

# IRP Acronym Glossary with Definitions

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Acronym	Term	Definition
<b>ACEE</b>	The American Council for an Energy-Efficient Economy	A non-profit research organization that develops policies to reduce energy waste and combat climate change.
<b>AMI</b>	Advanced Metering Infrastructure	An integrated system of smart meters, communications networks, and data management systems that enables two-way communication between utilities and customers. The system provides a number of important functions that were not previously possible or had to be performed manually, such as the ability to automatically and remotely measure electricity use, connect and disconnect service, detect tampering, identify and isolate outages, and monitor voltage.
<b>BESS</b>	Battery Energy Storage System	Rechargeable battery systems that store energy from solar arrays or the electric grid and provide that energy to a home or business.
<b>BNEF</b>	Bloomberg New Energy Finance	A strategic research provider covering global commodity markets and the disruptive technologies driving the transition to a low-carbon economy.
<b>BTA</b>	Build-Transfer Agreement	A hybrid between an acquisition agreement and a construction contract that allows for the direct ownership of a new renewable energy project as an alternative to power purchase agreements (PPAs) and provide incentives to utility or corporate owners and potential tax equity investors.
<b>C&amp;I</b>	Commercial and Industrial	Used when referring to classes of utility customers, commercial and industrial refers to subsets of customers that take service in order to provide services or produce goods.
<b>CAA</b>	Clean Air Act	The comprehensive federal law that regulates air emissions from stationary and mobile sources. It was initially enacted in 1963 and has been amended several times to reduce and control air pollution nationwide.
<b>CAGR</b>	Compound Annual Growth Rate	The rate of return that would be required for an investment to grow from its beginning balance to its ending balance.
<b>CCGT</b>	Combined Cycle Gas Turbines	A power system that uses a gas turbine to drive an electrical generator and recovers waste heat from the turbine exhaust to generate steam. The steam from waste heat is run through a steam turbine to provide supplemental electricity.

<b>CCS</b>	Carbon Dioxide Capture and Storage	A technological process that "scrubs" carbon dioxide from the emissions of a thermal generation resource, transports it, and permanently and safely stores it underground, reducing emissions from energy-intensive industries.
<b>CDD</b>	Cooling Degree Day	A measure of how hot the temperature was on a given day or during a period of days. A degree day compares the average outdoor temperatures recorded for a location to a standard temperature, usually 65° Fahrenheit in the United States.
<b>COD</b>	Commercial Operation Date	The day that the system becomes fully operational and can begin selling power under the terms of the PPA.
<b>CONE</b>	Cost of New Entry	The total annual net revenue (net of variable operating costs) that a new generation resource would need to recover its capital investment and fixed costs, given reasonable expectations about future cost recovery over its economic life.
<b>CP</b>	Coincident Peak	A facility's demand during the time when electricity demand systemwide is the highest.
<b>CPCN</b>	Certificate of Public Convenience and Necessity	A type of regulatory compliance certification for public service industries. Private companies wishing to provide essential public services in certain countries must be granted a CPCN before constructing facilities and offering services.
<b>CT</b>	Combustion Turbine	A turbine designed to meet peaks in power demand very quickly that operates much like a jet engine, drawing in air at the front of the unit, compressing it, mixing it with fuel and igniting it. The combustion occurs immediately allowing gases to then expand through turbine blades connected to a generator to produce electricity.
<b>CVR</b>	Conservation Voltage Reduction	The intentional operation of the transmission and distribution system to provide customer voltages in the lower end of the acceptable range, with the goal of achieving energy and demand reductions for customers.
<b>DER</b>	Distributed Energy Resource	A small-scale unit of power generation that operates locally and is connected to a larger power grid at the distribution level. DERs include solar panels, small natural gas-fueled generators, electric vehicles and controllable loads, such as HVAC systems and electric water heaters.
<b>DG</b>	Distributed Generation	A variety of technologies that generate electricity at or near where it will be used, such as solar panels and combined heat and power.
<b>DGPV</b>	Distributed Generation Photovoltaic System	A photovoltaic solar generation unit that is interconnected to a utility's distribution system.
<b>DLC</b>	Direct Load Control	A utility-sponsored demand-side management program that curtails load from specific appliances, such as electric water heaters or HVAC systems, during times of energy need.

