coordinated the development of the template and worked with building analytics SaaS company, Lucid Design Group (now part of Acuity Brands)



San Carlos School District Sustainability Dashboard

SCSD & Sustainability

San Carlos School District has a history of teaching beyond traditional class subjects as part of supporting the development of the whole child - including sustainability and the environment.

This dashboard serves both as an instructional and management tool. It can be used by teachers for environmental and sustainability education, as well as by the facilities team to identify areas for improvement.

How does this Sustainability Dashboard work?

Use the buttons at the bottom of this page to navigate the chapters of this dashboard. Chapters include Energy, Water, Waste, Transportation, Individual School Information, and Sustainability Competition pages.



Energy

The **Energy** page contains natural gas and electricity usage information derived from the district's utility accounts with Pacific Gas & Energy (PG&E) and Peninsula Clean Energy (PCE). **Sustainable** energy means finding renewable and greenhouse gas emission-free sources for generation and reducing usage.



Water

The **Water** page contains water consumption information derived from the district's utility account with California Water Service (CalWater). **Sustainable** water management involves reducing usage, switching to recycled water when possible, and conserving stormwater.



Waste

The **Waste** page contains waste production and diversion information derived from the district's utility account with Recology. **Sustainable** waste management involves reducing production, using recyclable or compostable materials, and properly sorting.

Energy at Arroyo



Arroyo

Type	Elementary School
Address	1710 Arroyo Ave, San Carlos, CA 94070 94070-3809
Area	36000 ft ²
Average occupancy	313

