



Glossary

1. **Additional Sum:** The additional sum is a performance incentive authorized by the Georgia Public Service Commission (PSC) to compensate Georgia Power for entering long-term power purchase agreements (PPAs) and/or for deploying certified demand-side resources.
2. **Advanced Solar Initiative (ASI):** The Advanced Solar Initiative was a solar procurement program authorized by the Georgia Public Service Commission in 2012. In the 2013 IRP, the Commission built on this program and authorized a new, larger solar procurement program called “ASI-Prime.”
3. **Avoided Cost:** As defined in the Public Utility Regulatory Policy Act (PURPA) of 1978, avoided cost means the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source.” For more information, see the *Utility Avoided Cost Primer* on the Google Classroom.
4. **Behind-the-Meter (BTM) Solar:** BTM solar describes a customer-sited solar facility that is connected to the electrical system on the customer side of a retail/revenue meter. The electrical generation of a BTM solar system is typically used onsite by the customer with the export of electricity to the utility grid only occurring when the immediate output of the solar system exceeds the customer’s immediate electrical demand.
5. **Buy-All-Sell-All (BASA) Solar:** BASA describes an arrangement for interconnecting a customer-sited solar system (or any DG electrical generator) whereby the solar system is connected directly to the utility electricity grid with a separate meter and the total electrical output of the system is exported to the utility electrical grid and the utility pays the customer for the electricity provided to the grid. The electrical output of the solar system is not available to be used directly by the customer.
6. **Capacity Worth Factor Table (CWFT):** The CWFT is a tool used by Georgia Power to designate the relative worth of capacity in terms of reliability on an hourly basis. In the RCB Framework, the Company defines it as the “...the relative allocation of the value of capacity across the year and represents the relative reliability risk (i.e., risk of unserved energy) in one hour relative to all other hours.”

7. **Carbon Dioxide (CO₂):** A gas emitted in large quantities by fossil fuel electrical generating units. It is the most prolific of the greenhouse gasses that contribute to climate change.
8. **Clean Power Plan (CPP):** The CPP is a regulatory framework put in place by the Obama administration for the regulation of carbon dioxide emissions from existing and new electrical generating units. Not currently in force.
9. **Coal Combustion Residuals (CCR):** Coal combustion residuals refers to the by-products of burning coal to generate electricity and includes at least fly ash, bottom ash, boiler slag, and flue gas desulfurization materials.
10. **Coincident Peak Demand:** Coincident peak demand (or coincident peak demand savings) describes a specific customer or facilities level of demand at the specific time when the overall electricity system is experiencing peak demand. Coincident peak demand can be measured within different intervals, such as a day, a month, a season, or a year. For instance, a utility may experience its summer daily peak demand at 4:30 pm in August. If one customer of that utility sets a peak demand of 7 kW between midnight and 1:00 am on August 10th, when she charges her electric vehicle, while her neighbor sets his peak demand that day between 4:00 and 5:00 pm, due to air conditioning load, her 7 kW demand in the middle of the night is non-coincident peak demand, while her neighbor's afternoon peak demand is coincident peak demand.
11. **Combined Cycle (CC):** Combined cycle units, sometimes called natural gas combined cycle or NGCC, are a type of electrical generating unit that combines combustion and steam turbine technologies to increase the unit's thermal efficiency. First, hot gas produced from the combustion of natural gas spins a turbine. Combined cycle units then "recover" the heat from the gas, after it has passed through the turbine, to boil water. The steam produced from the boiling water spins a steam turbine. In this way, combined cycle units use the heat twice from a single instance of combustion to produce energy, increasing the thermal efficiency of the units compared to a single-cycle gas turbine or a steam turbine alone. CCs are more efficient and less expensive to operate than CTs (see subsequent entry) and they can operate as base load units.
12. **Combustion Turbine (CT):** Combustion turbines are a type of electrical generating unit, in which the combustion of natural gas and/or distillate oil produces expansive hot gasses that pass directly through a turbine to spin the generator shaft, much like a jet engine. CT's are typically the least costly type of utility-scale electrical generating unit to build, but they tend to be expensive to operate due to the cost of fuel and their low efficiency level. CTs are easier than some other units to ramp up and down and are often used as "load following" units. They are also typically used to meet peak demand and are sometimes referred to as "peakers."
13. **Community Solar:** The U.S. Department of Energy defines community solar as any solar project or purchasing program, within a geographic area, in which the benefits of a

solar project flow to multiple customers such as individuals, businesses, nonprofits, and other groups. In most cases, customers are benefitting from energy generated by solar panels at an off-site array. Under community solar programs, customers can either buy or lease a portion of the solar panels in the array, and they typically receive an electric bill credit for electricity generated by their share of the community solar system—similar to someone who has rooftop panels installed on their home. Community solar is provided as an option for customers who are unable to install solar panels on their roofs because they don't own their homes, have insufficient solar resources or roof conditions to support a rooftop PV system due to shading, roof size, or other factors, or for financial/other reasons.

