

PJM Manual 35:

# Definitions and Acronyms

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Prepared by:

**Member Services** 



## PJM Manual 35:

## **Definitions and Acronyms**

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**Approval** 

Approval Date: 04/11/2014 Effective Date: 04/11/2014

John Gdowik

State and Member Training

## **Current Revision**

### Revision 23 (04/11/2014):

• Two of the eSuite Applications have been renamed. Moving forward EES will be known as ExSchedule and eMTR will be known as Power Meter.



#### Introduction

Welcome to the PJM Manual for *Definitions & Acronyms*. In this introduction, you will find the following information:

- What you can expect from the PJM Manuals in general (see "About PJM Manuals").
- What you can expect from this PJM Manual (see "About This Manual").
- How to use this manual (see "Using This Manual").

#### About PJM Manuals

The PJM Manuals are the instructions, rules, procedures and guidelines established by PJM for the operation, planning, and accounting requirements of PJM and the PJM Energy Market. The manuals are grouped under the following categories:

- Transmission
- PJM Energy Market
- Generation and transmission interconnection
- Reserve
- Accounting and billing
- PJM administrative services
- Miscellaneous.

#### **About This Manual**

The PJM Manual for **Definitions & Acronyms** is one manual within PJM's series of manuals. This manual focuses on the definitions and acronyms that are used and supported by PJM.

The PJM Manual for **Definitions & Acronyms** consists of three sections. The sections are as follows:

- Section 1: Overview
- Section 2: Definitions
- Section 3: Acronyms

#### **Intended Audience**

The following is a list of individuals who may find the PJM Manual for **Definitions & Acronyms** useful:

- Consultants
- Generation Owners
- Marketers



- PJM Members
- PJM accounting staff
- PJM audit staff
- PJM Member Relations
- PJM Training
- State Agencies
- Transmission Customers
- Transmission Owners

#### References

The References to other documents that provide background or additional detail directly related to the PJM Manual for *Definitions & Acronyms* are:

- Operating Agreement of PJM
- PJM Market Growth Web site
- PJM Open Access Transmission Tariff
- PJM Training Course Materials
- Transmission Owners Agreement
- Reliability Assurance Agreement among Load Serving Entities in the PJM Control Area
- Reliability Assurance Agreement among Load Serving Entities in the PJM Western Region
- NERC Glossary

## **Using This Manual**

Because we believe that explaining concepts is just as important as presenting the procedures, we start each section with an overview. We then present details and procedures. This philosophy is reflected in the way we organize the material in this manual. The following paragraphs provide an orientation to the manual's structure.

#### What You Will Find In This Manual

- A table of contents
- An approval page that lists the required approvals and revision history
- This introduction
- Sections containing the specific guidelines, requirements, or procedures including PJM actions and PJM member actions



#### **Section 1: Overview**

Welcome to the *Overview* section of the PJM Manual for *Definitions & Acronyms*. In this section, you will find the following information:

An overview of the PJM Definitions and Acronyms

#### Overview

Transmitting information to PJM member companies, partners, the electric industry and the public is an important function of PJM. In order to ensure a clear understanding of the terms used by PJM, the following pages list a compilation of current definitions and acronyms.

These definitions are for the purposes of PJM documentation only and do not apply to tariff and other documents, which may contain different definitions.

Acronyms used often in the electric industry are summarized with their full names

We hope you find the following information useful. If this is not the case please feel free to e-mail us at TrainingSupport@pjm.com and suggest additions or changes to the glossary.



#### **Section 2: Definitions**

A

Access — Eligible Load Retail load anticipated to participate in a

state-administered retail access program and the wholesale load for which there is no

contractual commitment.

Accounted-for Deficiency The amount by which an LSE's accounted-

for obligation exceeds its unforced capacity.

Accounted-for Excess The amount by which an LSE's unforced

capacity exceeds its accounted-for

obligation.

Accounted-for Obligation This is an Obligation based on load

ownership and PJM pool reserve

requirements. This can result in purchases and sales of unforced Capacity. The Accounted for Obligation for each Party is equal to the LSE Obligation, across all zones, over a Planning Period, determined on a daily basis, summed monthly for billing purposes. The principle tool used in

establishing the final LSE Obligation is the

web based eCapacity Application.

Actual Load The LA total load per EDC zone, as

determined through actual retail customer meter readings and EDC load profiling

methods.

Adjacent System or Adjacent Control Area

Any system or control area either directly

interconnected with or electrically close to (so as to be significantly affected by the existence of) another system or control

area.

Adjusted Integrated Interchange A company's interchange across its tie lines

corrected for the company's share of Generation from joint-owned units, NUGs,

and losses.



#### **Adjusted Primary Reserve (Calculated)**

Adjusted Spinning, plus the Quick-Start Reserve total, minus Non-Capacity Interchange Purchases

 This adjusts the Primary Reserve value by applying a factor to the non-Hydro Quick-Start total to account for the possible failure of equipment to start and by including the possible reduction in Non-Capacity Interchange.

Adjusted Spinning (Calculated)

Summation of the Spinning Reserve total, Non-Capacity Interchange Sales, and the ACE.

 This accounts for deficiencies or excesses of energy, which are present at the time of the IRC.

**Adjusted Zonal Capacity Prices** 

The results of the Second Incremental Auction. Preliminary Zonal Capacity Prices that result from the Base Residual Auction are adjusted to account for the procurement in the 2nd Incremental Auction for the RTO.



#### **Affiliate**

- Any two or more entities, one of which controls the other or that are under common control.
- Any generation and transmission cooperative and one of its cooperative members.
- Any joint municipal agency and one of its members.

Control means the possession of the power to direct the management or policies of an entity. Ownership of publicly traded securities of another entity does not result in control or affiliation for purposes of the Interconnection Agreement if the securities are held as an investment, the securities are less than 10 percent of the outstanding securities, there is no representation on the entity's board of directors or vice versa, and the holder does not exercise influence over day-to-day management decisions. Representative of state or federal government agencies are not deemed affiliates of each other and a regulatory agency will not be deemed to be in control over any PJM Participant. Control will be presumed to arise from the ownership of or the power to vote, directly or indirectly, 10 percent or more of the voting securities of an entity.

**Affiliate Group** 

A group of signatories to the Operating Agreement of PJM Interconnection, L.L.C., treated collectively as a single PJM Participant.

Agent

An entity appointed by a PJM Member to act in its stead on the Market Administrative Committee.

**Aggregate** 

Combination of buses or bus prices.

Agreement

The Operating Agreement of PJM Interconnection, L.L.C., dated March 28, 1997, together with its schedules.

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Alive (Energized)

Electrically connected to a voltage source, or electrically charged so as to have a potential different from that of ground. Synonyms: energized, live, hot.

**CAUTION:** Not to be used for protection of personnel where the term may be in violation of individual company's safety rules.

Analog Control A signal which, with respect to time, varies

continuously in proportion to the measured

quantity.

Ancillary Services Those services that are necessary to

support the transmission of Capacity and energy from resources to loads, while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility

Practice.

Annual Transmission Costs The total annual cost of the Transmission

System for purposes of Network Integration Transmission Service is the amount

specified in the Tariff for each Zone until amended by the applicable RTO or modified

by the Commission.

Apparent Power The vector sum of REACTIVE and REAL

power components. Units are Volt-Amperes.

Applicant An entity that desires to become a PJM

Participant under the Agreement.

Application A request by an Eligible Customer for

transmission service pursuant to the

provisions of the Tariff.

Area Control Error (ACE)

Area Control Error of the PJM RTO is the

actual net interchange minus the biased scheduled net interchange, including time error. It is the sum of tie-line errors and

frequency errors.



Area Regulation Signal Signal generated by PJM control center and

sent to the LSEs or other controllable

entities to change generation quickly to keep PJM's area control error within allowable limits. Used to control for small fluctuations

in load.

Associated unit (AU) A unit that is located at the same site as a

frequently mitigated unit (FMU) and which has identical electrical and economic impacts on the transmission system as an FMU but which does not qualify for FMU

status.

Auction Revenue Rights (ARR) Entitlements allocated annually to Firm

Transmission Service Customers that entitle the holder to receive an allocation of the revenues from the Annual FTR Auction.

Automatic Generation Control (AGC) Equipment that automatically adjusts a

Control Area's generation to maintain its interchange schedule plus its share of

frequency regulation.

Automatic Recloser The automatic closing of a circuit breaker(s)

by relay action after it has been tripped by protective relays. The automatic recloser may be high speed or include a time delay.

Automatic Reserve Sharing This is a reserve sharing agreement

between companies.

Availability A measure of time a generating unit.

transmission line or other facility is capable

of providing service, whether or not it

actually is in service.

Available The condition of an element that is capable

of service whether it is actually in service or

not.

Available Hours The time a unit is capable of producing

energy, regardless of its capacity level.

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**Available Resource** 

The sum of existing generating capacity, plus new units scheduled for service, plus the net of equivalent firm capacity purchases and sales, less existing capacity unavailable due to planned outages.

**Available Transfer Capability (ATC)** 

The amount of energy above "base case" conditions that can be transferred reliably from one area to another over all transmission facilities without violating any pre- or post-contingency criteria for the facilities in the PJM Control Area under specified system conditions.

В

**Balancing energy market** 

Energy that is generated and financially settled during real time.

Base Case Conditions (BCC) for Non-Firm ATC

Power flow base case modeling that reflects current system conditions at the time of the calculation, adjusted to reflect scheduled transactions during the 168-hour period by transmission customers holding firm reservations from PJM, firm transactions that are scheduled between control areas other than PJM, non-firm scheduled transactions, and major facility (generation and transmission) outage schedules during the period.

**Base Case Conditions for Firm ATC** 

Power flow base case modeling that reflects all transactions of transmission customers holding firm reservations from PJM, known firm transactions that are scheduled between control areas other than PJM, and transfers used to model the Capacity Benefit Margin.

**Base LDA Unforced Capacity Obligation** 

Equal to the sum of the Base Zonal Unforced Capacity Obligations for all the zones in an LDA and is the result of the clearing of the Base Residual Auction.

**Base Load** 

The quantity of generation that exists continuously during the period.

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**Base Offer Segment** 

The sell offer segment that may be offered as either a single price quantity for the capacity of the resource or divided into up to ten (10) offer blocks with varying price-quantity pairs that represent various output levels of the resource. The Base Offer Segment will consist of block segments at the specified price-quantity pairs.

**Base Residual Auction (BRA)** 

Allows for the procurement of resource commitments to satisfy the region's unforced capacity obligation and allocates the cost of those commitments among the LSEs through the Locational Reliability Charge.

**Base RTO Unforced Capacity Obligation** 

Determined after the clearing of the BRA and is posted with the BRA results. The Base RTO Unforced Capacity Obligation is equal to the sum of the unforced capacity obligation satisfied through the BRA plus the Forecast RTO Interruptible Load for Reliability (ILR) Obligation.

Base Unforced Capacity Imported into an LDA

Equal to the Base LDA Unforced Capacity Obligation less the LDAs Unforced Capacity cleared in the Base Residual Auction less the LDA Forecast ILR Obligation. This value is used to determine the maximum total amount of Capacity Transfer Rights that are allocated into an LDA in the Base Residual Auction for the Delivery Year.

**Base Zonal RPM Scaling Factor** 

Determined for each zone and Equal to the [(Preliminary Zonal Peak Load Forecast for the Delivery Year divided by the Zonal Weather Normalized Summer Peak for the summer four years prior to the Delivery Years) \* ((RTO Unforced Capacity Obligation Satisfied in Base Residual Auction divided by the (RTO Preliminary Peak Load Forecast \* the Forecast Pool Requirement))]. Base Zonal RPM Scaling Factors are posted with the Base Residual Auction results.

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#### **Base Zonal Unforced Capacity Obligation**

Determined for each zone and equal to the (Zonal Weather Normalized Summer Peak for the summer four years prior to the Delivery Year\* Base Zonal RPM Scaling Factor \* the Forecast Pool Requirement) + Forecast Zonal ILR Obligation. Base Zonal Unforced Capacity Obligations are posted with the Base Residual Auction clearing results.

#### **Behind the Meter Generation**

A generating 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 consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of Interconnection. Behind the Meter Generation may not include at any time any portion of a generating unit's capacity that is designated as a Capacity Resource or any portion of the output of a generating unit that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market at any time.

#### **Bilateral Market**

Provides LSEs the opportunity to hedge the Locational Reliability Charge determined through the BRA and Second Incremental Auction. The bilateral market also provides resource providers an opportunity to cover any auction commitment shortages.

#### **Bilateral Transaction**

An agreement between two entities (one or both being PJM Members) for the sale and delivery of a service.

#### **Bilateral Unit-Specific Transaction**

Transaction that enables the transfer of ownership of a specified amount of installed capacity from a specific unit from one party to another.

#### **Black Start Plant**

A Black Start Plant is a generating plant that includes one or more Black Start Units. A generating plant with Black Start Units electrically separated at different voltage levels will be considered multiple Black Start Plants.

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**Black Start Service** 

Black Start Service enables Transmission Provider and Transmission Owners to designate specific generators called Black Start Units whose location and capabilities are required to re-energize the transmission system following a system-wide blackout.

**Black Start Unit** 

A Black Start Unit is a generating unit that has equipment enabling it to start without an outside electrical supply or a generating unit with a high operating factor (subject to Transmission Provider concurrence) with the demonstrated ability to automatically remain operating, at reduced levels, when disconnected from the grid

Blackout (System Shutdown)

The disconnection of the source of electricity from all electrical loads in a certain geographical area brought on by insufficient generation, an emergency-forced outage, or other fault in the generation/transmission, distribution system serving the area.

**Bottled Energy/Capacity** 

Energy/capacity that is available at the source but that cannot be delivered to the point of use because of restrictions in the transmission system.

**Bulk Power Electric Supply System** 

All generating facilities, bulk power reactive facilities, and the high voltage transmission, substation and switching facilities, as well as those underlying lower voltage facilities that affect the capability and reliability of the generating and high voltage facilities, in the PJM RTO.

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**Bulk Electric System (BES)** 

Includes individual generation resources larger than 20 MVA or a generation plan with aggregate capacity greater than 75 MVA that is connected via a step-up transformer(s) to facilities operated at voltages 100 kV or higher; lines operated at voltages 100 kV or higher; transformers (other than generator step-up) with both primary and secondary windings of 100 kV or higher; and 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

Bus An interconnection point.

C

**Calculated Operating Capacity** PJM Load 1, plus total Operating Reserve, plus untelemetered generation and pumping

load, minus net tie flow.

**Capacity Interconnection Rights** The rights to input generation as a

Generation Capacity Resource into the Transmission System at the Point of Interconnection where the generating facilities connect to the Transmission

System.

**Capacitor Capability** A device whose primary purpose is to

> introduce voltamperes reactive into an electrical circuit. Shunt capacitors are normally used to produce reactive power for voltage control. Series capacitors are normally used to reduce the effective

reactance of a circuit.

Capacity Megawatts of Capacity for both firm energy

> delivered to load located electrically within the Interconnection and firm energy

> delivered to the border of the PJM RTO for

receipt by others.

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**Capacity Benefit Margin (CBM)** 

The portion of PJM's emergency import capability that is deducted from Total Transfer Capability to determine Available Transfer Capability. CBM is reserved to import capacity assistance from external areas under emergency conditions. CBM allows a system to reduce its installed generating capacity below that which may have otherwise been required if transmission interconnections did not exist.

**Capacity Capability** 

The rated load carrying capability of electrical equipment. May be further identified to more precisely indicate the ability being referred to; i.e., Rated Capacity, Maximum Capacity, Claimed Capacity, etc.

**Capacity Credit** 

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.

Capacity Deficiency Rate (CDR)

The CDR was designed to reflect the annual fixed costs of a new combustion turbine (CT) in PJM and the annual fixed costs of the associated transmission investment, including a return on investment, depreciation and fixed operation and maintenance expense. The CDR is used in applying penalties for capacity deficiencies. To express the CDR in terms of unforced capacity, it must further be divided by the quantity 1 minus the EFORd.

**Capacity Emergency** 

A state when a system's or pool's 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.

Capacity Emergency Transfer Limit (CETL)

The capability of the transmission system to support deliveries of electric energy to a given area experiencing a localized capacity emergency as determined in accordance with the PJM Manuals.

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Capacity Emergency Transfer Objective (CETO)

The amount of electric energy that a given area must be able to import in order to remain within a loss of load expectation of one event in 25 years when the area is experiencing a localized capacity

emergency.

Capacity Factor The ratio of the total energy generated by a

generating unit for a specified period to the maximum possible energy it could have generated if operated at the maximum capacity rating for the same specified period, expressed as a percent.

Capacity Modification (Cap Mod)

Transaction that enables generation owners

to request the addition of a new unit or the removal of an existing unit from their resource portfolio in eRPM, or the request an MW increase or decrease in the summer or winter installed capacity rating of an

existing unit.

Capacity Obligation See Accounted-for-Obligation.

Capacity Position = Capacity Resources –

Capacity Obligation

Capacity Resource Includes megawatts of net capacity from

existing or planned generation capacity resources or load reduction capability provided by Demand Resources or ILR in

the PJM Region.

Capacity Transfer Rights (CTR) Rights used to allocate the economic value

of transmission import capability that exists into a constrained LDA. Serve to offset a portion of the Locational Price Adder charged to load in constrained LDAs.

Carrying Charges These costs are the time value of money

associated with the project (i.e., AFUDC).

The interest rate must be specified.

CETL Capacity Emergency Transfer Limit. Part of

Deliverability demonstration.



Charging Current The current that flows in a circuit or

transformer when voltage is first applied to its de-energized terminals. Due to the inherent capacitance of the facility.

Circuit A system of conductors and its component

parts through which an electrical current

flows or is intended to flow.

Circuit Breaker A switching device capable of making,

carrying and breaking currents under normal circuit conditions and also making, carrying for a specified time and breaking currents under specified abnormal conditions such as

those of a short circuit.

Cogeneration Production of electricity, with heat or other

forms of energy produced as a by-product of

the process.

Coincidental Peaks (5CP)

The unrestricted load of a zone, LSE, or

end-use customer, coincident with one of the five highest loads used in the weather normalization of the PJM seasonal peak. 5 CP values are used in the allocation of the

PJM and zonal normalized peaks.

Combined Cycle An electric generating technology in which

electricity and process steam are produced from otherwise lost waste heat exiting from one or more combustion turbines. The exiting heat is routed to a conventional boiler or to a heat recovery steam generator for use by a conventional steam turbine in the production of electricity. This process increases the efficiency of the electric

generating facility.

Combustion Turbine A generating unit in which a combustion

turbine engine is the prime mover for an electrical generator. It is typically used for peak shaving operation due to quick

response capability.

Commission The Federal Energy Regulatory Commission

or FERC.



#### **Company Account Manager (CAM)**

CAM enables external customers to manage their own PJM user accounts. This application will have the following functions:

- Modify existing user accounts
- Create new user accounts
- View all user accounts for a company (Note: This only applies for those applications integrated into the MUI)
- Download user information

Completed Application

An Application that satisfies all of the information and other requirements of the Tariff, including any required deposit.

**Constrained Posted Path** 

Any posted path having an ATC less than or equal to 25 percent of TTC at any time during the preceding 168 hours or for which ATC has been calculated to be less than or equal to 25 percent of TTC for any period during the current hour or the next 168 hours. (§ 37.6, defined in FERC Order 889)

**Construction Costs** 

Refer to PJM OATT section 50.15. The cumulative sum of all costs and expenses including, but not limited to, capital expenditures and if applicable, overhead, return, cost of financing and taxes, and any incidental expenses expended to complete the construction of a particular project.

Contingency

An event, usually involving the loss of one or more elements that affects the power system at least momentarily.

**Continuing Education Hour (CEH)** 

A Continuing Education Hour is a clock measurement for continuing education programs that is awarded to individuals who participate in activities organized to provide planned training based learning outcomes, requires a demonstration by learners that the outcomes have been achieved, and meets specific criteria.

One CEH is equal to one contact hour (60 minutes) of organized training activity if sponsored by a responsible party.



Contract

An agreement for a seller to supply energy to a buyer for a designated period of time according to InSchedules.

**Contract Capacity** 

The number of megawatts of electric power that an LSE has provided to meet its obligations for electric generating capacity.

**Contract Path** 

A specific contiguous electrical path from a Point of Receipt to a Point of Delivery for which transfer rights have been contracted.

**Control Area (Balancing Authority)** 

An electric power system or combination of electric power systems bounded by interconnection metering and telemetry to which a common generation control scheme is applied in order to:

- Match the power output of the generators within the electric power system(s) and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);
- Maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;
- Maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice and the criteria of the applicable regional reliability council of NERC;
- Maintain power flows on Transmission Facilities within appropriate limits to preserve reliability; and
- Provide sufficient generating Capacity to maintain Operating Reserves in accordance with Good Utility Practice.

**Control Zone** 

A subset of a control area that has a separate regulation and spinning reserve requirement based on NERC criteria.

**Conversational Monitor System (CMS)** 

The interactive user interface software for IBM's Virtual Machine operating system.

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Converter An operative unit comprised of either a

rectifier or inverter bridge connected to an AC system through transformers and switching through transformers and switching devices with the associated

control equipment.

Converter Transformer A power transformer that transfers the

energy from the thyristor valves to the connected AC system and vice-versa.

Cost-Based Offers Offers that shall not exceed the variable cost

of producing such energy or other service, as determined in accordance with the Cost Development Guidelines. Cost based offers are used by PJM to schedule generation in cases in which structural market power is

found to exist.

Cost Development Subcommittee (CDS The Cost Development Subcommittee

(CDS) reports to the PJM Markets and Reliability Committee (MRC) and is

responsible for developing, reviewing, and recommending to the MRC standard procedures for calculating the costs of products or services provided to PJM when those products or services are required to be provided to PJM at a cost-based rate.

Cost of New Entry (CONE) Levelized annual cost in ICAP \$/MW-Day of

a reference combustion turbine to be built in

a specific location.

