

Glossary of Community Choice Energy and Related Terms



Assembly Bill (AB) 117	Community Choice Aggregation enabling legislation enacted in 2002
Behind-the-meter (BTM)	Refers to the customer's side of an electricity meter (as opposed to the grid side): electricity generated or consumption reduced on-site, so it is not measured by the meter (for example, rooftop solar generation, energy efficiency upgrades, Energy Star appliances, and so forth)
Bundled Services	An offering typical of an investor-owned utility or municipal utility by which a range of electrical services (electricity procurement, delivery, grid maintenance, billing, and so forth) are bundled together rather than sold separately
California Energy Commission (CEC)	State commission responsible for setting energy policy and planning. Commissioners are appointed by the governor
California Independent System Operator (CAISO)	Non-profit, independent agency responsible for maintaining access to the electrical power grid throughout California and balancing supply and demand.
California Public Utilities Commission (CPUC)	The agency charged with regulating California's investor-owned utilities and (to some extent) Community Choice energy programs; commissioners are appointed by the Governor
Clean Energy	Generally refers to energy generated from renewable sources, such as solar and wind, with low levels of pollution or carbon dioxide emissions
Community Choice Aggregation (CCA)	A program by which local governments <i>aggregate</i> electricity customers in their jurisdiction to provide electricity and related services for local residents and businesses, while the incumbent investor-owned utility continues to provide delivery, maintenance, and billing services
Community Choice Aggregation Code of Conduct	California Public Utility Commission rulemaking D12-02-009 prohibits investor-owned utilities from lobbying/marketing against Community Choice programs and engaging in other anticompetitive practices

Cogeneration (often called Combined Heat & Power)	Production and utilization of both electricity and thermal (heat) energy from a single fossil fuel source (for example using waste heat from electricity generation to heat buildings)
Community Choice energy program (sometimes referred to as CCA or CCE)	The public, not-for-profit electric service program that implements Community Choice Aggregation at a city or county level
Community Solar	Community-based solar facilities, owned or controlled by individuals, cooperatives, non-profit organizations, businesses, or government institutions that are part of the community
Decentralized Generation	Distributed generation (see below) in which ownership and control of generating assets are diversified into many hands
Demand Reduction	Reducing the amount of electricity used, including conservation, energy efficiency, and demand response measures (see below)
Demand Response (DR)	Methods of matching supply and demand by adjusting the amount of electricity being used to match the supply. Achieved through pricing, automated controls, and incentives that shift electrical demand from peak use times to off-peak times
Demand Side Management (DSM)	The use of conservation, energy efficiency, and demand response technologies to reduce electricity consumption
Direct Access (DA)	A program by which customers (typically corporate or university campuses) buy electricity directly from a supplier other than a utility, but the utility continues to provide delivery, maintenance, and billing services
Departing Load	Electricity demand of customers that depart a utility, like PG&E, to become Direct Access or Community Choice customers
Distributed Generation	Small to medium scale generation of renewable electricity close to users (for example rooftop solar), so transmission lines are not needed for delivery.

Electric Grid	Infrastructure that delivers electricity to users. The transmission grid typically delivers electricity through high-voltage transmission lines and towers from remote, large-scale generators to substations, which are close to areas with many users. Distribution grids deliver electricity at lower voltage to end users by connecting individual users to each other and to substations
ElectricLoad	The amount of electric power needed at a given time to meet demand; measured in watts, kilowatts, megawatts and gigawatts
Energy Democracy	Bringing energy resources under public or community control and/or ownership so as to meet community needs, and equitably distribute the benefits of transitioning to a clean energy economy
Feed-in-tariff (FIT)	Program that incentivizes new renewable energy generation through standardized purchase contracts that guarantee a set payment for all generated electricity for a set duration of time (usually 20 years)
Gigawatt (GW)	A unit of electrical power production or consumption equal to 1 billion Watts (See Watt). Power rating of a typical large nuclear power plant = 1 GW
Gigawatt-hour (GWh)	A unit of electrical energy produced or consumed equal to 1 billion Watt-hours (See Watt-hour). Yearly California electrical energy consumption = 300,000 GWh
Grid Parity	The point at which the cost of producing electricity from renewable energy sources is competitive with the cost of producing electricity from fossil-fuel sources
Implementation Plan	Document outlining a Community Choice program's plans for rate-setting, consumer protection, and electricity procurement. Must be approved by California Public Utilities Commission prior to launch of the program
Investor Owned Utility (IOU)	Private, for-profit utility with historic monopoly in a geographical region; California's 3 investor-owned utilities, which sell about 75% of the state's electricity, are Pacific Gas & Electricity (PG&E), San Diego Gas & Electric (SDG&E) and Southern California Edison (SCE)