14. **Criteria Pollutants:** The criteria pollutants are the six common air pollutants (carbon monoxide, ground-level ozone, lead, nitrogen dioxide, particulate matter, and sulfur dioxide) for which the US EPA has established National Ambient Air Quality Standards (see NAAQS).
15. **Customer Renewable Supply Procurement (CRSP):** As part of the Georgia Power's 2019 Integrated Resource Plan (IRP), the Georgia Public Service Commission (PSC) authorized Georgia Power to procure 1,000 megawatts (MW) of renewable resources through power purchase agreements (PPA) for subscription by commercial and/or industrial (C&I) customers, including municipalities, universities, schools, and hospitals, through the CRSP program. Participating customers may purchase a monthly subscription in exchange for receiving hourly credits on their bill based on the production of a portfolio of renewable facilities procured by Georgia Power to supply the CRSP Program (CRSP Portfolios). The program has two segments. The first makes 600 MW available for subscription to existing C&I customers with an aggregated load of at least 3 MW. The second segment makes 400 MW available for subscription to existing or new C&I customers with incremental new load additions of at least 15 MW.
16. **Customer-Sited Program:** The Georgia Power Customer-Sited (aka Customer-Connected) Program is a distributed generation solar program under which eligible customers apply pursuant to a request for proposals issued by Georgia Power, connect to the utility grid under a buy-all-sell-all arrangement and get compensated for all electrical generation at the utility's hourly avoided cost as calculated by the Renewable Cost Benefit Framework.
17. **Demand Response (DR):** DR describes the dynamic whereby end-use customers temporarily reduce their use of electricity in response to power grid needs, often in response to electricity price signals built into their electricity rate / tariff. Utilities operate a range of DR programs. Time-based, rate DR programs, such as real-time pricing or critical peak pricing, price electricity on a time-of-use basis according to system demand and the marginal cost of generation, thereby sending a "price signal" that encourages customers to reduce demand during episodes of high system demand. Direct load control programs can directly reduce demand from specific customer equipment (e.g., electric hot water heaters or central air conditioners) at times of peak demand, typically in return for bill credits.

18. **Demand Savings:** Amount of peak demand reduction (measured in kilowatts or megawatts) attributable to EE measure or program. Demand is sometimes described as an “instantaneous” measurement. Demand savings associated with an energy efficiency measure or program or portfolio can be measured independently of system dynamics (non-coincident peak demand savings) or measured as it coincides with system peak demand (coincident peak demand savings). For more information, see “Coincident Peak Demand.”
19. **Demand-Side Management (DSM):** DSM describes utility programs or initiatives that reduce customer demand as part of long-term efforts to meet system electricity demand. Utility-sponsored DSM programs might include customer rebates for installation of high-efficiency equipment, like refrigerators or air conditioners, or for improvement of building energy performance (e.g., through installation of better insulation). DSM is sometimes used interchangeably with “energy efficiency,” though DSM is a term of art used to describe utility-sponsored energy efficiency programs operated as part of an integrated resource plan.
20. **Deregulation and/or Deregulated:** In traditional, regulated electricity markets, vertically integrated utilities generate electricity, transmit electricity to substations, distribute electricity to buildings and manage retail sale of electricity to customers. In deregulated markets, these functions are often provided by a variety of companies, including the retail sale of electricity.
21. **Direct Install:** Is a type of DSM program in which the program implementer or program contractor directly installs energy efficiency measures in customer homes or businesses free of charge. This type of program contrasts with a rebate program in which a program sponsor provides a cash incentive to homeowners or business owners that purchase and install energy efficiency measures themselves (or hire and pay a contractor to install). Often low-income DSM programs are direct install programs and the participant has zero out-of-pocket expense.
22. **Discounted Cash Flows & Discount Rate:** One challenge of evaluating the costs and benefits of energy efficiency projects and programs is valuing future cash flows. A simple example is calculating the benefit to a customer of installing an energy efficiency measure that costs \$500 and will save the customer \$10 on her monthly energy bill every year for ten years. The “nominal” math is straightforward - the customer’s \$500 investment today will yield \$1,200 worth of savings over ten years for a net *nominal* savings of \$700. But, based on the concept of the time value of money, \$10 of savings in the current month is worth more to the customer than \$10 of savings in five years or ten years. Calculating the present value of a stream of future cash flows is the method for valuing these cash flows across time. The discount rate is the rate at which the evaluator discounts future cash flows. So, if you assume an annual discount rate of 3%, the net present value of the \$500 energy efficiency is closer to \$535 instead of a nominal net savings of \$700.