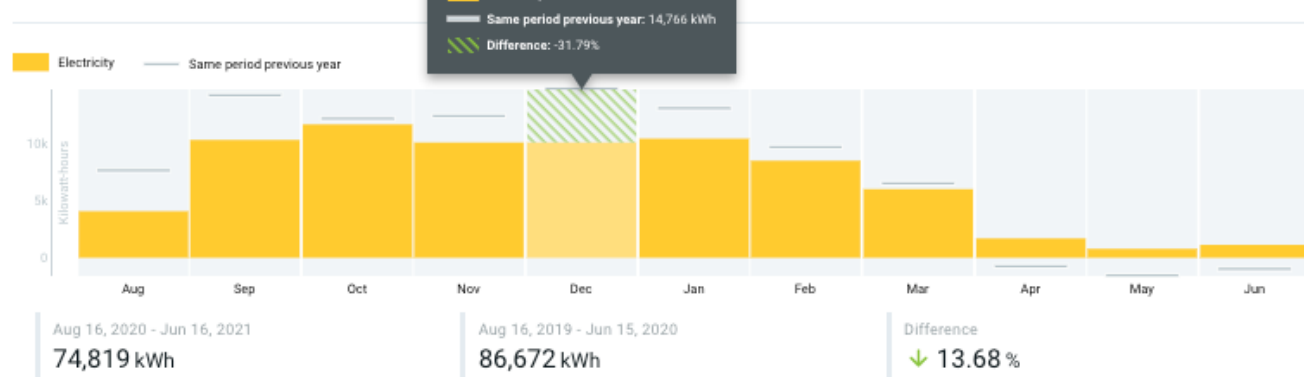
Arroyo Electricity Generation Emissions



1,973 kg CO₂

Feb 1 - Feb 29, 2020

Arroyo Electricity Use, 2018 vs 2019 / Aug



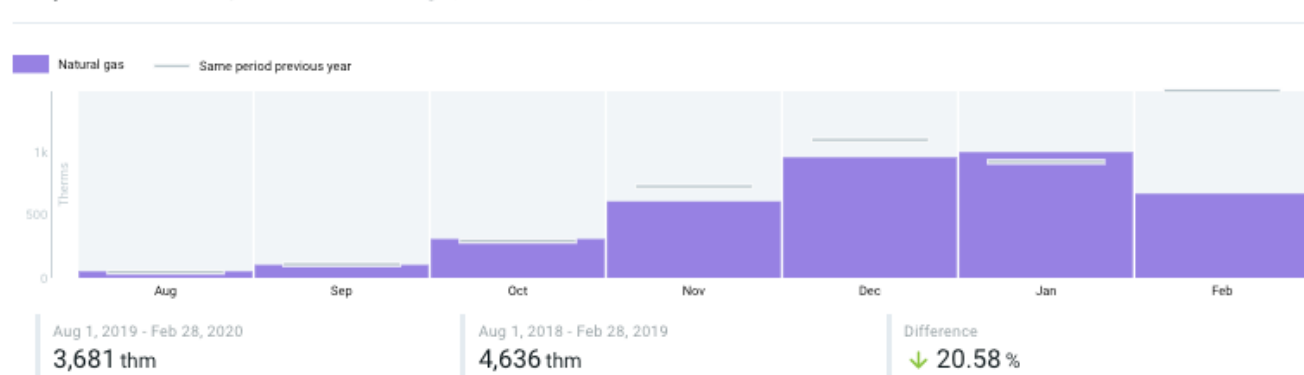
Arroyo Natural Gas Generation Emissions



3,559 kg CO₂

Feb 1 - Feb 29, 2020

Arroyo Natural Gas Use, 2018 vs 2019 / Aug 1, 2019 - Feb 29, 2020



Learning from SCSD Pilot

- Use of the dashboard:
 - Sustainability Competition across all 8 district schools was planned for April 2020 but abandoned due to COVID
 - Instead a Sustainability Classroom online was offered April-June 2020 for grades 3-8. Twenty students participated
- Success requires several commitments from the district:
 - A key point of contact at the district who has access to the needed data
 - Budget to fund the dashboard subscription fees after the first 2 years
 - Plan to use the dashboard (administration, curriculum, extra-curricular clubs)
- A dashboard template will streamline deployment to more sites
 - But the SCSD dashboard probably requires some refinement

Expanding the Pilot

- Two interested districts have completed a baseline buildings analysis
- Ravenswood
 - 9 teachers and 2 admins enrolled in fellowship programs
 - Have funding for future years
 - Have designated coordinator to manage the process for the district
 - Have used PG&E bills in classroom
- San Mateo High School District
 - Superintendent wants the dashboard to track facilities operations (spent lots on facilities)
 - Teachers have been trained
 - Implemented a model of sustainability champion (teacher or staff) at each site
 - Budgeted for SaaS contract in future years
 - Green clubs at the schools

Expanding the Pilot

- Two additional districts have also expressed interest
- Menlo Park City School District
 - Peninsula Clean Energy Board Chair, Rick DeGolia and Andra Yeghoian of SMCOE, met with Asst. Superintendent of Instruction
 - CBO, curriculum, and maintenance/facilities leaders are committed
 - Some teachers have participated in SMELC fellowship program
- Bayshore
 - Started on a dashboard project; paused for COVID
 - Several teachers have taken the clean energy fellowship program
 - Intends to budget for future years

Pilot Process

- Purpose of pilot → evaluate before possibly scaling county-wide
 - Full-scale rollout county wide could cost as much as \$800,000 to \$1,000,000
 - 2-year agreement with SMCOE for implement and evaluate expanded pilot
- SMCOE would provide
 - Technical Assistance Support – school district support for planning and implementation, including coordinating with dashboard vendor, training, etc.
 - Engagement of Climate Corps Fellow (10-month assignment) – work with district stakeholders on technical assessment, development and training
 - Fund administration – administration of dashboard implementation fees and first two years of subscription fees
 - Pilot evaluation – develop criteria to assess impact; evaluate results

Projected Costs of Expanded Pilot

	Year 1		Year 2
Climate Corps Fellow*	\$	41,000	\$ 43,000
Pilot Dashboards	\$	75,000	—
first 2 years subscription (3 districts at \$5-10K/year)	\$	30,000	\$ 30,000
Indirect expenses for SMCOE (14%)	\$	20,440	\$ 10,220
Total	\$	166,440	\$ 83,220
			\$ 249,660

* Cost of the Climate Corps Fellow ranges from \$28,000-\$41,000 depending on whether it is subsidized by AmeriCorps. Annual cost escalation is typically \$500-2,000.