CRM A Microsoft customer relationship

management system being used by

divisions across PJM as a single repository

for all member and non-member

interactions. This software is the platform for creating a 360-degree view of our clients.

Cranking Unit A generating unit that may be started with

complete isolation from external sources.

See black start units.

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CTR Settlement Rate The CTR Settlement Rate (\$/MW-day) is

equal to the Economic Value of CTRs allocated to LSEs in a zone as a result of the Base Residual Auction and Second Incremental Auction divided by the Total CTR MWs allocated to LSEs in the zone.

Curtailment A reduction in firm or non-firm transmission

service in response to a transmission capacity shortage as a result of system

reliability conditions.

Curtailment Service Provider Member or Special Member, whose action

on behalf of itself or one or more other Members or non-members, participates in the PJM Interchange Market by causing a

reduction in demand.

D

Daily Capacity Resource Deficiency Charge Assessed to party when the Daily RPM

Resource Position of its resource is less than the Daily RPM Resource Commitment for such resource on a delivery day. This charge is applicable to generation resource,

Demand Resource, or Qualified

Transmission Upgrade.

Daily Load and Capacity (DLC) File A database used for storing actual hourly

load data entered by the LSEs.

Daily Unforced Capacity Obligation Equals the LSE's Obligation Peak Load in

the zone/area \* the Final Zonal RPM Scaling Factor \* the Forecast Pool Requirement for

an LSE in a zone/area.

Day-Ahead Demand The fixed and/or price-sensitive demand

bids cleared in the PJM Day-Ahead Energy

Market (financial hedge).

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#### **Day-Ahead Energy Market**

A day-ahead hourly forward market in which PJM market participants may submit offers to sell and bids to buy energy. The results of the Day-Ahead Energy Market are posted daily at 4:00 p.m. and are financially binding. The Day-Ahead Energy Market is based on the concept of Locational Marginal Pricing and is cleared using least-price security-constrained unit commitment and dispatch programs.

**Day-Ahead Scheduling Reserve Market** 

Voluntary, offer-based market for 30-minute (supplemental) reserves that can be provided by both Generation and Demand Resources. Clears the Day-Ahead 30-minute reserve requirement simultaneously with Day-Ahead Energy Market.

Dead (De-energized)

Free from any electrical connection to a voltage source and from an electric charge; not having a potential different from that of ground.

**CAUTION:** The term is used only with reference to current carrying parts that are sometimes alive.

**CAUTION:** Should not be used for protection of personnel where the term may be in violation of company safety rules.

**Decrement Bids** 

An hourly bid, expressed in MWh, to purchase energy in the PJM Day-Ahead Energy Market if the Day-Ahead LMP is less than or equal to the specified bid price. This bid must specify hourly quantity, bid price and location (transmission zone, hub, aggregate or single bus).

**Deficiency Charge** 

Cost to participant that is responsible for a non-zero deficiency value in either the Accounted-for-Obligation or Peak Period Maintenance Obligation process. See Schedule 7 and Schedule 11 of RAA.



Delayed Outage A Forced/Unplanned Outage that may be

delayed for up to 6 hours.

Delivering Party The entity supplying capacity and energy to

be transmitted at Point(s) of Receipt.

Delivery Year Planning period for which resources are

being committed and for which a constant load obligation for the entire PJM region exists. For example, the 2007/2008 Delivery Year corresponds to the June 1, 2007 – May 31, 2008 Planning Period.

**Demand** The rate at which electric energy is

delivered to or by a system or part of a system, generally expressed in kilowatts or megawatts, at a given instant or averaged over any designated interval of time.

Demand should not be confused with Load.

Demand Bid (Fixed)

An hourly bid, expressed in MWh, that may

be submitted into the Day-Ahead Energy Market to purchase a certain amount of energy at Day-Ahead LMP. Fixed Demand Bids must specify hourly quantity and location (transmission zone, aggregate or

single bus).

Demand Bid (Price-sensitive)

An hourly bid, expressed in MWh, that may

be submitted into the Day-Ahead Energy Market to purchase a certain amount of energy at Day-Ahead LMP only if the Day-Ahead LMP value is less than or equal to the specified bid price. Price-sensitive Demand Bids must specify hourly quantity, bid price and location (transmission zone,

aggregate or single bus).

Demand Hours The time interval each day on a particular

system in which there is a heavy demand for electricity. For PJM, it is the time period beginning 8:00:01 and ending 22:00:00,

inclusive.

Demand Resource A resource with a demonstrated capability to

provide a reduction in demand or otherwise control load. A Demand Resource may be

an existing or planned resource.



**Demand Resource Factor (DR Factor)** 

Used to determine the reliability benefit of demand resource products and to assign an appropriate value to demand resource products. The DR Factor is calculated by PJM and is approved and posted by February 1 prior to its use in the Base Residual Auction for the Delivery Year.

**Demand Resource Modification (DR Mods)** 

Transaction used by PJM to track an increase or decrease of the nominated value of the Demand Resource in a party's resource portfolio in eRPM.

**Demand Side Management** 

Program designed to provide an incentive to end-use customers or curtailment service providers to enhance the ability and opportunity for reduction of load when PJM LMP is high.

**Designated Agent** 

Any entity that performs actions or functions on behalf of the Transmission Provider, an Eligible Customer, or the Transmission Customer required under the Tariff.

**Designated Transmission Facilities** 

Those transmission facilities owned by a Transmission Owner that are within the PJM RTO, are identified in the listing of such facilities maintained by PJM, and have a nominal operating voltage of 230 kV or greater or are facilities operating at a nominal voltage of less than 230 kV that:

- Are vital to the operation of the PJM RTO
- Can, if subject to an outage, have a significant impact on transmission facilities with a nominal operating voltage of 230 kV or greater
- Affect the capability and reliability of generating facilities or the power system model used by PJM
- Can have an effect on the PJM RTO's interconnected operation with other Control Areas.



#### **Direct Assignment Facilities**

Facilities or portions of facilities that are constructed by an RTO at the direction of the Transmission Provider for the sole use/benefit of a particular Transmission Customer requesting service under the Tariff. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer and shall be subject to Commission approval.

**Direct Costs** 

These are costs directly associated with the project. These costs need to be separated into:

- Direct Labor costs which include the cost of labor to design/build/install the upgrades or facilities, and
- Direct Material costs which include the cost of the physical upgrades and equipment.

**Disconnect Switch** 

A mechanical switching device used for changing the connections in a circuit or for isolating a circuit or equipment from a voltage source.

**Dispatch Rate** 

The control signal, expressed in dollars per megawatt-hour, calculated and transmitted continuously and dynamically to direct the output level of all generation resources dispatched by PJM in accordance with the Offer Data.

**Dispatchable Generation** 

Generation available physically or contractually to respond to changes in system demand or to respond to transmission security constraints. Dispatchable Generation typically excludes nuclear generation and ambient air impacts on combustion turbines.

**Distribution Factor** 

The term is generally applied to the percentage of power flowing on Element A that will be picked up (or backed down) on Element B as a result of an outage on Element A or a shift on generation.



Disturbance Control Standard (DCS)

The NERC DCS measures the ability of a

control area to return Area Control Error either to zero or to its initial value following

the loss of a large generating unit.

Diversified Peaks The Diversified Peaks for the PJM zones

are calculated based on the PJM weather normalized actual peak, diversity factor. Adjustments are made for summer and

winter peaking LSEs.

Diversity Factor (DF)

A five-year rolling average value expressed

in per-unit, quantifying seasonal (summer to winter) peak load shape for a given zone.

**Dump Power** Energy generated that is beyond the needs

of the producing system of which there is no

economic value.

Dynamic Rating The process that allows a system element

rating to vary with the changing

environmental conditions in which the

element is located.

**Dynamic Reserves**The amount of reserve that is available in

order to preserve the system during frequency disturbance. Dynamic reserve

consists of two components:

Reserve on generators that are available via

generator governor action during a frequency disturbance to a level at which generators will normally separate from the

system (i.e., 57.5 Hz).

System load with under frequency trip levels above the frequency at which generators will normally separate from the system during a

frequency disturbance (i.e., 57.5 Hz).

Dynamic Schedule A telemetered reading or value that is

updated in real time and used as a schedule in the Automatic Generation Control/Area Control Error equation and the integrated value of which is treated as a schedule. Commonly used for "scheduling" commonly owned generation or remote load to or from

another Control Area.



Ε

**Eastern Prevailing Time (EPT)** 

Eastern Prevailing Time (EPT) is equivalent to Eastern Standard Time (EST) or Eastern Daylight Time (EDT) as is in effect from time to time.

**eCapacity** 

eCapacity is an Internet application designed to fulfill the data reporting requirements of PJM participants who have retail load responsibility in the Control Area or who are participating members of the capacity market. All information entered into the application is processed according to the PJM Operating Agreement and the PJM Transmission Tariff.

**Economic Demand Response** 

Provides the Curtailment Service Provider with the opportunity to reduce load when the wholesale price is higher than the generation and transmission portion of the customer's retail rate. Load reduction is performed by participants in response to an economic price signal, namely the Day-Ahead or the Real-Time Locational Marginal Price (LMP).

**Economic Dispatch** 

The optimization of the incremental cost of delivered power by allocating generating requirements among the on-control units with consideration of such factors as incremental generating costs and incremental generating costs and incremental transmission losses.

**Economic generation** 

Units producing energy at an offer price less than, or equal to, LMP.

**Economic Maximum Generation** 

The highest incremental MW output level a unit can achieve while following economic dispatch.

**Economic Minimum Generation** 

The lowest incremental MW output level a unit can achieve while following economic dispatch.



**eDART** 

The Dispatcher Applications and Reporting Tool (eDART) is an Internet-based tool that allows communication of system information between PJM and member company dispatchers. eDart provides a customizable, real-time visual snapshot of generation and Transmission operational data. It is a control room tool to manage on-line generation and transmission outages.

**EES** 

Enhanced Energy Scheduler program records and manages the interchange of bulk power between the PJM RTO and other utilities, marketers, and brokers. PJM personnel use EES to process daily non-firm( both those electing to curtail due to congestion and those electing to pay congestion charges ) and firm Bilateral Transaction schedules that are submitted by PJM Members.

Effective EFORd

The most recently calculated EFORd that has been bridged to the eRPM system. During the Delivery Year, the Effective EFORd is based on forced outage data from the October through September period prior to the Delivery Year. This is the basis for a unit's UCAP value, and it does not include the events that are outside management control (OMC events).

Effective Equivalent Demand Forced Outage Rate

The forced outage rate used for reliability and reserve margin calculations. See the Generator Resource Performance Indices Manual (M-22) for the equation.

EFORd (Equivalent Demand Forced Outage Rate)

The portion of time a unit is in demand but is unavailable due to a forced outage. See the Generator Resource Performance Indices Manual (M-22) for the equation.

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**EFORd Offer Segment** 

The sell offer segment that specifies an installed capacity MW quantity not to exceed the product of the resource's summer net capability of installed capacity and the potential increase in EFORd as determined in accordance with Section 6.7 (d) (iii) of Attachment DD of the PJM Tariff. A seller may specify a single EFORd Offer Segment for their ownership portion of a specific resource.

**eFTR** 

A computerized information system developed as an Internet application that is the Market Participant interface to the monthly FTR Auction. This application also facilitates trading of Fixed Transmission Rights on a bilateral basis (secondary market trading).

**eGADS** 

Internet application for submission of GADS (Generator Availability Data Systems) data by generation owners and production of reports using the integral GORP (Generating Outage Rate Program).

**Electric Cooperative** 

An entity owned in cooperative form by its customers that is engaged in the generation, transmission, and/or distribution of electric energy.

**Electric Distribution Company (EDC)** 

PJM Member that owns or leases with rights equivalent to ownership electric distribution facilities that are used to provide electric distribution service to electric load within the PJM Control Area.

**Electric Distributor** 

PJM Member that owns or leases with rights equivalent to ownership electric distribution facilities that are used to provide electric distribution service to electric load within the PJM RTO.

**Electric System Losses** 

Total electric energy losses in the electric system. The losses consist of transmission, transformation, and distribution losses between supply sources and delivery points. Electric energy is primarily due to heating of transmission and distribution elements.

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**Electric Utility** 

**Electrical Energy** 

**Eligible Customer** 

A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation, transmission, distribution, or sale of electric energy primarily for use by the public and is defined as a utility under the statutes and rules by which it is regulated. Types of electric utilities include investor-owned, cooperatively owned, and government-owned (federal agency, crown corporation, state, provincials, municipals, and public power districts).

The generation or use of electric power by a device over a period of time, expressed in kilowatt-hours (kWh), megawatt hours (MWh) or gigawatt hours (GWh).

- Any electric utility (including any RTO and any power marketer), federal power marketing agency, or any person generating electric energy for sale for resale; electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico; however, such entity is not eligible for transmission service that would be prohibited by Section 212(h)(2) of the Federal Power Act; and
- Any retail customer taking unbundled Transmission Service pursuant to a state requirement that the Transmission Provider or an RTO offer the transmission service or pursuant to a voluntary offer of unbundled retail Transmission Service by an RTO.



**Emergency** 

An abnormal system condition requiring manual or automatic action to maintain system frequency, or to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property; a fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel; or a condition that requires implementation of emergency procedures as defined in the PJM Manuals.

**Emergency Demand Response** 

A commitment to reduce load or consume electricity only up to a certain level when PJM needs assistance under expected emergency conditions. (Also called Load Management).

**Emergency Maximum Generation Limit** 

The total output of generation that can be produced by a unit and still maintain it at a stable level of operation.

**Emergency Capability** 

The amount of power transfer allowed between areas or within an area when operating to meet PJM Emergency criteria contingencies.

**Emergency Minimum Generation Limit** 

The least amount of generation that can be produced by a unit and still maintain it at a stable level of operation.

**Emergency Response Rate** 

The rate of load change that a generating unit can achieve under emergency conditions, such as loss of a unit, expressed in megawatts per minute (MW/Min).

eMKT

A computerized information system developed as an Internet application that is the Market Participant interface to the PJM Day-Ahead Energy Market and Real-Time Energy Market. This application provides an interface for Market Participants to submit Generation Offer Data Demand Bids, Increment Offers, Decrement Bids and Regulation Offers and to view Day-Ahead Energy Market Results and Regulation Market Results on a daily basis.



End-Use Customer PJM Member that is a retail end-user of

electricity within the PJM RTO.

Energy Emergency A condition when a system or power pool

does not have adequate energy resources (including water for hydro units) to provide its customers' expected energy requirement.

Energy Exchange Transaction whereby the receiver accepts

delivery of energy for a supplier's account and returns energy later at times, rates, and

in amounts as mutually agreed.

Energy Imbalance Service

Used to supply energy for mismatch between scheduled delivery and actual

loads that have occurred over an hour.

Energy MW Megawatt loading of a machine.

Energy Market Opportunity Cost "Energy Market Opportunity Cost" shall

mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of available run hours due to limitations imposed on the unit by Applicable Laws and Regulations (as defined in PJM Tariff), and (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Energy Market Opportunity Cost therefore is the value associated with a specific generating unit's lost opportunity to produce energy during a higher valued period of time occurring within the same compliance period, which compliance period is determined by the applicable regulatory authority and is reflected in the rules set forth in PJM Manual 15. Energy Market Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

Enhanced Energy System (EES)

On-line ramp reservation tool for external

control area transactions into and out of

PJM control area.



Equivalent availability factor (EAF)

The equivalent availability factor is the proportion of hours in a year that a unit is available to generate at full capacity.

**Equivalent Demand Forced Outage Rate** (EFORd)

A measure of the probability that generating unit will not be available due to a forced outages or forced deratings when there is a demand on the unit to generate. See Generator Resource Performance Indices Manual (M-22) for equation.

**Equivalent Demand Forced Outage Rate** (EFORd-5)

EFORd determined based on five years of outage data through September 30 prior to the Delivery Year. This is an index similar to EFORd that is the basis for a unit's UCAP value for the Delivery Year, and it does not include the events that are outside management control (OMC events). The index is calculated using Generator Availability Data System (GADS) data in PJM. If a generating unit does not have a full 5 years of history, the EFORd-5 will be calculated using class average EFORd and the available history as described in Reliability Assurance Agreement, Schedule 5, Section C. The class average EFORd will be used for a new generating unit. The class average EFORds that are used by PJM to calculate a unit's EFORd-5 are posted to the PJM website by November 30 prior to the Delivery Year.

Equivalent forced outage factor (EFOF)

The equivalent forced outage factor is the proportion of hours in a year that a unit is unavailable because of forced outages.

**Equivalent Load** 

The sum of an Internal Market Buyer's net system requirements to serve its customer load in the PJM RTO, plus its net bilateral transactions.

Equivalent maintenance outage factor (EMOF)

The equivalent maintenance outage factor is the proportion of hours in a year that a unit is unavailable because of maintenance outages.



Equivalent Outage Hours The number of hours a unit was involved in

an outage, expressed as equivalent hours of full outage at its maximum net dependable

capacity. Equivalent hours can be calculated for forced, maintenance, or

planned outages.

Equivalent planned outage factor (EPOF)

The equivalent planned outage factor is the

proportion of hours in a year that a unit is unavailable because of planned outages.

**InSchedules** A computerized information system,

developed by PJM as an Internet

application, that allows Load Aggregators and LDCs to provide and obtain information needed to schedule Internal Transactions under the Customer Choice Program.

eSuite Several e-Tool applications (Oasis, EES,

eCapacity, InSchedules, eData, Power

Meter).

Exempt Wholesale Generator (EWG) Small power producer and co-generator

facilities that meet certain criteria (qualifying facilities – QFs) to be exempted in whole or

in part from federal and state utility

regulation.

from the PJM Interchange Market for

consumption by end-users outside the PJM RTO or for load in the Control Area that is not served by Network Transmission

Service.

External Resource A generation resource located outside the

metered boundaries of the PJM RTO.

External Transaction An energy transaction between two parties

in which the path of the energy crosses a

PJM RTO border.

Extra High Voltage (EHV)

This refers to 345kV and above on the PJM

system.

Extra-Territorial Generation (ETG) Entitlement to generation that is external to

a system's service area.



F

**Facilities Study** 

An engineering study conducted by the Transmission Provider to determine the required modifications to the Transmission Provider's Transmission System, including the cost and scheduled completion date for such modifications, that are required to provide the requested transmission service.

**Facilities Study Agreement** 

Refer to PJM OATT section 36.6 for Generation Interconnection projects and OATT section 41.5 for Transmission Interconnection projects. The agreement, in the form of Attachment N-2 to the Tariff, that must be executed by a Generation and/or Transmission Interconnection Customer to authorize PJM to proceed with an Interconnection Facilities Study. The agreement obligates the Interconnection Customer to reimburse PJM for the cost of the Facilities Study and may contain reasonable milestone dates that the Interconnection Customer must meet to retain its assigned priority while PJM is completing the Interconnection Facilities Study. PJM shall provide the Interconnection Customer with an estimate of the time needed to complete the Facilities Study, and if more than one Interconnection Request is being evaluated in the study, the Interconnection Customer's allocated share of the costs.

Fault

A physical condition that results in the failure of a component or facility of the transmission system to transmit electrical power in a manner for which it was designed.

**Feasibility Study** 

Refer to PJM OATT section 36.2 for Generation Interconnection projects and OATT section 41.2 for Transmission Interconnection projects. A Feasibility Study is the initial evaluation to make a preliminary determination of the type and scope of the work required to interconnect a proposed



Customer Facility (Generation Facility or Transmission Facility) to the electrical Transmission System. The Feasibility Study Report assesses the practicality of the proposed interconnection, identifies the Attachment Facilities, Local Upgrades and Network Upgrades that are necessary to accommodate the Interconnection Request and provides a preliminary estimate of the cost and time that will be required to construct any necessary facilities and upgrades. The Feasibility Study analysis is limited to short-circuit studies and load-flow analysis of probable contingencies.

**Feasibility Study Agreement** 

Refer to PJM OATT section 36.1 for Generation Interconnection projects and OATT section 41.1 for Transmission Interconnection projects. The agreement, in the form of attachment N to the Tariff for Generation Interconnection projects and in the form of Attachment S to the Tariff for Transmission Interconnection projects, that must be executed by a Generation and/or Transmission Interconnection Customer and submitted to PJM to request and authorize PJM to proceed with an Interconnection Feasibility Study. The agreement obligates the Interconnection Customer to reimburse PJM for the cost of the Feasibility Study and must provide sufficient information and data about the requested interconnection for proper modeling in the study.

**FERC** 

The Federal Energy Regulatory Commission.

**FERC Order 888/889** 

This is the Federal Energy Regulatory Commission's order issued on April 24, 1996, that defines the requirements for

OASIS.

Field Forcing

The ability of a generator's excitation system to increase excitation voltage during a transient disturbance to return the generators terminal voltage to normal.



File Download

Transfer of a file from the PJM

InSchedules/eCapacity server to the user's

client PC.

File Upload

Transfer of a file from the user's client PC to the PJM InSchedules/eCapacity server.

Final RTO Unforced Capacity Obligation

Determined after the clearing of the Second Incremental Auction and is posted with the Second Incremental Auction results. The Final RTO Unforced Capacity Obligation is equal to the sum of the unforced capacity obligation satisfied through the BRA and Second Incremental Auction plus the Forecast RTO Interruptible Load for Reliability (ILR) Obligation. If a Second Incremental Auction is not conducted, the Final RTO Unforced Capacity Obligation is equal to the sum of the unforced capacity obligation satisfied through the BRA plus the Forecast RTO Interruptible Load for

Reliability (ILR) Obligation.

**Final Zonal Capacity Prices** 

Determined by PJM after the ILR Resources are Certified (3 months prior to the Delivery Year). Final Zonal Capacity Prices reflect the final price adjustments that are necessary to account for (a) potential changes in the unforced value of the Interruptible Load for Reliability (ILR) resources certified for the Delivery Year in comparison to the Forecast RTO ILR Obligation and (b) potential decreases in nominated values of existing demand resources cleared in the Base Residual Auction and Second Incremental Auction.