23. **Distributed Generation (DG):** Distributed generation describes electrical generating facilities, such as on-site solar or combined heat and power systems, which are distributed throughout a utility's service area. DG contrasts with traditional central power plant generation. DG facilities are typically customer or third-party owned and operated, but not exclusively.
24. **Distribution:** The electrical distribution system describes the system of low-voltage wires and poles that deliver electricity from a substation to end-use customers. A typical feature of the distribution system is the classic power poles, power lines and customer transformers that you typically see along roads and streets. Taken together, the electrical transmission and distribution systems make up what people describe as the electricity grid.
25. **Effluent Limitation Guidelines (ELG):** Effluent limitations serve as the primary mechanism in NPDES permits (see National Pollution Discharge Elimination System entry) for controlling discharges of pollutants to receiving waters. The Effluent Limitation Guidelines put out by EPA are specific to the type of industry; steam electric power plants have specific Effluent Limitation Guidelines that govern their wastewater discharge requirements.
26. **Electric Generating Unit (EGU):** An EGU is a machine that converts primary energy, such as fossil fuels, uranium, or moving water, into electric energy. The two principal parts of a generating unit are the prime mover and the generator. The prime mover is the turbine, engine, water wheel, or similar machine that drives the electric generator. The generator creates the electric current. A shaft connects the prime mover to the generator. Some examples of EGUs include a steam boiler and connected steam turbine and generator or an oil/natural gas-fired combustion turbine and associated generator.
27. **Electric Membership Cooperative (EMC):** EMCs are customer-owned local corporations governed by boards of directors elected by each EMC's members. EMCs came into being in the 1930s with the creation of the Rural Electrification Administration (1935) and the passage of the Rural Electrification Act (1936) and the Electric Cooperative Corporation Act (1937). There are 41 electric membership cooperatives (EMC) in Georgia. Thirty-eight of Georgia's 41 EMCs are members of Oglethorpe Power (see below) and buy a portion of their power from Oglethorpe Power. Three of Georgia's 41 EMCs purchase power from the Tennessee Valley Authority (Blue Ridge Mountain EMC, North Georgia EMC, and Tri-State EMC).
28. **Energy Savings:** The amount of energy use reduction (measured in kilowatt-hours or megawatt-hours) attributable to EE measure or program.
29. **Environmental Cost Compliance Recovery (ECCR) Rider:** The ECCR rider is a cost recovery rider approved by the Georgia Public Service Commission and used by Georgia Power to recover certain environmental control costs. Riders entail a special and separate ratemaking process, usually associated with a specific utility cost, that is handled separately from base rate setting as commonly done in a rate case.

30. **Evaluation, Measurement & Verification (EM&V):** Evaluation, measurement and verification is the process of verifying energy efficiency results at the measure, project, or program level. EM&V is the process of verifying the energy efficiency action actually took place (e.g., the lightbulb was installed), verifying it is used as expected (e.g., that light fixture is turned on a certain number of hours each day or over the year) and that the customer installed the energy efficient light bulb directly in response to the utility program (e.g., decided to buy and install a more energy efficient light bulb specifically because the utility offered him/her an incentive to do so).
31. **Federal Energy Regulatory Commission (FERC):** FERC is an independent federal agency that regulates the interstate transmission of electricity, natural gas, and oil.
32. **Flue Gas Desulfurization (FGD):** FGD describes the post-combustion process and/or technology used to remove sulfur dioxide from the flue gas exiting a coal-fired boiler. One of the common FGD technologies used for coal fired EGUs is a “scrubber,” which pumps the flue gas through a slurry compound that removes sulfur dioxide.
33. **Free Ridership:** Free-ridership is concept used in energy efficiency EM&V that describes the extent of program participants that participated in an energy efficiency (EE) program, such as an ENERGY STAR Appliance Program, by purchasing an eligible appliance and applying for a program rebate even though they would have taken that EE action in the absence of the program incentive (i.e., rebate). Typically in EM&V studies free-ridership lowers the net-to-gross (NTG) ratio for an energy efficiency program by excluding energy savings associated with free riders whose actions were not induced by the program.
34. **Georgia Territorial Electric Service Act:** The Georgia General Assembly adopted the Georgia Territorial Electric Service Act in 1973, establishing assigned territories for Georgia utilities. Within their assigned territories, Georgia utilities have the responsibility and the privilege to serve all residential, small business and existing large commercial and industrial customers. The purpose of the Territorial Act was to avoid duplication of electric lines and assure efficient and orderly electric service in the state. The Act also preserved limited retail competition for large loads.
35. **Greenhouse Gasses (GHG):** GHGs are a family of gasses that contribute to climate change by trapping heat in the earth’s atmosphere. Some common GHGs include carbon dioxide and methane.
36. **Incremental Capacity Equivalence (ICE):** The annual ICE factor is a capacity equivalent calculated from the Capacity Worth Factor Table or CWFT (see CWFT entry). Multiplying the hourly forecasted generation for the renewable energy project being evaluated by the hourly CWFT yields the annual capacity equivalent in MW. The capacity equivalent is divided by the nominal “nameplate” capacity of the renewable resource to give the annual ICE factor as a percentage. In the RCB Framework, the Company defines it as the “...equivalent capacity value of a potential resource that is