Proposal to Expand Pilot

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- Background – Purpose and Benefits
- Status and findings from San Carlos School District pilot
- Expansion opportunities
- Proposed approach and budget

11. Approval of Expanded Pilot of School District Energy/Sustainability Dashboards (Action)

- Public Comment

12. Approve Building Electrification On-Bill Financing Program

Board of Directors
August 26, 2021



On-Bill Finance: Request

Program: Existing Building Electrification

Request: Approval of on-bill finance program

Budget

- Up to \$1,000,000 revolving capital
- Administrative cost
 - Startup ~\$50,000
 - Annual ≤\$10,000/year

Agenda

- Background
- Existing programs
- PCE's proposed on-bill finance (OBF) Program
- Customer Experience
- Timeline and Next steps
- Broader strategy on finance

Background

- Existing building electrification needs large upfront capital
- Rebates are helpful but not scalable
- Financing can reduce upfront cost barrier
 - Important option as volumes increase
- HMB and Menlo Park are working on existing building ordinances
 - Could trigger larger volume

Current finance options

Other Programs	Challenges
PG&E On-Bill Finance	Only offered to commercial properties
Property Assessed Clean Energy (PACE)	Transaction complexity – places lien on property High interest rates – 7%+ Complaints of detrimental consumer practices
CA Treasurer's Office Residential Energy Efficiency Loan Assistance Program (REEL)	Few institutions – 8 credit unions Conventional underwriting Low awareness and utilization

On-bill finance approach & benefits

Approach

- Typical loan but payments added to monthly utility bill

Benefits

Less complexity	Streamlined underwriting and payment
Widely adopted, low default rates	Median 0.08% for residential
Low/no interest rate	Attractive to customers
Widely applicable	Can accommodate many energy measures

Existing Programs

- SCP launched OBF March 2021
- SVCE has identified finance as top priority
- Widely used among utilities (2014 DOE study)

Sector	Number of participants	Lifetime Loan Volume (nominal \$)	n =	Average Size of Loan	Median value and range of default rates	n =
Residential	182,324	\$1.05B	20	\$5,787	0.08% (0 to 3%)	15
Non-residential	50,339	\$775M	7	\$15,400	0.9% (0.6 to 2.9%)	7
Total	232,663	\$1.83B	27 ⁶	\$7,867		22 ⁷

Sonoma Clean Power Program

- \$1M revolving capital fund
- Terms
 - \$10,000 maximum loans
 - Up to 10-year term, 0% interest, fixed monthly payments
 - Customer is homeowner
 - Customer may qualify for multiple loans
 - Customer must be in good standing (3 billing cycles), no other underwriting
 - SSN recorded for collections, if necessary
- Measures
 - Electrification (water heating, HVAC, panels, etc.), Efficiency, Batteries
 - Combined with equipment discounts and rebates
- Launched March 2021 (32 applications to-date, ave. loan: \$3,750)

