

## Section 6: Glossary



The terms and concepts in this glossary are described in more detail throughout the PJM Manuals, accessible via the following URL link: <http://www.pjm.com/contributions/pjm-manuals/manuals.html>. In particular, RTEP terms and concepts below marked with an asterisk (\*) are described in more detail in PJM Manual 14-B, “Regional Planning Process,” accessible from PJM’s Web site via the following URL link: <http://www.pjm.com/contributions/pjm-manuals/pdf/m14b.pdf>.

Term	Manual 14-B	Acronym	Definition
<b>Adequacy</b>			The ability of the electric system to supply the aggregate electrical demand and energy requirements of the end-use customer at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.
<b>Ancillary Service</b>			Those services necessary to support the transmission of capacity and energy from resources to loads while, in accordance with good utility practice, maintaining reliable operation of the transmission provider’s transmission system.
<b>Attachment Facilities</b>	*		The facilities necessary to physically connect a Customer Facility to the Transmission System or interconnected distribution facilities.
<b>Auction Revenue Right (ARR)</b>		ARR	A financial instrument entitling its holder to auction revenue from Financial Transmission Rights (FTRs) based on locational marginal price (LMP) differences across a specific path in the Annual FTR Auction.
<b>Available Transfer Capability</b>		ATC	A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses. It is defined as Total Transfer Capability less existing transmission commitments (including retail customer service), less a Capacity Benefit Margin, less a Transmission Reliability Margin.
<b>Baseline Upgrades</b>	*		In developing the RTEP, PJM tests the baseline adequacy of the transmission system to deliver energy and capacity resources to each load in the PJM region. The system as planned to accommodate forecast demand, committed resources, and commitments for firm transmission service for a specified time frame is tested for compliance with NERC and the applicable regional reliability council (ReliabilityFirst or SERC) standards, Nuclear Plant Licensee requirements, PJM Reliability Standards and PJM design standards. Areas not in compliance with the standards are identified and enhancement plans to achieve compliance are developed. The baseline analysis and the Baseline Upgrade expansion plans that result serve as the base system for conducting Feasibility Studies and System Impact studies for all proposed requests for generation and merchant transmission interconnection and for long-term firm transmission service. (Baseline upgrades are a subset of network upgrades.)

Term	Manual 14-B	Acronym	Definition
<b>Behind The Meter Generation</b>	*	BTM	Behind The Meter Generation refers to a generation unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit's capacity that is designated as a Capacity Resource; or (ii) in an hour, any portion of the output of such generating unit[s] that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.
<b>Bilateral Transaction</b>			A contractual arrangement between two entities (one or both being PJM Members) for the sale and delivery of a service.
<b>Bulk Electric System</b>		BES	<p>ReliabilityFirst defines the BES as all:</p> <ol style="list-style-type: none"> <li>(1) Individual generation resources larger than 20 MVA or a generation plant with aggregate capacity greater than 75 MVA that is connected via a step-up transformer(s) to facilities operated at voltages of 100 kV or higher,</li> <li>(2) Lines operated at voltages of 100 kV or higher,</li> <li>(3) Associated auxiliary and protection and control system equipment that could automatically trip a BES facility, independent of the protection and control equipment's voltage level (assuming correct operation of the equipment). The ReliabilityFirst Bulk Electric System excludes:               <ol style="list-style-type: none"> <li>(1) Radial facilities connected to load serving facilities or individual generation resources smaller than 20 MVA or a generation plant with aggregate capacity less than 75 MVA where the failure of the radial facilities will not adversely affect the reliable steady-state operation of other facilities operated at voltages of 100 kV or higher;</li> <li>(2) The balance of generating plant control and operation functions (other than protection systems that directly control the unit itself and step-up transformer); these facilities would include relays and systems that automatically trip a unit for boiler, turbine, environmental, and/or other plant restrictions;</li> <li>(3) All other facilities operated at voltages below 100 kV.</li> </ol> </li> </ol>
<b>Capacity Credit</b>			An entitlement to a specified number of MW of unforced capacity from a specific resource, for the purpose of satisfying capacity obligations imposed under the RAA.
<b>Capacity Emergency</b>			System condition where operating capacity plus firm purchases from other systems, to the extent available or limited by transfer capability, is inadequate to meet the total of its demand, firm sales and regulating requirements.
<b>Capacity Emergency Transfer Limit</b>	*	CETL	Part of Load Deliverability analysis to determine the maximum limit, expressed in megawatts, of a study area's import capability, under the conditions specified in the load deliverability criteria.
<b>Capacity Emergency Transfer Objective</b>	*	CETO	The CETO is the emergency import capability required of a PJM sub-area to satisfy established reliability criteria.
<b>Capacity Interconnection Rights</b>		CIRs	The rights to input generation into the Transmission System where the generating facilities connect to the Transmission System.