based on the resource's contribution to reducing expected reliability risk as compared to that of a dispatchable combustion turbine ("CT") resource."

37. **Incremental Cost:** the additional cost for a high-efficiency technology, compared to the average market cost of a standard-efficiency technology. For instance, if a standard-efficiency refrigerator costs \$700 and the average ENERGY STAR refrigerator costs \$850, the incremental cost of an ENERGY STAR refrigerator equals the difference (\$150).
38. **Integrated Resource Plan (IRP):** A utility IRP is a long-term plan and planning process where a utility estimates long-term demand and provides a plan for meeting that forecasted demand reliably and cost-effectively. A utility IRP typically considers anticipated customer expansion, economic growth, unit retirements, demand-side management, environmental regulations, required reserve margin, transmission capacity and constraints, etc. In Georgia, state law requires all electrical IOUs (i.e., Georgia Power) to submit an IRP every three years and the Georgia Public Service Commission presides over a detailed review of the utility's proposed IRP.
39. **Investor-Owned Utility (IOU):** IOU's are utility companies that are publicly traded or the subsidiary of a publicly traded company. Georgia Power and Atlanta Gas Light Company are Georgia examples of IOUs - they are both subsidiaries of Southern Company which is a publicly traded company. Many electricity and natural gas IOUs are regulated by state public utility commissions in exchange for monopoly rights in a defined service territory.
40. **Kilowatt (kW):** A kilowatt is the equivalent of 1,000 watts. A kilowatt (or watt) is a measured level of use (demand) or production (capacity) in a specific instant or on a "nameplate" basis. For instance, an electric range may have a nameplate or peak demand of 3,000 watts, but that is only when all four burners and the oven are on high. Likewise, a solar array may have a nameplate capacity of 100 kilowatts or 100 kW, but the system only reaches that level of output on perfectly sunny afternoons. For electric customers that are charged a "demand" charge, based on their peak use of electricity during a billing period, the customer's peak demand is a measured level of use during a short time interval, such as 15 or 30 minutes, and is measured in kilowatts (kW). Demand charges are often "per kW" charges based on the peak demand set by a customer during the billing period. For instance, a utility might charge a customer a certain amount per kW of demand, with demand measured as the customer's highest 30-minute interval use during the last 12 months. Kilowatt is distinct from kilowatt-hour, which is a measurement of energy use or production over time.
41. **Kilowatt-hour (kWh):** A kilowatt-hour is the equivalent of 1,000 watt-hours. It is a measurement of energy use or production over time. It is a volumetric measurement of electricity use or output. A kilowatt-hour is the equivalent amount of electrical energy of 1 kW of demand for one hour. Electricity customers, particularly residential customers, are billed based on their kilowatt-hour (volumetric) use of electricity.

