

TRANSMISSION PLANNING

Definitions and Acronyms

Term	Definition
Bulk Electric System	Transmission elements operated at 100 kilovolts (kV) or higher, and generation resources connected at 100 kV or higher, with some exceptions.
Contingency	The unexpected failure or outage of a system component, such as a generator, transmission line, circuit breaker, switch, or other system component.
Distribution	The delivery of electric distribution voltages ranging from 4 to 40 kV from transmission substations to homes, businesses, and other end users.
Federal Energy Regulatory Commission (FERC)	A regulatory agency that oversees the interstate transmission of electricity and regulates wholesale electricity markets between different states. FERC oversees NERC.
Generation	The process of producing electrical energy from various sources such as coal, natural gas, nuclear, hydroelectric, wind, solar, and other renewable resources at power plants; also, the amount of electric energy produced, usually expressed in kilowatt-hours (kWh) or megawatt-hours (MWh).
North American Electric Reliability Corporation (NERC)	A non-profit regulatory authority that develops and enforces rules and standards to improve the reliability and security of the electric system.
Planning Coordinator	The responsible entity that coordinates and integrates transmission facilities and service plans, resource plans, and protection systems. Also called the planning authority.

Power Market Administrations	Operate electric systems and sell the electrical output of federally owned and operated hydroelectric dams in 34 states.
Regional Transmission Organization/Independent System Operator (RTO/ISO)	Entities that oversee transmission planning, operate the transmission system, and operate competitive wholesale electricity markets in their defined territories.
Reliability Coordinator	Under NERC, the entity that is the highest level of authority and that is responsible for the reliable operation of the bulk electric system.
Traditional Wholesale Markets	Responsible for system operations and management and, typically, providing power to retail consumers. Utilities in these markets are frequently vertically integrated, which means they own all levels of the electricity supply chain within their territory – generation, transmission, and distribution.
Transmission	The transport of high voltage (69 to 765 kV) electricity from generation to distribution points for delivery to end-users.
Transmission Operator	The entity responsible for the reliability of its “local” transmission system and operating or directing the operations of the transmission facilities.
Transmission Owner	The entity that owns and maintains transmission facilities.
Transmission Planner	The entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within its portion of the Planning Coordinator area.
Transmission Planning	The process of considering future generation mix and capacity, demand patterns, weather, policy goals, and other factors to formulate strategies for developing and improving the transmission system.

DEFINITIONS ADAPTED FROM:

NERCipedia. (2020). Glossary. Retrieved April 2024 from <https://nerclopedia.com/glossary/>

North American Electric Reliability Corporation. (2024). Glossary of Terms Used in NERC Reliability Standards. Retrieved April 2024 from https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf

