

U.S. DEPARTMENT OF ENERGY OFFICE OF ELECTRICITY DELIVERY AND ENERGY RELIABILITY

Washington, D.C. 20585

OMB No. 1901-0288 Expiration Date: 01/31/15 Burden Per Response: 2.03 hours

Revised January 2012

OE-417 ELECTRIC EMERGENCY INCIDENT AND DISTURBANCE REPORT

QUESTIONS

If you have any questions about Form OE-417 after reading the instructions, please contact Brian Copeland at (202) 586-1178, FAX Number (202) 586-2623 or E-mail: brian.copeland@hq.doe.gov.

For additional information write to the following address: Assistant Secretary, Office of Electricity Delivery and Energy Reliability (OE-1)1000 Independence Ave, SW Washington, DC 20585

Emergency Contact: DOE Operations Center Telephone Number: (202) 586-8100 FAX Number: (202) 586-8485 E-mail: doehqeoc@hq.doe.gov.

PURPOSE

The Department of Energy (DOE), under its relevant authorities, has established mandatory reporting requirements for electric emergency incidents and disturbances in the United States. DOE collects this information from the electric power industry on Form OE-417 to meet its overall national security and Department of Homeland Security's National Response Framework responsibilities. DOE will use the data from this form to obtain current information regarding emergency situations on U.S. electric energy supply systems. DOE's Energy Information Administration (EIA) will use the data for reporting on electric power emergency incidents and disturbances in monthly EIA reports. The data also may be used to develop legislative recommendations, reports to the Congress and as a basis for DOE investigations following severe, prolonged, or repeated electric power reliability problems.

HOW TO SUBMIT

<u>Online</u>: An online form is now available at http://www.oe.netl.doe.gov/oe417.aspx. The online form is now the preferred delivery method.

Instructions on how to report via e-mail, facsimile, or telephone are printed on Schedule 1 of Form OE-417.

<u>E-mail</u>: If you experience problems using the online form, you may submit your form via e-mail as an attachment to doehgeoc@hq.doe.gov.

<u>Fax:</u> If you experience problems submitting via the online submission form or email, you may fax the form to the following facsimile number. (202)586-8485.

<u>Telephone:</u> If you experience problems submitting via online, email, or fax, please call and report the information to the following telephone number: (202) 586-8100. This telephone number is staffed 24/7.

INSTRUCTIONS

Copies in portable document format (PDF) and word format (DOC) are available on OE's website. You may access the materials by following the steps:

- Go to OE's Electric Emergency Incident And Disturbance Report website at http://www.oe.netl.doe.gov/oe417.aspx.
- Click on the hypertext link for the Form or for the Instructions.

GENERAL INSTRUCTIONS

Form OE-417 is mandatory pursuant to Section 13(b) of the Federal Energy Administration Act of 1974 (Public Law 93-275). The form is considered an emergency form filed only when at least one of the criteria for filing the form, on page one of the form, is met.

The Form OE-417 alerts the Department of Energy to electrical emergency incidents and disruptions. The ability of DOE to quickly respond to energy emergencies that may impact the Nation's infrastructure and to help alleviate or prevent further disruptions depends on industry's prompt response. As such, the initial timely filing of this form is of paramount importance. Many electric utilities have received approval to operate the Balancing Authority and/or Reliability Coordinator functions from the North American Electric Reliability Corportation (NERC). In addition, electric utilities also have computer centers and physical security departments. (Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) are established by the Federal Energy Regulatory Commission and are considered electric utilities.)