42. **Lost Revenues:** Under most existing ratemaking approaches, utilities estimate their revenue requirements and establish their retail rates according to how much revenue they must earn per kilowatt-hour of electricity they think they will sell in the future. If the utility implements a DSM program that lowers the utility's electricity sales while the same rates remain in effect, it can result in "lost revenues" – revenue requirements the utility anticipated earning that may not materialize due to selling fewer kilowatt-hours of electricity. The utility must then raise rates in the future to achieve revenue targets.
43. **Measure (DSM or Energy Efficiency):** A single energy efficiency technology, such as the installation of an LED light bulb (replacing an incandescent bulb) or the installation of new attic insulation in house.
44. **Megawatt (MW):** A megawatt is the equivalent of 1,000 kilowatts or 1,000,000 watts. A megawatt (or kilowatt or watt) is a measured level of use (demand) or production (capacity) in a specific instant or on a "nameplate" basis. For instance, a factory may have a peak demand of 2 megawatts, but that is only when all the assembly lines are operational, the heat is on, and all the lights are on. Likewise, a solar array may have a nameplate capacity of 1 megawatt, but the system only reaches that level of output on perfectly sunny afternoons. Alternatively, a megawatt-hour is a measurement of energy use or production over time. It is a volumetric measurement of electricity use or output.
45. **Megawatt-hour (MWh):** A megawatt-hour is the equivalent of 1,000 kilowatt-hours. It is a measurement of energy use or production over time. It is a volumetric measurement of electricity use or output. A megawatt-hour is the equivalent amount of electrical energy of 1 MW of demand or production for one hour.
46. **Mercury and Air Toxics Standard (MATS):** The US EPA issued the MATS rule in February 2012. The MATS rule limits the amount of mercury and other toxic emissions from power plants.
47. **Midstream Program:** see "Upstream Program."
48. **Monthly Netting:** Monthly netting refers to the way a utility accounts for "excess" solar generation from a behind-the-meter (BTM) solar customer, like a regular residential solar customer. A BTM solar customer typically uses some significant portion of the output from her/his solar system directly to satisfy on-site demand for electricity. Excess generation means the generation that exceeded the customer's on-site demand at any given moment and had to flow back across the meter to the electricity grid. Using a monthly netting approach, the utility sums up the excess generation from a participating customer's solar panels on a monthly basis and reduces the customer's monthly energy consumption accordingly. This differs from so-called "instantaneous" netting, whereby a utility charges a solar customer at the retail rate for all electricity consumed during the month and credits the customer for any excess generation at the utility's avoided cost. Georgia Power has traditionally used an instantaneous netting approach. By way of reference, Georgia Power's average residential retail rate is roughly 12 cents per kWh,

while the avoided rate paid to solar providers under the RNR tariff averages about 3 cents per kWh.

49. **Muni (aka Electric City or Municipal Utility):** Munis are utilities (electric or gas) that are owned and operated by cities. The ultimate governing body of municipal utilities are the respective city councils. In some cases, the term encompasses counties that operate their own utility.
50. **Municipal Electric Authority of Georgia (MEAG):** MEAG Power is a public power entity that supplies bulk electric power to political subdivisions of the State of Georgia that own and operate electric distribution systems. MEAG was created by the Georgia General Assembly in March 1975. MEAG owns numerous electrical generating units in Georgia, including portions of Plant Hatch, Plant Vogtle (units 1, 2, 3 & 4), Plant Scherer and Plant Wansley. MEAG also owns Plant Wansley unit 9.
51. **National Ambient Air Quality Standards (NAAQS):** The Clean Air Act requires EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants that are common in outdoor air, and considered harmful to public health and the environment. The NAAQS have two standards: a primary and secondary standard. The NAAQS establish a threshold for the atmospheric concentration of a pollutant above which is harmful to human health and the environment. The standards may be revised and made more stringent over time in accordance with the latest science.
52. **National Pollution Discharge Elimination System (NPDES):** The NPDES is a national permitting program that addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. The NPDES Program was created in 1972 by the Clean Water Act. The NPDES permit program is generally delegated to state governments to perform many permitting, administrative, and enforcement aspects of the program.
53. **Natural Gas Combined Cycle (NGCC):** see Combined Cycle.
54. **Net Present Value:** see “Discounted Cash Flows and Discount Rate”
55. **Net-to-Gross (NTG) Ratio:** The NTG ratio adjusts the impacts (e.g., energy savings) of DSM programs so that the savings values only reflect those energy efficiency gains that are a direct result of the energy efficiency program. The NTG deducts energy savings that would have been achieved without the efficiency program (e.g., “free-riders”) and increases savings for any “spillover” effect that occurs as an indirect result of the program. (EEI & RAP, 2008)
56. **Nitrogen Oxides (NOx):** The term nitrogen oxides or NOx describes a group of highly reactive gasses, including nitrogen dioxide, nitrous acid and nitric acid, that are emitted by the burning of fossil fuels. NOx can be directly harmful to humans and they react in the atmosphere with other compounds to form particulate matter and ozone, which are also harmful to human health.

