



San Francisco Local Agency Formation Commission

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May 19, 2023

TO: LAFCo Commissioners

FROM: Jeremy Pollock, Executive Officer

SUBJECT: Draft Executive Officer Memo on CleanPowerSF Rate Structure

At LAFCo's April 21, 2023 meeting, Chair Connie Chan directed me to write a memo to the commission on CleanPowerSF's rate setting process and structure, with a focus on residential and small business rates. This draft memo reviews the SFPUC's recent rate study and the Fiscal Year 2023-2024 CleanPowerSF rates adopted by the SFPUC on May 9, 2023 and offers my preliminary evaluation. Lastly, the memo suggests further research into the possibility of using pre-payment revenue bonds to lower costs.

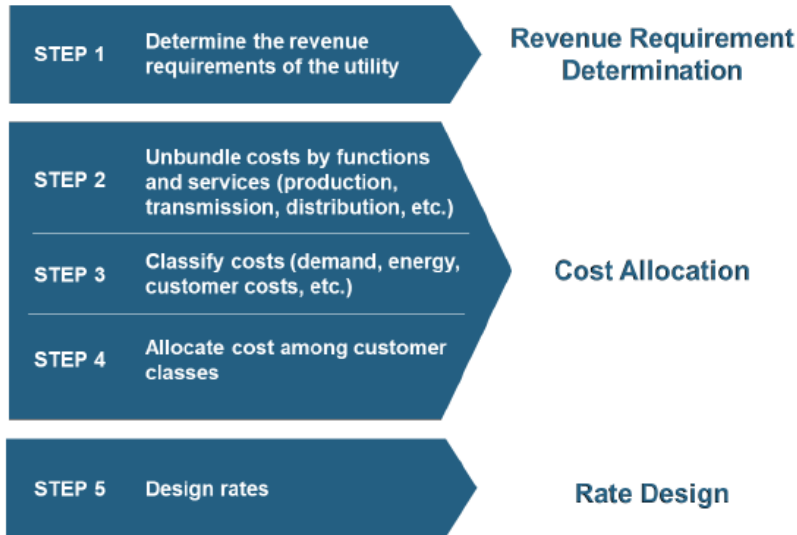
I have not discussed this memo with SFPUC staff, and I have not researched other rate setting methodologies or examples from other community choice aggregators. I consider this an initial exploration of this complex topic and welcome any corrections or feedback.

SFPUC 2022 Power Rates Study ([PDF](#))

San Francisco City Charter Section 8B.125.1 states that the SFPUC shall "retain an independent rate consultant to conduct rate and cost of service studies for each utility at least every five years." The SFPUC contracted with NewGen Strategies and Solutions to conduct the latest power rate study, which began in March 2021 and was published in May 2022. This is the first rate study for CleanPowerSF, which first began serving customers in May 2016 and completed citywide enrollment in 2019.

Although CleanPowerSF did not have a formal rate policy to "meet or beat" PG&E's rates, the Rate Study states, "CleanPowerSF rates have up until this point been set to follow PG&E, after accounting for the PCIA and FFS, rather than being based on CleanPowerSF's cost of service." The Rate Study conducts a process for determining Cost of Service (COS) and recommends a two-year transition to COS-based rates for CleanPowerSF, with the FY22-23 rates adopting 50% of the change from the prior rates and the FY23-24 being 100% COS-based. This is consistent with Charter Section 8B.125.2, which states that the SFPUC shall "set retail rates, fees and charges based on the cost of service."

NewGen describes the COS process as "an industry-accepted framework that assigns or allocates costs to each customer class served by a utility. This process determines the 'cost to serve' each customer class within the utility." The following graphic outlines their five-step approach to determining COS rates.



My initial evaluation is that the NewGen process for determining COS rates for CleanPowerSF is thorough and logical. I will continue to research if there are alternative rate-setting methodologies as well as look at the rate policies of other community choice aggregators for comparisons.