**Final Zonal RPM Scaling Factors** 

Used in determining an LSE's Daily
Unforced Capacity Obligation. A Final Zonal
RPM Scaling Factor for a zone is equal to
the Final Zonal Unforced Capacity
Obligation divided by (FPR times the Zonal
Weather Normalized Peak for the summer
prior to the Delivery Year). The Final Zonal
RPM Scaling Factors are posted by January
5<sup>th</sup> prior to the start of the Delivery Year.



**Final Zonal Unforced Capacity Obligation** 

Determined for each zone and is equal to the Base Zonal Unforced Capacity
Obligation plus [the unforced capacity obligation satisfied in the Second Incremental Auction \* zone's percentage allocation of the obligation satisfied in the Second Incremental Auction. If a Second Incremental Auction is not conducted, the Final Zonal Unforced Capacity Obligation is equal to the Base Zonal Unforced Capacity Obligation. The Final Zonal Unforced Capacity Obligations are posted with the Second Incremental Auction results.

**Financial Transmission Right (FTR)** 

A financial instrument that entitles the holder to receive compensation for certain congestion-related transmission charges that arise when the grid is congested and differences in locational prices result from the redispatch of generators out of merit order to relieve that congestion.

**Firm Transmission Service** 

Transmission service that is intended to be available at all times to the maximum extent practicable, subject to an emergency, and unanticipated failure of a facility, or other event beyond the control of the owner or operator of the facility, or other event beyond the control of the owner or operator of the facility or the Office of the Interconnection.

Firm Point-to-Point Transmission Service

Transmission Service that is reserved and/or scheduled between specified Points of Receipt and Delivery.

Firm Transmission Service

Transmission service that is intended to be available at all times to the maximum extent practicable, subject to an Emergency, an unanticipated failure of a facility, or other event beyond the control of the owner or operator of the facility or PJM.

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## **First Contingency Basis**

Operation of the bulk power electric supply system in the PJM RTO in a manner intended to protect against the consequences of the failure or malfunction of any single bulk power facility, such that prior to a contingency occurring

- The loading on all such bulk power facilities is maintained within normal continuous ratings, and
- Voltages are maintained at predetermined normal schedules at all load levels; and such that
- Immediately following any single facility malfunction or failure
  - The loading on all remaining facilities can be expected to be within emergency ratings,
  - System stability is maintained, and
  - An acceptable voltage profile is maintained.

**Fixed Demand Bid** 

Purchases of a defined MW level of energy, regardless of LMP in the Day-Ahead Market.

Fixed Resource Requirement (FRR)

An alternative method for a Party to satisfy its obligation to provide Unforced Capacity. Allows an LSE to avoid direct participation in the RPM Auctions by meeting their fixed capacity resource requirement using internally owned capacity resources.

**Flat Frequency Control** 

A mode of generation control where the only control objective is to utilize all regulating generators to control frequency at a scheduled level.

**Flat Tie-Line Control** 

A mode of generation control where the only control objective is to utilize all regulating generators to control net tie-line flows at a scheduled level.



Flexible Self-Scheduled Resources

Resources specified by an LSE in the Base Residual Auction to provide a mechanism to manage quantity uncertainty related to the Variable Resource Requirement. For each resource-specific sell offer, the LSE must designate a flexible self-scheduling flag as well as an offer price that will be utilized in the market clearing in the event the resource is not needed to cover a specified percentage of the LSE's capacity obligation. Flexible self-scheduled resources will automatically clear the auction if they are needed to supply the LSE's resulting capacity obligation.

**Forced Outage** 

An outage results in the immediate de-ration or unavailability of a generating unit due to a failure. (See Generator Forced/Unplanned Outage.)

**Forced Transmission Outage** 

An immediate removal from service of a Designated Transmission Facility by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the Designated Transmission Facility (as specified in the relevant portions of the PJM Manuals), but not a removal from service of a Designated Transmission Facility in response to or in order to affect market conditions.

**Forecast LSE Obligation** 

Forecast LSE Obligation (MW) is a Party's obligation established pursuant to Section 7.1(d) of the Reliability Assurance Agreement.

**Forecast Obligation** 

The amount of Capacity Resources that a PJM Member is obligated to install or contract for to satisfy the requirements for the Planning Period.

Forecast Pool Requirement (FPR)

The amount equal to one plus the unforced reserve margin (stated as a decimal number) for the PJM Region.



Forecast Zone Requirements Individual zonal requirements based on

Forecast Pool Requirements and zonal load

values.

Frequency Bias A value, usually given as MW/0.1 Hz,

associated with a control area that relates the difference between scheduled and actual frequency to the amount of

generation required to correct the difference.

Frequency Disturbance A system frequency deviation from normal

as a result of a generation/load imbalance.

Frequently mitigated unit (FMU) A unit that was offer-capped for more than a

defined proportion of its real-time run hours in the most recent 12-month period. FMU thresholds are 60 percent, 70 percent and 80 percent of run hours. Such units are permitted a defined adder to their costbased offers in place of the usual 10 percent

adder.

FRR Capacity Plan

A long-term plan for the commitment of

Capacity Resources to satisfy the capacity obligations of a Party that has elected the

FRR alternative.



**FRR Service Area** 

The service territory of an IOU as recognized by state law, rule, or order; the service area of a Public Power Entity or Electric Cooperative as recognized by franchise or other state law, rule, or order; or a separately identifiable geographic area that is bounded by wholesale metering, or similar appropriate multi-site aggregate metering, that is visible to and regularly reported to the Office of Interconnection or an EDC who agrees to aggregate the meters' load data for the FRR Service Area and regularly report the information to the Office of Interconnection or for which the FRR Entity has or assumes the obligation to provide capacity for all load (including load growth) within the area excluding the load of Single-Customer LSEs that are FRR Entities. In the event that the service obligations of an Electric Cooperative or Public Power Entity are not defined by geographic boundaries but by physical connections to a defined set of customers, the FRR Service Areas is defined as all customers physically connected to transmission or distribution facilities of the Electric Cooperative or Public Power Entity within an area bounded by appropriate wholesale aggregate metering as described above.

**FTR Auction** 

A monthly market for FTR trading that is administered by PJM in which PJM Market Participants and Transmission Customers may submit offers to sell and bids to buy onpeak or off-peak FTRs. FTRs awarded in this auction have a term of one calendar month.

**Fuel Cost** 

The cost of the fuel used by each unit expressed in \$/MBTU. When multiplied by the incremental heat rate (MBTU/MWh), the incremental fuel cost (\$/MWh) results.

**Full Requirements Service** 

Wholesale service to supply all of the power needs of a LSE to serve end-users within the PJM Region that are not satisfied by its own generation facilities.

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Future Unit A unit to be placed in service at some future

time, as indicated in a forecast installed

capacity schedule.

G

GEBGE PJM reliability computer program that

contains three support programs called MEGAWATT, CAPMOD, and CURTAIL.

Generating Availability Data System (GADS) A computer program and database used for

entering, storing, and reporting generating unit data concerning outages and unit

performance.

Generating Market Buyer An Internal Market Buyer that owns or has

contractual rights to the output of generation resources capable of serving the Market Buyers load in the PJM RTO or of selling energy or related services in the PJM Interchange Energy Market or elsewhere.

Generating Unit Event Request The "ticket" or form on which a request for

any change in a generating unit's capability

is recorded by PJM.

Generation The process of producing electrical energy

from other forms of energy; also, the amount

of electric energy produced, usually expressed in kilowatt-hours (kWh) or

megawatt hours (MWh).

Generation Capacity Resource Generation Capacity Resource shall mean a

generation unit, or the right to capacity from a specified generation unit, that meets the requirements of Schedules 9 and 10 of the

Reliability Assurance Agreement. A Generation Resource may be an existing

Generation Resource or a Planned

Generation Resource.

Generation offer Schedules of MW offered and the

corresponding offer price.



Generation Outage Rate Program (GORP)

A computer program maintained by the

Generator Unavailability Subcommittee that uses GADS data to calculate outage rates

and other statistics.

Generation Owner A Member that owns or leases with rights

equivalent to ownership facilities for the generation of electric energy that are located within the PJM Region. Purchasing all or a portion of the output of a generation facility is not sufficient to qualify a Member

as a Generation Owner.

Generator A machine that converts mechanical energy

into electrical energy.

Generator Forced/Unplanned Outage an immediate reduction in output or capacity

or removal from service of a generating unit by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions does not constitute a

Generator Forced Outage.

Generator Maintenance Outage The scheduled removal from service, in

whole or in part, of a generating unit in order to perform necessary repairs on specific components of the facility approved by PJM.

Generator Planned Outage The scheduled removal from service, in

whole or in part, of a generating unit for inspection, maintenance or repair with the

approval of PJM.

Generator Unavailability Subcommittee (GUS) A PJM subcommittee, reporting to the

Planning Committee, that is responsible for computing outage rates and other statistics needed by the Reliability Committee for

calculating Obligations.

Gigawatt (GW) A unit of power equal to 1,000 megawatts.

Gigawatt-day One GW of energy flow or capacity for one

day.



Gigawatt-hour (GWh)

One GWh is a gigawatt produced or

consumed for one hour.

**Good Utility Practice** 

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 that, in the exercise of reasonable judgment in light of the facts known at the time the decision is 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 is intended to include acceptable practices, methods, or acts generally accepted in the region.

Green Book The Rules and Procedures for

Determination of Generating Capability (PJM Manual 21), maintained by the staff of

the Capacity Adequacy Planning

Department of PJM.

Gross deficiency The sum of all companies' individual

capacity deficiency, or the shortfall of unforced capacity below unforced capacity obligation. The term is also referred to as

accounted-for-deficiency.

Gross excess The amount by which a load-serving entity's

(LSE's) unforced capacity exceeds its accounted-for-obligation. The term is also referred to as accounted-for-excess.

Gross export volume (energy)

The sum of all export transaction volume

(MWh).

Gross import volume (energy)

The sum of all import transaction volume

(MWh).

Gross Generation The electrical output at the terminals of the

generator, usually expressed in megawatt (MW) that does not take into consideration a

unit's station service.

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**Group Representative** 

An entity appointed by agreement among a group of PJM Participants to represent them on the Management Committee.

Н

Herfindahl-Hirschman Index (HHI)

HHI is calculated as the sum of the squares of the market share percentages of all firms in a market.

Hertz (Hz)

Electricity system frequency is measured in Hertz. Hertz measures 60 Hz in U.S. electric markets and 50 Hz in those in Europe.

**HRSG** 

Heat recovery steam generator. An air-tosteam heat exchanger installed on combined-cycle generators designed to utilize the heat in the combustion turbine exhaust to power a conventional steamturbine generator.

Hub

A group of nodes, also called buses, within a pre-determined region and at which PJM calculates individual Locational Marginal Prices (LMPs), for which the individual LMP values are averaged to create a single pricing reference.

**Hydro Calculator** 

Tool used by PJM to assure hydraulic coordination of hydro-electric power plants by computing hourly reservoir elevations and plant generation from input river flows and plant discharges.

Identifiable Load

Identifiable Load is the load of a customer that has been identified in the weather normalized coincident peak load of a Party that was used in the determination of the Diversified Peak.

**IEMO** 

Independent Electricity Market Operator (Canada's version of an ISO), replaced by Independent Electricity System Operator (IESO).

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Immature Unit A unit having between zero and five full

calendar years of operating experience for

reliability calculations.

Immediate Outage This is a forced/unplanned outage resulting

in the immediate removal of the facility from

service.

Impact Study See System Impact Study.

Imports The sum of all external transactions where

PJM is the Point of Delivery. Capacity imports from external units must be certified as deliverable using firm transmission and

non-recallable by any external party.

Inactive Status The classification of a unit that is

unavailable for an extended period of time because of its removal from service for economic or non-equipment-related

reasons.

Inadvertent Interchange Difference between net actual energy flow

and net scheduled energy flow into or out of

the Control Area.

Increment Offers An hourly offer, expressed in MWh, to sell

energy into the PJM Day-Ahead Energy Market if the Day-Ahead LMP is greater than or equal to the specified offer price. This offer must specify hourly quantity, offer price and location (Transmission Zone, Hub,

Aggregate or single bus).

Incremental Auctions Allow for an incremental procurement of

resource commitments to satisfy an increase in the region's unforced capacity obligation due to a load forecast increase or a decrease in the amount of resource

commitments due to a resource cancellation, delay, derating, EFORd increase, or decrease in the nominated value of a Planned Demand Resource.



Incremental Capacity Transfer Rights Allocated to transmission expansion projects

associated with new generation

interconnection that were required to meet PJM Deliverability requirements and to Merchant Transmission Expansion projects and are applicable to all such projects that have gone through the PJM interconnection process since the beginning of the PJM RTEPP in 1999. Such incremental Capacity Transfer Rights allocation is based on the incremental increase in import capability across a Locational Constraint that is caused by the transmission facility upgrade.

Incremental Cost The component of the total cost of generator

operation that varies as the output varies. It

is the cost of the next increment of

generation (the next megawatt), expressed in dollars per megawatt hour or in mills per

kilowatt-hour.

Indirect Costs These costs include A&G expenses such as

the salary of the payroll clerk.

Inframarginal unit A unit that is operating, with an accepted

offer that is less than the clearing price.

Interruption A reduction in non-firm transmission service

due to economic reasons.

Interruptible Load for Reliability Interruptible load that certifies in the

Reliability Pricing Model three months prior to the delivery year. ILR does not participate

in the RPM auctions.

Installed Capacity Value based on the summer net dependable

rating of the unit as determined in accordance with PJM's Rules and Procedures of the Determination of

Generating Capacity.

Instantaneous Reserve Check (IRC) See IRC.

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Installed Reserve Margin (IRM)

Used to establish the level of installed

capacity resources that will provide an acceptable level of reliability consistent with the Reliability Principles and Standards. The IRM is determined by PJM in accordance with the PJM Reserve Requirements Manual (M-20). The IRM is approved and posted by February 1 prior to its use in the

BRA for the Delivery Year.

Integrated The weighted average of instantaneous

values (e.g., energy flows) over a designated, continuous period of time (usually the clock hour), reported on an

hour-ending basis.

Interchange Energy or capacity transferred from one

electric company or power pool to another reported on an hourly basis (or on the basis

of capacity periods).

Interconnection The supply systems of the PJM Members,

functioning as a coordinated electrically interconnected supply system that operates

as a single control area.

Interconnection Agreement The Operating Agreement of PJM

Interconnection, L.L.C.

Interconnection Customer The responsible party for a generator or

merchant transmission project that is in the

PJM Interconnection Process.

Interconnection Service Agreement (ISA) An agreement among the Transmission

Provider, an Interconnection Customer and an Interconnected Transmission Owner

regarding interconnection.

Interconnection Queue Close Date

The date on which an Interconnection

Queue ends. Currently, in the PJM Open

Access Transmission Tariff, the

Interconnection Queue Close Dates are

January 31st and July 31st.

Interface The specific set of transmission elements

between two areas or between two areas comprising one or more electrical systems.

Internal Refers to facilities or market entities that are

within the PJM RTO.



Internal Bilateral Transaction (IBT)

InSchedules Service type IBT is used to designate all internal bilateral energy transactions, including supply transactions for parties serving retail load. This service type is used by PJM Market Settlements only to adjust a participant's interchange.

**Internal Market Buyer** 

A Market Buyer making purchases of energy from the PJM Interchange Energy Market for consumption by end-users inside the PJM RTO.

Internal Transaction

An energy transaction between two parties in which the path of the energy remains inside the PJM RTO borders.

Interruptible Load for Reliability (ILR)

A resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with PJM Standards that is certified by PJM no later than three months prior to a Delivery Year. Known as ILR Resource.

Interruptible Load for Reliability (ILR) Zonal/RTO Forecast

The average of the Zonal ILR nominated each of the five Delivery Years prior to the BRA for the Delivery Year. If five years of ILR history is not available for a Zone that was recently integrated into PJM, an average of the Zonal incremental load subject to mandatory interruption by EDC in the two years prior to the BRA will be sued as an estimated ILR for the Zone. Zonal Active Load Management (ALM) data will be used in place of Zonal ILR nominated data when Zonal ILR nominated data for the prior Delivery Years does not exist. The RTO ILR Forecast is the sum of the Zonal ILR Forecasts. A market based methodology will be considered for implementation in the future based on RPM experience. The Forecast Zonal/RTO ILR Obligation is determined by PJM in accordance with the Load Data Systems Manual (M-19) by February 1 prior to its use in the BRA for the Delivery Year.



## **Investor Owned Utility (IOU)**

An entity with substantial business interest in owning and/or operating electric facilities in any two or more of the following three asset categories: generation, transmission, distribution.

IRC

Instantaneous Reserve Check, a PJM survey to obtain the actual current available reserve on the system. It is an activity performed and recorded daily at morning and evening shifts by dispatch in conjunction with generator owners.

Island

A portion of a power system or several power systems that is/are electrically separated from the main grid.

**ISONE** 

Independent System Operator New England. Party to Memorandum of Understanding.

J

Joint-Owned Unit

A generating unit owned by two or more member systems whose output is dispatched as a pool resource, with each owner receiving a share of output for billing purposes on the percentage of ownership.

L

Lambda

A term commonly given to the incremental cost that results from the economic dispatch calculation. It represents the cost of the next kilowatt hour that could be produced from economical dispatchable units on the system.

Learning Management System (LMS)

The PJM LMS is a Web-based system used to track training and certification information of System Operators in PJM. \This training information is used to measure compliance with the PJM System Operator Training Requirements outlined in Attachment C of the Control Center Requirements Manual (M-01).

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Load & Capacity Subcommittee (L&CS) Performs the annual reserve requirement

study and maintains the Reliability analysis

documentation.

Load Aggregator (LA) A licensed entity that may provide (sell)

energy to retail customers within the service territory of a Local Distribution Company. Also known as Electric Generation Supplier

(EGS).

Load Analysis Subcommittee (LAS) A PJM subcommittee, reporting to the

Planning Committee, that produces the PJM Load Forecast Report, normalized seasonal

peaks, and peak allocation.

Load Curtailment Voluntary reduction of load of preselected

customers. Advanced notice of four hours (one hour in an emergency) is required.

Load Drop A parameter used in the calculation of LSE

forecast obligation determined by the Reserve Sharing Committee defined as the difference between a system's peak load and its average weekly loads. Load drop determines how much room is available to perform maintenance due to difference between the LSE's and pool load shapes.

Load Duration Curve A nonchronological, graphical summary of

demand levels with corresponding time durations using a curve, which plots demand magnitude (power) on one axis and percent of time that the magnitude occurs on the

other axis.



## **Load Management**

Previously known as ALM (Active Load Management. ALM was a term that PJM used prior to the implementation of RPM where end use customer load could be reduced at the request of PJM. The ability to reduce metered load, either manually by the customer, after a request from the resource provider which holds the Load management rights or its agent (for Contractually Interruptible), or automatically in response to a communication signal from the resource provider which holds the Load management rights or its agent (for Direct Load Control).

**Load Pick-up Factor** 

The amount of load (expressed in terms of percent of generator rating) that a generator can pick up without incurring dynamic frequency decay below a level at which generators will trip due to under frequency relaying (i.e., usually 57.5 Hz).

**Load Relief** 

- Load reduction accomplished by voltage reduction and/or load shedding.
- Curtailment of non-essential building load implemented in conjunction with voluntary customer load curtailment whenever a 5% voltage reduction is requested and added relief if required.

Load Serving Entity (LSE)

Any entity (or the duly designated agent of such an entity), including a load aggregator or power marketer that (a) serves end-users within the PJM Control Area, and (b) is granted the authority or has an obligation pursuant to state or local law, regulation or franchise to sell electric energy to end-users located within the PJM Control Area.

**Load Shedding** 

The systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations.



Load Shifting Demand-side management programs

designed to encourage consumers to move their use of electricity from on-peak time to off-peak times, or daily movement of load

between LSEs.

Local Area Transmission Facilities Those transmission facilities in the PJM

RTO that are not Designated Transmission

Facilities.

Local Control Center (LCC)

The equipment, facilities, and personnel

used by or on behalf of a Transmission Owner to communicate and coordinate with PJM on the operation of, and to operate, Bulk Power Electric Supply System facilities.

Local Control Center Dispatcher

The system operators at the LCC who direct

operation of the local facilities and communicate with PJM dispatcher to coordinate operation of the Bulk Power

Electric Supply system facilities.

Local Distribution Company (LDC) A company in whose service territory Load

Aggregators are providing energy to retail customers and whose distribution system is being used to transport the energy. Also known as Electric Distribution Company

(EDC).

Locational Constraints Localized capacity import capability

limitations that are caused by transmission facility limitations, voltage limitations or stability limitations that are identified for a

Delivery Year in the PJM Regional

Transmission Expansion Planning Process (RTEPP) prior to each Base Residual Auction. Such Locational Constraints are included in the RPM to recognize and to quantify the locational value of capacity.

Locational Deliverability Area (LDA) Sub-regions used to evaluate locational

constraints. LDAs include EDC zones, sub-

zones, and combination of zones.

Locational Marginal Price (LMP)

The hourly integrated market clearing

marginal price for energy at the location the

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energy is delivered or received.



Locational Price Adder An addition to the marginal value of

unforced capacity within an LDA as necessary to reflect the price of resources required to relieve the applicable binding

locational constraints.

Locational Price Algorithm Program that calculates locational marginal

prices based on actual system conditions at

five-minute intervals.

Locational Reliability Charge Fee applied to each LSE that serves load in

PJM during the delivery year. Equal to the LSEs Daily Unforced Capacity Obligation multiplied by the applicable Final Zonal

Capacity Price.

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).

LOLP Loss of Load Probability

Long-Term Firm Point-to-Point Transmission

Service

Firm Point-to-Point Transmission Service

with a term of one year or more.

Losses The power that is lost as dissipated heat

when power flows in transmission lines and

transformers.

Lost opportunity cost (LOC) The difference in net compensation from the

Energy Market between what a unit receives when providing regulation or synchronized reserve and what it would have received for

providing energy output.