<b>DOE</b>	Department of Energy	A Cabinet-Level Executive Branch Agency of United States with the mission to ensure the U.S.'s security and prosperity by addressing its energy, environmental, and nuclear challenges through science and technology solutions.
<b>DR</b>	Demand Response	Resource options for balancing supply and demand by reducing or shifting consumer electricity usage during peak periods in response to time-based rates or other forms of financial incentives.
<b>DRR</b>	Demand Response Resource	A capacity product, type of equipment, system, service, practice, or strategy that verifiably reduces end-use demand for electricity from the power system.
<b>DSM</b>	Demand-Side Management	A group of actions designed to manage and optimize a site's energy consumption and to cut costs, from grid charges to general system charges, including taxes.
<b>DSP</b>	Distribution System Planning	A forecast, analysis and solution planning cycle for maintenance and development of the utility grid.
<b>EE</b>	Energy Efficiency	The goal to reduce the amount of energy required to provide products and services and can also reduce effects of air pollution.
<b>EFORd</b>	Equivalent Forced Outage Rate Demand	A measure of the probability that a generating unit will not be available due to forced outages or forced deratings when there is demand on the unit to generate.
<b>EIA</b>	Energy Information Administration	A statistical and analytical agency within the U.S. Department of Energy. E IA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment.
<b>ELCC</b>	Effective Load Carrying Capability	A metric to assess capacity credit for any power plant.
<b>EM&amp;V</b>	Evaluation Measurement and Verification	The collection of methods and processes used to assess the performance of energy efficiency activities so that planned results can be achieved with greater certainty and future activities can be more effective.
<b>EV</b>	Electric Vehicle	A vehicle that uses one or more electric motors for propulsion.
<b>GDP</b>	Gross Domestic Product	A measurement of the value of the final goods and services produced in the United States, usually measured on an annual basis.
<b>GT</b>	Gas Turbine	A turbine designed to meet peaks in power demand very quickly that operates much like a jet engine, drawing in air at the front of the unit, compressing it, mixing it with fuel and igniting it.

<b>HDD</b>	Heating Degree Day	A measure of how cold the temperature was on a given day or during a period of days.
<b>HVAC</b>	Heating, Ventilation and Air Conditioning	The use of various technologies to heat, cool, purify, replace, circulate, and control the humidity of the air in an enclosed space.
<b>IAC</b>	Indiana Administrative Code	The regulations developed by the various Indiana state agency administrators who are responsible for implementing—administrating—the specific provisions of laws enacted by the State Legislature.
<b>IC</b>	Indiana Code	The code of laws for the U.S. state of Indiana. The contents are the codification of all the laws currently in effect within Indiana.
<b>ICAP</b>	Installed Capacity	A MW value based on the summer net dependable capability of a unit and within the capacity interconnection right limits of the bus to which it is connected. It represents physical generating capacity adjusted for ambient weather conditions.
<b>ICE</b>	Internal Combustion Engine	A heat engine in which the combustion of a fuel occurs with an oxidizer (usually air) in a combustion chamber that is an integral part of the working fluid flow circuit.
<b>IRP</b>	Integrated Resource Plan	The process where a utility, the Commission, and stakeholders examine a utility’s current and planned electricity generation for the next 20 years. AES Indiana is required to file an updated Integrated Resource Plan (IRP) every three years in accordance with Indiana Administrative Code (IAC 170 4-7) under the regulatory authority of the Indiana Utility Regulatory Commission (IURC) and the Federal Energy Regulatory Commission (FERC).
<b>ITC</b>	Investment Tax Credit	A 26 percent federal tax credit claimed against the tax liability of residential and commercial and utility investors in solar energy property.
<b>IURC</b>	Indiana Regulatory Commission	An administrative agency that hears evidence in cases filed before it and makes decisions based on the evidence presented in those cases. An advocate of neither the public nor the utilities, the Commission is required by state statute to make decisions in the public interest to ensure the utilities provide safe and reliable service at just and reasonable rates. The IURC regulates various aspects of the utility business, including rates, financing, bonding, environmental compliance plans and service territories. The Commission has regulatory oversight concerning construction and acquisition of additional plants and equipment.

<b>kW</b>	Kilowatt	A measure of how much power an appliance needs to run. A kilowatt is 1,000 watts.
<b>kWh</b>	Kilowatt-Hour	A unit of energy equal to one kilowatt of power sustained for one hour or 3600 kilojoules. It is commonly used as a billing unit for energy delivered to consumers by electric utilities.
<b>LED</b>	Light Emitting Diode	A lighting technology that works by passing current through a microchip, which illuminates the small light sources referred to as LEDs, which results in producing visible light. LED lighting products produce light up to 90% more efficiently than incandescent light bulbs.
<b>LMR</b>	Load Modifying Resource	Demand Resources and Behind the Meter Generation not typically modeled or measured as part of MISO's operations, but used during capacity shortages to help meet the energy balance.
<b>LNBL</b>	Lawrence Berkeley National Laboratory	A Department of Energy (DOE) Office of Science lab managed by University of California.
<b>Max Gen</b>	Maximum Generation Emergency Warning	An emergency warning to power plant operators that the supply of electricity on the grid is getting tight, and that they need all units on standby, ready to produce electricity when called upon.
<b>MIP</b>	Mixed Integer Programming	A problem where some of the decision variables are constrained to be integer values at the optimal solution. With data from dozens of different sources available at different frequencies and qualities, Mixed Integer Programming (MIP) is a useful framework for filling gaps in data.
<b>MISO</b>	Midcontinent Independent System Operator	An independent, not-for-profit, member-based organization responsible for operating the power grid across 15 U.S. states and the Canadian province of Manitoba and one of the world's largest real-time energy markets.
<b>MPS</b>	Market Potential Study	Analyses used by businesses to analyze a potential market with the aim of finding out how viable such a market is with regard to the product that the company has to offer.
<b>MW</b>	Megawatt	A unit of energy equal to one million watts.
<b>NDA</b>	Nondisclosure Agreement	A legal contract or part of a contract between at least two parties that outlines confidential material, knowledge, or information that the parties wish to share with one another for certain purposes but wish to restrict access to.
<b>NOX</b>	Nitrogen Oxides	A family of highly reactive gases. These gases form when fuel is burned at high temperatures. NOX pollution is emitted by automobiles, trucks, and various non-road vehicles as well as

