

NWCC Transmission Glossary

ACE Diversity Interchange (ADI): A method of regional regulation among participating control areas that can achieve a mutual reduction in regulation requirements and generator output adjustments (ramping).

Area Control Error (ACE) - A measure of the difference between an electrical control area's (or balancing authority's) actual and scheduled generation, taking frequency bias into account.

Allowance for Funds Used During Construction (AFUDC): Approval by FERC and state regulatory commissions for inclusion in rates of the cost of borrowing funds until a project is placed into operation.

Available Transmission Capacity (ATC): A measure of the electric transfer capability remaining in the transmission network for sale over and above already committed uses.

Balancing Authority: The entity responsible for operating a **control area** (see below). It matches generation with loads and maintains frequency within limits.

Bonneville Power Administration (BPA): The federal power marketing authority in the Northwest (OR, WA, ID, MT) that markets wholesale power from federal dams on the Columbia and Snake Rivers and owns and operates a high-voltage transmission system.

California Independent System Operator (CAISO): The entity in California that controls and administers nondiscriminatory access to electric transmission across investor-owned utility systems independent of their ownership.

Certificate of Public Convenience and Necessity (CPCN): The license granted to a public utility by a state regulatory agency to build and own transmission and other electricity or gas infrastructure.

Clean and Diversified Energy Advisory Committee (CDEAC): The stakeholder committee established by the Western Governors Association in 2005 to draft recommendations to implement a resolution to develop 30 GW of clean energy by 2015 and 20% energy efficiency by 2020.

Colorado Coordinated Planning Group (CCPG): A group of utilities, transmission owners, and stakeholders that study transmission expansion needs in Colorado.

Conditional Firm Service: A tariff proposal under consideration both at Bonneville Power Administration and in the FERC 888 OATT Reform NOPR. Conditional Firm service would be long-term, and firm for a pre-defined number of months during the year, combined with a specified number of hours over a set number of "conditional" months when firm transmission service may not be provided. This can allow the transmission

provider to offer more service and potentially serve new resources that would otherwise not be able to get on line.

Control Area: Electric power system in which operators match loads to resources within the system, maintain scheduled interchange between control areas, maintain frequency within reasonable limits, and provide sufficient generation capacity to maintain operating reserves. Same as Balancing Authority.

Curtailement: A reduction in the scheduled capacity or energy delivery due to a transmission constraint or power shortage.

Demand Side Management (DSM): A collection of methods for reducing electricity or gas demand including conservation, energy efficiency, tariffed or contracted interruptions, bidding during peak power events, appliance standards, and appliance controls.

Dynamic Line Rating: The transmission operator practice of increasing the line rating and thermal limits of a given transmission line in real time when the cooling effects of wind or weather occur.

Dynamic Scheduling: an accounting for power plant output in a neighboring control area, so the balancing authority that is host to a wind facility has no responsibility for scheduling.

Federal Energy Regulatory Commission (FERC): A federal agency created in 1977 to regulate, among other things, interstate wholesale markets and transportation of gas and electricity at “just and reasonable rates.” FERC is the successor of the Federal Power Commission (FPC), established in 1920.

Notice of Inquiry (NOI): A notice of inquiry by the Federal Energy Regulatory Commission or a state PUC with a comment period to solicit comments and recommendations on a specific issue.

Notice of Proposed Rulemaking (NOPR): A notice of a proposed rulemaking issued by the Federal Energy Regulatory Commission, asking for comments and declaring the intent to formally adopt the rule.

FERC Order 888: The current rules for regulating and setting prices for the US wholesale electricity market including standards for the terms and conditions for open access tariffs (**OATT**).

Firm Transmission: Transmission service that may not be interrupted for any reason except during an emergency when continued delivery of power is not possible.

Flow-based Methodology: A method for determining available transmission capacity (ATC) based on actual physical electricity flows rather than financial contracts.