Integrated Resource Management (IRM)	For an electricity service provider this is the on-going process of meeting electric demand through efficient planning that integrates resources for demand reduction, electricity generation, and market procurement.
Joint Powers Authority (JPA)	Legal entity comprised of two or more local governmental units that jointly exercise power for the purpose of delivering services; county-wide Community Choice programs are typically organized as JPAs
Kilowatt (kW)	A unit of electrical power production or consumption equal to 1 thousand Watts (See Watts). Power rating of a typical residential solar system = 1 to 10 kW
Kilowatt-hour (kWh)	A unit of electrical energy produced or consumed equal to 1 thousand Watt-hours (See Watt-hour). Energy consumption of a clock radio in a year = 40 kWh
Levelized Cost of Electricity (LCOE)	A way to compare the cost of electricity from different generating sources. Calculated by taking the total cost of a generating source, including construction, operation, owner profits, fuel, transmission and financing over the lifetime of the source, and then dividing by the total amount of electricity expected to be generated over that period. Does not account for externalized (social) costs borne by the public
Load Data	Electricity consumption patterns for residential, commercial and municipal customers
Loading Order	California State policy prioritizing demand reduction and renewable energy over fossil fuel energy to meet electricity demand
Load Profile	A graph showing rate of electricity consumption over time; takes the shape of a curve with peaks of high demand and valleys of low demand.
Load Shaping	Shaping the load profile to reduce electric peaks and valleys; includes motivating customers to shift electricity use to non-peak hours and using automated controls, as well.
Megawatt (MW)	A unit of electrical power production or consumption equal to 1 million Watts (See Watt). Power rating of a typical large KMart rooftop solar system = 1 MW, of a remote, large, scale solar plant = 50 - 500 MW

Megawatt-hour (MWh)	A unit of electrical energy produced or consumed equal to 1 million Watt-hours (See Watt-hour). Yearly average household electrical energy consumption in California = 7 MWh
Micro-grid	Usually small power grid with self-contained generation, distribution, storage and energy management; can operate independently or connect to the electric grid (see electric grid)
Municipal Utility	Public utility providing bundled electricity services to all residents and businesses of a municipality (for example, Alameda Municipal Power)
Negawatt	Unit of electric power conserved (not consumed)
Net Energy Metering (NEM), often called Net Metering	Program that charges customers with behind the meter solar facilities for net energy they consume from the grid and credits them for any net energy they generate into the grid
Offtaker	Party that purchases the electricity generated by a facility--this could be an investor-owned utility, a Community Choice program, or a Direct Access customer
On Bill Repayment (OBR)	Incentive program that allows customers to pay off the initial cost of a home solar installation or energy efficiency retrofit through their monthly utility bill
Opt-out	Community Choice customers, who are automatically enrolled, have the right to opt-out of a Community Choice program and retain (or resume) service with the investor-owned utility. Community Choice programs are required to send four opt-out notices to their customers prior to, and right after enrolling them in the program
Peak Demand/Peak Load	Maximum electric power demand occurring at a particular time within the day or year, often during summer afternoons when air conditioning is running
Power Charge Indifference Adjustment (PCIA)	Monthly fees collected <i>indefinitely</i> by an investor-owned utility from customers in its service territory who leave the utility for Community Choice or Direct Access programs. PG&E doubled these fees in 1/16.

