Margaret Abe-Koga, Chair
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Jon Robert Willey
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City of Sunnyvale

Susan Ellenberg
County of Santa Clara

Silicon Valley Clean Energy Authority
Board of Directors Special Meeting
Friday, March 19, 2021
1:00 pm

Teleconference Meeting
Webinar:
https://zoom.us/j/97819790088

Telephone (Audio Only):
US: +1 669 900 9128
Webinar ID: 978 1979 0088

This meeting will be conducted in accordance with State of California Executive Order N-29-20, dated March 17, 2020, in consideration of the Coronavirus (COVID-19). All members of the Silicon Valley Clean Energy Board of Directors and staff will participate in this meeting by teleconference.

Members of the public may observe this meeting electronically by accessing the meeting via instructions above. Public Comments can be sent in advance of the meeting to Board Clerk Andrea Pizano at Andrea.Pizano@svcleanenergy.org and will be read within the public comment period or the applicable agenda item. The public will also have an opportunity to provide comments during the meeting.

The public may provide comments on any matter listed on the Agenda. Speakers are customarily limited to 3 minutes each, however, the Board Chair may increase or decrease the time allotted to each speaker based on the number of speakers, the length of the agenda and the complexity of the subject matter. Speaking time will not be decreased to less than one minute.

If you are an individual with a disability and need a reasonable modification or accommodation pursuant to the Americans with Disabilities Act ("ADA") please contact Board Clerk Andrea Pizano at andrea.pizano@svcleanenergy.org prior to the meeting for assistance.

AGENDA

Call to Order

Roll Call

Public Comment on Matters Not Listed on the Agenda

svcleanenergy.org

333 W El Camino Real
Suite 330
Sunnyvale, CA 94087

Pursuant to the Americans with Disabilities Act, if you need special assistance in this meeting, please contact the Clerk for the Authority at (408) 721-5301 x1005. Notification 48 hours prior to the meeting will enable the Authority to make reasonable arrangements to ensure accessibility to this meeting. (28 CFR 35.105 ADA Title II).

SILICON VALLEY CLEAN ENERGY

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The public may provide comments on any matter not listed on the Agenda provided that it is within the subject matter jurisdiction of SVCE. Speakers are customarily limited to 3 minutes each, however, the Board Chair may increase or decrease the time allotted to each speaker based on the number of speakers, the length of the agenda and the complexity of the subject matter. Speaking time will not be decreased to less than one minute.

Regular Calendar

1) SVCE Board Workshop – Customers, Programs, and Finance and Administration

Board Member Announcements and Direction on Future Agenda Items

Adjourn

svcleanenergy.org

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SVCE
GLOSSARY OF TERMS

CAISO – California Independent System Operator - a non-profit independent system operator that oversees the operation of the California bulk electric power system, transmission lines and electricity market generated and transmitted by its members (~80% of California's electric flow). Its stated mission is to "operate the grid reliably and efficiently, provide fair and open transmission access, promote environmental stewardship and facilitate effective markets and promote infrastructure development. CAISO is regulated by FERC and governed by a five-member governing board appointed by the governor.

CALCCA – California Community Choice Association – Association made up of Community Choice Aggregation (CCA) groups which represents the interests of California's community choice electricity providers.

CARB – California Air Resources Board – The CARB is charged with protecting the public from the harmful effects of air pollution and developing programs and actions to fight climate change in California.

CEC – California Energy Commission

CPUC – California Public Utility Commission

C&I – Commercial and Industrial – Business customers

CP – Compliance Period – Time period to become RPS compliant, set by the CPUC (California Public Utilities Commission)

DA – Direct Access – An option that allows eligible customers to purchase their electricity directly from third party providers known as Electric Service Providers (ESP).

DA Cap – the maximum amount of electric usage that may be allocated to Direct Access customers in California, or more specifically, within an Investor-Owned Utility service territory.

DA Lottery – a random drawing by which DA waitlist customers become eligible to enroll in DA service under the currently-applicable Direct Access Cap.

DA Waitlist – customers that have officially registered their interest in becoming a DA customer but are not yet able to enroll in service because of DA cap limitations.