The following sections highlight points of interest for further analysis:

- Differences in Seasonal Time-of-Use Rates for Residential Customers
- Modifications to SuperGreen Rates Unrelated to Cost of Service
- SuperGreen Rate Benefits from Long-Term Power Purchase Agreements
- Lack of Stress Testing in the Rate Study
- Disconnect between Seasonal Rates and Wholesale Power Costs

Differences in Seasonal Time-of-Use Rates for Residential Customers

Most CleanPowerSF rates have different Summer (June through September) and Winter (October through May) rates. In July 2021, most CleanPowerSF customers were automatically transitioned from flat rates to Time-of-Use (TOU) rate plans. TOU rates charge higher rates during peak electricity demand (typically 4-9 p.m.) and lower rates during off-peak times. As part of the COS analysis, NewGen reviewed how these different rates differed from the average rate. The following table shows this analysis.

Table 7-1
TOU Energy Price Differential Analysis – CleanPowerSF

	Residential	Small General Service	Medium General Service – Low Demand	Medium General Service – High Demand	Large General Service
Summer	0.87	0.87	0.87	0.87	0.87
Winter	1.07	1.07	1.07	1.07	1.07
Summer					
On-Peak	1.40	1.25	1.25	1.25	1.25
Off-Peak	0.82	0.80	0.81	0.81	0.81
Winter					
On-Peak	1.29	1.30	1.30	1.30	1.30
Off-Peak	0.87	0.98	0.99	0.99	0.98
Super Off-Peak	N/A	0.38	0.39	0.39	0.38

I added the purple circles to highlight the three areas where residential rates differ from all of the other commercial rates:

- Residential customers pay a 40% premium during the Summer peak, while commercial pay a 25% premium
- Residential customers enjoy a 13% savings during Winter off-peak, while commercial savings are 1%-2%.
- Residential customers do not have the “Super Off-Peak” time period, which is from 9 a.m. to 2 p.m. while commercial customers enjoy a 61%-62% savings.

Modifications to SuperGreen Rates Unrelated to Cost of Service

CleanPowerSF offers two products for each rate class: a “green” rate that certifies a minimum of 50% renewable energy and a “SuperGreen” rate that certifies 100% renewable energy. The Rate Study recommends maintaining the existing SuperGreen premium for residential and medium businesses, while slightly lowering the premium for small and large businesses. These changes are described as “simplifying” the rates and do not appear to be linked to COS.

Table 7-23
CleanPowerSF SuperGreen Energy Premium
(Existing and Recommended Rates) ⁽¹⁾

SuperGreen Premium (\$/kWh)	Current	FYE 2023	FYE 2024
Residential	\$0.0100	\$0.0100	\$0.0100
Small General Service ⁽²⁾	\$0.0075	\$0.0050	\$0.0050
Med General Service – Low	\$0.0050	\$0.0050	\$0.0050
Med General Service – High	\$0.0050	\$0.0050	\$0.0050
Large General Service ⁽²⁾	\$0.0075	\$0.0050	\$0.0050

(1) Rate changes are effective July 1, 2022, and July 1, 2023.

(2) Changes recommended for Small and Large General Service (see text).

SuperGreen Rate Benefits from Long-Term Power Purchase Agreements

One striking result of NewGen’s analysis is that the effective cost per kilowatt hour of the SuperGreen energy was actually less than the Green product’s energy for the “Test Year” they analyzed (which was the average of the two-year period from FY 2022-2023 to FY 2023-2024).

Table 6-11
Analysis of Green and SuperGreen COS Results for CleanPowerSF

Expense Line	Residential	Small General Service	Medium General Service – Low Demand	Medium General Service – High Demand	Large General Service	Outdoor Lighting	Total for TY
Cost of Service/Revenue Requirement (\$000)							
Green Customer	\$137,352	\$41,846	\$33,443	\$59,803	\$12,463	\$159	\$285,068
SuperGreen	\$2,667	\$451	\$1,322	\$3,992	\$8,955	\$9	\$17,396
Total	\$140,020	\$42,297	\$34,765	\$63,795	\$21,418	\$168	\$302,464
COS \$/kWh Sales							
Green Customer COS	\$0.1152	\$0.1020	\$0.0990	\$0.0975	\$0.0962	\$0.1123	\$0.1062
SuperGreen COS	\$0.1035	\$0.0824	\$0.0780	\$0.0752	\$0.0789	\$0.0958	\$0.0809
Total COS ⁽¹⁾	\$0.1150	\$0.1017	\$0.0980	\$0.0957	\$0.0881	\$0.1113	\$0.1043

NewGen states this was the result of SuperGreen customers “benefitting from lower-priced PPAs entered into in the past, while Green customers are currently facing higher costs due to exposure to high-priced energy markets for a portion of their open position.”