WHO MUST SUBMIT

- Balancing Authorities (BA), Reliability Coordinators (RC), some Generating Entities, and Electric Utilities, including those located Puerto Rico, the Virgin Islands, Guam or other U.S. possessions are responsible for completing all relevant portions of the form when any of the criteria are met requiring the filing of Form OE-417.
 - All electric utilities must provide information to a BA when necessary for their reporting obligations and file Form OE-417 in cases where a BA will not be involved.
 - Note: this includes U.S. based utilities for whom balancing authority oversight responsibilities are handled by electrical systems located across an international border.
 - Foreign utilities, handling U.S. balancing authority responsibilities, may wish to file this information voluntarily to the DOE. Any U.S.-based utility in this international situation must inform DOE that these filings will come from a foreign-based electric system.
- Computer centers and physical security departments of electric utilities may file directly with OE on the selected

COPIES OF SURVEY FORMS AND

areas identified in the Form OE-417instructions.

Note: This information does not have to flow directly into the officials running the BA and RC and then be forwarded to DOE.

 Joint filing: BAs' and RCs' can file notifications for joint filings. BAs can also file a combined report with electric utilities under their electrical oversight or all information is passed to the BA who then files a single report.

Note: OE requests that it be notified of those entities that plan to file jointly and of those electric utilities that want to file separately. (Notification can be done at the time of the filing.)

FUNCTIONAL RESPONSIBLITY OF FILING ENTITIES

All entities must file on all line items except for the following exclusions:

- Electric Utilities There are no exclusions allowed, all items need to be addressed.
- Balancing Authority (BA) Reporting on the count of customers (and the amount of load, if the BA is based at a Regional Transmission Organization or Independent System Operator) is required only for the Final Report. A BA located in vertically integrated utilities, a municipality, federal utility, state-owned or cooperative will report the amount of load and counts of customers.
- Reliability Coordinators (RC) Reporting on the count of customers is excluded. If the RC has an agreement with the Regional Transmission Organization to supply the customer counts, the RC can supply this information.
- Generating Entities Entities who have 300 MW or more
 of generation dedicated to one or more end-use customers
 (e.g. retail or industrial customers) are required to file the
 form under criterion number 5.
- Local Utilities in Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands, and the U.S. Territories - If the local electrical system is less than 300 MW, then only file if criteria 1, 2, 3 or 4 are met.
- Computer, telecommunication, and physical security offices that support the BA, RC, and electric utility or are located within the entity - These support centers or offices can file information, in lieu of the emergency offices, on criteria 1, 2, 9 or 10 in direct submissions to DOE. These support centers or offices will address no other incident types.

WHEN TO SUBMIT

Form OE-417 is considered an emergency form. Schedule 1 and lines 13-17 in Schedule 2 of the form must be submitted to the DOE only when at least one of the twelve criteria on page one of the form is met. Depending on the nature of the situation, the Form OE-417 must be filed either within one hour or six hours of the incident.

Criteria for Filing:

Within One Hour of Incident: Schedule 1 and lines 13-17 of Schedule 2 must be filed if one or more of the following criteria

are met

- Physical attack that causes major interruptions or impacts to critical infrastructure facilities or to operations
- Cyber event that causes interruptions of electrical system operations
- Complete operational failure or shut-down of the transmission and/or distribution electrical system
- Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system
- Uncontrolled loss of 300 Megawatts (MW) or more of firm system loads for more than 15 minutes from a single incident
- Load shedding of 100 MW or more implemented under emergency operational policy
- 7. System-wide voltage reductions of 3 percent or more
- 8. Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system

Note: If the incident or disturbance is having a critical impact on operational events, respondents must balance their operational requirements with this mandatory reporting requirement. In such instances, telephone notification to the DOE Emergency Operations Center (202-586-8100) is acceptable, pending a written submission of the completed form.

Within Six Hours of Incident: Schedule 1 and lines 13-17 of Schedule 2 must be filed if one or more of the following criteria are met and none of the eight criteria above apply

- Physical attack that could potentially impact electric power system adequacy or reliability; or vandalism which targets components of any security systems
- Cyber event that could potentially impact electric power system adequacy or reliability
- Loss of electric service to more than 50,000 customers for 1 hour or more
- 12. Fuel supply emergencies that could impact electric power system adequacy or reliability

Update Report – Schedule 1 and lines 13-17 in Schedule 2 should be re-submitted if significant information (or changes) regarding a reported incident or disturbance becomes available after the initial Emergency Alert or Normal Alert Report was submitted. Add the new information and/or changes to the original submission and resubmit the form, checking Update as the Alert Status on line 1 of the form.