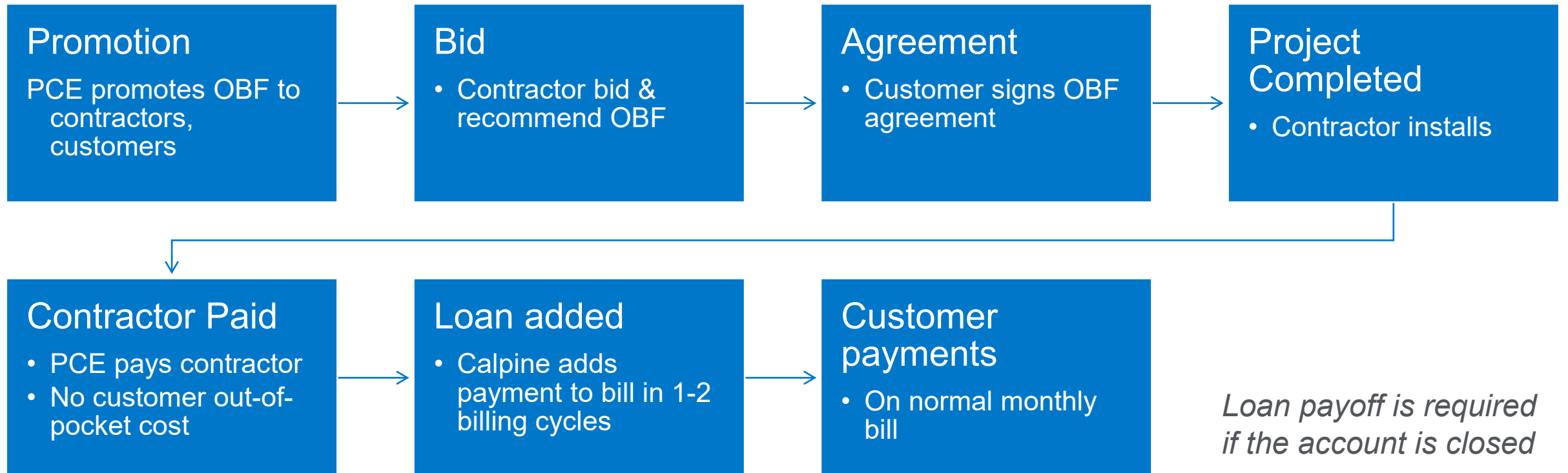
PCE's Proposed OBF Program

- \$1M PCE capital fund
- Up to \$10,000 per customer, 10-year max. loan term
- 0% interest
- Electrification & related measures (water & space heating, panels)
- Integrate with BayREN Home+ program
- Typical bill:
 - Water heater upfront cost: \$5,000 (\$2,500 after incentives)
 - \$2,500, 10-year loan term
 - \$20.83/month charge

Measures supported (draft)

- Heat pump water heater
- Heat pump space heating
- Induction stoves
- Heat pump dryers
- Associated panel upgrades
- Possibly complementary energy efficiency such as duct repair

Customer Experience



Bill Presentment

Details of Sonoma Clean Power Electric Generation Charges

06/11/2021 - 07/12/2021 (32 billing days)

Service For:

Service Agreement ID:

ESP Customer Number:

06/11/2021 – 07/12/2021

Rate Schedule: E-1

EverGreen	695.846200 kWh	@ \$0.02500	\$17.40
Generation - Total	695.846200 kWh	@ \$0.07962	55.40
Improvement Repayment 1 of 60			58.73
Net Charges			131.53
Energy Commission Surcharge			0.21

Total Sonoma Clean Power Electric Generation Charges **\$131.74**

Service Information

Total Usage 695.846200 kWh

For questions regarding charges on this page, please contact:

SONOMA CLEAN POWER
PO BOX 1030
SANTA ROSA CA 95402
1-855-202-2139
www.sonomacleanpower.org

Additional Messages

At Sonoma Clean Power, sustainable solutions

and deliver programs that positively impact the lives of our customers.

Our default electricity service is 50% renewable* and 97% carbon free. We partner with PG&E, who continues to deliver your electricity, and our shared customers receive one monthly bill from PG&E.

By providing you a choice of increased renewables that reduce greenhouse gas emissions, our customers help solve the climate crisis at the local level.

*Based on the official 2019 California Energy Commission Annual Power Content Label Calculation.

- SCP example
- Separate line on PCE portion of the bill
- Exact text to be determined

Prospective Timeline

- August 2021: Request Board approval
- Sept – Dec: Program development
- January 2022: Program launch

Longer Term Finance Strategy

A blue trapezoidal shape, wider at the top and narrower at the bottom, containing the white text 'OBF'.