Note that the SuperGreen portion of CleanPowerSF power purchases is significantly smaller than the Green portion, because less than 3% of customers are enrolled in SuperGreen.

Lack of Stress Testing in the Rate Study

One topic I did not find in the Rate Study was any consideration for how CleanPowerSF should adapt to dramatic changes in energy costs, such as the environment we are currently experiencing. It may be that the assumption is that the increased rates would simply be plugged into the COS calculations to fairly allocate the cost increases. But I will continue to research if there are other industry best practices for managing such increases in energy costs. In particular, I am interested in methodologies for how to balance long, medium, and short-term purchasing contracts in CleanPowerSF’s portfolio as well as balancing energy sources and locations to manage risk.

Disconnect between Season Rates and Wholesale Power Costs

In the Rate Study’s conclusion, NewGen states that, “the seasonal variation suggests that CAISO (wholesale market) power supply costs for both Hetch Hetchy Power and CleanPowerSF are higher during the winter periods than summer periods. However, current and recommended rate structures are set to have higher costs during the summer than winter.” The report does not go into the reason for or implications of this disconnect between CleanPowerSF’s seasonal costs for power and its customers rates.

Fiscal Year 2023-2024 CleanPowerSF Rates ([PUC 5/9/23 Agenda Packet](#))

On May 9, 2023, the SFPUC adopted new rates for CleanPowerSF for Fiscal Year 2023-2024 that were a dramatic departure from the Rate Study. The Rate Study had anticipated a decrease of 9% for residential customers and between 13% and 18% for commercial customers. But because of “the volatile nature of the power supply market due to the changing environment caused by geopolitical conflict,” the adopted rates represent an approximate 15% system-wide increase from the FY22-23 rates. It is important to note that these increases are only on the generation charges. Customers’ total bills will increase by approximately 3%-8%.

Rate Increases Uneven by Customer Class

The following table summarizes the generation rate increases by customer class:



Proposed CleanPowerSF Generation (Green) Rates

Customer Class	FY 2023-24 Green Rates (\$/kWh)	% Gen Rate Change
Residential	\$0.13748	16%
Small General Service	\$0.12431	13%
Medium General Service – Low Demand	\$0.12099	7%
Medium General Service – High Demand	\$0.11936	17%
Large General Service	\$0.10586	6%
Agriculture	\$0.09065	8%
Street Lighting	\$0.12559	21%
Traffic Control	\$0.12559	14%

The staff memo does not explain why the “Medium General Service – Low Demand” (medium-sized businesses with lower energy usage) and “Large General Service” (large businesses) increases were smaller than the other customer classes. The memo does describe rebalancing the rates for electric vehicle owners to keep their rate from exceeding PG&E’s and that “rates have been rebalanced within the residential customer class to keep the effective rate of the customer class to cost of service.”

[CleanPowerSF Reserve Policy \(PDF\)](#)

In April 2022, the SFPUC adopted a CleanPowerSF Fund Balance Reserve policy. The policy stated that within three years of policy adoption (by April 2025), CleanPowerSF reserves would consist of:

- Operating Reserve Fund Minimum: equal to 150 days cash on hand (or 41%) of annual operating expenditures; and
- Operating Reserve Fund Target: equal to 180 days cash on hand (or 49%) of annual operating expenditures.