DAC – Disadvantaged Community

DASR – Direct Access Service Request – Request submitted by C&I to become direct access eligible.

Demand - The rate at which electric energy is delivered to or by a system or part of a system, generally expressed in kilowatts (kW), megawatts (MW), or gigawatts (GW), at a given instant or averaged over any designated interval of time. Demand should not be confused with Load or Energy.

DER – Distributed Energy Resource – A small-scale physical or virtual asset (e.g. EV charger, smart thermostat, behind-the-meter solar/storage, energy efficiency) that operates locally and is connected to a larger power grid at the distribution level.

Distribution - The delivery of electricity to the retail customer's home or business through low voltage distribution lines.

DLAP – Default Load Aggregation Point – In the CAISO's electricity optimization model, DLAP is the node at which all bids for demand should be submitted and settled. SVCE settles its CAISO load at the PG&E DLAP as SVCE is in the PG&E transmission access charge area.

DR – Demand Response - An opportunity for consumers to play a significant role in the operation of the electric grid by reducing or shifting their electricity usage during peak periods in response to time-based rates or other forms of financial incentives.

DWR – Department of Water Resources – DWR manages California's water resources, systems, and infrastructure in a responsible, sustainable way.

ELCC – Effective Load Carrying Capacity – The additional load met by an incremental generator while maintaining the same level of system reliability. For solar and wind resources the ELCC is the amount of capacity which can be counted for Resource Adequacy purposes.

EPIC – Electric Program Investment Charge – The EPIC program was created by the CPUC to support investments in clean energy technologies that provide benefits to the electricity ratepayers of PG&E, San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE)

ERRA – Energy Resource Recovery Account – ERRA proceedings are used to determine fuel and purchased power costs which can be recovered in rates. The utilities do not earn a rate of return on these costs, and only recover actual costs. The costs are forecast for the year ahead. If the actual costs are lower than forecast, then the utility gives money back, and vice versa.

ESP – Energy Service Provider - An energy entity that provides service to a retail or end-use customer.

EV – Electric Vehicle

GHG – Greenhouse gas - water vapor, carbon dioxide, tropospheric ozone, nitrous oxide, methane, and chlorofluorocarbons (CFCs). A gas that causes the atmosphere to trap heat radiating from the earth. The most common GHG is Carbon Dioxide, though Methane and others have this effect as well.

GRC – General Rate Case – Proceedings used to address the costs of operating and maintaining the utility system and the allocation of those costs among customer classes. For California's three large IOUs, the GRCs are parsed into two phases. Phase I of a GRC determines the total amount the utility is authorized to collect, while Phase II determines the share of the cost each customer class is responsible and the rate schedules for each class. Each large electric utility files a GRC application every three years for review by the Public Advocates Office and interested parties and approval by the CPUC.

GWh – Gigawatt-hour - The unit of energy equal to that expended in one hour at a rate of one billion watts. One GWh equals 1,000 megawatt-hours.

IEP – Independent Energy Producers – California's oldest and leading nonprofit trade association, representing the interest of developers and operators of independent energy facilities and independent power marketers.

IOU – Investor Owned Utility – A private electricity and natural gas provider.

IRP – Integrated Resource Plan – A plan which outlines an electric utility's resource needs in order to meet expected electricity demand long-term.

kW – Kilowatt – Measure of power where power (watts) = voltage (volts) x amperage (amps) and 1 kW = 1000 watts

kWh – Kilowatt-hour – This is a measure of consumption. It is the amount of electricity that is used over some period of time, typically a one-month period for billing purposes. Customers are charged a rate per kWh of electricity used.

LCFS – Low Carbon Fuel Standard – A CARB program designed to encourage the use of cleaner low-carbon fuels in California, encourage the production of those fuels, and therefore, reduce greenhouse gas emissions.

LCR – Local (RA) Capacity Requirements – The amount of Resource Adequacy capacity required to be demonstrated in a specific location or zone.

LMP – Locational Marginal Price – Each generator unit and load pocket is assigned a node in the CAISO optimization model. The model will assign a LMP to the node in both the day- ahead and real time market as it balances the system using the least cost. The LMP is comprised of three components: the marginal cost of energy, congestion and losses. The LMP is used to financially settle transactions in the CAISO.

