



**San Francisco Public Utilities Commission
 Citizens' Advisory Committee
 Power Subcommittee**

MEETING MINUTES

**Tuesday, June 11, 2024
 5:30 p.m. – 7:00 p.m.
 525 Golden Gate Ave., 3rd Floor Tuolumne Conference Room**

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Mission: The Power Subcommittee shall review power generation and transmission system reliability and improvement programs, including but not limited to facilities siting and alternatives energy programs, as well as other relevant plans, programs, and policies ([Admin. Code Article XV, Sections 5.140 - 5.142](#)).

Members

Chair Emily Algire (D5)	Barklee Sanders (D6)	Moisés García (D9)
Jodi Soboll (M- Eng./Fin.)	Sally Chen (D3)	Caroline Law (D1)

D = District Supervisor appointed, M = Mayor appointed, B = Board President appointed

Staff Liaisons: Lexus Moncrease, Sharon Liu-Bettencourt, & Desiree Almendral
 Staff Email for Public Comment: cac@sfwater.org

ORDER OF BUSINESS

1. Call to order and roll call:

Members present at roll call: Sanders*, Garcia, Chen, and Law

Members absent: Algire and Soboll

*Approved accommodation to attend remotely

2. Approve [February 13, 2024](#), Minutes

Motion was made (Chen) and seconded (Law) to approve the February 13, 2024 minutes.

Approved without objection.

London N. Breed
 Mayor

Tim Paulson
 President

Anthony Rivera
 Vice President

Newsha K. Ajami
 Commissioner

Sophie Maxwell
 Commissioner

Kate H. Stacy
 Commissioner

Dennis J. Herrera
 General Manager



Public Comment: None

3. Report from the Chair

- Welcome members, staff, and the public
- Ohlone Tribal Land Acknowledgement

Public Comment: None

4. Public Comment: Members of the public may address the Committee on matters that are within the Committee's jurisdiction and are not on today's agenda (2 minutes per speaker)

Public Comment: None

5. Presentation and Discussion: [Overview of Grid Reliability in California](#),

Sid Carter, Utility Specialist, Risk Management and Business Analysis, SFPUC, Firas Abu-Sneh, Utility Specialist, Regulatory and Legislative Affairs, SFPUC

Presentation

- Overview of Grid Reliability in California
- About Today's Presentation
- Part 1: The Grid
- How Does the Electric Grid Work
- California's Electric Grid
- Who Manages the Electric Grid?
- What Does CAISO Do?
- Energy Supply in California
- Energy Demand in California
- Electric Grid Challenges
- Grid Stress Impacts
- Opportunities for the Grid
- Recent Trends: Battery Storage is Growing
- Part 2; Electricity Supplies
- San Francisco is an Electricity Generator and Buyer
- Hetch Hetchy Water & Power System
- Hetch Hetchy Power: Power Supply and Demand
- CleanPowerSF Energy SF (2022, 2035)
- CleanPowerSF Projected New Generating Resources (Cumulative)
- Part 3: Clean Energy Transition & Reliability
- Clean Transition and Reliability Challenges
- Comparison of Energy Alternatives
- More Capacity and More Diversity
- Need for Transmission
- Closing Summary
- Learn More

Discussion

- **Member Sanders** commented that he looked through the website that gives the process on reporting issues with the California Independent

System Operator (CAISO). He explained that there was another outage on Treasure Island on Monday June 10th. He asked how he can report issues with power grid reliability on Treasure Island and if the entity to report to is CAISO? He further explained that when he searched up Treasure Island Development Authority (TIDA) and attempted to report an ethics violation for electricity issues, there was no one listed under Treasure Island to make a report to. He mentioned multiple government agencies, including the SFPUC and the California Public Utilities Commission does not have oversight over the power grid in Treasure Island.

Staff Abu-Sneneh responded that he does not have a lot of information on grid reliability issues on Treasure Island and if such could be reported to CAISO but that he would investigate it and get back to the CAC. He explained that from his understanding CAISO handles transmission issues, but he is unsure if the issues on Treasure Island is considered transmission or distribution.