Within 72 hours of incident a *Final Report* must be filed. An updated Form OE-417 Schedule 1 and all of Schedule 2 are both due within 72 hours of the incident to provide complete disruption information.

 Complete and revise Schedule 1 as necessary and check "Final" as Alert Status on line 1.

On Schedule 2 provide a narrative description of the event and actions taken to resolve the incident. There are several specific subject blocks of space shown on the Schedule that are provided to gather the specific information. Include, as appropriate, the cause of the incident or disturbance, change in frequency, the equipment damaged, critical infrastructures interrupted, and

affect on other electrical systems. Equivalent documents containing this information can be supplied to meet this requirement; this includes the North American Electric Reliability Corporation EOP-004 Disturbance Report.

SPECIFIC INSTRUCTIONS

<u>Definitions</u> of electric power industry terminology and other terms are available on the EIA website and in Appendix B, the Glossary for these instructions. Refer to the above for details on accessing the EIA website. Please refer to these definitions before completing the survey form.

Schedule 1

Criteria for filing Examine the Criteria for Filing on page 1 of the form to determine if a form needs to be filled out. Check all criteria (boxes 1–12) that apply to the situation or incident. If any of criteria 1-8 apply to the incident, then a report must be filed within one hour of the incident and respondents should check the Emergency Alert box on Line 1. If any of the boxes 9-12 are checked AND none of the boxes 1-8 have been checked, then the form must be filed within 6 hours of the incident and respondents should check the Normal Alert box on the Alert Status (line 1). An updated Schedule 1 also should be submitted with all of Schedule 2 filled out as the Final Report, 72 hours after the incident.

Organization Filing section Lines 1 – 3

- Line 1, Alert Status: check the Emergency Alert box if at least one of criteria 1-8 apply; check Normal Alert box if only one or more of criteria 9-12 apply; check Update box if this filing is a re-submission due to important changes or corrections from the prior submission; check Final box to indicate this is the final report submitted for the incident, which should be filed 72 hours after the incident or disturbance was detected to have met one of the 12 criteria.
- Lines 2 and 3: enter the name and address of the organization filing the report.

Incident and Disturbance Data -- Completely fill out all parts of Lines 4-13 that apply

- Line 4 Geographic Area(s) Affected, enter the name of the State(s) and political subdivision(s) (i.e., city, town, county, etc.) affected by the incident. Please identify in general terms the largest area affected by the incident. (This does not represent a requirement to list all the cities and towns in a region or State.) If you are unsure what geographic areas are affected at the time of the initial submission of Schedule 1 of the form, check the unknown box; when the geographic locations are determined fill in this data on line 4 of the form and re-submit the form, checking the Update or Final Alert Status box on line 1, as applicable.
- Line 5 Date/Time Incident Began (mm-dd-yy/hh:mm), enter the month, day, and year, the time, in 24-hour time format, and check the appropriate time zone when that the incident began.
- Line 6 Date/Time Incident Ended (mm-dd-yy/hh:mm), enter the month, day, and year, the time, in 24-hour time format, and check the appropriate time zone when the event no longer met any of the 12 criteria.
- Line 7 Did the incident/disturbance originate in your system/area? If known, check the Yes or No box; otherwise check the unknown box. If the unknown box is checked at the time of initial submission, and later this is determined, check the Yes or No box as applicable when re-