Term	Manual 14-B	Acronym	Definition
Capacity Resource			The net capacity from owned or contracted for generating facilities which are accredited pursuant to established procedures.
Capacity Status			A capacity status designation permits a unit to participate in PJM's capacity market. A generating unit is ineligible for full capacity status until all transmission upgrades needed to ensure deliverability are completed. Only then will PJM grant a capacity status designation which permits a unit thereafter to participate in PJM's Capacity Market. For the sake of reporting, generating resources that are fully in-service are designated "IS". A status code of "IS-NC" (in-service, no capacity) indicates a generator that is in-service for energy only. Such units have not requested consideration for capacity status. A status code of "ISP" (in-service, partial) denotes a generating resource that is only partially in-service and has not reached full capacity status.
Combined Cycle		CC	A generating unit generally consisting of a gas-fired turbine and a heat recovery steam generator. Electricity is produced by a gas turbine whose exhaust is recovered to heat water, yielding steam for a steam turbine that produces still more electricity.
Combustion Turbine		CT	A generating unit in which a combustion turbine engine is the prime mover.
Deactivation			The retirement or mothballing of a generating unit governed by the PJM Open Access Transmission Tariff.
Deliverability	*		Deliverability is a test of the physical capability of the transmission network for transfer capability to deliver energy from generation facilities to wherever it is needed to ensure, only, that the transmission system is adequate for delivery of energy to load under prescribed conditions. The testing procedure includes two components: (1) Generation Deliverability; and (2) Load Deliverability.
Demand-Side Response		DSR	The term for all activities or programs undertaken by a Load-Serving Entity or its customers to influence the amount or timing of electricity used.
Diversity			The amount of MWs that account for the difference between a Transmission Owner zone's forecasted peak load at the time of its own peak and the coincident peak load of PJM at the time of PJM peak.
Electrical Distribution Company		EDC	A company that owns and/or operates electrical distribution facilities for the delivery of electrical energy to end-use customers.
Electrical Topography			A geographically based or other diagrammatic representation of the physical features of an electrical system or portion of an electrical system.
Energy Resource			A generating facility that does not have Capacity Resource status.
Federal Energy Regulatory Commission		FERC	The Federal Energy Regulatory Commission, or FERC, is an independent agency that regulates the interstate transmission of electricity, natural gas and oil.
Financial Transmission Right		FTR	A financial instrument entitling the holder to receive revenues based on transmission congestion measured as hourly energy LMP differences in the PJM Day-Ahead Energy Market across a specific path.
Firm Transmission Service			Transmission service that is intended to be available at all times to the maximum extent practicable. Service availability is subject to system emergency conditions, unanticipated facility failure or other unanticipated event.
Generation Deliverability	*		The ability of the transmission system to export capacity resources from one electrical area to the remainder of PJM, to ensure that, under normal transmission system conditions, if capacity resources are available and called on, their ability to provide energy to the system at peak load will not be limited by the dispatch of other certified capacity resources.

Term	Manual 14-B	Acronym	Definition
<b>Good Utility Practice</b>			Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods or acts generally accepted in the region.
<b>Independent System Operator</b>		ISO	An entity that is authorized to operate an electric transmission system and is independent of any influence from the owner(s) of that electric transmission system.
<b>Interconnection Queue</b>	*		All Interconnection Requests that are received within each six-month period ending on January 31 and July 31 of each year collectively comprise an Interconnection Queue. Effective February 1, 2008, interconnection queues comprise all such requests received on a 3-month basis, for the periods ending January 31, April 30, July 31 and October 31.
<b>Load</b>			Demand for electricity at a given time, expressed in megawatts (MW).
<b>Load Deliverability</b>	*		The ability of the transmission system to deliver energy from the aggregate of available capacity resources in one PJM electrical area and adjacent non-PJM areas to another PJM electrical area that is experiencing a capacity deficiency.
<b>Load Management</b>		ALM	Retail customer load that can be interrupted at the request of PJM. Such a PJM request is considered an emergency action and is implemented prior to a voltage reduction. ALM derives an ALM credit in the accounted-for-obligation.
<b>Load Serving Entity</b>		LSE	Load-serving entities provide electricity to retail customers. LSEs include traditional distribution utilities.
<b>Loss-of-Load Expectation</b>	*	LOLE	Loss-of-load expectation (LOLE) defines the adequacy of capacity for the entire PJM footprint based on load exceeding available capacity, on average, during only one day in ten years (1/10).
<b>Market Participant</b>			A PJM market participant can be a market supplier, a market buyer or both. Market buyers and market sellers are members that have met creditworthiness standards as established by PJM. Market buyers are otherwise able to make purchases and market sellers are otherwise able to make sales in PJM Energy and Capacity Markets.
<b>Merchant Transmission Facility</b>			A.C. or D.C. transmission facilities that are interconnected with or added to the Transmission System in accordance with the PJM Open Access Transmission Tariff and that are not any physical facilities of the Transmission System that are already in existence and that are not any transmission facilities that are included in the rate base of a public utility and on which a regulated return is earned.
<b>MVAR</b>	*		(See "Reactive Power")
<b>Network Upgrades</b>			Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all users of such Transmission System.
<b>North American Electric Reliability Corporation</b>		NERC	A voluntary organization of U.S. and Canadian utilities, ISOs and RTOs established to assure coordinated operation of the interconnected transmission systems.
<b>PJM Manuals</b>			The instructions, rules, procedures and guidelines established by PJM for the operation, planning and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