LSE Reserve Margin The percent reserve for an LSE defined as

(FPR).

LSE Reserve Requirement The level of installed or purchased reserves

needed to satisfy the LSE's obligation to the

PJM RTO.

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M

Maintenance Outage The scheduled removal from service, in

whole or in part, of a generating unit in order to perform necessary repairs on specific

components of the facility.

Manual Load Dump The removal of electric load from a system

by manually opening the breakers.

Margin The difference between net capacity

resources and net internal demand. Margin is usually expressed in megawatts (MW).

Marginal Benefits Factor Is the amount of benefit the last Regulation

D or fast moving resource provides in RegA or traditional resource MWs. It is a rate of substitution between the fast and slow resources for the last MW of the marginal Regulation D resource. This is used in

regulation market settlement.

Marginal Equipment Generating units that, due to their cost, may

or may not run to carry system load.

Market unit The last generation unit to supply power

under a merit order dispatch system.

Market Buyer A PJM Member that meets reasonable

creditworthiness standards established by PJM and that is otherwise able to make purchases in the PJM Interchange Energy

Market.

Market-clearing price The price that is paid by all load and paid to

all suppliers.

Markets Database An Oracle database that is the central

repository for generating unit offer data, Demand bids, Increment Offers, Decrement Bids and technical data at PJM. Information is entered by the PJM member companies and is used for scheduling, dispatching, and

accounting.



Market Operations Center (MOC)

The equipment, facilities, and personnel used by or on behalf of a Market Participant to communicate and coordinate with PJM in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM RTO.

**Market Participant** 

A Market Buyer or a Market Seller, or both.

**Market Seller** 

A PJM Member that meets reasonable creditworthiness standards established by PJM and that is otherwise able to make sales in the PJM Interchange Energy Market.

Marketer

An entity that has the authority to take title to electrical power generated by itself or another entity and re-market that power at market-based price.

Market user interface

A thin client application allowing generation sellers to provide and to view generation data, including bids, unit status and market results.

**Mature Unit** 

A unit that has at least 7 years of operating experience for reliability calculations.

**Maximum Emergency Generation** 

The maximum net electrical power that a generator can deliver for a limited period of time without exceeding specified limits of equipment stress.

**Maximum Facility Output** 

The maximum (not nominal) net electrical power output in megawatts, specified in the Interconnection Service Agreement, after supply of any parasitic or host facility loads, that a Generation Interconnection Customer's Customer Facility is expected to produce, provided that the specified Maximum Facility Output shall not exceed the output of the proposed Customer Facility that Transmission Provider utilized in the System Impact Study.



Maximum Generation Emergency An Emergency declared by PJM in which

PJM anticipates requesting one or more Capacity Resources to operate at its maximum net or gross electrical power output, subject to the equipment stress limits for such Capacity Resource, in order to manage, alleviate, or end the Emergency.

Maximum Generation Emergency Limit The maximum net or gross electrical power

that a generator can deliver for a limited period of time without exceeding specified

limits of equipment stress.

Megawatt (MW) A megawatt equals 1,000 kilowatts or

1,000,000 watts.

Megawatt-day One MW or energy flow or capacity for one

day.

Megawatt-hour (MWh) One MWh is a megawatt produced or

consumed for one hour.

Megawatt-year One megawatt of energy flow or capacity for

one calendar year.

Member An entity that is a signatory in good standing

of the PJM Operating Agreement

Memorandum of Understanding Agreement among Independent system

organizations with responsibility to provide a

reliable bulk power grid and robust

marketplace to coordinate efforts. The four participating parties are PJM RTO, NY-ISO,

ISO-NE and IESO.

Metered Refers to facilities or market entities that are

within the PJM RTO.

Metered Entity A Local Distribution Company within the

PJM RTO that provides distribution and metering services to customers in its

territory.

from the PJM Interchange Energy Market for consumption by end-users inside the PJM

RTO.



**Metered Value** 

A measured electrical quantity that may be observed through telemetering, supervisory control and data acquisition (SCADA) or other means.

Mid-Atlantic Area Council (MAAC)

A regional reliability council responsible for ensuring the adequacy, reliability, and security of the bulk electric supply systems of the MAAC Region through coordinated operations and planning of generation and Transmission Facilities. The electric Control Area operated by PJM is the MAAC region. As of January 1, 2006, MAAC no longer exists. Many MAAC members and PJM have joined the new Reliability First Corporation, which covers the geographical region of MAAC and ECAR along with

Commonwealth Edison, formerly of MAIN.

Mileage

Mileage is the summation of movement requested by the regulation control signal a resource is following. It is calculated for the market hour and on a five minute basis for each regulation control signal (i.e. RegA and RegD).

**Minimum Generation Alert** 

Emergency notification procedure that indicates the expected PJM generation level is within 2500 MWs of normal minimum energy limits and PJM may be initiating Minimum Generation procedures.

Minimum Generation Emergency

An emergency declared by PJM in which PJM anticipates requesting one or more generating resources to operate at or below Normal Minimum Generation, in order to manage, alleviate, or end the emergency.

**Monthly Energy Reconciliation** 

Service provided by PJM to bill for the difference between the Retail Load Responsibility and Actual Load, based on reconciliation amounts in kWh reported by

the EDCs.

**Mothballed Unit** 

A unit placed on inactive status.



**Multi-Area Operation** 

The scheduling and/or dispatching of a single system recognizing system constraints on the free flow of energy from a group of generators to a load area.

**Must-Run Generation** 

Generation designated to operate at a specific level and not available for economical dispatch.

N

**Native Load Customers** 

The wholesale and retail power customers of an RTO on whose behalf the RTO, by statute, franchise, regulatory requirement, or contract, undertakes an obligation to construct and operate the RTO's system to meet the reliable electric needs of such customers.

**NEPOOL** 

**NERC** 

New England Pool.

The North American Electric Reliability
Corporation, whose mission is to ensure the reliability of the bulk power system in North America. They develop and enforce reliability standards; assess reliability annually via 10-year and seasonal forecasts; monitor the bulk power system; evaluate users, owners, and operators for preparedness; and educate, train, and certify industry personnel. NERC is a self-regulatory organization, subject to oversight by the U.S. Federal Energy Regulatory
Commission and governmental authorities in Canada.

**Nested LDAs** 

When an aggregate of Zones, a Zone and its sub-zones are constrained LDAs, the LDAs are referred to as "Nested". When LDAs are nested, the Zonal CTR calculations include allocation of CTRs from RTO to aggregate of Zones as well as CTRs from aggregate of Zones to the Zone.

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Net Capability The number of megawatts of electric power

that can be delivered by an electric generating unit of a System under

conditions and criteria specified by the PJM Board upon consideration of the advice and recommendations of the Management Committee. Net Capabilities for all units are determined for both summer and winter

operating conditions.

Net Capacity Verification Report (NETCAPVR) A PC-based computer program that allows

an LSE to provide summer and winter Net Verification Report data electronically rather

than on paper forms.

Net Energy & Ancillary Services (E&AS)

Offset

Used to offset the value of Cost of New Entry (CONE) to determine the net value of CONE. This value is calculated using the historical averages of Energy &Ancillary Services revenue data for a reference combustion turbine. During the first three Delivery Years (2007/08, 2008/09, 2009/10), the E&AS Offset is calculated using a historical average of the six most recent calendar years. In the subsequent Delivery Years E&AS Offset is calculated using a historical average of the three most recent

calendar years.

Net excess (capacity)

The net of gross excess and gross

deficiency, therefore the total PJM capacity resources in excess of the sum of load-

serving entities' obligations.

Net exchange (capacity) Capacity imports less exports.

Net Generation Gross generation minus station service or

unit service power requirements, usually

expressed in megawatts (MW).

Net interchange (energy) Gross import volume less gross export

volume in MWh.

Net Tie Flow (Telemetered)

Summation of the flows on all ties between

PJM and the outside world. Flows into PJM

RTO are positive (+); out of PJM are

negative (-).



**Network Customer** 

An entity receiving Transmission Service pursuant to the terms of the Transmission Provider's Network Integration Transmission Service.

**Network Integration Transmission Service** 

Allows a Transmission Customer to integrate, plan, economically dispatch and regulate its network resources to serve its network load in a manner comparable to that in which the transmission provider utilizes its Transmission System to serve its Native Load Customers. Network Integration Transmission Service also may be used by the Transmission Customer to deliver non-firm energy purchases to its network load without additional charge.

**Network Load** 

The load that a Network Customer designates for Network Integration Transmission Service. The Network Customer's Network Load includes all load served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total load as Network Load but may not designate only part of the load at a discrete Point of Delivery. Where an Eligible Customer has elected not to designate a particular load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements for any Point-to-Point Transmission Service that may be necessary for such non-designated load.

**Network Operating Agreement** 

An executed agreement that contains the terms and conditions under which the Network Customer operates its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service.



Network Operating Committee A group made up of representatives from

the Network Customer(s) and the Transmission Provider established to coordinate operating criteria and other technical considerations required for implementation of Network Integration

Transmission Service.

Network Resource Any designated generating resource owned

or purchased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource or any portion that is committed for sale to third parties or

otherwise cannot be called upon to meet the Network Customer's Network Load on a

non-interruptible basis.

Network Service Peak Load (NSPL)

Used to determine network transmission

charges and/or allocate network service

FTRs or ARRs.

Network Service User An entity using Network Transmission

Service.

Network Transmission Service Transmission Service provided pursuant to

the rates, terms and conditions set forth in

the Tariff.

Network Upgrades 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.

New Entry Pricing

An incentive provided to a Planned

Generation Resource where the size of the new entry is significant relative to the size of the LDA and there is a potential for the clearing price to drop when all offer prices including that of the new entry are capped. This allows Planned Generation Resources to recover the amount of its cost of entrybased offer for up to two additional

consecutive years, under certain conditions, and to set the clearing price of all resources

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within that LDA for all three years.



**NICApacity** 

A Web-based application used by PJM market participants with load responsibility in PJM, or who are participating members of the capacity markets. This application enables these participants to view load responsibility and enter capacity transaction information. It also allows participants to buy and sell capacity to meet their installed capacity obligations.

**Nominated DR Value** 

The nominated value of a Demand Resource or ILR Resource is the value of the maximum load reduction and the process to determine this value is consistent with the process for the determination of the capacity obligation for the customer. Therefore, the maximum load reduction for each resource is adjusted to include system losses.

Non-Capacity Interchange Purchases

Amount of interchange purchases that are not capacity backed.

**Non-Capacity Interchange Sales** 

Amount of interchange sales that are not capacity backed.

**Non-Capacity Resource** 

A Resource that is not included as part of

PJM's capacity.

**Non-Curtailing Outage** 

The removal from service of spare or redundant equipment (i.e., major components or entire systems) for repairs, which causes no unit outage or capacity

reduction.

Non-economic generation

Units producing energy at an offer price greater than the LMP.

Non-Firm Point-to-Point Transmission Service

Point-to-Point Transmission Service under the Tariff that is reserved and scheduled on an as-available basis and is subject to curtailment or interruption. Non-Firm Pointto-Point Transmission Service is available on a stand-alone basis for periods ranging from one hour to one month.

Non-Metered

Refers to facilities or market entities that are

outside the PJM RTO.

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Non-Metered Market Buyer

A Market Buyer making purchases of energy from the PJM Interchange Energy Market for consumption by end-users outside the PJM RTO or for load in the Control Area that is not served by Network Transmission Service.

Non-PJM-Designated Transmission Facilities

The transmission facilities within the PJM RTO that are not designated for PJM operation. These are also referred to as Local Non-designated Transmission Facilities.

Non-Recallable Available Transfer Capability (NATC)

The Total Transmission Capability less the Transmission Reliability Margin, less non-recallable reserved transmission service (including the Capacity Benefit Margin).

Non-Retail Behind the Meter Generation

Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, and electric distribution companies to serve load.

**Non-Unit Specific Capacity Transactions** 

Transactions in eRPM between a buyer and seller that facilitate financial settlement, only, between the buyer and seller using the eRPM system and PJM settlement process. Non-Unit Specific Capacity Transactions will not change the resource position or load obligation of an entity, and are not eligible to be offered in an RPM auction or used to the meet the region's unforced capacity obligation. Non-Unit Specific Capacity Transactions can be settled at a Zone or Capacity Hub as defined by PJM. Non-Unit Specific Capacity Transactions were formerly known as Financial Capacity Transactions.

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## Non-Utility Generator (NUG)

- All co-generators, qualifying facilities, and all independent power producers not owned and operated by an electric utility.
- A facility that produces electric power and then sells it to an electric utility, usually under a long-term contract. NUGs may also sell thermal energy and electricity to nearby industrial customers.

Non-Zone Load

The load that is located outside of the PJM Region served by a PJM Load Serving Entity using PJM internal resources. Non-Zone Load is included in the load of the Zone from which the load is served.

**Normal Maximum Generation** 

The highest output level of a generating resource under normal operating conditions. See economic maximum.

**Normal Maximum Generation Limit** 

The highest output level of a generating resource under normal operating conditions.

**Normal Minimum Generation** 

The lowest output level of a generating resource under normal operating conditions. See economic minimum.

**Normal Minimum Generation Limit** 

The lowest output level of a generating resource under normal operating conditions.

**Normal Response Rate** 

The rate of load change that a generating unit can achieve for normal loading purposes expressed in megawatts per minute (MW/Min).

**Normal Transfer Capability** 

The amount of power transfer allowed between areas or within an area when operating to meet PJM normal criteria contingencies.

Nuclear Plant Generator Operator (NPGO) Any Generator Operator or Generator Owner that is a Nuclear Plant Licensee responsible for operation of a nuclear facility licensed to produce commercial power.





Nuclear Plant Off-site Power Supply (Off-site Power) The electric power supply provided from the electric system to the nuclear power plant distribution system as required per the nuclear power plant license

Nuclear Plant Licensing Requirements (NPLRs)

Requirements included in the design basis of the nuclear plant and statutorily mandated for the operation of the plant, including nuclear power plant licensing requirements for:

1) Off-site power supply to enable safe shutdown of the plant during an electric system or plant event; and

2) Avoiding preventable challenges to nuclear safety as a result of an electric system disturbance, transient or condition.

**Nuclear Plant Interface Requirements (NPIRs)** 

The requirements based on NPLRs and Bulk Electric System requirements that have been mutually agreed to by the Nuclear Plant Generator Operator and the applicable Transmission Entities.

**NYISO** 

New York Independent System Operator. Party to Memorandum of Understanding.

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**Obligation Peak Load** 

The summation of the weather normalized coincident summer peaks for the previous summer of the end-users for which the Party was responsible on that billing day.

Off-Cost

A given Load Serving Entity's (LSE's) generation as being dictated by PJM RTO security considerations.

Offer Data

The scheduling, operations planning, dispatch, new resource, and other data and information necessary to schedule and dispatch generation resources for the provision of energy and other services and the maintenance of the reliability and security of the Transmission System in the PJM RTO, and specified for submission to the PJM Interchange Energy Market.



Office of Interconnection (OI)

The employees and agents of PJM Interconnection, L.L.C., subject to the supervision and oversight of the PJM board.

Office Working Day

Any day from Monday to Friday, excluding PJM designated holidays.

Off peak

For the PJM Energy Market, off-peak periods are all NERC holidays (i.e., New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day) and weekend hours plus weekdays from the hour ending at midnight

until the hour ending at 0700.

On peak

For the PJM Energy Market, on-peak periods are weekdays, except NERC holidays (i.e., New Year's Day, Memorial Day, Independence day, Labor Day, Thanksgiving Day, Christmas Day) from the hour ending at 0800 until the hour ending at 2300.

Open Access Same-Time Information System (OASIS)

- The computer system that is used by Transmission Providers to exchange Transmission Service and Ancillary Service information with Transmission Customers. The OASIS requirements and standard of conduct were initially defined in FERC Order 889. These requirements may be modified by subsequent FERC orders.
- A computerized information system, developed as an Internet application, that allows LDCs to provide and obtain information needed to schedule transmission services.

**Operating Agreement of PJM** 

That agreement dated as of March 28, 1997, as amended from time to time, that establishes the planning and operation of the PJM RTO, and provides for PJM.

**Operating Availability Factor** 

The portion of time a unit is available to operate.

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Operating Capability The maximum load carrying ability of

generating equipment or other electrical apparatus under specified conditions for a

given time interval.

Operating Capacity

An estimated amount of capability

scheduled in advance to carry the estimated peak load of PJM and to provide reserve as

required.

Operating Day The daily 24-hour period beginning at

midnight for which transactions on the PJM Interchange Energy Market are scheduled.

Operating Margin Incremental adjustments, measured in MW,

required in the PJM RTO operations in order to accommodate in a first-come contingency basis, an operating contingency in the PJM

RTO resulting from operation in an

interconnected Control Area.

Operating Reserve The amounts of generating Capacity

scheduled to be available for specified periods of an Operating Day to ensure the

security of the PJM RTO.

Operating Transmission Limit The maximum value of the most critical

system operating parameter(s) which meets:
(a) pre-contingency criteria as determined
by equipment loading capability and
acceptable voltage conditions, (b) transient
performance criteria or (c) post-contingency

loading and voltage criteria.

Other Supplier An entity other than a Generation Owner

selling electric energy in the PJM RTO.

Outage Transfer Distribution Factor (OTDF)

The electric power transfer distribution factor

(PTDF) with a specific system facility removed from service (outage). The OTDF applies only for the post-contingency configuration of the systems under study.

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**Parameter Limited Schedules** 

Schedules containing pre-determined limits that could be imposed on the parameters in generation offers when certain operational circumstances exist. Cost based offers are parameter limited. Price based offers can be parameter limited or not.

**Partial Requirements Service** 

Wholesale service to supply a specified portion, but not all, of the power needs of a LSE to serve end-users within the PJM Region that are not satisfied by its own generating facilities.

**Peak Demand** 

The highest electric requirement occurring in a given period (e.g., an hour, a day, month, season or year). For an electric system, it is equal to the sum of the metered net outputs of all generators within a system and the metered line flows into the system, less the metered line flows out of the system.

**Peak Load Contributions (PLCs)** 

A customer's contribution to a zone's normalized summer peak load, as estimated by the zone's Electric Distribution Company. Used in determining a Load Serving Entity's obligation Peak Load.

Peak Load Residual

The Peak Load for a zone—sum of all Load Serving Entities' PLC in that zone equals peak load residual. The zone owner is responsible for meeting the residual peak load's obligation.

Peak Period Capacity Available (PCAP)

Total Unit ICAP Commitment Amount of the generating unit times (1.0 – EFORp).

Peak-Period Equivalent Forced Outage Rate Peak (EFORp)

A measure of the probability that a generating unit will not be available due to forced outages or forced deratings when there is a demand on the unit to generate during seasonal peak periods. Currently there are two sets of seasonal peak periods. The Summer peak period is defined as June through August non-holiday weekdays from 1400 to 1900. The Winter peak period is defined as January through February non-holiday weekdays from 0700 to 0900 and 1800 to 2000.



#### **Peak Period Maintenance Deficiency**

A party shall be deficient and shall pay the charge as set forth in Schedule 11 of the Reliability Assurance Agreement (RAA) if its Unforced Capacity is less than the sum of its Peak Season Maintenance Obligation and its Accounted-for Obligation (as determined pursuant to Schedule 7 of the RAA); provided, however that a Party shall be considered to be deficient only to the extent of any megawatts of deficiency in excess of the number of megawatts for which said Party already has paid a deficiency charge related to Schedule 7 of the RAA. (RAA Schedule 8-E)

**Peak Period Maintenance Excess** 

For each day during the Peak Season, the Peak Season Maintenance Obligation of a Party shall be the amount, in megawatts, which shall be based on the Unforced Capacity of the Unit, of that Party's Peak Season Maintenance at the time of the Control Area daily peak, excluding outages for maintenance when released by the Office of the Interconnection for a specified period and other outages as approved by the Reliability Committee from time to time.

**Peak Period Maintenance Season** 

The time period between the 24<sup>th</sup> through the 36<sup>th</sup> Wednesdays of the calendar year, with each week beginning on a Monday.

**Peak Season** 

Peak Season is defined to be those weeks containing the 24<sup>th</sup> through 36<sup>th</sup> Wednesdays of the calendar year. Each such week begins on a Monday and ends on the following Sunday, except for the week containing the 36<sup>th</sup> Wednesday, which ends on the following Friday.

**Peak Season Maintenance** 

Planned outages and maintenance outages during the Peak Season.

Percentage Internal Resources Required

For purposes of an FRR Capacity Plan, the percentage of the LDA Reliability Requirement for an LDA that must be satisfied with physically Capacity Resources located in that LDA.



Period Hours The total clock time in the period of concern.

Permanent Fault A fault that prevents the affected device

from being returned to service until physical actions are taken to effect repairs or to

remove the cause of the fault.

Phase Angle Regulator (PAR)

Allows Dispatchers to change the flow of

megawatts over a transmission line by changing the impedance of the transmission

facility.

PJM shall mean the PJM Board and the

Office of the Interconnection. (RAA Section

1.39)

PJM Board of Managers The PJM Board shall mean the Board of

Managers of the PJM Interconnection, L.L.C., acting pursuant to the Operating

Agreement. (RAA Section 1.40)

PJM Control Area shall mean the Control

Area recognized by NERC as the PJM Control Area. (RAA Section 1.41).

PJM Control Area-Scheduled Resource This is a generating resource that the seller

has turned over to PJM for scheduling and

control.

PJM Control Center The equipment, facilities, and personnel

used by PJM to coordinate and direct the operation of the PJM RTO and to administer the PJM Interchange Energy Market,

including facilities and equipment used to communicate and coordinate with the Market Participants in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM RTO.

PJM Energy Market The regional competitive market

administered by PJM for the purchase and sale of spot electric energy at wholesale in interstate commerce and related services

established in the PJM Operating

Agreement.



PJM Installed Reserve Margin (IRM)

The level of installed reserves needed to meet the Reliability *First* Corporation criteria for a loss of load expectation (LOLE) of one day, on average, every 10 years.

