

Glossary

Adequacy – Having sufficient resources to provide customers with a continuous supply of electricity at the proper voltage and frequency, virtually all of the time. “Resources” refers to a combination of electricity generating and transmission facilities, which produce and deliver electricity; and “demand-response” programs, which reduce customer demand for electricity.

Balancing Authority – One of the regional functions contributing to the reliable planning and operation of the bulk power system. The Balancing Authority integrates resource plans ahead of time, and maintains in real time the balance of electricity resources and electricity demand.

Bulk power system – The part of the overall electricity system that includes the generation of electricity, and the delivery of that electricity over high-voltage transmission lines to distribution companies. This includes power generation facilities, transmission lines, interconnections between neighboring transmission systems, and associated equipment. It does not include the local distribution of the electricity to homes and businesses.

Compliance – The act of adhering to NERC Reliability Standards.

Control Area - Control areas are defined by the electricity meters at their boundaries, which measure the power flowing into and out of the area. Control areas are connected to each other by “tie lines.” The Control Area/Balancing Authority matches generation with customer demand, and the transmission operator monitors the flows over the transmission system and voltages at substations.

Demand – The amount of electricity required at any given time to meet customer needs.

Demand response – “Changes in electric usage by end-use customers from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.” (Definition from U.S. Dept. of Energy)

Demand-side management (DSM) – Programs that encourage customers to use less electricity, or to use it at different times of day, or to allow system operators to interrupt their electricity supply during peak demand times.

Distribution – The local delivery of electricity to customers.

Electricity Reliability Organization (ERO) – The generic name used in the U.S. Energy Policy Act of 2005 to refer to the independent entity that would be

given the authority to develop and enforce mandatory reliability standards for the North American bulk power system. NERC was designated as this “electricity reliability organization” by FERC on July 20, 2006. “ERO” refers to NERC’s role, but “ERO” is not an official name.

Generating facility – Power plants or other facilities where electricity is produced.

Generation – The process of creating electric energy by transforming other forms of energy into electricity.

Grid – The network of interconnected, high-voltage electricity lines that transport electricity from power plants and other generating facilities to local distribution areas.

Independent System Operator (ISO) – An independent entity that coordinates regional transmission in a manner that is non-discriminatory against any transmission owners, operators or users, and ensures a safe and reliable electric system. Regulated by the US and Canadian governments. [The ISO/RTO Council](#).

Interconnection – (a) A common transmission line connecting two or more electric systems. Interconnections allow electricity to flow between the two systems, and facilitate the sale of electricity between the two regions served by the systems. (b) The synchronized grids in North America: the Eastern Interconnection, Western Interconnection, ERCOT, and Quebec Interconnection.

Penalty – A monetary fine or other action given to a bulk power system user, owner or operator that violated a NERC Reliability Standard.

Planning Coordinator – One of the regional functions that contributes to the reliable planning and operation of the bulk power system. Planning Coordinators are responsible for regional planning including assessing the longer-term reliability of the bulk power system, in coordination with other regions.

Regional Entity – The term ‘regional entity’ is defined in Section 215 of the Federal Power Act means an entity having enforcement authority pursuant to subsection (e)(4) [of Section 215].

A regional entity (RE) is an entity to which NERC has delegated enforcement authority through an agreement approved by FERC. There are eight RE’s. The regional entities were formed by the eight North American regional reliability organizations to receive delegated authority and to carry out compliance

monitoring and enforcement activities. The regional entities monitor compliance with the standards and impose enforcement actions when violations are identified.

Reliability – In the context of the bulk power system, NERC defines reliability as the ability to meet the electricity needs of end-use customers, even when unexpected equipment failures or other factors reduce the amount of available electricity. NERC breaks down reliability into **adequacy** and **security**.

Reliability Coordinator – One of the regional functions contributing to the reliable operation of the bulk power system. The Reliability Coordinator is responsible for the real-time operating reliability of its Reliability Coordinator Area, and coordinates closely with neighboring areas. It has the authority to prevent or mitigate emergency operating situations in real-time and in next-day analysis. All balancing authorities and transmission operators must be within the purview of a reliability coordinator.

Resource Planner – One of the regional functions contributing to the reliable planning and operation of the bulk power system. Resource Planners are responsible for ensuring adequate resources to meet the load in its area.

Security – The ability of the bulk power system to withstand sudden, unexpected disturbances such as short circuits, or unanticipated loss of system elements due to natural or man-made causes.

Self-regulatory or self-regulated – The designation given to a non-governmental entity to which the government has delegated some powers. In NERC's case, United States governmental agencies have delegated to NERC the authority to implement, and enforce compliance with, Reliability Standards. Although both U.S. and Canadian governmental entities have the power of review and audit of NERC, NERC and the industry have the freedom to write its own rules and standards. This approach allows for greater involvement by those entities directly involved in the operation of the bulk power system, who have detailed knowledge of the industry's operational and technical needs if it is to serve customers as reliably as possible.

System operator – One of the regional functions contributing to the reliable planning and operation of the bulk power system. System operators are the "airplane pilots of the electricity grids," working at various industry control centers. They monitor and control the electricity network in real time, to maintain its integrity and regulate generating supplies to keep them balanced with customer demand. Balancing authorities, transmission operators, generator operators, and reliability coordinators are all considered system operators.

Transmission – The transportation of electricity over high-voltage lines and

equipment, from generating facilities or other transmission facilities, to a point where it is transformed into voltages usable by customers, and distributed to customers.

Transmission Operator – The person responsible for the operation of the transmission facilities in his or her Transmission Operator Area.

Transmission Planner – One of the regional functions contributing to the reliable planning and operation of the bulk power system. Transmission Planners are responsible for planning a reliably interconnected bulk power system.

Violation – The failure to comply, or comply fully, with a NERC Reliability Standard.

Watch List – A list of concerns that might impact negatively on electricity reliability, identified through a NERC Reliability Assessment. The concern might relate to an individual entity or a region.

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