Term	Manual 14-B	Acronym	Definition
<b>PJM Member</b>			Any entity that has completed an application and satisfies the requirements of PJM to conduct business with PJM, including transmission owners, generating entities, load-serving entities and marketers.
<b>PJM Open Access Transmission Tariff</b>		OATT	A FERC filed contractual arrangement specifying the terms of conditions under which PJM provides transmission service and carries out its generation and merchant transmission interconnection process.
<b>Planning Horizon</b>			The future time period over which system transmission expansion plans are developed based on forecasted conditions.
<b>Planning Period</b>			The twelve months beginning June 1 and extending through May 31 of the following year.
<b>Probabilistic Risk Assessment</b>		PRA	PJM assesses risk exposure using a PRA risk management tool. Initially, this tool is being used to assess the risk of PJM's aging 500/230kV transformer fleet. The goal of the PRA model is to minimize asset service cost. PJM's PRA method integrates the economics of transformation loss with the likelihood of incurring the precipitating event. Using the PRA, PJM can determine the amount of risk each transformer poses to the system; the best way to mitigate each transformer's risk; the optimum number of spare transformers; where to locate them on the system; the value of moving a low-risk spare transformer to a higher risk location; the value of a common transformer design; and, the point at which the risk associated with continued operation of an older transformer unit exceeds the value of a new unit.
<b>Programmable Logic Controller</b>		PLC	An electronic device that is capable of being programmed with instructions to provide specific operating control over electrical equipment.
<b>Reactive Power (expressed in MVAR)</b>	*		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. It also must supply the reactive losses on transmission facilities. Reactive power is provided by generators, synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is usually expressed in megavars (MVAR).
<b>Regional RTEP Project</b>	*		A transmission expansion or enhancement rated at 230 kV or above.
<b>Regional Transmission Expansion Plan</b>	*	RTEP	The plan prepared by the Office of the Interconnection pursuant to Schedule 6 of the PJM Operating Agreement for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.
<b>Regional Transmission Organization</b>		RTO	A FERC-approved organization that coordinates the movement of wholesale electricity, acting neutrally and independently, operating the competitive wholesale electricity market and ensures the reliability in managing the regional transmission system and the wholesale electricity market, under a FERC approved tariff.
<b>Reliability</b>			Descriptive term indicating the actual availability of electrical service relative to full availability.
<b>Reliability Assurance Agreement</b>		RAA	The Reliability Assurance Agreement among load-serving entities in the PJM Region. This Agreement is intended to ensure that adequate Capacity Resources will be planned and made available to provide reliable service to loads within PJM, to assist other Parties during Emergencies and to coordinate planning of Capacity Resources consistent with the Reliability Principles and Standards.