**PJM Interchange** 

- The amount by which an Internal Market Buyer's hourly Equivalent Load is exceeded by the sum of the hourly outputs of the Internal Market Buyer's operating generating resources; or
- The hourly scheduled deliveries of Spot Market Energy by an External Market Seller from an External Resource; or
- The hourly net metered output of any other Market Seller.

**PJM Interchange Energy Market** 

The regional competitive market administered by PJM for the purchase and sale of spot electric energy at wholesale in interstate commerce and related services established in the PJM Operating Agreement.

**PJM Interchange Export** 

- The amount by which an Internal Market Buyer's hourly Equivalent Load is exceeded by the sum of the hourly outputs of the Internal Market Buyer's operating generating resources; or
- The hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or
- The hourly net metered output of any other Market Seller.

**PJM Interchange Import** 

- The amount by which an Internal Market Buyer's hourly Equivalent Load exceeds the sum of the hourly outputs of the Internal Market Buyer's operating generating resources; or
- The hourly scheduled deliveries of Spot Market Energy to an External Market Buyer.



PJM Load Ordered Time Series (PLOTS)

A magnitude ordered load model consisting

of a 52-week load distribution (mean and

standard deviation).

PJM Manuals The instructions, rules, procedures and

guidelines established by PJM for the operation, planning, and accounting requirements of the PJM RTO and PJM

Interchange Energy Market.

PJM Markets Facilities Those facilities above 100kV which are both

monitored in the PJM EMS and included in

the LMP calculations for congestion

management.

PJM Member 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.

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This is the person to contact if you have questions or need information about PJM

OASIS. Directions to contact the

administrator are on the PJM OASIS Web

page.

PJM Office of the Interconnection (PJM)

The facilities and staff of PJM engaged in

implementation of the PJM Operating Agreement and administration of the Tariff.

**PJM Open Access Same-Time Information** 

**PJM OASIS Account Administrator** 

System

The electronic communication system for

the collection and dissemination of

information about Transmission Services in the PJM RTO established and operated by PJM in accordance with FERC standards

and requirements.

PJM Region represents the aggregate of the

PJM Mid-Atlantic Control Zone and the PJM

West Region.

PJM Reliability Facilities Those facilities above 100kV which are

monitored as part of the NERC BES set of facilities but are not included in the LMP calculations for congestion management.

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PJM RTO PJM RTO shall mean the Control Area

recognized by NERC as the PJM RTO.

(RAA Section 1.41)

PJM RTO Scheduled Resource This is a generating resource that the seller

has turned over to PJM for scheduling and

control.

PJM Tariff PJM Open Access Transmission Tariff

providing Transmission Service within the PJM RTO, including schedules and exhibits.

Planned Demand Resource A Demand Resource that does not currently

have the capability to provide a reduction in demand or to otherwise control load, but that is scheduled to be capable of providing a reduction or control on or before the start of the Delivery Year for which the resource

is to be committed.

Planned Generation Capacity Resource A Generation Capacity Resource

participating in the generation interconnection process for which Interconnection Service is scheduled to commence on or before the first day of the Delivery Year for which the resource is to be committed. A Facilities Study Agreement (FSA) must be executed prior to the BRA for the corresponding Delivery Year and an Interconnection Service Agreement (ISA) must be executed prior to any Incremental Auctions for the corresponding Delivery

Year.

Planned Outage The scheduled removal from service, in

whole or in part, of a generating unit for inspection, maintenance or repair with

approval of PJM.

Planned Transmission Outage Any transmission outage scheduled for the

performance of maintenance or repairs or

the implementation of a system

enhancement which is planned in advance for a pre-determined duration and which meets the notification requirements for such

outages as specified by PJM.



**Planned Transmission Outage Schedule** 

The schedule of Planned Transmission Outages, including extended outages and scheduled retirements.

**Planning Period** 

The 12 months beginning June 1 and extending through May 31 of the following year. As changing conditions may require, the Markets and Reliability Committee may recommend other Planning Periods to the PJM Board of Managers.

**Planning Period Peak** 

For a summer peaking system, the Planning Period Peak and summer peak is equal. For a winter peaking system, the Planning Period Peak is equal to the average of the reduced winter peak for the Planning Period and the greater of its summer peak for the Planning Period or its reduced winter peak for the Planning Period immediately preceding.

**Planning Period Peak Diversity Entitlement** 

For a winter peaking system, this entitlement is equal to one half the difference between it planning period peak and its summer peak. For a summer peaking system, the entitlement is equal to the ratio of the difference between the summer peak load and the reduced winter peak load to the sum of all such differences for all summer peaking systems multiplied by the sum of the planning period peak diversity entitlements of the winter peaking systems.

**Planning Year** 

Annual period from June 1 to May 31 (also may be referred to as Planning Period).

**Pnodes** 

Pricing Node or Pricing Location

Point(s) of Delivery (POD)

Point(s) on the Transmission Provider's Transmission System where capacity and energy transmitted by the Transmission Provider is made available to the Receiving Party. The Point(s) of Delivery are specified in the Service Agreement for Long-Term Point-to-Point Transmission Service.



Point(s) of Receipt (POR)

Point(s) of interconnection on the Transmission Provider's transmission system where capacity and energy are made available to the Transmission Provider by the Delivering Party. The Point(s) of Receipt are specified in the Service Agreement for Long-Term Firm Point-to-Point Transmission Service.

Point-to-Point Transmission Service

The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery.

**Pool-Scheduled Resource** 

This is a generating resource that the seller has turned over to PJM for scheduling and control.

Pool-Wide Average EFORd

Average of the forced outage rates, weighted for unit capability and expected time in service, attributable to all units that are planned to be in service during the delivery year. Determined by PJM and is approved and posted by February 1 prior to its use in the Base Residual Auction for the Delivery Year. The OMC events are not considered in the EFORd values used to calculate Pool-Wide Average EFORd (this change as a part of RAA was filed with FERC on June 19).

Posted Path

Any control area to control area interconnection; any path for which service is denied, curtailed or interrupted for more than 24 hours in the past 12 months; and any path for which a customer requests to have ATC or TTC posted (defined in FERC Order 889).

Postponability Code 9 Outage

A routine, periodic outage (e.g., deslagging, condenser cleaning, etc.) that both starts and ends during a single valley load period (i.e., the time period from 22:00:01 to 08:00:00, inclusive).

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Postponed Outage This is a Forced/Unplanned Outage that

may be postponed beyond 6 hours but no later than the end of the next weekend

period.

Power Meter A PJM software application (one of the

eTools) that calculates a market participant's actual interchange energy amounts to be used for real-time energy market settlements. Transmission and generation owners submit hourly tie and generator values to be verified and corrected on a next-hour basis.

Power Purchaser The entity that is purchasing the capacity

and energy to be transmitted under the

Tariff.

Power Swing An unscheduled transient change in the

power flows on a system, usually of an

oscillatory nature.

Power System Simulator Equation (PSSE) PSSE is an integrated set of computer

programs that handles the following power system analysis calculation: power flow, balanced and unbalanced fault analysis, network equivalent construction and

dynamic simulation.

Power Transfer Distribution Factor A measure of the responsiveness or change

in electric loading on system facilities due to a change in electric power transfer from one area to another, expressed in percent (up to 100%) of the change in power transfer. The PTDF applies only for the pre-contingency configurations of the system under study.

President The President of the PJM Interconnection,

L.L.C., appointed by the PJM Board of Managers, who directs and manages all of the staff and operations of PJM and reports

to the PJM Board of Managers.

Price-sensitive bid Purchases of a defined MW level of energy

only up to a specified LMP. Above that LMP,

the load bid is zero.

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Primary operating interfaces

Primary operating interfaces are typically defined by a cross section of transmission paths or single facilities which affect a wide geographic area. These interfaces are modeled as constraints whose operating limits are respected in performing dispatch operations.

**Primary Reserve** 

Reserve capability that can be converted fully into energy within 10 minutes from the request of PJM. Current approved value for this objective is 1,700 MW.

**Production Cost** 

The total cost of producing energy in dollars per hour from a generating unit or group of generating units. It includes the cost of fuel, operations, and maintenance of the unit(s).

**Protective Relay** 

A device whose function is to detect defective lines, apparatus, or other power system conditions of an abnormal or dangerous nature and to initiate appropriate control circuit action.

> **NOTE:** A protective relay may be classified according to its input quantities, operating principles, or performance characteristics.

**Public Power Entity** 

Any agency, authority, or instrumentality of a state or of a political subdivision of a state, or any corporation wholly owned by any one or more of the above, that is engaged in the generation, transmission, and/or distribution of electric energy.

Q

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#### **Qualifying Transmission Upgrade (QTU)**

A proposed enhancement or addition to the Transmission System that will increase the Capacity Emergency Transfer Limit (CETL) into an LDA by a megawatt quantity certified by PJM. A Qualified Transmission Upgrade is scheduled to be in service on or before the commencement of the first Delivery Year for which such upgrade is the subject of a Sell Offer in the Base Residual Auction. Prior to the conduct of the Base Residual Auction for such Delivery Year, a Facilities Study Agreement (FSA) must be executed.

**Queue Box** 

Each queue box represents a certain period of time that PJM receives a generation request or the first feasibility agreement.

**Queue Date** 

The date on which PJM receives a valid Interconnection Request from an Interconnection Customer.

**Quick-Start Reserve** 

Reserve capability that can be converted fully into energy within 10 minutes of PJM's request and is provided by equipment not electrically synchronized to the power system.

Quorum

The quorum requirements vary among the four agreements that comprise and define PJM. Typically a quorum requirement can be met by participants participating in person, via teleconference, or by designating an alternate.

R

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RAA Reliability Assurance Agreement. One of

four agreements that define authorities, responsibilities and obligations of participants and PJM. This agreement defines the role of the Markets and

Reliability Committee, amended from time to time, establishing obligation standards and

procedures for maintaining reliable operation of the PJM RTO. The other

principal PJM agreements are the Operating

Agreement, the PJM Open Access Transmission Tariff, and the Transmission

Owners Agreement.

Radio and TV Appeal Load Curtailment A request for public energy conservation

made via radio and TV systems. Notify adjacent pools due to area overlap. (Requires PJM System Operating

subcommittee approval.)

Ramp Rate The rate, expressed in megawatts per

minute, at which a generating unit can

change output level.

Ramping A method of generation control that moves

the unit to a designated end point (above or below current actual) at the unit rate of

response.

Ramping Capability The sustained rate of change of generator

output, in megawatts per minute.

Rating The operational limits of electric system

equipment.

Reactive Limitations The maximum power flow possible into or

through some particular part of the system while maintaining the bulk power supply system bus voltage with the operating

criteria.

Reactive Power The product of voltage and the out-of-phase

component of alternating current. Reactive power, usually measured in VARs, is produced by capacitors and overexcited generators and absorbed by reactors and

other inductive devices.



Reactor (Inductor) The primary purpose of this device is to

introduce inductance into a circuit. Shunt reactors are normally used to absorb reactive power (VARs) for voltage control. Series reactors are normally used to

increase the effective reactance on a circuit

to limit fault current.

Real Power This is the energy of the work producing part

of Apparent Power, measured in watts.

Real-Time Operations The instantaneous operations of a power

system as opposed to those operations that

are simulated.

Recallability The right of a transmission provider to

interrupt all or part of a transmission service for any reason, including economic, that is consistent with Federal Energy Regulatory Commission policy and the transmission provider's transmission service tariffs or

contract provisions.

Receiving Party The entity receiving the capacity and energy

transmitted by the Transmission Provider to

Point(s) of Delivery.

Redispatch Cost The cost or bid price that exceeds the

Unconstrained Market Clearing Price, multiplied by the amount of additional generation required for control of constraints

on the Transmission System.

Reduced Winter Peak The winter peak reduced by the excess of

its total zone capacity capability under winter operating conditions over its total capacity capability under summer operating conditions. The total capability is defined as net capabilities of its Capacity Resources planned in service as of December 1<sup>st</sup>.

traditional regulating resources with physical characteristics that limit ramp rate. This regulation signal takes into account the RTO

frequency and tie error.



## **RegD-Dynamic Control Point**

The dynamic regulation signal is used for regulating resources with no physical characteristics that limit ramp rate. This signal is derived from the same algorithms as the RegA, however, the main difference is the use of a dynamic time constants that allow for faster cycling.

## Regional Transmission Expansion Planning Protocol

The process by which PJM recommends specific transmission facility enhancements and expansions based on reliability and economic criteria.

# Regional Transmission Expansion Planning Process (RTEPP)

PJM's comprehensive annual process that examines the three interrelated components of electric power system reliability: load, generation, and transmission. The RTEP Process employs a range of planning study tools and methodologies to analyze and assess each component to ensure that reliability remains firm. The RTEP Process is designed to meet established reliability criteria, keep markets robust and competitive, and ensure stable operations.

## Regional Transmission Group (RTG)

A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

#### **Regional Transmission Organization (RTO)**

Each entity (a) that owns, leases or otherwise has a possessory interest in facilities used for the transmission of electric energy in interstate commerce, (b) that provides Transmission that is a party to the PJM Transmission Owners Agreement and PJM Operating Agreement.

## Regulation

The capability of a specific resource with appropriate telecommunications, control and response capability to increase or decrease its output in response to a regulating control signal to control for frequency deviations.



Regulation Market Capability Clearing Price (RMCCP)

The Capability Clearing Price for regulation is the 5 minute jointly co-optimized regulation price to reserve MWs. It is set by finding the residual between the RMCP and the RMPCP.

Regulation Market Clearing price (RMCP)

The shadow price of supplying the last MW of regulation needed in the area, thus satisfying its regulation requirement constraint. The shadow price is obtained through a simultaneous 5 minute jointly cooptimization of Regulation, Synchronized Reserve and Energy to minimize overall production cost. The co-optimized result ranks all available regulating resources in ascending merit order price, where merit order is the offer plus lost opportunity cost, simultaneously determining the least expensive set of resources necessary to provide regulation and synchronized reserve for the operating hour while taking into account any resources self-scheduled to provide any of these services. This is the starting point for finding the Regulation Market Performance Clearing Price and Regulation Market Capability Clearing Price.

Regulation Market Performance Clearing Price (RMPCP)

The Performance Clearing Price for regulation is the 5 minute jointly cooptimized regulation price to move MWs It is set by finding the maximum performance offer from the set of all cleared resources' performance offers.

Reliability

The degree of performance of the bulk electric system that results in electricity being delivered to customers within accepted standards and in the amount desired. Reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electric supply.



Reliability Coordination Plan (RCP)

An agreed upon four-level plan between Allegheny Power System (APS), PJM, and Virginia Power Company (VAP) in which assistance is given by participating control areas in order to maintain interregional reliability.

ReliabilityFirst Corporation (RFC)

Reliability *First* Corporation is a not-for-profit company whose goal is to preserve and enhance electric service reliability and security for the interconnected electric systems within its territory. It is the successor organization to three former Regional Reliability Councils: the Mid-American Area Council, the East Central Area Coordination Council Agreement and the Mid-American Interconnected Network organizations. RFC is one of the eight regional reliability organizations in North America.

Reliability Pricing Model (RPM)

PJM's resource adequacy construct. The purpose of RPM is to develop a long term pricing signal for capacity resources and LSE obligations that is consistent with the PJM Regional Transmission Expansion Planning Process (RTEPP), RPM adds stability and a locational nature to the pricing signal for capacity.

**Reliability Principles and Standards** 

The principles and standards established by NERC or Reliability First Corporation to define, among other things, an acceptable loss of load due to inadequate generation or transmission capability.

Remote Terminal Unit (RTU)

The part of the SCADA system that is responsible for collecting data from transducers at remote locations and converting to a digitized quantity for serial transmission to the SCADA computer.

**Required Reserves** 

The generating capability to carry the load reliability, economically providing protection against instantaneous load variations, load forecast error, and failure of system

equipment.



Reseller Any customer who offers to sell

transmission capacity it has purchased (defined in Standards and Communication

Protocols for OASIS).

Reserved Capacity The maximum amount of capacity and

energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery. Reserved capacity is expressed in terms of whole megawatts on a 60-minute interval (commencing on the clock hour) basis.

Reserved Shutdown Hours The time a unit is available for service but

not dispatched due to economics or other

reasons.

Reserved Transmission Capability The maximum amount of capacity and

energy reserved or agreed to be transmitted for the Transmission Customer over the PJM RTO Transmission Service Facilities between the Point(s) of Receipt and the Point(s) of Delivery. Reserved Transmission Capability shall be expressed in terms of whole megawatts on a 60-minute interval (commencing on the clock hour) basis.

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#### Reserves

- Operating Reserve—Generation available in 30 minutes.
- Synchronized Reserve—Reserve capability that can be converted fully into energy within 10 minutes or customer load that can be removed from the system within 10 minutes of the request from the PJM dispatcher, and must be provided by equipment electrically synchronized to the system.
- Non-Synchronized—Non-synchronized reserve available in 10 minutes. Also known as quick-start.
- Secondary Reserve—Reserve available in 10 to 30 minutes.
- Reserve Availability >30—Reserve available in more than 30 minutes.
- Non-Reported Capacity Reduction—As reported by LSEs, the total amount of Capacity reductions that have been previously reported to PJM and therefore have not caused an adjustment to be made to the Scheduled Capacity.

## **Reserve Requirement Documentation**

Procedures for "PJM Reserve Requirements and Related Studies," issued and maintained by the Engineering planning staff of the PJM Interconnection, L.L.C.

## Resource

Resource refers to the total contributions provided by supply-side and demand-side facilities and or actions.



Resource Clearing Price The clearing price in the Base Residual

Auction or Incremental Auctions as determined by optimization algorithm for each auction. The Resource Clearing Price within an LDA is equal to the sum of (1) the marginal value of system capacity; and (2) the Locational Price Adder, if any, for the LDA. The Resource Clearing Price for the Unconstrained Market Area is the marginal value of system capacity. PJM posts the Resource Clearing Prices for all resources that clear in the Base Residual Auction and all Buy Bids and Sell Offers that clear in the

Incremental Auctions.

Resource Scheduling and Commitment (RSC) A computer optimization program used by

the PJM Scheduling Coordinator to schedule marginal resources required for

future operating periods.

Response Rates The rate of load change that a generating

unit can achieve for normal Economic loading purposes in MW/minute.

Retail Customer The energy end-user; interfaces only with

the load aggregator (LA) and electric distribution company (EDC), not with PJM.

Retail Load Responsibility The agreed-upon hourly load, within the

service territory of the Local Distribution Company, for which the Load Aggregator

must provide energy to customers.

Retail System User An end-user of electric energy within the

PJM RTO.

Retail Transaction An energy transaction scheduled between a

Load Aggregator and a Local Distribution Company for the Load Aggregator to supply energy for retail load in the LDC's service

area.

Rotational Load Dump Disconnection of load on a rotational or

cyclical basis for a specific period of time during periods of generation or transmission

deficiency.



RTO Unforced Capacity Obligation Established in the BRA and is used to

determine the Base Zonal RPM Scaling Factors to use in determining Base Zonal

Unforced Capacity Obligation.

RTO Weather Normalized Summer Peak

The sum of the Zonal Weather Normalized

Summer Coincident Peaks.

S

**SCADA (Supervisory Control and Data** 

Acquisition)

Schedule

A system of remote control and telemetry used to monitor and control the electric system.

A set of MWh values consisting of one value for each hour of a single day.

Scheduled Capacity Not Available In 30

Minutes (Calculation)

Summation of total Reserve not available within 30 minutes and total non-reported

capacity reductions.

**Secondary and Communications Protocols** 

for OASIS (S&CP)

This document contains the detailed requirements for implementation of an OASIS node. It was prepared by an EPRI-

led industry working group.

Secondary Provider Any customer who offers to sell

transmission capacity it has purchased (defined in Standards and Communication

Protocols for OASIS).

Secondary Reserve Reserve capability that can be converted

fully into energy within a 10- to 30-minute interval following the request of PJM. Equipment providing Secondary Reserve need not be electrically synchronized to the

power system.

Secondary Transmission Provider (Reseller,

or Secondary Provider)

Any customer who offers to sell

transmission capacity it has purchased (defined in Standards and Communication

Protocols for OASIS).



Sector One of five divisions of the Management

Committee, which are: the Generation Owners Sector, Other Suppliers Sector, Transmission Owners Sector, Electric Distributors Sector, and End-Use Customers

Sector.

Sector Votes Each Sector's Sector Vote split into

components for and against a pending motion in direct proportion to the Member Votes cast within the Sector for and against the pending motion (rounded to two decimal

places).

Security The agreement relating to the sharing of

certain generating capacity and related services among the parties to that

agreement.

Self-Scheduled Resource A generating resource that is scheduled and

controlled by the owner or operator of the facility, not following the economic dispatch rate, under the overall coordination of PJM.

Self-Scheduled Resources for RPM Resources specified by a resource provider

in the Base Residual Auction to provide a mechanism to guarantee that the resource will clear in the Base Residual Auction. For each resource-specific sell offer, if a resource is designated as self-scheduled by the resource provider, the minimum and

the resource provider, the minimum and maximum MW amounts specified must be equal and the sell offer price will be set to zero. Self-Scheduled resources will be cleared first in the Base Residual Auction, and cannot set the clearing price as the marginal resource, since these resources

lack flexibility.

Service Agreement The initial agreement and any amendments

or supplements entered into by the Transmission Customer and the

Transmission Provider for service under the

Tariff.



**Service Commencement Date** 

The date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement or the date the Transmission Provider begins to provide service.

**Service Hours** 

The time a unit is electrically connected to the system.

**Shadow price** 

The constraint shadow price represents the incremental reduction in congestion cost achieved by relieving a constraint by 1 MW. The shadow price multiplied by the flow (in MW) on the constrained facility during each hour equals the hourly gross congestion cost for the constraint.

**Shared Reserves** 

An agreement between PJM and NPCC (includes ISO-NE, NY-ISO, IESO, and New Brunswick) to assist the opposite pool in faster recovery from a sudden loss of generation or energy purchase than it would otherwise have achieved without outside assistance.