Power Purchase Agreement (PPA)	Contract between an electricity producer and customer, in which the consumer purchases a specified amount of electricity for a specified period of time (usually 10-20 years) at a specified price (usually below short-term market rates). Solar power purchase agreements are frequently used by municipalities to purchase renewable energy from local sources: There is almost no up-front cost to the municipality, and the producer takes on the construction, maintenance, and risk of the system
Project Labor Agreement (PLA)	Collective bargaining agreement, entered into before a project begins, that sets the terms and conditions for employing union labor for a project or set of projects
Property Assessed Clean Energy (PACE)	Program by which loans to homeowners or business owners for solar installations or energy efficiency retrofits are paid back over time through their property tax bills
Renewable Energy	Energy derived from a source designated by an appropriate government agency as renewable such as wind, solar, geo-thermal, and so forth. In California, large hydro and nuclear are not designated as renewable
Renewable Energy Certificates (RECs)	Renewable Energy Certificates authenticate that an amount of electricity was produced from a verified renewable source. RECs can be sold “bundled” together with the power they represent or sold separately as “unbundled” RECs. Purchase of unbundled RECs has been used to claim renewable credit for power from non-renewable sources; This practice is controversial because there is no validation that it results in an increase in renewable energy production
Renewable Portfolio Standard (RPS)	State regulation requiring investor-owned utilities and Community Choice programs to include increasing percentages of renewable energy in their portfolios over time. In California, utilities and Community Choice programs must achieve a 33% RPS by 2020 and 50% by 2030. The California renewable portfolio standard also specifies the types and quantity of renewable energy certificates that can be used to meet renewable requirements

Scavenged Electricity	Capturing energy from natural and human-made sources that surround us in the everyday environment (heat, movement, light sound) and storing it for later use (for example, sewage treatment plant using bio-digesters to convert waste into electricity)
Shared Solar (sometimes incorrectly called Community Solar)	Solar facility supported by multiple investors and/or subscribers, who share the benefits of the renewable electricity generated; a way for renters and others unable to own their own solar system to reap the benefits of a solar generating facility
Solar Lease	Agreement in which a solar company builds and retains ownership of an installed solar system and a customer pays a monthly fee for the use of the system. The electricity generated belongs to the customer.
Smart Meter	Electric meter that measures and records energy usage and can transmit information to utilities and customers for demand reduction or billing purposes
Solar Thermal	The conversion of solar energy to heat energy (as opposed to electricity). This can take the form of passive solar rooftop water heaters or utility-scale concentration of sunlight to vaporize a fluid into a gas to drive a turbine (called concentrated solar thermal power)
Storage	Technologies such as rechargeable batteries and thermal (heat) energy storage that store surplus electricity and heat for later use
Transmission Access Charges (TAC)	Utility fees that add about 30% to the cost of electricity in California to support the transmission system, including operations, maintenance, and financing. These charges are assessed even on electricity from local renewable resources, which do not utilize the transmission system, putting local renewables at a competitive disadvantage with remotely generated power.
Tiered Rates	Electric rates based on customer's electric consumption; higher rates are charged as usage increases. PG&E flattened its rate structure in 2015, shifting service costs to low-energy users
Time-of-Use Rates	Different rates for electricity depending on the time of day, with higher rates during peak demand hours

Utility-scale generation	Large, centralized electricity-generating facilities; typically this electricity is purchased by investor-owned or municipal utilities, Community Choice programs, or Direct Access customers
Virtual Net Metering	Program aimed at encouraging Shared Solar by enabling investors or subscribers of a solar facility (for example, apartment-dwellers) to benefit from their share of the electricity generated as if that share were generated behind their meter
Watt (W)	The unit of electrical power (the rate of energy production or consumption). Power rating of a typical light bulb = 25 to 150 Watts
Watt-hour (Wh)	The unit of electrical energy (the amount of energy produced or consumed). Energy consumption of a 100W light bulb in an hour = 100 Watt-hours

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