The Reserve Policy explains the need for these reserves as follows:

While CleanPowerSF operates under much of the same legal and policy framework as the SFPUC’s other utility services, the program is also uniquely reliant on a volatile power supply market, and faces competitive pressures that reduce its flexibility for rate increases. Moreover, CleanPowerSF’s credit impacts not only lending terms, but also third-party power supply contracts, a key tool to mitigate market exposure. In the case of CleanPowerSF, the reserves need to be higher than in other Enterprises to account for the increased financial pressures and need for rate stabilization faced by power supply market volatility impacting open positions.

The staff memo on the rate increase states, “staff also evaluated needed fund balance in the CleanPowerSF revenue requirement to get on a path to meet the Days-Cash-On-Hand target consistent with the Fund Balance Reserve Policy.” The memo does not mention if any consideration was given to revising contributions to the reserves to reduce the rate increases. CleanPowerSF’s power supply costs increased by \$67 million for FY23-24 compared to what was projected in the Rate Study.

The FY23-24 CleanPowerSF Revenue Requirement lists these “CleanPowerSF Metrics” that appear to be the reserve balance:

- Beginning Fund Balance: \$65,187,124
- EOY Fund Balance: \$96,584,184
- Days of Cash on Hand: 105

New Delegated Authority for Creating New Temporary Rates

The May 8 action by the SFPUC also delegated authority to the General Manager to temporarily adopt new rates when PG&E offers a new rate. The new rate will be calculated based on ratios of comparable PG&E and CleanPowerSF rates. The temporary rates implemented under this section will remain in effect until CleanPowerSF's next comprehensive rate adoption.

Given the dynamic nature of the electricity market, this is a reasonable measure to ensure CleanPowerSF stays competitive as electricity service rapidly evolves. However, the SFPUC should inform the Board of Supervisors, Rate Fairness Board, and LAFCo whenever such rate actions are considered to ensure oversight and transparency.

Pre-Payment Clean Energy Project Revenue Bonds

Lastly, I'd like to highlight a financial instrument that other CCAs have used to reduce the energy procurement costs: issuing revenue bonds to achieve savings by pre-paying for long-term power purchase agreements. At least three of these bonds have been issued through the [California Community Choice Financing Authority](#), a joint powers authority formed for this purpose.

This [2021 press release from CCFA](#) explains the process:

A Clean Energy Project Revenue Bond is a form of wholesale electricity prepayment that requires three key parties: a tax-exempt public electricity supplier (the CCA), a taxable energy supplier, and a municipal bond issuer. The three parties enter into long-term power supply agreements for zero-emission clean electricity sources like solar, wind, geothermal, and hydropower. The municipal bond issuer – in this case, CCCFA – issues tax-exempt bonds to fund a prepayment of energy that is to be delivered over thirty years. The energy supplier utilizes the bond funds and provides a discount to the CCA on the power purchases based on the difference between the taxable and tax-exempt rates. This discount is historically in the range of 8-12%, and minimum discounts are negotiated for each transaction.

The first of these bonds, which was issued by CCCFA to the benefit of East Bay Community Energy and Silicon Valley Clean Energy, was underwritten by Morgan Stanley. It successfully generated nearly \$1.5 billion in proceeds, after having received an investment grade "A1" rating from Moody's and a "Green Climate Bond" designation from Kestrel Verifiers.

The second transaction, issued by CCCFA to the benefit of MCE, was underwritten by Goldman Sachs. The very successful bond sale produced approximately \$700 million in bond proceeds and generated significant investor demand. The issue received an investment grade "A2" rating from Moody's Investors and a "Green Climate Bond" designation from Kestrel Verifiers.

And [this press release from Clean Power Alliance](#), the largest CCA in California serving one million customer accounts in Los Angeles and Ventura counties describes their pre-payment revenue bond that was issued in February of 2023:

The nearly \$1 billion bond issuance is expected to reduce CPA's renewable energy costs by approximately \$66.7 million over the initial eight-year period of the bonds, or an average of \$8.3 million annually. The savings from this prepay transaction are locked in until 2031, when the bond will be repriced.

I suggest the SFPUC evaluate the viability of this funding mechanism, including the potential for savings, any risks, and any potential impacts on revenue bonding capacity for other CleanPowerSF priorities.