Imbalance Penalties: FERC-tariffed penalties imposed on generators by transmission owners based on deviations from schedules. These penalties are intended to prevent generators from gaming wholesale markets. Imbalance penalties for variable output generators like wind are deemed unfair because wind output is not controllable in the same way fossil fuel generators are.

Independent System Operator (ISO): Entity that controls and administers nondiscriminatory access to electric transmission in a region or across several systems, independent from the owners of the facilities.

Integrated Resource Planning (IRP): An approach to planning which compares the full life-cycle costs, including social and environmental costs, of a broad spectrum of alternatives.

Investor Owned Utility (IOU): A utility regulated by state and federal commissions and statutes that is privately-owned by its shareholders.

Load Serving Entity (LSE): Any entity providing service to load.

Network Transmission (NT): A transmission contract or service as described in a transmission provider's Open Access Transmission Tariff filed with the FERC.

Non-Firm Transmission Service: Transmission service that may be interrupted in favor of firm transmission schedules or for other reasons.

Northwest Transmission Assessment Committee (NTAC): A group of utilities, transmission owners, and stakeholders that studies transmission needs in the Pacific Northwest and makes recommendations to members of the Northwest Power Pool.

Open Access Same-time Information System (OASIS): A web-based information system linking individual transmission owner OASIS websites that list available capacity on specific transmission lines.

Open Access Transmission Tariff (OATT): A FERC regulated tariff under Order 888 and 889 that is intended to ensure that transmission services are provided on a basis that is just, reasonable and not unduly discriminatory or preferential.

Operating Transfer Capacity (OTC): represents the real time operating capability that recognizes the actual line operating conditions at a given hour.

Participating Transmission Owner (PTO): a transmission owner who agrees to place its facilities under the operational control of an RTO/ISO.

Performance-based Regulation (PBR): A departure from rate base, rate of return regulation that bases a utility's revenues and/or profits on measurable performance

criteria, usually aimed at changing the company's incentives to align them more with the interests of customers, society, and/or the environment.

Postage Stamp Pricing: Flat rates charged for transmission service without regard to distance.

Power Marketing Authority (PMA): One of several federal entities that market power from federally owned and operated generators and sometimes own or operate federal transmission infrastructure in the United States. WAPA and BPA are examples in the West.

Priority Non-Firm: Similar to non-firm, except that priority non-firm can be procured on a long term basis, and has a higher curtailment priority than traditional non-firm (is curtailed after traditional non-firm).

Prudence Review: A regulatory proceeding that determines if an IOU investment is just and reasonable and allowable for full cost-recovery in rates given the information available to the utility at the time it was made.

Public Utility Commission (PUC): These state regulatory authorities are appointed by the governor or elected by the people to set rates for electricity, gas, telephone and other monopoly services imbued with the public interest. PUC's often provide consumer information and mediation services, and administer programs defined in state statutes.

Rate Pancaking: Fees that are tacked on as electricity flows through a number of transmission systems.

Redispatch: The modification of generating schedules and/or demand side management, usually to reduce congestion in transmission systems. This product would allow a transmission owner to offer more long-term service when their system is constrained on one or more paths by arranging for dispatch of generation resources to relieve those constraints when the system is at peak usage. When the flow of electricity on transmission lines is at or over capacity, increasing generation on one side of the constraint, and decreasing it on the other side of the constraint can relieve the congestion. A transmission provider must consider how many hours of the year this service might be needed and arrange for generator(s) on both sides of the constraint to provide adjustment. This arrangement then allows the transmission provider to treat the customer purchasing transmission with redispatch like a firm customer. Commercial Redispatch must be considered under the 888 OATT Section 13.5 if there is no long-term firm capacity available to serve a customer's request. However utilities have not yet offered it.

Regional Transmission Organization (RTO): An independent regional transmission operator and service provider that meets certain criteria, including those related to independence and market size, established by FERC Order 2000.

