

Term	Report Use Definition
Black-Start	A Black Start is the process of restoring an electric power station or part of an electric grid to operation without relying upon the external electric power transmission network to recover from a total or partial shutdown. If power is lost throughout the entire grid area, designated generators are able to restore electricity to the grid without using an outside electrical supply. Electric generators have a great deal of rotating equipment for pumps and compressors that need to be running in start-up. Under normal operating conditions, these generators rely on pulling power from the grid when it is starting up. It acts like a jump start for your car or a defibrillator for your heart. Black Start conditions occur when the entire electric grid has lost all power and there is no load on the system – hence all the “lights are out”. When the grid has failed and gone down, it relies on supply from dedicated, fail-safe, back-up resources, called “black start generators” to restart the grid in isolated areas.
Critical Load Filing (CLF)	End users that qualify for preferred position in the event of a potential interruption, must file an application with their local electric distributor (wires company) to request qualification as a critical load.
Day Ahead Market	Market for a commodity, in this case, electrical power generation, where the contract for short term power generation is awarded one day ahead of the requirement to produce that power.
Dispatchable generation	Dispatchable generation refers to sources of electricity that can be dispatched (turned on) on demand at the request of power grid operators, according to market needs. Dispatchable generators can adjust their power output according to an order. Non-dispatchable renewable energy sources such as wind power and solar photovoltaic (PV) power cannot be controlled by operators.
EEA	Energy Emergency Alert (EEA). When electric supply and demand cannot be balanced with normal procedures, ERCOT will declare an energy emergency, which allows the grid operator to use resources only available during tight conditions. There are three energy emergency levels that are used to protect the reliability of the electric system and prevent an uncontrolled, system-wide outage.
Energy Transition	The transition of the energy from resource consuming generation resources, principally fossil fuel powered generation to renewable sources of generation.
ERCOT	The Electric Reliability Council of Texas (ERCOT) manages the flow of electric power to 26 million Texas customers - representing about 90 percent of the state’s electric load. As the independent system operator for the region, ERCOT schedules power on an electric grid that connects more than 46,500 miles of transmission lines and 710+ generation units. It also performs financial settlement for the competitive wholesale bulk-power market and administers retail switching for nearly 8 million premises in competitive choice areas.
Explicit interdependence	Explicit Interdependence, where major reliance by one sector, such as telecommunications reliance on electricity, is documented and recognized.
Firm Supply	In the supply of natural gas to a power generation entity, Firm Supply refers to contractual arrangement where the power generation entity agrees to pricing that affirms the supply of a certain volume of natural gas upon demand.
Firm Transport	In the supply of natural gas to a power generation entity, Firm Transport refers to contractual arrangement where the power generation entity agrees to pricing that affirms the capacity in a pipeline to transport a certain volume of natural gas upon demand.
Fit for Purpose	A confirmation that the infrastructure is designed, built, operated, and maintained in a manner to consistently and reliably perform or operate for its intended use today