- **Member Sanders** asked how staff determines what is considered a reliable grid? He further inquired as to whether there are internal studies done within the SFPUC to determine what areas of San Francisco need more investment into their grid.

Staff Abu-Sneneh responded that issues with electricity reliability within the city of San Francisco are typically related to the distribution side of reliability. He explained that there is a distinction between the two different sides of electricity reliability. He explained that his team focuses on the reliability of supply (otherwise known as generation reliability) and making sure there is an available and reliable supply of electricity to provide to residents. He explained that there are four parts of the grid: generation, transmission, distribution, and customer side. He explained that transmission reliability is how reliable electricity can get into the city, a lot of transmission lines are owned by PG&E and other third parties. He explained that most resources to distribute electricity throughout the city is owned by PG&E. He explained that his team does not work very much on electricity reliability in the city in terms of outages within the distribution network.

Member Sanders commented that there is a transmission line that comes from the port of Oakland. He explained that he had been told that line runs from Hetch Hetchy and can be used to turn off power on Treasure Island. He asked if this line is a distribution or transmission line.

Staff Abu-Sneneh responded that he is not an expert in Treasure Island issues, but he can take the question back to his team and get a better answer.

Staff Carter commented that he had a few points to make on how utilities measure their resiliency. His first point; utilities are highly regulated and many reports, including integrated resource plans that detail the framework to meet resiliency standards within 2–5-year time periods are produced for utility regulators. He commented that he used to work for Southern California Edison, a for profit investor-owned utility company. He explained that some of their revenues are performance-based revenues, so they earn higher revenues if there are fewer outages. He explained that the two metrics for measuring resiliency for his old company were 1) System

Average Interruption Duration Index (Sadie) which measures how long the interruptions last and 2) Safety System Average Interruption Frequency Index which measures how many interruptions there are on a particular circuit or for the entire company during a specific time. He explained that he is making these points to illustrate how heavily regulated utilities are and that they could help put Member Sanders on the right path to knowing how specific utility resiliencies are measured.

Member Sanders responded that Treasure Island has the most power outages in the city. He explained that while the city owned the grids in Treasure Island, the California Public Commissions, FERN, and the SFPUC all have no oversight over the grid there because it is a development authority. He explained that CAC asked for an emergency declaration there but given the lack of oversight, there is little the city can do until the houses on Treasure Island are rebuilt. He commented that when reliability is talked about, he wants Treasure Island to be talked about as well. He explained that Treasure Island is the least reliable power grid in all of California, there are outages every 2 to 3 weeks, at least 491 outages total. He commented that the grid has not been updated because it is not deemed worth it, even though \$11 million were spent to turn the lights back on the Bay Bridge.

Member García explained that Treasure Island is a regulatory Pandora's Box and there are never any satisfactory responses on how to improve it and he does not believe there will be until everything on the island is rebuilt and the grid is given over to SFPUC to run.

Staff Gollotta introduced himself as the Communications Manager for the Power Enterprise at SFPUC. He commented that his office understands the issues on Treasure Island. He explained that are jurisdictional challenges because the grid on Treasure Island was owned by the Navy and transferred over to the city through TIDA and technically TIDA owns and operates the grid while SFPUC functions as a contractor that serve and operate the grid. He explained that through redevelopment, SFPUC hopes to own and operate the grid and invest into the reliability of the system, management, and investment into maintenance. He explained that the legacy system on Treasure Island is old and needs significant investment to bring it up to the standard of reliability the SFPUC wants it to be at, however the SFPUC cannot make those decisions as it is under TIDA's purview. He explained that the new grid on Treasure Island will serve both Treasure Island and Yerba Buena Island and will be owned and operated by Hetchy Hetchy and be regulated by the SFPUC Commission Board, the Board of Supervisors and the Mayor. He explained that the new grid will improve reliability addressing which entity is responsible for running the grid. He commented that the SFPUC's vision for San Francisco is to own and operate the entire grid in San Francisco and remove PG&E as the owner of the grid system so that the SFPUC can deliver our own clean energy and maintain and invest in the grid locally.