Short-Term Firm Point-to-Point Transmission

Service

Firm Point-To-Point Transmission Service under Part II of the PJM RTO Open Access Tariff with a term of less than one year.

Simultaneous Feasibility Test (SFT)

A market feasibility test to ensure that the transmission system can support the subscribed set of FTRs during normal system conditions. The test models the flow according to the MW values of the FTRs on each line and determines if these values can be supported without causing a constraint.

Single-Customer LSE

A Party that serves only retail customers that affiliates of such Party; owns or controls generation facilities located at one or more of the retail customer location(s) that in the aggregate satisfy at least 50% of the Party's Unforced Capacity obligations; and serves retail customers where each location's peak load is at least 10 MW and obligation peak load is at least 25 MW and the sum of all locations is at least 100 MW.

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Sink

- The bus, buses, company or pool receiving the transferred energy to evaluate ATC transfers for a given path using generation or load changes, or
- The point of receipt of the energy in a PJM InSchedules Contract.

Solar Magnetic Disturbance (SMD)

Events that occur on the earth as a result of solar activity. The sun emits a stream of charged particles that flow to Earth and disturb Earth's magnetic field causing unwanted flows and possible damage in electrical transmission systems.

Sole-Supplier Load

The portion of the Zone without choice of suppliers throughout the relevant Planning Period.

Source

- The bus, buses, company, or pool supplying the energy used to evaluate ATC transfers for a given path using generation or load changes, or
- The point of delivery of the energy in a PJM InSchedules contract.

**Split Cost** 

An off-cost operation technique that uses more than one geographical area to control transmission limitations.

Spot Market Energy

Energy bought or sold by Market Participants through the PJM Interchange Energy Market at Locational Marginal Prices.

**Stability** 

The ability of a power system to maintain a state of equilibrium during normal and abnormal system conditions or disturbances

Static Var compensator

A static Var compensator (SVC) is an electrical device for providing fast-acting, reactive power compensation on high-voltage electricity transmission networks.



Steady State Period Period of time where the auction schedule

follows the proposed three year forward planning dates. The steady-state condition of RPM begins with the 2011/12 Delivery

Year.

Steady State Stability The ability of a power system to remain in

equilibrium during relatively low or normal load changes and to damp out any oscillations caused by such change.

Substation A facility for switching electrical elements,

transforming voltage, regulating power, or

metering.

Summer Peak Period The period from June 1 through September

30 of the Planning Period.

Summer Peaking Zone A system whose maximum one-hour load

during the period of June through

September exceeds its reduced winter peak.

Supervisory Control A form of remote control comprising an

arrangement for the selective control of remotely located facilities by an electrical

means over one or more common

interconnecting channels.

Supplementary Status Report A PJM survey initiated during capacity

shortage conditions to obtain information from member companies to determine the expected PJM reserve for a peak period.

Surge A transient variation of current, voltage, or

power flow in an electric circuit.

Surge Impedance Loading The megawatt loading of a line at which the

reactive power consumed by the inductance in a circuit is equal to the reactive power generated by the capacitance of the circuit.

Synchronism Check Relay A verification relay whose function is to

operate when two input voltages and frequencies are within predetermined magnitude and phase angle limits.

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**Synchronize** 

The process of connecting together two previously separated electrical apparatus after matching frequency, voltage, etc.; for example, paralleling a generator to the system (also referred to as phasing a unit online).

**Synchronized Reserve** 

Reserve capability which is required in order to enable an area to restore its tie lines to the pre-contingency state within 10 minutes of a contingency that causes an imbalance between load and generation. During normal operation, these reserves must be provided by increasing energy output on electrically synchronized equipment, by reducing load on pumped storage hydroelectric facilities or by reducing the demand by demand side resources. During system restoration, customer load may be classified as synchronized reserve.

**Synchronized Reserve Market** 

The capability that can be converted fully into energy within 10 minutes or customer load that can be removed from the system within 10 minutes of the request from the PJM dispatcher, and must be provided by equipment electrically synchronized to the system.

**Synchronous Condenser** 

A synchronous machine that operates without mechanical load to supply or absorb reactive power for voltage control purposes.

**System** 

Refers to the generation and transmission facilities and the operation thereof of a pool or member company.

**System Capacity** 

The sum of the net capabilities, based on specified summer generating conditions, of all the electric generating units of the LSE, with adjustments for firm capacity commitments and decreased by the amount of the limitations imposed by transmission facilities or any other limitations.

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## System Impact Study

The System Impact Study provides a regional analysis that is another degree more comprehensive and detailed than Feasibility Analysis in order to assess the impact of adding a new transmission facility, upgrade an existing facility or accelerate the completion of an existing proposed upgrade. This analysis includes NERC-defined stability analysis as well as an evaluation of impact on deliverability to PJM load in the particular PJM region where the facility is to be located. This study identifies system constraints that arise from the addition of the project and enumerates the necessary attachment facilities, local upgrades and network upgrades required for reliable interconnection. The study refines and more comprehensively estimates cost responsibility and construction lead times for facilities and upgrades.

System Lambda

**System Operator** 

Т

Target Unforced Capacity (TCAP)

**Tariff** 

Telefail

The cost to the PJM system of generating

the next unit of output.

An individual at an electric system control center whose responsibility it is to monitor and control that electric system in real time.

The "target" to measure the peak period availability of capacity from the generator in the Delivery Year and it may be different from the Delivery Year UCAP value of such generator. The TCAP for a unit is calculated as the Total Unit ICAP Commitment Amount times (1 - EFORd-5).

The PJM Open Access Transmission Tariff on file with the Federal Energy Regulatory Commission, as it may be amended from time to time.

Substitution of a data quantity in place of a dynamic quantity (aka manual replace).



Telemetering

The process by which measurable electrical quantities from substations and generating stations are instantaneously transmitted using telecommunication techniques.

Temperature-humidity index (THI)

A temperature-humidity index (THI) gives a single, numerical value reflecting the outdoor atmospheric conditions of temperature and humidity as a measure of comfort (or discomfort) during warm weather. THI is defined as: THI =Td - (0.55 - 0.55 RH) \* (Td - 58) where Td is the drybulb temperature and RH is the percentage of relative humidity.

**Thermal Limitations** 

The maximum power flow possible into or through some particular part of the system while maintaining the real power flows on the transmission system within the operating criteria.

Thermal Rating

The maximum amount of electrical current that a transmission line or electrical facility can conduct over a specified time period before it sustains permanent damage by overheating or before it violates public safety requirements.

Third-Party Sale

Any sale for resale in interstate commerce to a Power Purchaser that is not designated as part of Network Load under the Network Integration Transmission Service, but not including a sale of energy through the interchange energy market established under the PJM Operating Agreement.

Tie Line

A circuit connecting two or more Control Areas or systems of an electric system.

**Tie Line Bias Control** 

The normal mode of operation under automatic generation control in which the area control error is determined as the difference between actual net interchange and the scheduled net interchange plus a frequency bias contribution (adjustment for difference between actual and scheduled frequency).

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Total Transfer Capability (TTC)

TTC is the capacity of a transmission path

taking into account ATC and all of the complex transmission network operating

factors.

Transaction Management System (TMS) A computerized information system

developed by PJM that allows Load Aggregators to provide and obtain information needed to schedule external energy transactions, and allows LDCs to schedule internal and external energy

transactions.

Transfer Limit Capability

An operating limit relating to the permissible

power transfer between specified areas of

the transmission system.

**Transformer**An electromagnetic device for transforming

energy from one circuit to another of different voltage levels as in alternating

current system.

**Transient Fault**A fault that occurs for a short or limited time.

or that disappears when the faulted device is separated from all electrical sources and that does not require repairs to be made before the device can be returned to service

either manually or automatically.

**Transient Stability**The ability of a power system to maintain

synchronism between its parts when

subjected to a fault of specified severity and

to regain a state of equilibrium.

Transition Period Period of time where the auction schedule is

compressed in order for the auction

schedules to occur before the delivery year. The Transition Period takes place during the 2007/08 through 2010/11 Delivery Years.

Transmission Congestion Charge A charge attributable to the increased cost

of energy delivered at a given load bus when the Transmission System serving that load bus is operating under constrained

conditions.



Transmission Congestion Credit The allocated share of total Transmission

Congestion Charges credited to each holder

of Fixed Transmission Rights.

Transmission Constraints Limitations on a transmission line or element

that may be reached during normal or

contingency system operations.

Transmission Customer An entity that utilizes Point-to-Point

Transmission Service.

Transmission Facilities Facilities within the PJM Region that have

been approved by or meet the definition of transmission facilities established by FERC;

or have been demonstrated to the

satisfaction of the Office of Interconnection

to be integrated with the PJM Region transmission system and integrated into the planning and operation of the PJM Region to serve all of the power and transmission

customers within the PJM Region.

Transmission Loading Relief (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.

**Transmission Owner**A Member that owns or leases, with rights

equivalent to ownership, Transmission Facilities. Taking transmission service is not

sufficient to qualify a Member as a

Transmission Owner.

Transmission Owners Agreement An Agreement amended from time to time

among Transmission Owners in the PJM RTO, providing for an Open-Access Transmission Tariff in the PJM RTO.

Transmission Provider The Office of the Interconnection.

Transmission Provider's Monthly Maximum firm usage of the Transmi

Transmission Provider's Monthly
Transmission System Peak

Maximum firm usage of the Transmission
Provider's Transmission System in a

calendar month.



Transmission Reliability Margin (TRM)

The amount of total non-simultaneous

transfer capability necessary to ensure that the interconnected transmission network is secure under a reasonable range of system

conditions.

Transmission Security System (TSS) PJM monitoring program that closely

evaluates the integrity of the PJM

transmission system on a real-time basis.

Transmission Service Point-to-Point Transmission Service

provided on a firm and non-firm basis.

Transmission Service Request (TSR)

A request made by a 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 determines if it can be accommodated, responding back to the requesting parting in

a time frame outlined in the PJM

transmission tariff.

Transmission Services Enabling Agreement A document that gives authorization to post

transmission requests on the OASIS.

Transmission Services Information Transmission and ancillary services

information that must be made available by public utilities on a non-discriminatory basis to meet the regulatory requirements of transmission open access (defined in

Standards and Communication Protocols for

OASIS).

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#### **Transmission Subzone**

A collection of zip codes within a transmission zone, where any one location on the demand response registration located within such zip code will mean that all locations on such registration should respond to the PJM dispatch signal unless otherwise notified by PJM. Registrations based on residential and small commercial direct load control programs that do not have the operational capability to respond to a transmission subzone dispatch signal do not need to respond to a transmission subzone dispatch signal unless instructed by PJM to respond with all related direct load control registrations.

#### **Transmission System**

The facilities owned, controlled or operated by the transmission provider within the PJM RTO that are used to provide Transmission Service.

## U

#### **Unaccounted-for Capacity**

The capacity reported on the load and capacity printout (10), minus the calculated operating capacity, minus scheduled capacity not available in 30 minutes. This is the amount of capacity that is reported available at the time of the Instantaneous Reserve Check (IRC), but cannot be accounted for based on system conditions at the time of the IRC.



## **Unavailable Capability**

The algebraic difference at any time between the installed and the available capability at that time. Available capability is determined according to definitions and criteria specified by the Operating Committee and approved by the PJM Board of Managers upon consideration of the recommendation of the Reliability Committee. The several component causes of unit unavailability, namely:

- Forced outages
- Planned and maintenance outages
- Miscellaneous adjustments

are determined according to definitions and criteria specified by the Operating Committee and Planning Committee and approved by the PJM Board of Managers upon consideration of the recommendation of the Reliability Committee.

**Unconstrained Locational Marginal Price** 

A rate in dollars per MWh equal to the cost or bid price in dollars per MWh of the highest-priced increment of energy that was requested to operate by PJM during that hour if no constraints were experienced on the Transmission System, or the highest-priced increment of energy that would have been requested to operate if constraints actually experienced on the Transmission System had been disregarded.

**Unconstrained Posted Path** 

Any posted path not determined to be a constrained posted path (defined in FERC Order 889).

**Unforced Capacity** 

Installed capacity rated at summer conditions that are not on average experiencing a forced outage or forced derating, calculated for each Capacity Resource on the 12-month period from October to September without regard to the ownership of or the contractual rights to the capacity of the unit.



Uniform Resource Locator (URL) The Internet addressing scheme that

defines the route to a file or program. For example, a home page on the World Wide

Web is accessed via its URL.

Unit Commitment Database (UCDB)

A central repository for generating unit cost,

availability, and constraint data at PJM. Information is entered by the PJM member companies and is used for scheduling,

dispatching, and accounting.

Unit Specific Benefits Factor The benefits factor translates fast moving

resource's MWs into traditional MWs or effective MWs. These effective MWs reflect the rate of substitution between resources following the different regulation signals. This is used in regulation market clearing

and pricing.

Unscheduled Transmission Service Transmission Service that is not pre-defined

in the Operating Agreement, with the compensation determined by PJM.

Untelemetered Generation & Pumping Load Any generation (+) or pumping load (–) that

is not telemetered.

V

Variable Resource Requirement Curve (VRR) Defines the maximum price for a given level

of Capacity Resource commitment relative to the applicable reliability requirement. VRR Curves are defined for the PJM Region and each of the constrained LDAs within the

PJM region.

Variance A measure of the variability of a unit's partial

forced outages that is used in reserve

margin calculations.

Voltage Control The control of transmission voltage through

adjustments in generator reactive output and transformer taps, and by switching

capacitors and inductors on the

transmission and distribution systems.

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Voltage Reduction A means to reduce customer demand by

lowering voltage on the distribution side of

the system.

**Voltage Stability** The condition of an electric system in which

the sustained voltage level is controllable

and within predetermined limits.

W

Weather Normalized Loads Estimated seasonal peak assuming weather

> at average peak-day conditions. Also referred to as 50/50 loads. Historic weather normalized loads are produced by the load

analysis subcommittee.

**Weather Normalized Peak** An adjustment technique implemented by

> the Load Analysis Subcommittee, to remove the impact of varying weather conditions on

seasonal peaks. The normalization procedure estimates the relationship

between PJM daily peak load and weather conditions. This relationship is evaluated at average peak-day weather conditions to establish a PJM weather normalized peak. PJM normalized peaks are used in the establishment of accounted-for obligations.

Weekday Period The period of the week that begins at 0800

on Monday and ends at 2200 on Friday.

**Weekend Period** The period of the week that begins at 2200

on Friday and ends at 0800 on Monday.

Weighted Average Resource Clearing Price The average of the Resource Clearing

Prices that result in all the auctions for a specific Capacity Resource, weighted by the Unforced Capacity cleared for that particular resource. This value is used to determine the Daily Peak-Hour Period Availability Charge Rate for an individual resource.

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Weighted Zonal Resource Clearing Price

The average of the Resource Clearing Price of the sub-zones, weighted by the Unforced Capacity of Resources Cleared in each of the sub-zones. This value is used to calculate CTR values on a Zonal basis, when a Zone and its sub-zones are constrained LDAs. This is also used to calculate the Auction Credit to DR on the zonal basis if EDC cannot provide DR data

by sub-zones.

Wheeling The contracted use of electrical facilities of

one or more entities to transmit electricity for

another entity.

Wheel-through An energy transaction flowing through a

transmission grid whose origination and destination are outside of the transmission

grid.

Wholesale Load Responsibility (WLR)

Service type WLR is used to determine load

responsibility and resulting LRS for

wholesale entities not currently fully metered

to PJM.

Wholesale System User An entity that purchases electric energy for

resale, or uses transmission service for such

transactions, within the PJM RTO.

Wholesale Transaction A bulk energy transaction between two

market entities.

Winter Peak Period The period from December 1 through

February 29 of the Planning Period.

Winter Peaking Zone A system whose reduced winter peak is

greater than its maximum one-hour load

during the period of June through

September.

World Refers to information obtained from sources

outside the PJM RTO, e.g., NERC, ECAR, NPCC and SERC. Typically, this term is used to reflect those neighboring regions

electrically close to PJM facilities.



Ζ

**Zonal Capacity Price** 

The price of UCAP in a Zone that an LSE that has not elected the FRR Alternative is obligated to pay for a Delivery Year. Zonal Capacity Prices are calculated in the Base Residual Auction or the Second Incremental Auction clearing process as the sum of (1) the marginal value of system capacity for the PJM Region;(2) the Locational Price Adder, if any, for such zones in a constrained Locational Deliverability Area (LDA); and (3) an adjustment in the Zone, if required, to account for any resource makewhole payments. Preliminary Zonal Capacity Prices are the result of the clearing of the Base Residual Auction. Adjusted Zonal Capacity Prices are the result of the clearing of the Second Incremental Auction. Final Zonal Capacity Prices are determined after the ILR Resources are cCertified (3 months prior to the Delivery Year).

**Zonal CTR Credit Rate (Base and Final)** 

The rate calculated as a ratio of economic value of CTRs to zonal unforced capacity obligation. These rates are calculated as the Base Zonal CTR Credit Rate after the Base Residual Auction (used to calculate Base Zonal ILR Price) and as the Final CTR Credit Rate adjusted for the results of the Second Incremental Auction (used to calculate Final Zonal ILR Price) Zonal CTR Credit Rate is subtracted from Zonal Capacity Price to estimate Net Load Price.

**Zonal CTR Settlement Rate** 

A rate calculated as a ratio of economic value of CTRs to total CTRs allocated to LSEs in a zone. This rate is used to settle CTRs by calculating credit for CTRs owned.

Zonal ILR Price (Base and Final)

Zonal ILR Prices are the prices paid the Interruptible Load for Reliability that is certified. These prices are calculated as the Base Zonal ILR Price after the Base Residual Auction and as Final Zonal ILR Price adjusted for the results of the Second Incremental Auction.

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Zone

An area within the PJM Region or such areas that may be combined as a result of mergers and acquisitions; or added as a result of the expansion of the boundaries of the PJM Region. A Zone will include any Non-Zone Network Load located outside the PJM Region that is served from inside a particular Zone.



# **Section 3: Acronyms**

Α

A/D Analog to Digital

AAC Audit Advisory Committee

AC Alternating Current

AC<sup>2</sup> Advanced Second Control Center

ACB Air Circuit Breaker

ACC Area Coordination Committee

ACE Area Control Error

ACR Avoidable cost rate

ADR Alternate Dispute Resolution

ADRC Alternate Dispute Resolution Committee

Atlantic City Electric Company, division of Conectiv, aka AEC,

**AECO** 

AEC Atlantic City Electric Company, see AE

AEC Alabama Electric Cooperative, Inc.

AECI Associated Electric Cooperative, Inc.

AECO Atlantic City Electric Company, see AE

AEG Alliant Energy Corporation

AEP American Electric Power

AESO Alberta Electric System Operator

AETS Allegheny Energy Trading and Supply

AFC Available Flowgate Capability

AGC Automatic Generation Control





AH Available Hours

AIE Area Interchange Error

ALM Active Load Management

ALTE Alliant Energy (East)

ALTW Alliant Energy (West)

AMIL Ameren – Illinois

AMRN Ameren

ANSI American National Standards Institute (endorses standards-

setting process)

AO Alleviate Overload

AP Allegheny Power System, see APS

APPA American Public Power Association (represents municipal

utilities)

APS Allegheny Power System, aka AP

APV Allegheny Power, PJM, VaPwr

AQP Air Quality Permit

AR Area Regulation

ARR Auction Revenue Right

ARS Automatic Reserve Sharing

ASCC Alaska Systems Coordinating Council

ASOC Advanced System Operations Courseware

ATC Available Transfer Capability

AU Associated unit

AVA Avista Corp.

AVR Automatic Voltage Regulator

AZPS Arizona Public Service Company





В

BAAL Balancing Authority Area Control Error Limit

BC Baltimore Gas and Electric Company, see BGE

BCA Batesville Control Area

B.C. Hydro & Power Authority

BES Bulk Electric System

BGE Baltimore Gas and Electric Company, aka BC

BGS Basic Generation Service

BG&E Baltimore Gas and Electric Company, see BGE

BLI Billing Line Item

BME Balancing market evaluation

BPAT Bonneville Power Administration Transmission

BRA Base Residual Auction

BPU Board of Public Utilities

Big Rivers Electric Corp.

BSSTF Black Start Service Task Force

Basic Signaling Window

"Behind the Meter" Generation

British thermal unit

Bucc Back-Up Control Center

BWR Boiling Water Reactor

C

CA Control Area

CAISO California Independent System Operator





C&I Commercial and industrial customers

CAM Company Account Manager

CAPG Compliance Agreement Participants Group

CB Circuit Breaker

CBL Customer Baseline Calculation

CBM Capacity Benefit Margin

**CCM** Capacity Credit Market

CCP Capacity Clearing Price

CCPS Commonwealth Chesapeake Power Station

CCT Combined Cycle Turbine

CDR Capacity Deficiency Rate

CDS Cost Development Subcommittee

CE Consolidated Edison, see ConEd

**CEH** Continuing Education Hours

CEI FirstEnergy (previously Cleveland Electric Illuminating)

CEM Continuous Emissions Monitoring System

CETL Capacity Emergency Transfer Limit

CETO Capacity Emergency Transfer Objective

CF Coordinated flowgate under the Joint Operating Agreement

between PJM and the Midwest Independent Transmission

System Operator, Inc.

CFE Comision Federal De Electricidad

CHPH Chelan County PUD

CID Civil Investigative Demand

CIL Central Illinois Light Co.

CILC Central Illinois Light Co. Interface





CILCO Central Illinois Light Co.