Reliability: Term used to describe a utility's ability to deliver an uninterrupted stream of energy to its customers and how well the utility's system can handle an unexpected shock that may affect generation, transmission or distribution service.

Renewable Portfolio Standard (RPS): A standard set by a state or the federal government that requires affected LSEs to acquire a minimum percentage electricity to be generated or purchased from renewable resources.

Right-of-Way (ROW): Strip of land used for utility lines. Most utilities negotiate easements with property owners or use the power of eminent domain to gain access. In some cases, the land is purchased outright.

Rocky Mountain Area Transmission Study (RMATS): A study initiated in 2003 by the governors of Wyoming and Utah to examine transmission needs in the CO-ID-MT-UT-WY region. It issued a report in 2004 that recommended a number of transmission upgrades, expansions, and operational reforms based on production cost modeling that demonstrated significant economic benefits to the region.

Southwest Area Transmission group (SWAT): A sub-regional planning group that includes utilities, transmission owners and stakeholders in Arizona and New Mexico.

Southwest Transmission Expansion Plan (STEP): A sub regional planning group that includes utilities, transmission owners, and stakeholders in California, Nevada, and Arizona.

Tariff: A document, approved by the responsible regulatory agency, listing the binding terms and conditions, including prices, under which utility services will be provided.

Transmission: The process of transporting wholesale electrical energy at high voltages from a supply source to utilities.

Transmission Dependent Utility (TDU): A utility that owns and operates little or no transmission and is therefore dependent on another entity for transmission services.

Transmission Owner (TO): The owner of transmission facilities. A Transmission Owner may or may not be responsible for providing transmission service.

Transmission Provider (TP): The entity responsible for providing transmission service, subject to reliability, regulatory and commercial requirements. A Transmission Provider may or may not own the facilities it is responsible for.

Unused Transmission Capacity (UTC): A recently-coined term used in the RMATS study to identify available capacity on a given transmission line or path (a collection of lines between two areas) based on actual physical flows rather than financial contracts or ownership.

Used and Useful Test: A regulatory test to determine if the plant or transmission infrastructure investments made by a utility are actually in service and therefore subject to full cost-recovery, i.e. used, and if it was a good investment compared with alternatives, i.e. useful.

Utility Wind Integration Group (UWIG): An organization whose membership includes utilities that own, operate or purchase wind power and which have an interest in wind integration and supply issues. The organization participates in proceedings and meetings at the national level and provides technical assistance and publications to its members.
www.uwig.org.

Variable Output Resource: An energy resource like wind or solar that generates electricity depending on weather or solar insolation or other uncontrollable forces.

Vertically Integrated Utility: A traditional electric utility that has direct control over its transmission, distribution, and generation facilities and can offer a full range of power services.

Western Area Power Administration (WAPA): A federal power marketing authority that owns or operates generation and transmission facilities primarily in the interior western US.

Western Electricity Coordinating Council (WECC): The voluntary electric industry reliability organization responsible for grid reliability in the western interconnection including Canadian provinces and Mexican states connected to the US grid.

Western Governors Association (WGA): The association of governors in the western US from Hawaii and Alaska to the Dakotas and Texas.

Western Interconnection: The synchronous grid that is connected across states and provinces in the west not including ERCOT in Texas or Alaska and Hawaii. It also includes British Columbia, Alberta, and Saskatchewan in Canada and Baja del Norte in Mexico.

wesTTrans: A voluntary, cooperative open access (OASIS) website providing a common platform for the posting of available transmission capacity, independent of ownership. WesTTrans.net complements but does not replace the individual OASIS sites maintained by individual Transmission Owners. It serves a significant portion of the Western Interconnection.

References

Federal Energy Regulatory Commission, www.ferc.gov.

National Council on Electric Policy. (June 2004). *Electricity Transmission: A Primer*. www.ncouncil.org.

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Western Interstate Energy Board, <http://www.westgov.org/wieb/>.