- **Member Sanders** commented that Staff Gollotta said it is a significant investment to upgrade the grid on Treasure Island, however in the 25 or so years Treasure Island has existed, there has never been a report generated to determine how much it would cost to upgrade the grid. He asked if the SFPUC has a number for how much it would cost to upgrade the grid, he explained that he has asked through numerous avenues in the past four years. He commented that he does not believe the SFPUC can call upgrading the grid on Treasure Island a significant investment if there

is no number on how much the investment is. He commented that it is scary to him that the city has no oversight over the grid in Treasure Island but cannot keep the power on in Treasure Island and now the city wants to own and operate the grid for the rest of the city as well. He commented that the city does not hold itself accountable while holding PG&E accountable for the same issues. He commented that the city is spending over \$1 billion to buy the grid from PG&E and yet the city is not buying the grid away from TIDA who currently operates the least reliable grid in California. Member Sanders ended his comment asking SFPUC to please generate the report on how much an upgrade to the grid on Treasure Island would cost, he also commented that he would be willing to fund this report out of pocket.

- **Member Law** asked to clarify that CAISO runs the generation and transmission aspects of the grid while PG&E runs the distribution aspects of the grid.

Staff Carter responded that CAISO does not run generation, they own the transmission lines. He explained that the distribution is run by PG&E.

Staff Abu-Sneh added that CAISO does not technically own the transmission lines, they operate it. He said that a variety of entities own the transmission lines, including both private utility investors and Hetch Hetchy. He explained that the ownership of generation is complicated in California, some are owned by utilities, some are owned by the developers who sign contracts with utilities for exclusive use of that generation. He explained that distribution in California is mainly owned by PG&E, Southern California Edison and San Diego Gas and Utilities. He explained that there are some cities that own their own distribution assets, San Francisco is unique in that we own some but not all our distribution assets.

- **Member Chen** commented that different members of the Power CAC have different levels of experience with the overview of grid reliability. She asked how CAISO's specific role in operating the transmission line interacts with the other parts of the grid process, such as the public service power shut off or making the decision to call for a rolling blackout.

Staff Abu-Sneh responded that in terms of interacting with the public service power shut offs, PG&E and other power related entities, he is unsure of the level of detail in interaction. He commented that he knows CAISO is a lot of processes and he would need a lot of research to answer questions such as, who orders the public service power shut offs or if they are automatically triggered. He explained that PG&E installed automatic shutoff triggers in 2021, 2022 to prevent forest fires by shutting off electricity immediately when an object falls on a distribution line.

- **Member Chen** asked how different electric grids are between states. She asked if other states have a similar mix of private and public utilities?

Staff Abu-Sneh responded that every state is different. He explained that some states have a fully integrated model where the utility owns everything; transmission, distribution, and generation and in some states for example, Texas, the market for electricity is very deregulated and there are many entities that can supply electricity. He explained that California is in the middle where local governments can form community choice aggregators but there are also public owned utilities; he explained that a lot

of states have both public and private owned utilities and that is not unique to California. He explained that the active community choice aggregators that are focused on decarbonization make California more unique. He also explained that California has smaller private owned utilities that balance out CAISO and other sorts of balancing authorities. He commented that CAISO covers 88% of California and a little bit of Nevada. He commented that other states have bigger regional organizations that involve multiple states, and some states are not organized enough to have privately owned utilities organizations. He explained that all states must adhere to the Northern Electrical Reliability Corporation Standards (NARC).

- **Member García** asked if staff could explain what baseload energy is.

Staff Carter explained that baseload energy is basically the lowest level at which energy is distributed through the day. He gave an example; in the charts the peak energy was 36 gigawatts at hour 18, whereas the lowest level was 12 gigawatts, and throughout the day as lights come on, energy would move up, in this example 12 gigawatts would be the baseload energy. He explained this means, if you had resources to serve 12 gigawatts throughout the day, that resource would be serving the baseload energy. He explained that you would probably not use wind or solar to serve your baseload energy because they are intermittent and unpredictable. He explained that batteries make more sense to serve the baseload energy which might have surplus wind or solar energy. He explained that batteries are a high growth resource to serve baseload because in the future, it might be possible to serve baseload entirely with batteries. He commented that nuclear and geothermal are good, reliable, stable resources to serve baseload energy.