OBF

On-Bill Finance: Request

Program: Existing Building Electrification

Request: Approval of on-bill finance program

Budget

- Up to \$1,000,000 revolving capital
- Administrative cost
 - Startup ~\$50,000
 - Annual \leq \$10,000/year, write-off of possible defaults

12. Approval of a Building Electrification On-Bill Financing Program (Action)

- Public Comment

13. Los Banos Rate Making Methodology

Board of Directors

August 26, 2021



Current PCE Process for Setting Rates

- Current Algorithm for San Mateo County
 - Calculate PCE Generation rates so that total costs for Generation results in a 5% discount from PG&E rates for almost all customers (see below)
 - $(\text{PG\&E Gen Rate} * 0.95) - \text{PCIA 2016 Vintage} - \text{FFS 2016 Vintage}$
= **Published PCE Generation Rate**

* A small number of customers have different PCIA rates than the territory standard

Current PCE Process for Setting Rates

- PCIA Vintage

- Territory Vintage year is set based on when CCA completes enrollment
- PCE completed its mass enrollment for San Mateo County during the 2016 Vintage year (Vintage years run from July 1-June 30), so we use the 2016 Vintage year figures for PCIA and FFS whenever we calculate new rates
- A small number of PCE customers (less than 500) have PCIA Vintages other than 2016.
 - Customers that opt-out and then re-enroll in a subsequent period have a later Vintage and end up realizing a different discount from the “standard” 5%
 - Because PCE only publishes and charges one set of rates that are calculated after crediting the value of the 2016 vintage, a customer’s actual realized discount can be higher or lower depending whether the applicable PCIA Vintage is higher or lower than the 2016 Vintage

Los Banos Enrollment

- Los Banos customers are scheduled to begin enrollment in April 2022
 - Majority of customers are planned to be enrolled in April
 - NEM enrollment is expected to be rolling through 2022 to align enrollment with NEM true-up for most customers
- Los Banos customers will have either a 2021 or 2022 PCIA Vintage
 - Vintage years run from July 1-June 30
 - Customers enrolled before June 30, 2022 will have a 2021 PCIA Vintage
 - Customers enrolled after July 1, 2022 will have a 2022 PCIA Vintage
 - Over 90% of customers will have a 2021 PCIA Vintage

2016 PCIA Vintage vs. 2021 PCIA Vintage

- Pre-2020 PCIA Vintages are currently subject to the PUBA adder through 2023
- Pre-2020 PCIA Vintage Charges are currently significantly HIGHER than new Vintages while the PUBA adder is in effect
- Applying the same methodology for both vintages will result in different PCE generation rates

Los Banos Rate Making Sub-Committee

- Evaluated options presented by staff
- Agreed with Staff recommendation that PCE utilize same methodology for both territories and develop rates based on the prevalent PCIA Vintage for customers in each territory

Los Banos Rate Making Sub-Committee

- Evaluated options presented by staff
- Agreed with Staff recommendation to use same methodology in each territory
 - Maintains 5% total generation discount for both territories
 - One PCIA vintage for each territory
- Key Benefits:
 - Each territory pays the same overall cost for electricity use
 - Each territory receives the same discount (5% less than PG&E bundled Gen rate)
- Key Challenges:
 - Different PCE Rate for each territory
 - One PCE rate will inevitably be higher than the other because of different Vintage surcharges
 - Staff has to calculate and maintain 2 sets of rates

Table of Actual Rate Comparison (E1)

	PG&E Gen Rate	95% of PG&E	PCIA	FFS	PCE Gen Rate	Disc vs PG&E
San Mateo	0.11418	0.108471	0.04756	0.00048	0.060431	5.00%
Los Banos	0.11418	0.108471	0.02887	0.00062	0.078981	5.00%

Total paid by customer to PG&E/PCE is the same

Amount paid by customer to PCE is higher in Los Banos because of lower PCIA credit