Load - An end use device or customer that receives power from an energy delivery system. Load should not be confused with Demand, which is the measure of power that a load receives or requires. See Demand.

LSE – Load-serving Entity – Entities that have been granted authority by state, local law or regulation to serve their own load directly through wholesale energy purchases and have chosen to exercise that authority.

NEM – Net Energy Metering – A program in which solar customers receive credit for excess electricity generated by solar panels.

NRDC – Natural Resources Defense Council

OIR – Order Instituting Rulemaking - A procedural document that is issued by the CPUC to start a formal proceeding. A draft OIR is issued for comment by interested parties and made final by vote of the five Commissioners of the CPUC.

MW – Megawatt – measure of power. A megawatt equals 1,000 kilowatts or 1 million watts.

MWH – Megawatt-hour – measure of energy

NP-15 – North Path 15 – NP-15 is a CAISO pricing zone usually used to approximate wholesale electricity prices in northern California in PG&E's service territory.

PCC1 – RPS Portfolio Content Category 1 – Bundled renewables where the energy and REC are dynamically scheduled into a California Balancing Authority (CBA) such as the CAISO. Also known as "in-state" renewables

PCC2 – RPS Portfolio Content Category 2 – Bundled renewables where the energy and REC are from out-of-state and not dynamically scheduled to a CBA.

PCC3 – RPS Portfolio Content Category 3 – Unbundled REC

PCIA or "exit fee" - Power Charge Indifference Adjustment (PCIA) is an "exit fee" based on stranded costs of utility generation set by the California Public Utilities Commission. It is calculated annually and assessed to customers of CCAs and paid to the IOU that lost those customers as a result of the formation of a CCA.

PCL – Power Content Label – A user-friendly way of displaying information to California consumers about the energy resources used to generate the electricity they sell, as required by AB 162 (Statue of 2009) and Senate Bill 1305 (Statutes of 1997).

PD – Proposed Decision – A procedural document in a CPUC Rulemaking process that is formally commented on by Parties to the proceeding. A PD is a precursor to a final Decision voted on by the five Commissioners of the CPUC.

Pnode – Pricing Node – In the CAISO optimization model, it is a point where a physical injection or withdrawal of energy is modeled and for which a LMP is calculated.

PPA – Power Purchase Agreement – A contract used to purchase the energy, capacity and attributes from a renewable resource project.

RA – Resource Adequacy - Under its Resource Adequacy (RA) program, the California Public Utilities Commission (CPUC) requires load-serving entities—both independently owned utilities and electric service providers—to demonstrate in both monthly and annual filings that they have purchased capacity commitments of no less than 115% of their peak loads.

RE – Renewable Energy - Energy from a source that is not depleted when used, such as wind or solar power.

REC - Renewable Energy Certificate - A REC is the property right to the environmental benefits associated with generating renewable electricity. For instance, homeowners who generate solar electricity are credited with 1 solar REC for every MWh of electricity they produce. Utilities obligated to fulfill an RPS requirement can purchase these RECs on the open market.

RPS - Renewable Portfolio Standard - Law that requires CA utilities and other load serving entities (including CCAs) to provide an escalating percentage of CA qualified renewable power (culminating at 33% by 2020) in their annual energy portfolio.

SCE – Southern California Edison

SDG&E – San Diego Gas & Electric

SGIP – Self-Generation Incentive Program – A program which provides incentives to support existing, new, and emerging distributed energy resources (storage, wind turbines, waste heat to power technologies, etc.)

TCR EPS Protocol – The Climate Registry Electric Power Sector Protocol – Online tools and resources provided by The Climate Registry to assist organizations to measure, report, and reduce carbon emissions.

Time-of-Use (TOU) Rates — The pricing of delivered electricity based on the estimated cost of electricity during a particular time-block. Time-of-use rates are usually divided into three or four time-blocks per 24 hour period (on-peak, midpeak, off-peak and sometimes super off-peak) and by seasons of the year (summer and winter). Real time pricing differs from TOU rates in that it is based on actual (as opposed to forecasted) prices that may fluctuate many times a day and are weather sensitive, rather than varying with a fixed schedule.