57. **Non-Energy Benefits (NEBs):** are benefits of energy efficiency beyond energy and cost savings, such as improved comfort, increased productivity, better health, greater convenience, and better aesthetics. These benefits can be difficult to quantify. Some jurisdictions choose to include NEBs in some of the cost-effectiveness tests. (EEI & RAP, 2008)
58. **Non-Participant Spillover (NPSO):** NPSO is concept used in energy efficiency EM&V that describes the extent of people that took an energy efficiency action, such as purchased an ENERGY STAR appliance, because they were inspired to do so due the operation of an energy efficiency / DSM program but they did not formally participate in the program (e.g., apply for rebate). In some EM&V studies, NPSO can offset free-ridership in determining the net-to-gross (NTG) ratio.
59. **Oglethorpe Power:** Oglethorpe Power Corp (OPC) is an electric membership corporation that is owned by its 38 retail EMC members. Its principal business is providing wholesale power to its members. OPC was created by the Georgia General Assembly in 1974. In 1997, OPC restructured into three separate, interrelated cooperatives: Oglethorpe Power, which continues to provide power to its members; Georgia Transmission Corporation, which owns and operates the transmission lines and substations; and Georgia System Operations Corporation, which coordinates system dispatch, etc. OPC owns numerous electrical generating units in Georgia, including portions of Plant Hatch, Plant Vogtle (units 1, 2, 3 & 4), Plant Scherer, Plant Wansley and the state's largest pump hydro facility - Rocky Mountain. OPC also fully owns several other generating units.
60. **Participant Cost Test (PCT):** The PCT evaluates the benefits and costs of an energy efficiency program from the perspective of the customer installing the measure. The PCT quantifies benefits and costs from the perspective of the customer that participates in the program.
61. **Portfolio (DSM or Energy Efficiency):** A group of energy efficiency programs sponsored by a single program sponsor, such as a utility. For instance, Georgia Power's EE portfolio includes several certified residential and commercial programs, several EE pilot programs and energy efficiency customer awareness activities.
62. **Power Purchase Agreement (PPA):** A PPA is a long-term, bilateral agreement for the purchase of electrical power between a power producer and a buyer. The PPA can be for electrical capacity and/or electrical energy. For instance, a utility may need electrical generating capacity and energy to serve its customers and enters a PPA with a third-party power plant operator to buy capacity and energy.
63. **Present Value:** see "Discounted Cash Flows and Discount Rate"
64. **Program (DSM or Energy Efficiency):** An organized effort designed to encourage the installation of a specific energy efficiency measure or a bundle of measures among one

customer segment or in a particular building type. An example is Georgia Power's residential Refrigerator Recycling Program or Commercial Custom Program.

65. **Program Administrator Cost Test (PACT):** The PACT evaluates the benefits and costs of an energy efficiency program from the perspective of a utility, government agency, or third party implementing the program. The PACT measures the costs of administering an energy efficiency program relative to energy supply options. In other words, the PACT measures whether it is more costly for a utility to generate and deliver a given amount of energy or to implement programs to save that energy.
66. **Public Service Commission or Public Utility Commission (PSC/PUC):** PSCs / PUCs are the typical titles for state commissions that regulate investor-owned electricity, natural gas, water, telecom, railroad, and/or public livery/transportation services.
67. **PURPA or the Public Utility Regulatory Policy Act:** The Public Utility Regulatory Policies Act of 1978 (PURPA) promotes energy conservation and greater use of domestic and renewable energy resources. The Act also expanded competition in the electric power sector, which was, at the time, dominated by vertically integrated utilities.
68. **Qualifying Facility:** A qualifying facility is a small renewable energy or cogeneration facility, as defined under the Public Utility Regulatory Policy Act (PURPA) of 1978.
69. **Rate Impact Measure (RIM) Test:** The RIM test evaluates the benefits and costs of an energy efficiency program from the perspective of the non-participant. The RIM test measures what happens to customer rates due to changes in utility revenues and utility avoided operating costs caused by the program. In contrast to most energy supply options, energy efficiency programs directly decrease a utility's revenues, and these lost revenues may need to be recovered from ratepayers. The RIM test is the only test that reflects this revenue shift. Some stakeholders emphasize the point that, strictly speaking, the RIM test is not a test of cost-effectiveness. It indicates if a program would put "upward pressure" on rates that might impact non-participants.
70. **Real Time Pricing (RTP):** RTP describes an electricity tariff that prices a portion of a customer's electricity use on an hourly basis according to the utility's hourly marginal cost to generate electricity (aka system lambda). For instance, the hourly price for RTP electricity may be low in very early hours of a June weekday and begin to increase across the hours of the day, as the demand on the grid grows. Since RTP prices may spike to very high levels during periods of high demand or when a generating unit unexpectedly goes offline, RTP customers assume more price risk. RTP is considered a demand response tariff under which the utility anticipates customers will decrease their demand during high-price periods. Georgia Power offers RTP-Day Ahead and RTP-Hour Ahead tariffs (the latter being for larger, more sophisticated customers).
71. **Renewable Cost Benefit (RCB) Framework:** The RCB is a document that describes Georgia Power's methodology for calculating the hourly compensation rate for interconnected renewable energy generating facilities and includes the pricing of energy