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<b>ReliabilityFirst Corporation</b>		RFC	ReliabilityFirst is a not-for-profit company incorporated in the State of Delaware whose goal is to preserve and enhance electric service reliability and security for the interconnected electric systems within its territory. ReliabilityFirst was approved by the North American Electric Reliability Council (NERC) to become one of eight Regional Reliability Councils in North America and began operations on January 1, 2006. ReliabilityFirst is the successor organization to three former NERC Regional Reliability Councils: the Mid-Atlantic Area Council (MAAC), the East Central Area Coordination Agreement (ECAR) and the Mid-American Interconnected Network organizations (MAIN).
<b>Sources and Sinks</b>	*		Sources are the origins or the injection end of a transmission transaction. Sinks are the destinations or the withdrawal end of a transaction.
<b>Special Protection Scheme</b>		SPS	A Special Protection Scheme (SPS) - also known as a Special Protection System -includes an assembly of protection devices designed to detect and initiate automatic action in response to abnormal system conditions. The intent of these schemes is generally to protect equipment from thermal overload or to protect against system instability following subsequent contingencies on the electric system. Redundant assemblies may be applied for the above functions on an individual facility—in such cases, each assembly is considered as a separate protection system. A SPS consists of protection devices such as relays, current transformers, potential transformers, communication interface equipment, communication links, breaker trip and close coils, switchgear auxiliary switches, and all associated connections.
<b>Subregional RTEP Committee</b>	*		A PJM committee that facilitates the development and review of the Subregional RTEP Projects. The Subregional RTEP Committee will be responsible for the initial review of the Subregional RTEP Projects, and to provide recommendations to the Transmission Expansion Advisory Committee concerning the Subregional RTEP Projects.
<b>Subregional RTEP Project</b>	*		Defined in the PJM Operating Agreement as a transmission expansion or enhancement rated below 230 kV.
<b>Supplemental Project</b>	*		Replaces the term “Transmission Owner Initiated or TOI Project.” A Regional RTEP Project(s) or Subregional RTEP Project(s), which is not required for compliance with the following PJM criteria: System reliability, operational performance or economic criteria, pursuant to a determination by the Office of the Interconnection.
<b>Temperature-Humidity Index</b>		THI	A temperature-humidity index has been developed by the U.S. National Weather Service (NWS). It gives a single, numerical value in the general range of 70 to 80, reflecting the outdoor atmospheric conditions of temperature and humidity as a measure of comfort (or discomfort) during warm weather. The temperature-humidity index, THI, is defined as follows: $THI = Td - (0.55 - 0.55RH) * (Td - 58)$ where Td is the dry-bulb temperature and RH is the percentage of relative humidity.
<b>Transmission Customer</b>			Any Eligible Customer (or its Designated Agent) that (i) executes a Transmission Service Agreement, or (ii) requests in writing that PJM file with the FERC, a proposed unexecuted Service Agreement to receive transmission service under Part II of the PJM OATT.
<b>Transmission Expansion Advisory Committee</b>	*		A committee established by PJM to provide advice and recommendations to the Office of the Interconnection to aid in the development of the Regional Transmission Expansion Plan. The Transmission Expansion Advisory Committee shall review and provide advice and recommendations on the Regional RTEP Projects and the Subregional RTEP Projects when in the judgment of the Office of the Interconnection, these projects are determined to substantially impact power flow(s) on the regional transmission facilities.

Term	Manual 14-B	Acronym	Definition
<b>Transmission Facilities</b>	*		Those power system physical facilities that transmit electricity that: (i) are within the PJM Region; (ii) meet the definition of transmission facilities pursuant to FERC's Uniform System of Accounts or have been classified as transmission facilities in a ruling by FERC addressing such facilities; and (iii) have been demonstrated to the satisfaction of PJM to be integrated with the transmission system of PJM and integrated into the planning and operation of such to serve all of the power and transmission customers within such region.
<b>Transmission Loading Relief</b>		TLR	A NERC procedure developed for the Eastern Interconnection to mitigate overloads on the transmission system by allowing reliability coordinators to request the curtailment of transactions that are causing parallel flows through their system.
<b>Transmission Owner</b>		TO	A PJM Member that owns or leases with rights equivalent to ownership in Transmission Facilities. Taking transmission service is not sufficient to qualify a Member as a Transmission Owner.
<b>Transmission Provider</b>			The Transmission Provider is the PJM Office of the Interconnection for all purposes in accordance with the PJM OATT.
<b>Transmission Service Request</b>		TSR	A request submitted by a PJM market participant for transmission service over PJM designated facilities. Typically the request is for either short term or long term service, over a specific path for a specific megawatt amount. PJM evaluates each request and to determine if it can be accommodated. And, if the requestor so chooses, pursue needed upgrades to accommodate the request.
<b>Violation</b>	*		A PJM planning study result that shows a specific system condition that is not in compliance with an established NERC, ReliabilityFirst, SERC or PJM reliability criteria.
<b>Zone / Control Zone</b>			An area within the PJM Control Area, as set forth in the PJM Open Access Tariff and the Reliability Assurance Agreement (RAA). Schedule 16 of the RAA defines the distinct zones that comprise the PJM Control Area.