Forced Outage Rate (FOR)	Forced Outage Rate (FOR or FOAR) of a power station unit is the probability that the unit will not be available for service when required. It is defined as the number of hours a unit is on forced outage over the total number of hours in a year. It is also sometimes described as unplanned outages and is a key metric for measuring the reliability of a plant.
Freeze-Off	Natural gas wellhead freeze-off happens when outside temperatures drop below 40 degrees in producing fields, with initial obstruction caused by forming of hydrates contained in the fluid stream. If the wellhead and control valves are not insulated or heat traced, produced water and heavy hydrocarbons in the gas can freeze and block the flow of oil and gas through the system.
Interdependence	Interdependence is when sector of infrastructure is dependent upon another infrastructure sector's performance. It can be 1 way, like the water system depending upon electricity, or it can be 2-way like the electricity industry relying on natural gas fuel supply from the gas industry, while the natural gas industry relies on reliable electric service from the electricity industry. Increasing interdependence increases the fragility of the network system and in the case of winter storms Uri and Viola led to a cascading series of failures, like dominoes, across infrastructure sectors. Growing interdependency between infrastructure sectors is making the system less reliable.
Interdependence creep	This occurs where individual decisions about integrating with another sector might not rise to a level of concern but when this one-o integration is repeated hundreds or thousands of times the result creates a systemic issue.
Interdependence risk	This is composed of the level of activity in the Sector plus the reliance between the sectors, offset by the level of reliance mitigation (back-up power, alternate fuel, etc.)
Intermittent	Intermittent = occurring at irregular intervals; not continuous or steady. In relation to generation it references to renewable generation capacity that is reliant on variable supplies of input that are not controlled to produce electricity (solar and wind generation). This is also referred to as non-dispatchable generation.
ISO and RTO	Independent System Operators (ISO) grew out of Orders Nos. 888/889 where the Commission suggested the concept of an Independent System Operator as one way for existing tight power pools to satisfy the requirement of providing non-discriminatory access to transmission. Subsequently, in Order No. 2000, the Commission encouraged the voluntary formation of Regional Transmission Organizations (RTO) to administer the transmission grid on a regional basis throughout North America (including Canada).
LDC	Local distribution Company. This can be a natural gas or electricity provider that connects directly to the end user and delivers the physical service to the end user
Mitigate	Perform deliberate actions that reduce the likelihood of severe or harmful events.
NERC	The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the bulk power system through system awareness; and educates, trains, and certifies industry personnel. NERC's area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the Electric Reliability Organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC's jurisdiction includes users, owners, and operators of the bulk power system, which serves nearly 400 million people.

Non-Dispatchable Generation	Power generated by wind or sunshine (wind turbine generators or solar photovoltaic cells), which is dependent on the availability of those sources. The availability of Non-Dispatchable generated power is not controlled by operators.
OTC	Over The Counter refers to the process of how commodities are traded via a broker dealer network as opposed to on a centralized exchange.
PJM	<u>PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity</u>
Reliability	Having access to a service (electricity) that you need when you need it. Reliability is electricity is considered as being binary, like a switch, it either works or it doesn't work.
Resilience	Measure of the robustness of a process or system to absorb shocks and either continue to operate or, if it fails, how quickly it recovers and restores services or returns to full operating capacity.
Revenue sufficiency	The sufficiency and predictability of ongoing investments to support operations and maintenance and reliability upgrades.
Run to Failure	When capital assets are not proactively and adequately maintained (see also revenue sufficiency) they will continue to operate until that lack of maintenance leads to an interruption of ability to operate at normal operating capacities.
SCADA	Supervisory Control and Data Acquisition - the systems that manage (monitor and control) and operate infrastructure and networks.
TMax	The number of days when temperature is below 32F for an entire 24-hour period.
TMin	The number of days on either side of a TMax period when minimum temperatures for at least 1 hour during the 24-hour period was below 32F.
Winter Storm Uri	<u>Winter Storm Uri was a major coast-to-coast storm that spread snowfall and damaging ice from the Northwest into the South, Midwest, and Northeast Feb. 12-16, 2021. The storm was followed by the coldest temperatures in decades in the south-central states.</u>
Winter Storm Viola	Immediately followed Winter Storm Uri, taking a similar track, and producing more snow, ice and rain in the Northwest, South, Midwest and East US, Feb 15-21, 2021.

Report Acronyms

ARRA	<u>American Recovery and Reinvestment Act</u>
ASCE	American Society of Civil Engineers
CLF	Critical Load Filing
EEA	Energy Emergency Alert
ERCOT	Electric Reliability council of Texas
FERC	Federal Energy Regulatory Commission
FOR or FOAR	Forced Outage Rate
IRC	Infrastructure Report Card
ISO	Independent System Operators
LDC	Local Distribution Company
LNG	liquefied natural gas
NERC	North American Electric Reliability Corporation
OTC	Over The Counter — See Glossary for report usage definition

PUC or PUCT	Public Utility Commission of Texas
RRC or TRC	<u>Railroad Commission of Texas or Texas Railroad Commission</u>
RTO	Regional Transmission Organizations
SCADA	Supervisory Control and Data Acquisition
SOP	standard operating procedure/process
TxDOT	<u>Texas Department of Transportation</u>
RPM	Reliability Pricing Model