		industrial sources such as power plants, industrial boilers, cement kilns, and turbines.
<b>NREL</b>	National Renewable Energy Laboratory	A laboratory specializing in the research and development of renewable energy, energy efficiency, energy systems integration, and sustainable transportation. NREL is a federally funded research and development center sponsored by the Department of Energy and operated by the Alliance for Sustainable Energy, a joint venture between MRIGlobal and Battelle.
<b>PPA</b>	Power Purchase Agreement	A contract between two parties, one which generates electricity and one which is looking to purchase electricity.
<b>PRA</b>	Planning Resource Auction	An annual capacity auction through which electricity providers can procure planning resources to meet MISO’s resource adequacy requirements.
<b>PTC</b>	Renewable Electricity Production Tax Credit	A per kilowatt-hour (kWh) federal tax credit included under Section 45 of the U.S. tax code for electricity generated by qualified renewable energy resources.
<b>PRMR</b>	Planning Reserve Margin Requirement	A margin to measure the amount of generation capacity available to meet expected demand in planning horizon.
<b>PV</b>	Photovoltaic	The conversion of light into electricity using semiconducting materials that exhibit the photovoltaic effect, a phenomenon studied in physics, photochemistry, and electrochemistry.
<b>PVRR</b>	Present Value Revenue Requirement	The revenue that a regulated utility needs to earn in a test year in order to provide adequate service to its customers and a fair return for its shareholders.
<b>PY</b>	Planning Year	A designated 12-month period that can be the calendar year or an alternative period, for example, July 1 to June 30.
<b>RA</b>	Resource Adequacy	The ability to meet consumers' energy needs.
<b>RAN</b>	Resource Availability and Need	An initiative established to identify near-term solutions to increase the conversion of committed capacity resources into energy during times of need.
<b>REC</b>	Renewable Energy Credit	A certificate corresponding to the environmental attributes of energy produced from renewable sources.
<b>REP</b>	Renewable Energy Production	Energy that is collected from renewable resources that are naturally replenished on a human timescale.
<b>RFP</b>	Request for Proposals	A project announcement posted publicly by an organization indicating that bids for contractors to complete the project are sought.

<b>RIIA</b>	MISO's Renewable Integration Impact Assessment	An assessment to find inflection points of renewable integration complexity by MISO, organization responsible for operating the power grid across 15 U.S. states and the Canadian province of Manitoba which includes AES Indiana's service territory.
<b>SAC</b>	MISO's Seasonal Accredited Capacity	An assessment of the potential for electricity generation resources to provide electricity to the grid reliably.
<b>SCR</b>	Selective Catalytic Reduction System	A mechanism that removes nitrogen oxides from flue gas emitted by power plant boilers and other combustion sources.
<b>SMR</b>	Small Modular Reactors	An advanced nuclear power generation system with 300 MW of capacity or less per unit.
<b>ST</b>	Steam Turbine	A mechanical device that extracts thermal energy from pressurized steam and transforms it into mechanical work by spinning the turbine's blades.
<b>SUFG</b>	State Utility Forecasting Group	A group that assists the State of Indiana through its forecasts of electricity consumption, prices, and resource requirements and performs analyses of a number of issues facing the energy industries based at Purdue University.
<b>TRM</b>	Technical Resource Manual	A guide used to help plan and evaluate energy efficiency programs.
<b>UCT</b>	Utility Cost Test	A test that determines whether a DSM program or portfolio is cost effective from the utility's perspective measuring the benefits of a program or portfolio of programs with respect to the cost of achieving those benefits.
<b>UCAP</b>	Unforced Capacity	The MW value of a capacity resource. For a generating unit, the unforced capacity value is equal to the installed capacity of the unit multiplied by (1- unit's EFORd).
<b>WTP</b>	Willingness to Participate	A measure of individuals' inclination to join a particular group or program.
<b>XEFORd</b>	Equivalent Forced Outage Rate Demand excluding causes of outages that are outside management control	A measure of the probability that a generating unit will not be available due to forced outages or forced deratings when there is demand on the unit to generate calculated by excluding causes of outages that are outside management control.