CIN Cinergy Corporation

CIPS Commission Issuance Posting System

CISO California Independent System Operator

CLEC Cleco Power LLC

**CLMP** Congestion component of LMP

CM2 Congestion Management Coordinated Methodology

ComEd Commonwealth Edison, Exelon Corporation

CONE Cost of New Entry

ConEd Consolidated Edison, aka CE

**CP** Pulverized coal-fired generator

CPLE Carolina Power & Light Company – East

CPLW Carolina Power & Light Company – West

**CPP** Competitive Procurement Process

**CPS** Control Performance Standards

CPU Central Processing Unit

CRM Customer Relationship Management

CRM Crew Resource Management

CR&T Customer Relations & Training

CRT Cathode Ray Tube

CS Credit Subcommittee

CSA Construction Service Agreement

CSP Curtailment Service Provider

CSS Collaborative Scheduling System

CSTF Capacity Senior Task Force





**CSWS** Central and Southwest

CT Current Transformer

CT Combustion Turbine

CTR Capacity Transfer Right

**CWG** Credit Working Group

CWLD Columbia Water & Light

CWLP City Water Light & Power

cz Control Zone

CZRA Control Zone Regulation Assist

D

Day-ahead

Digital to Analog Converter

Data Acquisition and Computer Systems

Day-ahead Scheduling Reserve (market)

Day-ahead Scheduling Reserve Market Clearing Price

Dayton Power and Light Company aka DAY

Dayton Power and Light Company, see Dayton

**DEC** Decrement Bid

Direct Current

Disturbance Control Standard

**DECA**, LLC – Arlington Valley

DECA, LLC – Enterprise

DECA, LLC – Murray 230 kV

**DENL** DECA, LLC – North Little Rock





DECA, LLC – Ruston

DECA, LLC – Sandersville

**DECA**, LLC – Vermillion

**DF** Diversity Factor

**DFAX** Distribution Factors

DL Diesel

Daily Load and Capacity

Duquesne Lighting Company, aka DUQ or DQE or DLCO

Daily Load Estimates

DMS Data Management Subcommitee

**DMT** Dispatcher Management Tool

**DNP** Distributed Network Protocol

P.U.D. No. 1 of Douglas County

**DOE** Department of Energy

**DOJ** Department of Justice

Dominion Virginia Electric Power aka DVP or VAP or VaPwr

**DPC** Dairyland Power Cooperative

DPL Delmarva Power and Light, division of Conectiv

**DPLN** Delmarva Peninsula north

**DPLS** Delmarva Peninsula south

Duquesne Lighting Company, see DLCO

Duquesne Lighting Company, see DLCO

DR Demand response

Demand Response Subcommittee

DRS Dispute Resolution Service





DSM Demand Side Management

DSR Demand-Side Response

**DSSL** Docket Sheet and Service List

DTD Document Type Declarations

DTS Dispatcher Training Simulator

DTS Dispatcher Training Subcommittee

**DUK** Duke Energy Corporation

Duquesne Lighting Company, see DLCO

DVP Dominion Virginia Electric Power, see DOM

Delivery Year

Ε

EAF Equivalent Availability Factor

**E&AS** Energy and Ancillary Services

ECAR East Central Area Reliability Coordination Agreement

Ecs Energy Control System

eDART Dispatcher Applications and Reporting Tool

eDart XML User Group

**EDUG** eDart User Group

EDC Electric Distribution Company

EDE Empire District Electric Co.

Electronic Data Interchange

Eastern Daylight Time

**EEA** Energy Emergency Alerts

EFFORd Effective Equivalent Demand Forced Outage Rate





EEI Edison Electric Institute

Electric Energy, Inc.

**EES** Entergy

**EFOF** Equivalent Forced Outage Factor

**EFOH** Equivalent Full Forced Outage Hours

**EFOR5** 5 Year Equivalent Forced Outage Rate

**EFORd** Equivalent Demand Forced Outage Rate

**EFORp** Equivalent Forced Outage Rate Peak

**EFPOH** Equivalent Forced Partial Outage Hours

EFTF Energy Efficiency Task Force

eGADS Generator Availability Data System, aka GADS

EGS Electric Generation Supplier

**EHV** Extra High Voltage

**EKPC** East Kentucky Power Cooperative, Inc.

**EMAAC** Eastern Mid-Atlantic Area Council

**EMF** Electric Magnetic Fields

**EMOF** Equivalent Maintenance Outage Factor

**EMOH** Equivalent Full Maintenance Outage Hours

**EMPOH** Equivalent Maintenance Partial Outage Hours

Energy Management System

EPC Energy Pricing Cap

EPE El Paso Electric

**EPOEF** Equivalent Planned Outage Extension Factor

**EPOF** Equivalent Planned Outage Factor

EPOH Equivalent Full Planned Outage Hours





**EPPOH** Equivalent Planned Partial Outage Hours

EPRI Electric Power Research Institute

**EPSA** Electric Power Supply Association

**EPT** Eastern Prevailing Time

Electric Quarterly Report

**ERAR** Extended Resource Adequacy Requirement

ERCOT ISO

**ERCOT** Electric Reliability Council of Texas

ERG Emergency Reducible Generation

ERO Electric Reliability Organization

ES-ISAC Electric Sector-Information Sharing and Analysis Center

Eastern Standard Time

Extended Training Course

**EWG(s)** Exempt Wholesale Generator(s)

**ExGen** Exelon Generation Company, L.L.C.

F

FC Finance Committee

FCA Forecast Applications

FE First Energy, previously GPU, consists of FE-JC, FE-ME, FE-PN

FE-E First Energy – East – Pennsylvania

FE-JC First Energy – Jersey Central Power and Light Company

FE-ME First Energy – Metropolitan Edison Company

**FE-PN** First Energy – Pennsylvania Electric Company

**FE-W** First Energy – West – Ohio

FECE First Energy Conversion Economics





FEMA Federal Emergency Management Agency

FERC Federal Energy Regulatory Commission

FERD First Energy Reading Dispatch

FERRIS Federal Energy Regulatory Records Information System

FMPP Florida Municipal Power Pool

FMU Frequently Mitigated Unit

FOH Full Forced Outage Hours

**FOR** Forced Outage Rate

**FPA** Federal Power Act

FPC Federal Power Commission

FPC Florida Power Corporation

FPL Florida Power & Light

FPOH Forced Partial Outage Hours

FPPL Forecast Period Peak Load

FPR Forecast Pool Requirement

FRC Frequency Response Characteristic

FRCC Florida Reliability Coordinating Council

FRP Financially Responsible Party

FRR Fixed Resource Requirement

FSA Facilities Study Agreement

FTR Financial Transmission Rights

FTRTF FTR Task Force

FTS Failed to Start

G

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GADS Generator Availability Data System, see eGADS

GAPP General Agreement on Parallel Paths

Generator Attributes Tracking System

GCA Generating Control Area

GCB Gas Circuit Breaker

GCPD Grant County PUD No. 2

GD Generation Dispatcher

GE General Electric Company

GEBGE General Electric, Baltimore Gas & Electric Reliability Program

Geomagnetic Induced Currents

GISB Gas Industry Standards Board

GLDFs Generator to Load Distribution Factors

GMS Generation Management System

GMT Greenwich Mean Time

GORP Generator Outage Rate Program

GPU General Public Utilities, First Energy

GRDA Grand River Dam Authority

GRE Great River Energy

GRMA Gila River Maricopa Arizona

Generation Transfer or Gas Turbine

Generation Transfer Optimizer

Gainesville Regional Utilities

**GW** Gigawatt

**GWh** Gigawatt-hour





Н

HE Hoosier Energy

**HE** Hour Ending

**HGMA** Harquahala L.L.C.

HHI Herfindahl-Hirschman Index

HIS Historical Information System

HRSG Heat recovery steam generator

HQ Hydro Quebec

HQT Hydro-Quebec, TransEnergie

HST City of Homestead

HTML Hyper Text Markup Language

HVAC Heating, Ventilation and Air Conditioning

HVDC High Voltage Direct Current

Hz Hertz

ı

IA Incremental Auction

IA Interconnection Association

IBT Internal Bilateral Transaction

IC&C Interregional Coordination and Compliance

ICAP Installed Capacity

ICCP Inter-control Center Communication Protocol

ID Interconnection Dispatcher

Interchange Distribution Calculator

IDEC Interutility Data Exchange Consortium

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IDR Incremental Delivery Rights

IEEE Institute of Electric and Electronic Engineers

Independent Electricity System Operator, previously IMO and

Ontario Hydro

IID Imperial Irrigation District

ILR Interruptible Load for Reliability

IMO Ontario – Independent Electricity Market Operator, see IESO

INC Increment offer

INDN City of Independence P&L Dept.

INPO Institute of Nuclear Power Operations

IO Interconnection Office

IOU Investor Owned Utility

IP Illinois Power

IPCO Idaho Power Company

IPL Indianapolis Power & Light Company

IPL Initial Program Load

IPP(s) Independent Power Producer(s)

Interconnection Process Senior Task Force

IRC Instantaneous Reserve Check

IRM Installed Reserve Margin

IRRC Independent Regulatory Review Commission

IRTF Intermittent Resources Task Force

ISA Interconnection Service Agreement

ISO New England, see ISO-NE

Independent System Operator





ISO New England, previously New England Power Exchange

(NEPEX), aka ISNE or NE-ISO

ITCF Interregional Transmission Coordination Forum

ITP Initial Training Program (for PJM system operators)

ITS Interchange Transactions System

ITSS Interim Transmission Settlement Solutions

J

Java SDK Java Solution Development Kit

JC Jersey Central Power and Light Company, see JCP&L

JCPL Jersey Central Power and Light Company, see JCP&L

JCP&L Jersey Central Power and Light Company, aka JCPL, JC

JEA JEA

JOA Joint Operating Agreement

Jointly owned units

JRCA Joint Reliability Coordination Agreement

JSSE Java Secure Socket Extension

Κ

KCPL Kansas City Power & Light, Co.

L

L/O Loss of

Load Aggregator

Lafayette Utilities System

LAGN Louisiana Generating, LLC

Load Analysis Subcommittee

Liaison Committee





LCA Load Control Area

Local Control Center

Limited Condition of Operation (nuclear)

Load Dump Rating

Liquid Damages

Locational Deliverability Area

Local Distribution Company

Los Angeles Department of Water and Power

LEPA Louisiana Energy & Power Authority

Lincoln Electric System

LF Load Forecast

Load Frequency Control

LFH Load Forecast, Hourly (hourly interval for seven days)

Load Forecast, five Minute (five minute interval for six hours)

LG&E Energy Transmission Services

LLC Limited Liability Corporation

Load management

LMP Locational Marginal Pricing

Learning Management System

Lost Opportunity Cost

LOSS of Load Expectation

LPA Locational Price Algorithm

LRS Load Ratio Share

LSE Load Serving Entity

Load Tap Changing





LTE Long Term Emergency Rating

M

Market to Market Coordination

MAAC Mid-Atlantic Area Council (as of January 1, 2006, this no longer

exists)

MACRS Modified accelerated cost recovery schedule

MAIN Mid-America Interconnected Network

MAPP Mid-Continent Area Power Pool, see MRO

MAR Maritime Area

MC Members Committee

MCLN McClain

MCP Market Clearing Price

ME Metropolitan Edison Company

ME Maximum Emergency Generation

MEC MidAmerican Energy Company

MECS Michigan Electric Coordinated Systems

MEN MAAC, ECAR, NPCC

Met-Ed Metropolitan Edison Company

MGE Madison Gas and Electric Company

MHEB, Transmission Services

MIC Market Implementation Committee

MICHFE The pricing point for the Michigan Electric Coordinated System

and FirstEnergy control areas

MIL Mandatory Interruptible Load

MIS Metering Issues Subcommittee





MISO Midwest Independent System Operator

MLUG Marginal Losses User Group

MMI Man Machine Interface

MMUAC Market Monitoring Unit – Advisory Committee

MOA Market Operations Agreement

MOAB Motor Operated Air Break

MOC Market Operations Center

MOD Motor Operated Disconnect

MOF Maintenance Outage Factor

MOH Full Maintenance Outage Hours

Mon Power Monongahela Power

MOOL Maximum Outstanding Obligation Limit

MOU Memorandum of Understanding (agreement in principle to do

something)

MP Minnesota Power, Inc.

MPOH Maintenance Partial Outage Hours

MPS Aguila Networks – MPS

MPW Muscatine Power and Water

MRC Markets and Reliability Committee

MRO Mid-American Reliability Operator, previously MAPP (Mid-

Continent Area Power Pool)

MSCS Market Settlements Calculations System

MSET Market Settlements

MSRS Market Settlements Reporting System

MSS Market Settlements Subcommittee

MUI Market User Interface





MVAR Mega Volt Amperes Reactive

MW Megawatt

MWd Megawatt-day

MWh Megawatt-hour

N

NACUSA National Association of Consumer Advocates (50 States)

NAESB North American Energy Standards Board

NARUC National Association of Regulatory Utility Commissions (50

States)

NATC Non-Recallable Available Transfer Capability

NC Nominating Committee

NCA Neighboring Control Area

ND Network Designated

NE-ISO New England ISO, see ISO-NE

NEPA National Energy Policy Act 1992

NEPA Northeast PA Transformer Limit

NEPEX New England Power Exchange, see ISO-NE

NERC North American Electric Reliability Council

**NEVP** Nevada Power Company

NICA Northern Illinois Control Area

NIS Net Interchange Schedule

NISF Net Interchange Schedule Forecast

NF Non-Firm (transmission service)

NGOUG Nuclear Generation Owners/Operators User Group

NICA Northern Illinois Control Area





NIMO Niagara Mohawk

NIPC National Infrastructure Protection Center

Northern Indiana Public Service Company

NIPSCO Northern Indiana Public Service Co.

NITS Network Integration Transmission Service

NN Neural Networks

NND Network Non-Designated

NNL Network and native load

NO Normally Open

NOAA National Oceanic and Atmospheric Administration

NOI Notice of Inquiry

NO<sub>x</sub> Nitrogen oxides

NOPR Notice of Proposed Rulemaking

NPCC Northeast Power Coordinating Council

NPPD Nebraska Public Power District

NRC Nuclear Regulatory Commission

NRECA National Rural Electric Cooperative Association

NRECA National Rural Electric Cooperative Association (represents

coops)

NRG National Review Group

NRITF NERC Ratings Initiative Task Force

NSB Utilities Commission, City of New Smyrna Beach

NSP Northern States Power Company

NSPL Network Service Peak Load

NUG Non-Utility Generator





Nug Non-Utility Owned Generator

NWMT NorthWestern Energy

NY-ISO New York ISO, previously New York Power Pool (NYPP), aka

NYIS or NYISO

New York ISO, see NY-ISO

NYISO New York ISO, see NY-ISO

NYPP New York Power Pool, see NY-ISO

New York State Electric and Gas

0

OA Amended and Restated Operating Agreement of PJM

Interconnection, L.L.C.

O&M Operating and Maintenance

O&R Orange and Rockland Utilities, also Rockland

OAF Operating Availability Factor

OASIS Open Access Same-Time Information System

OATF Operations Analysis Task Force

OATI Open Access Technology International, Inc.

OATT Open Access Transmission Tariff

oc Operating Committee

ODEC Old Dominion Electric Cooperative

OF Orion Energy, LLC

OEA Office of External Affairs

OEM Original equipment manufacturer

**OEP** Office of Energy Projects

OH Ontario Hydro

Office of the Interconnection





Operating Instruction

On the Job Training

OKGE Oklahoma Gas and Electric

Ontario IESO Ontario Independent Electricity System Operator

OOM Out of Market

OPD Operation Planning Department

OPPD Omaha Public Power District

**OPSI** Organization of PJM States, Inc.

ORNS Operating Representatives of Northeast Systems

Osha Occupational Safety and Health Administration

OSL Operating Security Limit

OTDF Outage Transfer Distribution Factor

OTP Otter Tail Power Company

Operator Training Schedule

**OVEC** Ohio Valley Electric Corporation

Ρ

PACE PacifiCorp – East

PACW PacifiCorp – West

PAR Phase Angle Regulator

PC Planning Committee

PCGC NERC Personnel Certification and Governance Committee

oversight for the NERC System Operator Certification Program

PCLLRW Post Contingency Local Load Relief Warning

PD Power Dispatcher

PE PECO Energy Company, see PECO





PEC Progress Energy Carolinas, Inc.

PECO Energy Company, Exelon Corporation, aka PE

PEMA Pennsylvania Emergency Management Agency

Penelec Pennsylvania Electric Company, aka PN

PEP Potomac Electric Power Company, see PEPCO

Perco Potomac Electric Power Company, aka PEP

PGE Portland General Electric

PGT Pathway Generation Transfer

PH Period Hours

PIEUG Public Interest and Environmental Organizations User Group

PJM PJM Regions: Mid-Atlantic, Western, and Southern

PJM/ALTE The interface between PJM and the eastern portion of the Alliant

Energy Corporation's control area

PJM/ALTW The interface between PJM and the western portion of the Alliant

Energy Corporation's control area

PJM/AMRN The interface between PJM and Ameren Corporation's control

area

PJMCA PJM Control Area

PJM/CILC The interface between PJM and the Central Illinois Light

Company's control area

PJM/CIN The interface between PJM and the Cinergy Corporation's control

area

PJM/CPLE The interface between PJM and the eastern portion of the

Carolina Power & Light Company's control area

PJM/CPLW The interface between PJM and the western portion of the

Carolina Power & Light Company's control area

PJM/CWPL The interface between PJM and the City Water, Light & Power's

(City of Springfield, IL) control area

PJM/DUK The interface between PJM and the Duke Energy Corp.'s control





area

PJM/EKPC The interface between PJM and the Eastern Kentucky Power

Corporation's control area

PJM/FE The interface between PJM and the FirstEnergy Corp.'s control

area

PJM/IP The interface between PJM and the Illinois Power Company's

control area

PJM/IPL The interface between PJM and the Indianapolis Power & Light

Company's control area

PJM/LGEE The interface between PJM and the Louisville Gas & Electric

Company's control area

PJM/MEC The interface between PJM and MidAmerican Energy Company's

control area

PJM/MECS The interface between PJM and the Michigan Electric

Coordinated System's control area

PJM/NIPS The interface between PJM and the Northern Indiana Public

Service Company's control area

PJM/NYIS The interface between PJM and the New York Independent

System Operator

PJM/OVEC The interface between PJM and the Ohio Valley Electric

Corporation's control area

PJM/TVA The interface between PJM and the Tennessee Valley Authority's

control area

PJM/WEC The interface between PJM and the Wisconsin Energy

Corporation's control area

PL Pennsylvania Power & Light Company

PLC Programmable Logic Controller

PLS Parameter Limited Schedules

PMMS Preliminary market structure screen

PMS Power Management System

PN Pennsylvania Electric Company, see Penelec





PNM Public Service Company of New Mexico

PNNE PENELEC's northeastern subarea

PNNW PENELEC's northwestern subarea

POD Point of Delivery

POH Full Planned Outage Hours

POLR Provider of Last Resort

POR Point of Receipt

PPL Pennsylvania Power & Light Company

PPM Peak Period Maintenance

PPOH Planned Partial Outage Hours

PPPC PJM Public Power Coalition

PS Public Service Electric and Gas Company

PSCO Public Service Company of Colorado

PSEG Public Service Enterprise Group

PSE&G Public Service Electric & Gas Company (a wholly owned

subsidiary of PSEG)

PSEI Puget Sound Energy Transmission

PSN PSEG north

**PSNC** PSEG northcentral

PSSE Power System Simulator Equation

PT Potential Transformer

PTDF Power Transfer Distribution Factor

PTI Power Technologies, Inc.

PTID Point Identification

PTP Point to Point





PUC Public Utility Commission

PUHCA Public Utility Holding Company Act

PURPA Public Utilities Regulatory Policies Act

PWR Pressurized Water Reactor

Q

**QF** Qualifying Facility

QIL Qualified Interruptible Load

Qualifying Transmission Upgrade

R

RA Reliability Authority

RAA Reliability Assurance Agreement

RAAS Resource Adequacy Analysis Subcommittee

RAIS Reliability Authority Information System

RATC Recallable Available Transfer Capability

RC Reedy Creek Improvement District

RC Reliability Coordinator

RCIS Reliability Coordinator Information System

RCP Reliability Coordination Plan

RCR Reactive Capability Range

RE Reserved Economy

REC(s) Rural Electric Cooperative(s)

RECO Rockland Electric Company

RegA Regulation A

RegD Regulation D





REQ Retail Electric Quadrant

RFC Reliability First Corporation

RFP Request for Proposal

RLGCTF Reliability Limited Generator Compensation Task Force

RGQ Retail Gas Quadrant

RIMS Records and Information Management System

RLR Retail Load Responsibility

RMCCP Regulation Market Capability Clearing Price

RMCP Regional Market Clearing Price

RMPCP Regulation Market Performance Clearing Price

RPM Reliability Pricing Model

RPPTF Regional Planning Process Task Force

RPSTF Regulation Performance Senior Task Force

RRAS Reserve Requirement Assumptions Subcommittee

RRC Reactive Reserve Check

RRO Regional Reliability Organization

RS Relay Subcommittee

RSA Reserve Sharing Agreement

RSC Resource Scheduling and Commitment

RSCS Reliability Standards and Compliance Subcommittee

RSI Residual Supply Index

RSH Reserved Shutdown Hours

RTC Real-time commitment

RTEP Regional Transmission Expansion Plan

RTEPP Regional Transmission Expansion Planning Process.





RTG(s) Regional Transmission Group(s)

RTO Regional Transmission Organization

RTS Relay Testing Subcommittee

RTU Remote Terminal Unit

S

SA Security Analysis

SAR Standards Authorization Request

SARDT Standards Authorization Request Drafting Team

SARP Systematic Assessment of RTO Performance

sc Santee Cooper

Scheduling Coordinator

SCADA Supervisory Control and Data Acquisition

SCED Security Constrained Economic Dispatch

SCEG South Carolina Electric & Gas Company

ScL Seattle City Light

Scot Super Critical Once Through Generation Facility

SCPA Southcentral Pennsylvania subarea

Scr Selective catalytic reduction

System Data Exchange

SDWG System Dynamics Working Group

SE State Estimator

SEC Seminole Electric Cooperative

SECI Sunflower Electric Power Corporation

SEHA Southeastern Power Administration

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SEPJM Southeastern PJM subarea

SERC Southeastern Electric Reliability Council

SERU Southeastern Power Administration

SESC Space Environment Service Center (issues SMD warnings)

SETH Southeastern Power Administration

Simultaneous Feasibility Test

SGIWG Small Generation Interconnection Working Group

SH Service Hours

SHWPC Safe Harbor Water Power Company

SIGE Southern Indiana Gas & Electric Co.

