NET METERING GLOSSARY of TERMS

Annualized Billing Period - means: (a) a 12-month billing cycle beginning on April 1 of one year and ending on March 31 of the following year; or (b) an additional 12-month billing cycle as defined by an electrical corporation's net metering tariff or rate schedule.*

Avoided Costs - means the incremental costs to an electrical corporation of electric energy or capacity or both that, due to the purchase of electric energy or capacity or both from small power production or cogeneration facilities, the electrical corporation would not have to generate itself or purchase from another electrical corporation.*

Balance of System (BoS) - encompasses all components of a photovoltaic system other than the photovoltaic panels. This includes wiring, switches, a mounting system, one, or many solar inverters.

Capacity Factor - the ratio of the electrical energy produced by a generating unit for the period of time considered to the electrical energy that could have been produced at continuous full power operation during the same period.

Classes of Service - customers grouped by similar characteristics in order to be identified for the purpose of setting a common rate for electric service. Usually classified into groups identified as residential, commercial, industrial, and other.

Coincidental Demand - the sum of two or more demands that occur in the same time interval.

Coincidence Factor - is equal to the coincidence demand divided by the peak or non-coincidence demand.

Coincident Peak - (CP) is the sum of two or more peak loads that occur in the same time interval.

Cost-Based Rates - a ratemaking concept used for the design and development of rate schedules to ensure that the filed rate schedules recover only the cost of providing the service.

Cost Causation - is a phrase referring to an attempt to determine what, or who, is causing costs to be incurred by the utility. Cost

causation considers: (1) that utilities add capacity to meet critical system planning reliability criteria such as loss of load probability, loss of load hours, reserve margin, or expected unserved energy; and (2) that the utility's energy load or load duration curve is a major indicator of the type of plant needed.

Cost of Service - a ratemaking concept used for the design and development of rate schedules to ensure that the filed rate schedules recover only the cost of providing the electric service at issue. This concept attempts to correlate the utility's costs and revenue with the service provided to each of the various customer classes.

Customer Generated Electricity - means electricity that: (a) is generated by a customer generation system for a customer participating in a net metering program; (b) exceeds the electricity the customer needs for the customer's own use; and (c) is supplied to the electrical corporation administering the net metering program.*

Customer Generation System - (a) means an eligible facility that is used to supply energy to or for a specific customer that: (i) has a generating capacity of: (A) not more than 25 kilowatts for a residential facility; or (B) not more than two megawatts for a non-residential facility, unless the governing authority approves a greater generation capacity; (ii) is located on, or adjacent to, the premises of the electrical corporation's customer, subject to the electrical corporation's service requirements; (iii) operates in parallel and is interconnected with the electrical corporation's distribution facilities; (iv) is intended primarily to offset part or all of the customer's requirements for electricity; and (v) is controlled by an inverter; and (b) includes an electric generator and its accompanying equipment package.*

Demand Charge - that portion of the consumer's bill for electric service based on the consumer's maximum electric capacity usage and calculated based on the billing demand charges under the applicable rate schedule.

Demand Meter - electricity must be made when it is used or available from storage resources. This means that the power company

must have generating and distribution equipment large enough to handle the peak load of each customer or all customers on a circuit even though that peak may exist for only a few minutes. In order to fairly distribute the added cost of supplying peak power to each customer according to his peak power requirements, demand meters are used for measuring that electric-power demand.

Demand Response Programs - are incentive-based programs that encourage electric power customers to temporarily reduce their demand for power at certain times in exchange for a reduction in their electricity bills. Some demand response programs allow electric power system operators to directly reduce load, while in others, customers retain control. Customer-controlled reductions in demand may involve actions such as curtailing load, operating onsite generation, or shifting electricity use to another time period. Demand response programs are one type of demand-side management, which also covers broad, less immediate programs such as the promotion of energy-efficient equipment in residential and commercial sectors.

Demand-Side Management (DSM) - a utility action that reduces or curtails end-use equipment or processes. DSM is often used in order to reduce customer load during peak demand and/or in times of supply constraint. DSM includes programs that are focused, deep, and immediate such as the brief curtailment of energy-intensive processes used by a utility's most demanding industrial customers, and programs that are broad, shallow, and less immediate such as the promotion of energy-efficient equipment in residential and commercial sectors.