- submitting the form as either an Update or Final report.
- Line 8 Estimate of Amount of Demand Involved (Peak Megawatts), enter the amount of the peak demand involved over the entire incident. In the Emergency or Normal alert, if amount is unknown and you are unable to make an estimate, then leave this blank. Provide the actual number or an estimate in any Update notice or Final report.
- Line 9 Estimate of Number of Customers Affected, enter the total number of customers affected during the entire incident or disturbance which could be more than the peak number in the case of rolling blackouts. If this number cannot be estimated when the form is initially submitted, check the unknown box; when the number of customers can be estimated, fill in this data on line 9 of the form and re-submit the form, checking the Update or Final Alert Status box on line 1, as applicable.
- Line 10 Type of Emergency check all options that apply:
 - Physical Attack: An attack on any part of your system suspected of being a deliberate attack or sabotage that disrupts system operations or had the intent to harm the national security of the United States. Note: If burglary or vandalism is suspected check Vandalism under Line 12 instead.
 - Cyber Event: A disruption on the electrical system and/or communication system(s) caused by unauthorized access to computer software and communications systems or networks including hardware, software, and data.
 - Major Transmission System Interruption: An event has occurred that required action(s) to relieve voltage or loading conditions; or transmission separation or islanding has occurred.
 - Major Generation Inadequacy: Insufficient generation exists to meet demand, or unexpected problems or inadequacies develop that impact operational and/or system reliability.
 - Major Distribution System Interruption: A significant uncontrolled loss of load has occurred, or an unexpected controlled loss of load is required.
 - Other: Check if the type of emergency is known, but not one of those listed above or if the type of emergency is unknown.
 - Additional Information/Comments: Include any description of the type of emergency which can be publically released.
- Line 11, Cause of Incident, check all of options that apply:
 - Complete Electrical System Failure: check if total system failure occurred.
 - Electrical System Separation Islanding: check if Islanding has occurred.
 - Inadequate Electric Resources to Serve Load: check if resource constraints have been identified or are expected to happen that limit the availability of power sources to serve load or if electric resources are not available.
 - Actual or Potential Attack/Event: check if there was an actual attack or reason to suspect that the disruption was

intentionally caused (or that there was an attempt), check all of the following that may apply:

Physical Attack: for disruption of the system caused by physical means such as destruction of property or an attack on any security system.

Cyber Event: for disruption of the electrical system and/or communication system caused by unauthorized access to computer software and communications systems or networks including hardware, software, and data.

Vandalism -- the criteria for reporting of vandalism have been separated into two parts. The primary requirement is defined by the severity of impact.

- i. Report incidents that include vandalism or threat actions which attempt to or circumvent significant security systems which protect key components used to operate the Nation's electric power systems have to be reported at all times.
- ii. A secondary reporting requirement on vandalism will not be activated for much/all of the three-year clearance cycle. This secondary requirement would be imposed on reporting of all other types of attempts or damage inflicted upon security protection within the electric power industry (e.g., cutting of locks and fences), but the obligation to report at this level and the duration of time period for which these reports have to be will be reviewed by DOE. If this becomes a reporting requirement, DOE will notify the respondents that the reporting threshold has to be met and will identify the reporting population for the duration of reporting at that level. The notification will be done by e-mail to the respondents and by an alert to critical energy infrastructure protection centers. The threat or other determination that obligates' DOE to activate this lower reporting level is directly linked to national security concerns.
- Transmission Equipment: check if failure of or damage to transmission equipment occurred, causing disruption to service or reliability.
- Loss of Part or All of a High Voltage Substation or Switchyard: check if substations or switchyards (230+ kV AC or 200+ kV DC) were adversely affected, causing disruption to service or reliability.
- Weather or Natural Disaster: check if severe weather (thunderstorms, ice storms, etc.) or natural disasters (hurricanes, floods, tornadoes, solar activity, etc.) have caused service disruption.
- Operator Action(s): check if service or reliability disruption is attributable to operator action.
- Fuel Supply Deficiency: check if an existing or anticipated fuel supply emergency situation occurred.
- Unknown Cause: check if the cause of the disruption is unknown.
- Other: Check if the cause of the disruption is known, but not one of those listed above.
- Additional Information/Comments: Include any description of the cause of the incident which can be publically released.
- Line 12, Actions Taken, check all of options that apply:

- Shed Firm Load: check if, in order to maintain the bulk power system, system operators called for load shedding of 100 MW or greater of firm-load customers' demand, or if firm load customers were disconnected from the bulk power system during emergency conditions.
- Reduced Voltage: check if system wide voltage reductions of 3 percent or greater were implemented.
- Made Public Appeals: check if public appeals to reduce the use of electricity for purposes of maintaining the continuity of the bulk electric power system were issued. Check only if appeals were issued during emergency conditions. Do not check if appeals were energy conservation related.
- Implemented a Warning, Alert, or Contingency Plan: check if existing short-term contingency plans were implemented to reduce demand, maximize generation to maintain the bulk power system, and/or address other reliability issues.
- Shed Interruptible Load: check if, in order to maintain the bulk electric system, system operators called for load shedding of 100 MW or greater of pre-selected interruptible load customers' demand, or if those interruptible customers were disconnected from the bulk power system during emergency conditions. Do not check if terminations were under contract agreements during normal operations.
- Repaired/Restored: check if system was repaired or restored.
- Mitigation(s) Implemented: check if mitigations for the event were implemented
- Other: check if other actions were taken
- Additional Information/Comments: Include any description of the actions taken that which be publically released.
- For items that are unknown, check the "unknown" box, and update that Line when the information becomes available in as an update filing or final report.

Schedule 2

When to File: Lines 13-17 of Schedule 2 must be filed 1 or 6 hours after the incident. All of Schedule 2 must be filed within 72 hours of the incident along with an updated Schedule 1.

- Lines 13-17 Name of Official that needs to be contacted for follow up. Fill in contact information on official to contact for follow up.
- **Line 18 Narrative**: Provide a description of the incident and actions to resolve it.
- Provide an estimate when restoration of customers who are able to receive power will be complete.
- Provide the information on generators, lines system reference, substations, system separation, etc causing or impacted by the event.
- Provide details of any unit, process, system or critical component failures. Use additional sheets if necessary

SPECIAL INVESTIGATIONS

Under its authorities, DOE may instigate a special investigation

into incidents affecting the electric power industry that involve more than BAs and Reliability Coordinators. DOE may address any energy concern or may contact any utility or business entity that participates in the electric power industry for technical information concerning a particular incident. These special investigations are infrequent.

PROVISIONS REGARDING CONFIDENTIALITY OF INFORMATION

The information reported on Schedule 1 will be considered "public information" and may be publicly released in company or individually identifiable form, and will not be protected from disclosure in identifiable form.

All information on Schedule 2 of the form will be protected and will not be disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the DOE regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. The DOE will protect the information in accordance with its confidentiality and security policies and procedures.

The Federal Energy Administration Act requires the DOE to provide company-specific protected data to other Federal agencies when requested for official use. The information reported on this form may also be made available, upon request, to another component of DOE; to any Committee of Congress, the General Accountability Office, or other Federal agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order. The information may be used for any nonstatistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

Disclosure limitation procedures are applied to the statistical data published from OE-417 survey information to ensure that the risk of disclosure of identifiable information is very small.

The data collected on Form OE-417, Electric Emergency Incident and disturbance Report will be used by DOE to meet its overall national security and Federal Emergency Management Agency's National Response Framework responsibilities.

SANCTIONS

DOE is authorized to collect the information on Form OE-417 under the Federal Energy Administration Act of 1974 (Pub. L. No. 93-275, 15 U.S.C. 761 et seq.) as amended, the Federal Power Act (16 U.S.C 791a et seq.), the DOE Organization Act (Public Law No. 95-91, 42 U.S.C. 7101 et seq.) as amended, and the Public Utility Regulatory Policies Act of 1978, Sect. 209 (Public Law No. 95-317, 92 stat. 3117, 16 U.S.C. 824a-2). The timely submission of Form OE-417 by those required to report is mandatory under Section 13(b) of the Federal Energy Administration Act of 1974 as amended. Failure to respond may result in a penalty of not more than \$2,750 per day for each civil violation or a fine of not more than \$5,000 per day for each criminal violation. The government may bring a civil action to prohibit reporting violations, which may result in a temporary restraining order or a preliminary or permanent injunction without bond. In such civil action, the court may also issue mandatory injunctions commanding any person to comply with these reporting requirements. Title 18 U.S.C. 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.