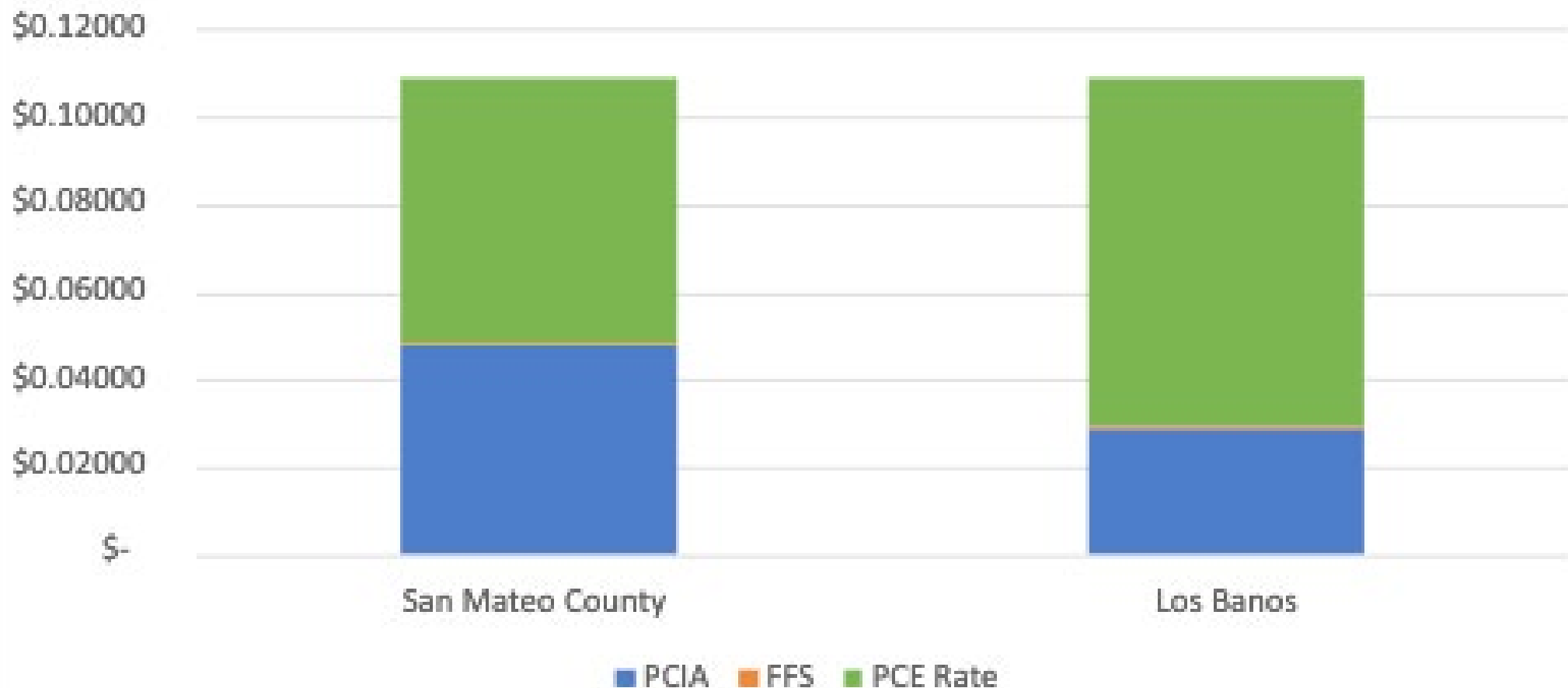
Assumptions:

- PG&E E1 Generation Rate as of March 1, 2021
- PCE E1 Generation Rate as of April 1, 2021 calculated with 2016 Vintage PCIA and FFS for San Mateo County
- PCE E1 mock-up for Los Banos with 2021 Vintage PCIA and FFS

Impact:

- Total cost to combined PG&E/PCE by both customers is the same
- But the PCE Generation rate is Higher for Los Banos because the PCIA rate is lower

Distribution of Components that Make up 95% of PG&E Generation Rate



Note: based on same rate assumptions as previous slide

Staff Recommendation

Maintain Existing Rate Methodology for Los Banos

- Consistent 5% discount for each territory
 - Different allocation of fees between PG&E and PCE
 - Same overall bill in each territory
 - Different PCE rate for each territory
 - Different PCIA rate for each territory

But, all customers pay the same total amount for electricity for the same usage

13. Approval of Peninsula Clean Energy's Standard Rate Making Methodology for Los Banos Customers (Action)

- Public Comment



5. Resolution Approving the Sixth Amended and Restated Agreement with Janis C. Pepper

Regular Agenda

5. Resolution Approving the Sixth Amended and Restated Agreement with Janis C. Pepper

- Public Comment



Board Members' Reports (Discussion)

Regular Agenda

Adjournment