and the ancillary costs imposed and/or benefits provided to the utility’s system by the operation of the interconnected renewable energy facility. The table below provides a list of RCB components and an indication of whether each component is considered to impose a cost or provide a benefit to the electrical system, by system type/size.

RCB Component	Utility Scale	Dist. Gen.
Avoided Energy Costs (AEC)	Benefit	Benefit
Deferred Generation Capacity Costs	Benefit	Benefit
Deferred Transmission Investment	Case-by-case	Benefit
Reduced Transmission Losses (Energy Related)	Benefit	Benefit
Reduced Transmission Losses (Capacity Related)	Case-by-case	Benefit
Reduced Distribution Losses (Energy Related)	N/A	See note
Generation Remix	Cost or Benefit	Cost or Benefit
Ancillary Services – Regulation	Cost	Cost
Support Capacity (Flexible Reserves)	Cost	Cost

72. Renewable Energy Certificates (RECs): Renewable energy certificates, or RECs, are tradable “certificates” that represent proof that one megawatt-hour (MWh) of energy was produced by an eligible renewable energy resource (e.g., solar PV) and supplied to the utility electricity grid. The REC represents the environmental attributes of this MWh of clean energy. RECs provide a mechanism for individuals to “buy” renewable energy that is supplied to the grid. They are the standard commodity used to buy or trade clean energy that is not directly supplied to a customer.

73. Renewable Energy Development Initiative (REDI): The REDI program was a solar procurement program authorized by the Georgia Public Service Commission in the 2016 IRP.

74. Renewable & Nonrenewable Resources (RNR) Schedule: The RNR schedule is a tariff offered by Georgia Power for customers with behind-the-meter energy systems that wish to sell excess energy (not used onsite) to the utility. The RNR tariff describes who is eligible, how participating customers will be compensated, associated fees and interconnection requirements.

75. Scrubber: Scrubbers are a type of utility-scale, post-combustion pollution control which cleans the gasses of a coal-burning power plant. Most scrubbers in the US are designed to remove sulfur dioxide from coal plant emissions to assist in Clean Air Act / Title V Permit compliance.

76. **Selective Catalytic Reaction (SCR):** SCRs are a type of post-combustion pollution control used in a range of applications, including power plants, to remove NO_x from power plant emissions.
77. **Solar Energy Procurement Agreement (SEPA):** A Solar Energy Procurement Agreement (SEPA) is a financial arrangement by which a third-party developer arranges for the design, permitting, financing and installation of a solar energy system on a customer's property at little or no up-front cost. The developer owns, operates, and maintains the photovoltaic (PV) system, and the host customer agrees to site the system on its property and to purchase the system's electric output from the developer for a predetermined period. This financial arrangement allows the host customer to receive stable and often low-cost electricity that offsets the host's purchase of electricity from the grid. Meanwhile, the developer receives the income from these sales of electricity as well as any tax credits and other incentives generated from the system. SEPA's, commonly referred to as Solar Power Purchase Agreements in other states, were authorized in Georgia by the Solar Power Free Market Financing Act, signed into law in 2015.
78. **Solar Photovoltaic (PV):** Solar PV systems are solar systems that convert sunlight directly into electrical current. Other types of solar systems include solar hot water systems that convert sunlight into heated water and solar thermal systems that typically concentrate solar energy to produce steam that is, in turn, used to produce electrical current.
79. **Solar+Storage (S+S):** S+S describes the pairing of a solar photovoltaic system with onsite battery storage. S+S systems help customers maximize the use of onsite solar electrical generation by capturing electricity generated at times of peak solar production (e.g., mid-afternoon) and making it available for use during times of poor solar production (e.g., at night).
80. **Southeastern Power Administration (SEPA):** The Southeastern Power Administration (SEPA) is a division of the U.S. Department of Energy. SEPA markets the electric power and energy generated at reservoirs operated by the U.S. Army Corps of Engineers throughout the Southeast. The U.S. Army Corps of Engineers operates hydroelectric facilities in Georgia, Virginia, Florida, Alabama, South Carolina, Tennessee and Kentucky, including hydroelectric facilities in Georgia or along the state's borders. SEPA is headquartered in Elberton, GA.
81. **Sulfur Dioxide (SO₂ or SO_x):** Sulfur dioxide (SO₂) is a gas emitted by the burning of fossil fuels that contain sulfur. The term SO_x describes the larger group of gaseous sulfur oxides (such as SO₃) that are also emitted from the burning of fossil fuels that contain sulfur. SO₂ is the component of greatest concern and is used as the indicator for the larger group of gaseous sulfur oxides.
82. **Target Reserve Margin (TRM):** A utility system's TRM describes the amount of electrical generating capacity that a utility must have on-hand in excess of its anticipated system peak demand to ensure reliability. For instance, if a utility anticipates a peak