FILING FORMS WITH THE FEDERAL GOVERNMENT AND ESTIMATED REPORTING BURDEN

Respondents are not required to file or reply to any Federal collection of information unless it has a valid OMB control number. The public reporting burden for Schedule 1 is estimated to average 10 minutes per response and 2 hours for Schedule 2, including reviewing the form and instructions, gathering information, and submitting the form during an emergency situation. In addition DOE estimates there will be additional burden for refresher training of approximately 2 hour annually for each entity subject to reporting on Form OE-417. The burden per response has been calculated to be 2.03 hours on average. Send comments regarding this burden estimate or any other aspect of this collection of information including suggestions for reducing this burden to: Office of Electricity Delivery and Energy Reliability, OE-30, Infrastructure Security and Energy Restoration Division, 1000 Independence Avenue, S.W., Washington, D.C. 20585; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

U.S. Department of Energy Electricity Delivery and Energy Reliability Form OE-417

ELECTRIC EMERGENCY INCIDENT AND DISTURBANCE REPORT

Form Approved
OMB No. 1901-0288
Approval Expires 01/31/15
Burden Per Response: 2.03 hours

APPENDIX A	QUICK REFERENCE GUIDE
WHEN TO REPORT	
Incident	File if Meet Criteria
1. Physical attack	If causes major interruption or major negative impact on critical infrastructure facilities or to operations.
2. Cyber event	If causes interruptions of electrical system operations.
Complete operational failure of electrical system	If isolated or interconnected electrical systems (transmission or distribution) suffer electrical system collapse.
Electrical System Separation (Islanding)	If part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system.
5. Uncontrolled loss of firm system load	If 300 MW or more for greater than 15 minutes from a single incident.
6. Load shedding	If 100 MW or more implemented under emergency operational policy.
7. Voltage reductions	3 percent or more applied system-wide to maintaining the continuity of bulk electric system
Public appeal to reduce use of electricity	If in emergency condition only to reduce demand.
Physical attack which targets any security system or could impacts electric power system reliability	If any component of any physical security system is damaged by an attack or is suspected to have been altered or vandalism which targets components of any security systems.
Cyber event which could impact electric power system reliability	If the attempt occurred or was mitigated before causing an interruption or impact.
11. Loss of electric service	If greater than 50,000 customers for 1 hour or more.
12. Fuel supply emergencies	Fuel inventories or hydro project water storage levels at 50 percent or less of normal, with projected continued downward trend; emergency generation requiring abnormal use of a particular fuel.
WHO MUST REPORT	
Entity – Functional Responsibility	What is Excluded
Electric Utilities	There are no exclusions allowed. All items need to be addressed.
Balancing Authority (BA)	Reporting on the count of customers (and the amount of load, if the BA is based at a Regional Transmission Organization (RTO) or Independent System Operator) is required only for the Final Report. A BA located in vertically integrated utilities, a municipality, federal utility, stateowned or cooperative will report the amount of load and counts of customers.
Reliability Coordinators (RC)	Reporting on the count of customers is excluded. If the RC has an agreement with the RTO to supply the customer counts, the RC can supply this information
Generating Entities	Entities who have 300MW or more of generation detected to one or more end-use customers are required to file the form under criterion #5.
Local Utilities in Alaska, Hawaii, Puerto Rid the U.S. Virgin Islands, and the U.S. Territo	
Computer, telecommunication, and physics security offices that support the BA, RC, at electric utility or located within the entity	These support centers or offices can file information, in lieu of the emergency offices, on
WHEN TO SUBMIT	
Schedule	Time Limit
Submit Emergency Alert - Schedule 1 and lines 13-17 of Schedule 2	Within 1 hour after the incident if any of criteria 1-8 is met.
Submit Normal Alert - Schedule 1 and lines 13-17 of Schedule 2	Within 6 hours after the incident if any of criteria 9-12 is met and criteria 1-8 has not been met.
Submit Update - Schedule 1 and lines 13- of Schedule 2	As applicable after initial submission if significant new information is available or if significant changes occurred since submission.
Submit Final - Schedule 1 and Schedule 2	Within 72 hours after incident.
HOW TO SUBMIT	
How	Website/E-mail Address/Phone Number
Online	http://www.oe.netl.doe.gov/oe417.aspx
E-mail	doehqeoc@hq.doe.gov
Telephone (Staffed 24/7)	(202) 586-8100
Fax	(202) 586-8485 (only when other methods are not available)