Distributed Generation - a generator that is located close to the particular load that it is intended to serve. General, but non-exclusive, characteristics of these generators include: an operating strategy that supports the served load; and interconnection to a distribution or sub-transmission system (138 kV or less).

Distribution System - the sub-transmission circuits of a typical distribution system deliver electric power from bulk power sources to the distribution substations. The distribution substation, which is made up of power transformers together with the necessary voltage regulating apparatus, bus bars, and

switchgear, reduces the sub-transmission voltage to a lower primary system voltage for local distribution. The three-phase primary feeder distributes electric power from the low-voltage bus of the substation to its load center, where it branches into three-phase sub-feeders and three-phase and occasionally single-phase laterals. Most of the three-phase distribution system lines consist of three-phase conductors and a common or neutral conductor, making a total of four wires. Single-phase branches (made up of two wires) supplied from the three-phase mains provide power to residences, small stores, and farms. Loads are connected in parallel to common power-supply circuits.

Effective Load Carrying Capability - is the measure of the effective capacity for distributed PV that can be applied to the avoided generation capacity costs, the avoided reserve capacity costs, the avoided generation fixed O&M costs, and the avoided transmission capacity costs.****

Equipment Package - means a group of components connecting an electric generator to an electric distribution system, including all interface equipment and the interface equipment's controls, switchgear, inverter, and other interface devices.*

Excess Customer-Generated Electricity - means the amount of customer-generated electricity in excess of the customer's consumption from the customer generation system during a monthly billing period, as measured at the electrical corporation's meter.*

Externalities - benefits or costs, generated as a byproduct of an economic activity, that do not accrue to the parties involved in the activity. Environmental externalities are benefits or costs that manifest themselves through changes in the physical or biological environment.

Fixed Cost - an expenditure or expense that does not vary with volume level of activity.

Functionalization - is defined as the process of grouping costs associated with a facility that performs a certain function with the costs of other facilities that perform similar functions.

Incremental Energy Costs - the additional cost of producing and/or transmitting electric energy above some previously determined base cost.

Integration Costs - represent the cost of measures to help meet the incremental needs of the system as more renewable energy is brought online, typically in the operational timeframe.

Inverter - means a device that: (a) converts direct current power into alternating current power that is compatible with power generated by an electrical corporation; and (b) has been designed, tested, and certified to UL1741 and installed and operated in accordance with the latest revision of IEEE1547, as amended.

Islanding - refers to the condition in which a distributed generator (DG) continues to power a location even though electric grid power from the electric utility is no longer present. Islanding can be dangerous to utility workers, who may not realize that a circuit is still powered, and it may prevent automatic re-connection of devices.

Levelized Cost of Energy - attempts to compare different methods of electricity generation in cost terms on a comparable basis. It is an economic assessment of the cost to build and operate a power-generating asset over its lifetime divided by the total power output of the asset over that lifetime. The LCOE can also be regarded as the cost at which electricity must be generated in order to break-even over the lifetime of the project.

Load Curve - the relationship of power supplied to the time of occurrence. Illustrates the varying magnitude of the load during the period covered.

Load Factor - the ratio of the average load to peak load during a specified time interval.

Load leveling - any load control technique that dampens the cyclical daily load flows and increases base load generation. Peak load pricing and time-of-day charges are two techniques that electric utilities use to reduce peak load and to maximize efficient generation of electricity.

Loss of Load Probability - a measure of the probability that a system demand will exceed capacity during a given period; often expressed as the estimated number of days over a long period, frequently 10 years or the life of the system.

Marginal Cost - in a perfectly competitive equilibrium, the amount consumers are willing to pay for the last unit of a good or service equaling the cost of producing the last unit.

Net Electricity - means the difference, as measured at the meter owned by the electrical corporation between: (a) the amount of electricity that an electrical corporation supplies to a customer participating in a net metering program; and (b) the amount of customer-generated electricity delivered to the electrical corporation.

Net Metering - means measuring the amount of net electricity for the applicable billing period.