TURN – The Utility Reform Network - A ratepayer advocacy group charged with ensuring that California IOUs implement just and reasonable rates.

Unbundled RECs - Renewable energy certificates that verify a purchase of a MWH unit of renewable power where the actual power and the certificate are "unbundled" and sold to different buyers.

VPP – Virtual Power Plant – A cloud-based network that leverages an aggregation of distributed energy resources (DERs) to shift energy demand or provide services to the grid. For example, thousands of EV chargers could charge at a slower speed and hundreds of home batteries could discharge to the grid during a demand peak to significantly reduce the procurement of traditional supply resources.

The California ISO is monitoring COVID-19 developments, and is taking proactive steps to protect staff, customers, community, and the electric grid. Learn more.

Understanding electricity

A guide to industry terminology

What's a watt?

A watt is a measure of electricity. If you have ten 100-watt bulbs on at the same time, the "demand" or instantaneous measure of the power required for the job is 1,000 watts, also called one kilowatt or kW. If you keep them lit for one full hour, you have used 1,000 watt hours of electricity also called a kilowatt-hour or kWh. The typical American home uses about 840 kWh per month.

Megawatt

One megawatt equals one million watts or 1,000 kilowatts, roughly enough electricity for the instantaneous demand of 750 homes at once. That number fluctuates because electrical demand changes based on the season, the time of day and other factors.

Voltage

Just as it takes pressure to move water through a pipe, it takes voltage to move electricity across a wire. The high-voltage transmission lines operated by the ISO carry power at 500, 230, 115 and 70 kV. It is "stepped down" into lower voltage by transformers at utility-operated substations and then to 12 or 21 kV for delivery to homes and businesses. Final delivery by the utilities is at 220 volts; most household plugs deliver power at 110 volts.

Capacity

The amount of electricity an electrical facility can carry or generate; usually applied to generators, transmission lines, substation equipment and distribution lines.

Energy vs. capacity

If you're filling up a bucket with water from a garden hose, the amount of water moving through the hose is the "energy" or wattage, and the water pressure inside the hose is the voltage. The size of the hose is the capacity.

The electrical grid

Continuing the water analogy, envision the electrical grid as a big pressurized water system with hundreds of devices (generators) pumping water into the system through long pipes (transmission lines), and literally millions of customers sucking water out through smaller straws (utility distribution systems). There are hundreds of places (substations) where valves and adapters (switches and transformers) are used to break large volumes of water down into smaller units under less pressure for delivery through straws. The ISO job is to make sure that the high-pressure system, the water pressure (voltage) and pump output (frequency) remain constant even though inflow and outflow (measured in wattage) are changing minute by minute.

Frequency

Much like radio signals, electric generators can be "tuned" to produce power that vibrates at different frequencies. In the United States, virtually all electricity is generated and transmitted at 60-hertz or 60 cycles per second (cps). If the frequency fluctuates, it can damage all manner of electrical equipment. Frequency can be affected by a variety of factors and must be monitored closely by the ISO to make sure it remains very close to the 60 cps target.

Load

Load is the energy use; the ISO refers to utilities as load serving entities (LSEs) because that's what they do, serve load. Load is frequently confused with demand, which is actually how much power the load requires.

Demand

The number of kilowatts or megawatts delivered to the load at a given instant.

Market participant

Any entity that buys, sells, trades, transmits or distributes electricity in the California ISO control area. This includes utilities, generating companies, transmission owners, energy-trading companies and Scheduling Coordinators (SCs).

Scheduling coordinator

Entities that buy or sell power through the California ISO have to do so through a SC that is specifically authorized by the ISO to handle this type of transaction. SCs may be a subsidiary of the company they represent or hired as agents for the company.

Investor-owned utility (IOU)

The term investor-owned utility or IOU refers to the fact that these are private companies, owned by stockholders, as opposed to municipal utilities that are owned by the customers they serve. The three largest utilities in California are: Pacific Gas and Electric (PG&E), Southern California Edison (SCE) and San Diego Gas and Electric (SDG&E).