- **Member Law** asked about the graph on slide 19 regarding the projected new generating resources and if the jump from 2024 to 2025 is happening. Member Law asked how many projects are happening, what are the projects and if the projects are only focused on storage?

Staff Carter responded that he could research that question and provide a response offline. He commented that the people in origination and power supply who work on long term power purchase agreements have selected developers to build resources that ran into delays due to supply chain constraints or increases in tariff that led to developers renegotiating their prices. He explained that one item causing the jump in the chart is that some projects that were supposed to come online in 2023 or 2024 were delayed until 2025.

Staff Abu-Sneneh added that the graph on slide 19 is the cumulative plan and that in 2023 and 2024, they were not expecting a lot of projects to come online due to delays in COVID-19 restrictions, tariffs from China and a continuous problem with the way CAISO approved new projects to be built that created a backlog of projects. He explained that the 250 megawatts increase in 2025 is normal with CleanPowerSF's goal of getting to 100% clean energy by 2025.

- **Member Law** referenced slide 17 and commented that it shows there's an excess of megawatt hours that are sold to the market but then later in the months we must purchase it from places. Member Law asked why we don't use the electricity we sold before, why do we sell it then buy it back.

- **Staff Abu-Sneneh** responded that this gets a bit complicated, obviously because we are not hydroelectric power only, we're also a water utility. He commented that a big reason why we release water is due to different environmental water needs and obligations. He then explained that when we release water into the powerhouses, we are essentially generating electricity, so a lot of the electricity we are generating is incidental. We then sell this excess electricity on the market, because when releasing this water, the power is generated and it must go somewhere, so we sell it on the market, we generate revenue which can help lower the ratepayers' costs. So as Member Law pointed out, water is being released during January, February, March, and April, the months where it rains and snows, and when the water melts it must go somewhere and its generating power, and that is why we sell it. Then in August, September, October, and December, things are starting to dry up, and there's much less rain, so we're not releasing water into the powerhouses as much. At the end of the year all the water we're getting we're trying to store enough to meet our needs, so typically in October, November, and December we don't have the ability to generate that much electricity.

Public Comment: None

6. Staff report

Public Comment: None

7. Future Agenda Items and Resolutions

- IEPR from the CEC
- TI Resolution Report back
- Bayview Power
- Emergency Preparedness
- Power Enterprise Training
- Legislative Update – Federal and State
- Electrification: San Francisco Climate Action Plan
- Municipalization: Interconnection, FERC Order 568, CCSF Purchase Offer
- Electric Rates & Equity
- Power Enterprise Residential & Commercial Power Programs: Heat Pumps, CAP
- California Community Choice Aggregation Residential & Commercial Power Programs
- Redevelopment Projects: Hunter's Point Shipyard & Treasure Island
- Time-of-Use Rates Update
- Reliability: Wildfires and Public Safety Power Shutoffs

Adopted Resolutions for Follow Up

- Resolution Recommending that the SFPUC Commission Reverses its Position on the "Not to Exceed Rates" for CleanPowerSF, Move Forward with this Important Program, and Allow Staff to Move Forward with its Launch [adopted September 16, 2014](#)
- Resolution in Support of SB 612 Electrical Corporations and other Load-Serving Entities [adopted on July 20, 2021](#)

- Resolution in Supporting of the Transition of CleanPowerSF Residential Customers to Time-of-Use Rates [adopted on July 20, 2021](#)

Public Comment: None

8. Announcements/Comments Visit www.sfpuc.org/cac for confirmation of the next scheduled meeting, agenda, and materials.

Public Comment: None

9. Adjournment

Meeting adjourned at 6:54pm

For more information concerning the agendas, minutes, and meeting information, please visit www.sfwater.org/cac. For more information concerning the CAC, please contact by email at cac@sfwater.org or by calling (415) 517-8465.

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ACCESO A IDIOMAS

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