APPENDIX B

GLOSSARY

Balancing Authority (BA): The responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

Complete Operational Failure: An emergency event where an electrically isolated or interconnected electrical system suffers total system collapse that results in the shutdown of the transmission and/or distribution electrical system. If communications are affected, then reporting is done as soon as practical after restoration of an operational control center.

Cyber Event: A disruption on the electrical system and/or communication system(s) caused by unauthorized access to computer software and communications systems or networks including hardware, software, and data.

Cyber/computer/telecom: Cyber/computer systems are those used in a power entity organization for electric power operations, power marketing or corporate IT (information technology) functions.

Electric Utility: A corporation, person, agency, authority, or other legal entity or instrumentality aligned with distribution facilities for delivery of electric energy for use primarily by the public. Included are investor-owned electric utilities, municipal and State utilities, Federal electric utilities, and rural electric cooperatives. A few entities that are tariff based and corporately aligned with companies that own distribution facilities are also included

Electrical System Separation - Islanding: Part or parts of the utility grid remain(s) operational in an otherwise blacked out area.

Firm Load: Power provided to customers that is continuously available on demand and which is subject to interruption only under extreme circumstances.

Fuel Supply Emergency: Existing or anticipated fuel supply situations that could threaten continuity of the bulk electric power supply system, including:

- 1. Fuel inventories or hydro project water storage levels at 50 percent or less of normal, with a projected continued downward trend.
- 2. Emergency generation requiring abnormal use of a particular fuel with the potential to reduce supply or stocks to a level that threatens the reliability or adequacy of electric service.

Generating Entity: Any combination of physically connected generators, reactors, boilers, combustion turbines, and other prime movers operated together to produce electric power.

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.

Interruptible Load: This Demand-Side Management category represents the consumer load that, in accordance with contractual arrangements, can be interrupted at the time of annual peak load by the action of the consumer at the direct request of the system operator. Reporting on the Form OE-417 is limited to those interruptions implemented under emergency operational policy or contingency plans.

Major Distribution System Interruption: Loss of load has occurred in a controlled or uncontrolled fashion that exceeds the reporting thresholds.

Major Generation Inadequacy: When there is insufficient generation to meet demand, forcing a service interruption or disruption.

Major Transmission Interruption: The disruption of the movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to other electric systems that will deliver it in their distribution systems to end-use consumers. Major interruptions are those disruptions that impact the reliability of the electrical system that cannot be addressed by use of alternate transmission paths or cause the potential of additional system disabling contingencies. These transmission events require action(s) to relieve voltage or loading conditions, or transmission separation or islanding has occurred.

Regional Transmission Organization (RTO): Independent entities that control and operate regional electric transmission grids free of any discriminatory practices.

Reliability Coordinators: The entity that is the highest level of authority who is responsible for the reliable operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations.

Telecommunications: Critical telecommunications are those systems that are essential for the power industry system operation including wireline and wireless, both voice and data.

Transmission Operator: The entity responsible for the reliability of its "local" transmission system, and that operates or directs the operations of the transmission facilities.

Voltage Reduction: Any intentional reduction of system voltage for reasons of maintaining the continuity of service of the bulk electric system.