Net Metering Program - means a program administered by an electrical corporation whereby a customer with a customer generation system may: (a) generate electricity primarily for the customer's own use; (b) supply customer-generated electricity to the electrical corporation; and (c) if net metering results in excess customer-generated electricity during a billing period, receive a credit as provided in Section 54-15-104.*

Non-Coincident Peak Demand - (NCP) is the individual or actual peak demands of each load in an electrical system oftentimes occurring at different hours of the day. It does not necessarily fall during system peak.

Power Optimizer - is a DC to DC convertor technology developed to maximize the energy harvest from solar photovoltaic or wind turbine systems. They do this by individually tuning the performance of the panel or wind turbine through maximum power point tracking and optionally tuning the output to match the performance of the string inverter.

Peak Demand - the maximum load during a specified period of time.

Peak Load - the maximum load during a specified period of time.

Peak Load Reduction - is defined as the maximum distribution load over the Load Analysis Period (without the Marginal PV Resource) minus

the maximum distribution load over the Load Analysis Period (with the Marginal PV Resource).****

Peak Load Month - the month of greatest plant electrical generation during the winter heating season (Oct-Mar) and summer cooling season (Apr-Sept), respectively.

Power Purchase Agreement (PPA) – is a financial agreement where a developer arranges for the design, permitting, financing and installation of a solar energy system on a customer's property at little to no cost. The developer sells the power generated to the host customer at a fixed rate that is typically lower than the local utility's retail rate. This lower electricity price serves to offset the customer's purchase of electricity from the grid while the developer receives income from these sales of electricity as well as any tax credits and other incentives generated from the system.
http://www.seia.org/sites/default/files/resources/SolarPPAs_fact%20sheet_FINAL%201.pdf

Rate Design - part of the rate making concept where pricing for utility services is developed. Rate design involves the formulation of prices for specific rate elements that will, when multiplied by the related test period billing units, recover the revenue requirement through the various rate schedules ensuring reasonable cost apportionment among customers within and across classes.**

Reactive Power - the portion of electricity that establishes and sustains the electric and magnetic fields of alternating-current equipment. Reactive power must be supplied to most types of magnetic equipment, such as motors and transformers. Reactive power is provided by generators, synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is a derived value equal to the vector difference between the apparent power and the real power. It is usually expressed as kilovolt-amperes reactive (KVAR) or megavolt-ampere reactive (MVAR).

Renewable Energy Credits (RECs) - also known as Green Tags, Renewable Energy Certificates, Renewable Electricity Certificates, or Tradable Renewable Certificates (TRCs), are tradable, non-tangible, energy commodities in the United States that represent proof that 1 megawatt-hour (MWh) of electricity was generated from an

eligible renewable resource and was fed into the shared system of power lines which transport energy.
https://www.wecc.biz/WREGIS/Pages/Default.aspx

SRECs - are RECs that are specifically generated by solar energy.

Reserve Generating Capacity - amount of generating capacity available to meet peak or abnormally high demands for power and to generate power during scheduled or unscheduled outages.

Smart Inverter - the utility can communicate with the inverter to tailor its output voltage, frequency, or power factor to help provide whatever the utility needs most – voltage support or VAR support or frequency support.***

Smart Meter - is an electronic device that records consumption of electric energy in intervals of an hour or less and communicates that information at least daily back to the utility for monitoring and billing. Smart meters enable two-way communication between the meter and the central system.

Sunk Cost - part of the capital costs actually incurred up to the date of reserves estimation minus depreciation and amortization expenses. Items such as exploration costs, land acquisition costs, and costs of financing can be included.

Switchgear - means the combination of electrical disconnects, fuses, or circuit breakers: (a) used to: (i) isolate electrical equipment; and (ii) de-energize equipment to allow work to be performed or faults downstream to be cleared; and (b) that is: (i) designed, tested, and certified to UL1741; and (ii) installed and operated in accordance with the latest revision of IEEE1547, as amended.*

Time-of-Day Pricing - a special electric rate feature under which the price per kilo-watt-hour depends on the time of day.

Volumetric Rate - a fee for moving electricity over the transmission and/or distribution system that is based on the quantity of electricity that is transmitted.

References

*Utah Code Ann. § 54-2-1 and 54-15-102
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