SIPC Southern Illinois Power Cooperative

Systems Information Subcommittee

SLOD Severe Line Outage Detection

Solar Magnetic Disturbance

SMD Standard Market Design

SME Subject Matter Expert

SMECO Southern Maryland Electric Cooperative

SMEE South Mississippi Electric Power Association

SMP System Marginal Price

Southern Minnesota Municipal Power Agency

SMUD Sacramento Municipal Utility District

SNJ Southern New Jersey

**SO**₂ Sulfur dioxide

SOAP Simple Object Access Protocol

soco Southern Company Services, Inc.





SOF Scheduled Outage Factor

sos System Operations Subcommittee

sos Standard Offer Service

SPA Southwestern Power Administration

SPC SaskPower Grid Control Centre

Scheduling, Pricing and Dispatch

SPP Southwest Power Pool

SPPC Sierra Pacific Power Co. – Transmission

SPS Southwestern Public Service Company

SRAR Standard Resource Adequacy Requirement

SRCTF System Restoration Coordinators Task Force

SRMCP Synchronized Reserve Market Clearing Price

SPREGO Synchronized reserve and regulation optimizer (market-clearing

software)

**SRMCP** Synchronized reserve market-clearing price

SRP Salt River Project

SRRTEP-MA Sub Regional RTEP Committee – Mid-Atlantic

SRRTEP-S Sub Regional RTEP Committee – Southern

SRRTEP-W Sub Regional RTEP Committee - Western

SSL Secure Socket Layer

SSR Supplemental Status Report

Standard deviation

STE Short Term Emergency Rating (thermal)

STLF Short Term Load Forecast (hourly interval for seven days)

STNET Study Network Analysis

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STOP Scheduled Transmission Outage Program

SUB Substation

svc Static VAR Compensator

SWMAAC southwestern Mid-Atlantic Area Council

T

TAL City of Tallahassee

Transaction Coordinator

TCAP Targeted Unforced Capacity

TCUL Tap Changing Under Load (transformer)

Transmission Dependent Utility

TEAC Tariff Expansion Advisory Committee

TERM Transmission Equipment Ratings Monitor

THI Temperature Humidity Index

TIR Transmission Injection Rights

TISTF Transaction Issues Senior Task Force

TLB Tie Line Bias

TLC Transfer Limit Calculation

TLR Transmission Loading Relief Procedure

TMI Three Mile Island

TMS Transaction Management System

Tos Transmission Owners

TOA Transmission Owners Agreement

TOA-AC Transmission Owners Agreement-Administration Committee

TPS Third Party Supplier

TPS Three-Pivotal Supplier Test





TPWR Tacoma Power

TRM Transmission Reserve Margin or Transmission Reliability Margin

Transmission and SubstationSubcommittee

TSR Transmission Service Request

Transmission Security System

Total Transfer Capability

TTF Transactions Task Force

TTV4TF TO/TOP Matrix v4 Task Force

TVA Tennessee Valley Authority

TWR Transmission Withdrawal Rights

U

uc Unit Commitment

UCAP Unforced Capacity

UCDB Unit Commitment Data Base

UCDC Unit Commitment Data Coordinators

UCT Unit Commitment Terminal

Unit Dispatch System

UGI Utilities, Inc.

UOH Unplanned Outage Hours

**UPF** Unit participation factor

**UPPC** Upper Peninsula Power Co.

UPS Uninterruptible Power Supply

URL Uniform Resource Locator

V





VACAR Virginia – Carolina Region of SERC

VAP Dominion Virginia Electric Power, see DOM

VaPwr Dominion Virginia Electric Power, see DOM

VAR Volt Ampere Reactive

VCLC Voluntary Customer Load Curtailment

VCP Voltage Coordination Plan

VEM VACAR, ECAR, MAAC

VGR Video Graphic Recorder

VOM Variable Operating & Maintenance expense

VRR Variable Resource Requirement

**VSTLF** Very Short Term Load Forecast (five minute interval for six hours)

W

WACM Western Area Power Administration – CM

WALC Western Area Power Administration – DSW

WAUE Western Area Power Administration – UGPR

WAUW Western Area Power Administration – UGPR

WE Wisconsin Public Service Corp.

WEA Weather Services

WEC Wisconsin Energy Corporation

WECC Western Electricity Coordinating Council

WEQ Wholesale Electric Quadrant

WFEC Western Farmers Electric Cooperative

WGQ Wholesale Gas Quadrant

WLR Wholesale Load Responsibility

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**WPEK** Aquila Networks – WPK

WPF Wind Power Forecast

WPS Wisconsin Public Service Corporation

WR Western Resources, dba Westar Energy

WSA Weather Sensitivity Adjustment

wscc Western Systems Coordinating Council

WSI Weather Services International

X

xic External Installed Capacity

XML Extensible Markup Language

Υ

YAD Yadkin, Inc.



# **Revision History**

#### Revision 22 (2/28/2013):

• Administrative Change: updated all references of "eSchedules" to "InSchedules"

#### Revision 21 (01/15/2013):

Based on the work of the Regulation Performance Senior Task Force (RPSTF) the following Definitions were added:

- Marginal Benefits Factor
- Mileage
- RegA
- RegD
- Regulation Market Performance Clearing Price
- Regulation Market Capability Clearing Price
- Unit Specific Benefits Factor

The following Definition was edited:

Regulation Market Clearing Price

The following Acronyms were added:

- RegA
- RegD
- RMCCP
- RMPCP

#### Revision 20 (06/28/2012):

Added the following Definitions:

Transmission Subzone

Added the following Acronyms:

- CSTF Capacity Senior Task Force
- EFTF- Energy Efficiency Task Force
- MMUAC Market Monitoring Unit Advisory Committee
- PCLLRW Post Contingency Local Load Relief Warning
- RLGCTF Reliability Limited Generator Compensation Task Force
- RSCS Reliability Standards and Compliance Subcommittee
- SCED Security Constrained Economic Dispatch
- TTF Transactions Task Force

Removed the following acronyms:



- AQTAC- Air Quality Technical Advisory Committee
- ARG- At-Risk Generation Subcommittee
- ASC- Accounting Subcommittee
- CIRCWG Circulation Working Group
- DSRWG- Demand-Side Response Working Group
- EPMUG- Emergency Procedures and Messaging User Group
- GRS- Generation Relay Subcommittee
- GUS-Generator Unavailability Subcommittee
- GWG-Governance Working Group
- IPMWG- Interconnection Project Management Working Group
- L&CS- Load and Capacity Subcommittee
- LMPMWG- Local Market Power Mitigation Working Group
- LMTF- Load Management Task Force
- LRWG- Load Research Working Group
- LTFTRWG- Long-Term FTR Working Group
- MLWG- Marginal Losses Working Group
- MMAC- The Market Monitoring Advisory Committee
- MMWG- Multi-Regional Modeling Working Group
- OAWG Operations Analysis Working group
- RAMSWG- PJM-RAM Stakeholder Working Group
- RMWG- Reserve Markets Working Group
- RPCWG- Reliability Planning Criteria Working Group
- RRAWG-Reserve Requirement Assumptions Working Group
- RSWG-Reactive Services Working Group
- TAC- Tariff Advisory Committee
- TIG- Transmission Issues Working Group
- TORWG- Transmission Outage Reporting Working Group
- TSDS- Transmission and Substation Design Committee
- UIS- User Interface Subcommittee
- VPRMWG- Voltages Profile & Reactive Margin Working Group
- WTOA-AC-The West TOA Administrative Committee

## Revision 19 (06/24/2011):



- Revised the following Acronyms
  - FCA Forecast Applications
  - LF Load Forecast
  - LFH Load Forecast, Hourly (hourly interval for seven days)
  - LFM Load Forecast, Five Minute (five minute interval for six hours)
  - NIS Net Interchange Schedule
  - NISF Net Interchange Schedule Forecast
  - NN Neural Networks
  - STLF Short Term Load Forecast (hourly interval for seven days)
  - VSTLF Very Short Term Load Forecast (five minute interval for six hours)
  - WEA Weather Services
  - WPF Wind Power Forecast
  - CDS Cost Development Subcommittee
  - PLS Parameter Limited Schedules
  - DMS Data Management Subcommittee
  - DRS Demand Response Subcommittee
  - DTS Dispatcher Training Subcommittee
  - MSS Market Settlements Subcommittee
  - RAAS Resource Adequacy Analysis Subcommittee
  - RTS Relay Testing Subcommittee
  - BSSTF Black Start Service Task Force
  - FTRTF FTR Task Force
  - IRTF Intermittent Resources Task Force
  - LMTF Load Management Task Force
  - RPPTF Regional Planning Process Task Force
- Added the following definitions:
  - Black Start Service
  - Black Start Plant
  - Black Start unit to conform to the definitions in the OATT
  - Carrying Charges
  - Cost Based Offers
  - Direct Costs
  - Economic Demand Response



- Emergency Demand Response
- Energy Market Opportunity Costs
- Indirect Costs
- Interconnection Queue Close Date
- Interconnection Customer
- Parameter Limited Schedules
- Pnodes
- Queue Date
- Regulation Market Clearing price (RMCP)
- Synchronized Reserve Market
- Updated Cost Development Task Force to Cost Development Subcommittee

### Revision 18 (10/01/2010):

 Added Capacity Interconnection Rights and Maximum Facility Output definitions and modified Dispatchable Generation definition to reflect revision to PJM tariff regarding Energy Resource Curtailments (Docket #ER10-1762-000).

# Revision 17 (04/01/2010):

Added Nuclear Energy related definitions

#### Revision 16 (01/22/2010):

Added the definition for Hub

#### Revision 15 (04/17/2009):

Updated the definition for "Generation Capacity Resource."

#### Revision 14 (10/21/2008):

Removed the definitions for Active Load Management, ALM Credits, ALM Factor Updated definition for System Impact Study,

Added the glossary of terms from Manual 18

#### Revision 13 (11/01/2006)

Coincidental Peaks (5CP)

The following definitions were added:

3

Reliability *First* Corporation (RFC)

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eMTR



Conversational Monitor System (CMS) PJM Energy Market Reliability Pricing Model (RPM)

Daily Load and Capacity (DLC) File

The following definitions were revised:

Available Transfer Capability (ATC) Green Book PJM Region

Capacity Emergency Transfer Objective (CETO) IEMO RAA

Effective Equivalent Demand Forced Outage Rate Reliability Coordination Plan (RCP)

EFORd (Equivalent Demand Forced Outage Rate) MAAC Reliability Principals and Standards

eGADS Memorandum of Understanding Retail Customer

Electric Distribution Company (EDC) Mid-Atlantic Area Council (MAAC) Sector

eSuite PJM Installed Reserve Margin (IRM) Shared Reserves

The following definitions were deleted:

PJM Reserve Margin Pool Reserve Margin

PJM Reserve Requirement Recallable Available Transmission Capacity (RATC)

The following acronyms were added:

ACB	ConEd	EPMUG	GCB	M2M	O&R	PSE&G	RTTF
AEC	CRM	FE-E	GRS	ME	OE	RCP	SARP
AECO	CT	FE-JC	Hz	MIS	PCGC	RFC	SCOT
AP	Dayton	FE-ME	IESO	MLWG	Penelec	RMWG	SE
ARG	DAY	FE-PN	ISO-NE	MRO	PJM	RPM	SHWPC
BGE	DOM	FE-W	JCPL	NE-ISO	POLR	RPPWG	UIS
BG&E	DQE	FECE	JCP&L	NEPA	PPL	RRC	VPRMWG
BPU	DUQ	FERD	LOC	NY-ISO	PSEG		

The following acronyms were revised:

AE	CIRCWG	DQ	GADS	JC	NYIS	PECO	PN
APS	ComEd	DVP	GPU	MAAC	NYISO	PEP	VAP
ВС	CRM	eGADS	IMO	MAPP	NYPP	PEPCO	VaPwr
CE	DLCO	FE	ISNE	NEPEX	PE		

• The following acronyms were deleted:

ASAP IEMO MIWG

#### Revision 12 (08/25/06)

Exhibit 1: Updated to include the new Manual 30: Alternative Collateral Program

Section 2: Definitions



- Revised definition of Area Control Error(ACE), Active Load Management (ALM), ALM Factor, Adjusted Primary Reserve, Adjusted Spinning, Affiliate Group, Agent, Agreement, Ancillary Services, Area Regulation Signal, Available Transfer Capability, ALM Credit
- Revised definition of Bulk Power Electric Supply System
- Revised definition of Calculated Operating Capacity, Capacity, Capacity Emergency Transfer Objective, Capacity Resource, CETL
- Added definition of CRM
- Revised definition of Decrement Bids, Deficiency charge, Designated Transmission Facilities, Dispatch Rate, Diversified Peaks, Diversity Factor
- Added definition of Day-ahead Energy Market, Delayed Outage, Demand Bid(Fixed), Demand Bid(Price-sensitive)
- Added definition of EES, eMKT
- Revised definition of eFTR, Electric Distributor, End-Use Customer, Equivalent Load, InSchedules, External Market Buyer, External Resource, External Transaction
- Added definition of FTR Auction
- Revised definition of Facilities Study, FERC Order 888/889, File Download, File Upload, First Contingency Basis, Financial Transmission Right, Forecast Pool Requirement
- Revised definition of GEBGE, Generating Market Buyer, Generation Outage Rate Program, Generation Owner, Generator Maintenance Outage, Green Book
- Revised definition of IEMO, Inadvertent Interchange, Increment Offers, Interconnection, Interconnection Agreement, Internal, Internal Market Buyer, Internal Transaction, IRC, ISONE
- Added definition of Interruption
- Added definition of Learning Management System, LSE Reserve Margin
- Revised definition of Load, Load Aggregator, Load Analysis Subcommittee, Load Drop, Load Serving Entity, Load & Capacity Subcommittee, Local Area Transmission Facilities, LSE Reserve Requirement
- Revised definition of Market Operations Center, Maximum Generation Emergency, Maximum Generation Emergency Limit, Metered, Metered Entity, Metered Market Buyer, Mid-Atlantic Area Council
- Added definition of Market Database
- Revised definition on Net Capability, Net Capacity Verification Report, Net Tie Flow, Non-Metered, Non-Metered Market Buyer, Non-PJM-designated Transmission Facilities, NYISO
- Added definition of Normal Maximum Generation, Normal Minimum generation
- Revised definition of Off-Cost, Offer Data, Operating Agreement of PJM, Operating Reserve, Other Supplier



- Added definition of Office of Interconnection. Operating Margin
- Revised definition of PJM, PJM Board of Managers, PJM Installed Reserve Margin, PJM Interchange Energy Market, PJM Interchange Export, PJM Manuals, PJM Control Center, PJM Open-Access Same-Time Information System, PJM Reserve Margin, PJM Reserve Requirement, PJM Tariff, Planned Outage, Planning Period, PJM Load Ordered Time Series, Pool Reserve Margin, President
- Added definition of Peak Period Maintenance Deficiency, Peak Period Maintenance Excess, Peak Season, Peak Season Maintenance, PJM Interchange, PJM Office of the Interconnection, PJM RTO, PJM-RTO Scheduled Resource, Planning Period Peak, Planning Period Peak Diversity Entitlement
- Revised definition of Reduced Winter Peak, Regional Transmission Owner,
   Reserved Transmission Capability, Retail Load Responsibility, Retail System User,
   RAA
- Added definition of Reserve Requirement Documentation
- Revised definition of Sector, Short-Term Firm Point-to-Point Transmission Service, Source
- Added definition of Security
- Revised definition of Total Transfer Capability, Transmission Facilities, Transmission Owner, Transmission Owners Agreement, Transmission Provider, Transmission System
- Added definition of Transmission Security System
- Revised definition of Unavailable Capability, Unforced Capacity, Untelemetered Generation & Pumping Load
- Added Unaccounted for Capacity
- Revised definition of World, Wholesale System User, Zone
- Added definition of Weather Normalized Peak
- Section 3: Acronyms
  - Deleted the following acronyms:
    - Public Interest and Environmental Organizations User Group (PIUG)
    - Reliability Committee (RC)
    - Electricity Market Committee (EMC)
    - Transmission Outage Impact Mitigation Working Group (TOIMWG)
    - PJM-RAM Stakeholder Working Group (RAM)
    - Retail Access Working Group (RAWG)
    - Load Power Factor Working Group (LPFWG)
    - Generation Retirement Working Group(GRWG)
    - Combustion Turbine (CT)

Revision 23. Effective Date: 04/11/2014



- Data Confidentiality Working Group (DCWG)
- Base Case Conditions (BCC)
- ➤ Behind The Meter Generation Working Group (BMGWG)
- Capacity Emergency Transfer Limit (CETL)
- Capacity Emergency Transfer Objects (CETO)
- System Dynamics Data Working Group (SDDWG)
- Added the following acronyms:
  - Learning Management System (LMS)
  - Markets and Reliability Committee (MRC)
  - Circulation Working Group (CLWG)
  - Alternate Dispute Resolution Committee (ADRC)
  - Customer Relationship Manager (CRM)
  - Load Research Working Group (LRWG)
  - Long-Term FTR Working Group (LTFTRWG)
  - PJM-RAM Stakeholder Working Group (RAMSWG)
  - System Dynamics Working Group (SDWG)
  - Governance Working Group (GWG)
- Revised the following acronyms:
  - Synchronized Reserve Market Clearing Price (SRMCP)
  - Static VAR Compensator (SVC)

#### Revision 11 (06/08/06)

- Section 2: Definitions
  - Add term and definition for Demand Resources
  - Revised relevant terms for Ancillary Services Rules for Demand Side Response providing Ancillary Services

## Revision 10 (04/19/06)

Deleted the following definitions:

- Generating Capability Rating Procedures Task Force
- Organization Certification Task Force (OCTF)
- Office of Interconnection (OI)
- Office of the Interconnection (OI)



# Deleted the following acronyms:

CRMWG	EC	FSWG	GCRPTF	GCTF	JIC	L&CWG
MICSWG	MMOWG	OCTF	OI	PCTF	RMTF	SAC
SC&PWG	SDT	SES	SGS	SRTF		

Added the acronym MSWG.

Revisions were made on the following pages: 34, 48, 50, 76, 79, 82, 85, 87, 88, 90, 91, 94, 95 and 97.

## Revision 09 (10/26/05)

Revised definition for Extra High Voltage (EHV).

# Revision 08 (10/14/05)

Added definition for Construction Costs, Feasibility Study and Feasibility Study Agreement. Revised definition for Facilities Study and Facilities Study Agreement.

#### Revision 07 (06/23/05)

Added the acronym OPSI and removed the acronym PJM.

#### Revision 06 (06/08/05)

Added the acronyms PGT and RRO.

### Revision 05 (02/04/05)

Added the following acronyms:

AEC	CWLD	FMPP	KCPL	NGO	RPCWG	SPS
AECI	CWLP	FPC	LAFA	NIPS	RRAWG	SRP
AESO	DEAA	FPL	LAGN	NPPD	RS	TAL
AVA	DEEM	GCPD	LDWP	NSB	SC	TEC
AZPS	DEMT	GRDA	LEPA	NSP	SCEG	TEPC
BCA	DENL	GRE	LES	NSPL	SCL	TOA-AC
BCHA	DERS	GRMA	LGEE	NWMT	SEC	TOIMWG
<b>BMGWG</b>	DESG	GRWG	LPFWG	NYIS	SECI	<b>TPWR</b>
<b>BPAT</b>	DEVI	GVL	MAR	OKGE	SEHA	TSDS
BREC	DLCO	HE	MCLN	OPPD	SERU	UPPC
<b>BSSWG</b>	DOCA	HGMA	MEC	OTP	SETH	WACM

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CFE	DPC	HQT	MECS	PACE	SGIWG	WALC
СНРН	DUK	HST	MGE	PACW	SIGE	WAUE
CILC	<b>EDARTUG</b>	IID	MHEB	PGE	SIPC	WAUW
CIN	EDE	IMO	MIC	PIEUG	SMEE	WEC
CISO	EEI	INDN	MICSWG	PNM	SMP	WFEC
CLEC	EES	IPCO	MMAC	PSCO	SMUD	WPEK
CPLE	EKPC	IPL	MP	PSEI	SOCO	WPS
CPLW	EPE	IPMWG	MPS	RAM	SPA	WR
CSWS	ERCO	ISNE	MPW	RC	SPC	WTOA-AC
CWG	FC	JEA	NEVP	RC	SPPC	YAD

Deleted BSWG from acronyms.

Revised EMC from Energy Market Committee to Electricity Market Committee.

#### Revision 04 (08/23/04)

Add the following acronyms:

CA	Control Area

ComEd Commonwealth Edison

CM2 Congestion Management Coordinated

Methodology

**CZRA** Control Zone Regulation Assist

eDart Dispatcher Applications and Reporting

Tool

eGADS Generator Availability Data System

GCA Generating Control Area

GMS Generation Management System

GTO Generation Transfer Optimizer



JOA Joint Operating Agreement

LCA Load Control Area

LD Liquid Damages

MIL Mandatory Interruptible Load

ND Network Designated

NND Network Non-Designated

NICA Northern Illinois Control Area

**PD** Power Dispatcher

PJMCA PJM Control Area

PTP Point to Point

**SA** Security Analysis

SDX System Data Exchange

**TVA** Tennessee Valley Authority

UCAP Uninstalled Capacity

**VSTLF** Very Short Term Load Forecast

XIC External Installed Capacity

#### Revision 03 (06/22/04)

Add acronym LSR: Load Ratio Share

#### Randy RitterRevision 02 (05/08/04)

Add definitions for NICApacity.

Change Manager's name to reflect current manager of Customer Relations Department

# Revision 01 (10/15/03)

Correct two definitions: "Area Regulation Signal" and "Mature Units".

# Revision 00 (09/30/03)



This revision is a draft of the PJM Manual of Definitions and Acronyms.