demand on its system of 10,000 MW and uses a fifteen percent target reserve margin for planning purposes, that utility must have available 11,500 MW of generating capacity (10,000 MW of peak demand + 1,500 MW of excess capacity or reserve margin). Target reserve margin is a concept used in utility long-term planning. A utility system's actual reserve margin may vary depending on the ratio of actual demand and utility capacity.

83. **Technical Economic Achievable Potential (TEAPOT) Study:** TEAPOT studies evaluate how much energy efficiency is available within a given geographic area (such as service territory or state).
84. **Technical Resource Manual (TRM):** A TRM is an inventory of EE measures with pre-calculated values for savings impacts and cost-effectiveness, based on standard methodologies. Sometimes, TRM authors will rely on EM&V studies to update measure data. TRMs are often effective in standardizing EE reporting across multiple program implementers. Georgia Power now maintains a TRM.
85. **Time of Use (TOU):** TOU electricity tariffs price electricity based on the time of day the electricity is used. TOU rates typically divide up the hours of the day into "buckets." A simple TOU rate might price electricity based on whether it was used "on-peak" (2:00 – 7:00 pm in summer months) or "off-peak" (all other hours). More sophisticated TOU rates might have other "buckets," such as shoulder periods or off-off-peak periods (like midnight to 6:00 a.m.). TOU rates are considered a demand response tariff.
86. **Title V Permit:** A Title V permit is a type of air emissions permit for so-called "major sources" of criteria pollutants and/or hazardous air pollutants. The name "Title V" comes from Title V of the 1990 federal Clean Air Act Amendments that require the Environmental Protection Agency (EPA) to establish a national, operating permit program.
87. **Total Resource Cost (TRC) Test:** The TRC test evaluates the benefits and costs of an energy efficiency program from the perspective of all utility customers (participants and non-participants) in the utility service territory. The TRC test assesses the costs of an energy efficiency program relative to other energy supply options. In essence, the TRC test measures whether it is more expensive to generate and deliver a given amount of energy or to implement programs to save that energy. It is a good measure of overall economic efficiency.
88. **Transmission:** The electricity transmission system describes the system of high-voltage electricity wires and towers that move bulk energy from the site of generation (e.g., large power plant) to substations where the voltage of the electricity is stepped down for local distribution to customers across the "distribution" system. Taken together, the electrical transmission and distribution systems make up what people describe as the electricity grid.
89. **Upstream Program:** An upstream or midstream demand-side management program focuses "upstream" from the individual customer and targets product retailers or

manufacturers. For instance, a utility might implement an upstream restaurant program whereby it works with retailers of restaurant equipment to promote or exclusively stock energy efficient equipment.

90. **Utility-Scale (Solar):** Utility-scale solar describes large solar systems that are, typically, free-standing (not customer sited) systems that are interconnected to the grid at transmission level and sell all electrical output to the “off-taker” or utility. These systems often operate as independent power producers and are in the business of generating electricity for the wholesale market.

91. **Weatherization:** Weatherization describes energy efficiency improvements to the “shell” of a building (typically single-family home), such as air sealing, window and door replacement, insulation installation or improvement, etc. In some cases, weatherization is used as a synonym for low-income energy efficiency upgrades, likely based on the term’s prevalence in the title of the federal income-qualified energy efficiency program, the Weatherization Assistance Program, which operates in all 50 states.

=====