

ERCOT
OPERATING GUIDE NO. III

EMERGENCY OPERATION

B. ADVERSE WEATHER OPERATION

The purpose of this Guide is to provide more uniform reliability during adverse weather conditions. This guide is to be used for scheduling generation to serve the load during times when contingencies are most likely and it should not limit the decision of the control center operator in minute-by-minute operation. The operator's judgement, based on current information, should result in prudent operation of the system.

ALERT

- A. Any Control Area having information on significant weather changes, oil burning possibilities or any fuel shortages should notify the appropriate Security Center. The appropriate Security Center will advise each Control Area and the other Security Center of the pending adverse operating conditions.
- B. The Security Center(s); either North, South or jointly, will declare a Wet Weather, Cold Weather, or Severe Cold Weather Alert, as outlined below, with the effective time of implementation whenever the expected weather or system conditions may significantly limit ERCOT's ability to serve the system load.
- C. Each Control Area will maintain spinning reserve obligations in accordance with ERCOT Operating Guides No. III.D. and No. II.A. Additional reserve need not be responsive reserve nor maintained with emergency help.
- D. Types of Alerts are listed below with specific additional requirements:
 1. Wet Weather Alert - declared whenever rain storms or anticipated hurricanes may result in significant capability loss due to coal/lignite handling limitations, loss of other power plants or loss of bulk power transmission lines.

Each Control Area will increase its spinning reserve by an amount at least equal to its responsive spinning reserve obligation as soon as possible (this additional reserve need not be responsive).

2. Cold Weather Alert - declared whenever temperatures in the mid-to-low 20's are likely and maximum temperatures are expected to remain near or below freezing or significant oil burning is imminent.
 - a. Each Control Area will increase its spinning reserve by an amount at least equal to its responsive spinning reserve obligation as soon as possible (this additional reserve need not be responsive).

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B. ADVERSE WEATHER OPERATION (cont.)

- b. Actual capabilities will be used for ERCOT Information reporting.
 - c. Oil will be circulated and/or test fired or minimum oil burned on curtailable units before freezing temperatures are reached.
 - d. Oil capabilities will be used for capacity planning in each Control Area when oil burning is imminent or in effect.
3. Severe Cold Weather Alert - declared whenever temperatures in the lower teens are likely and the maximum temperatures are expected to remain in the mid 20's or below or significant oil burning is imminent.
- a. Each Control Area will increase its spinning reserve by an amount at least equal to its responsive spinning reserve obligation as soon as possible (this additional reserve need not be responsive).
 - b. Actual capabilities will be used for ERCOT Information reporting.
 - c. Oil will be circulated and/or test fired or minimum oil burned on curtailable units before freezing temperatures are reached.
 - d. Oil capabilities will be used for capacity planning in each Control Area when oil burning is imminent or in effect.
 - e. All units available for service within the anticipated time frame of the emergency but having start-up times greater than one hour, shall be brought on-line without regard to spinning reserve requirements.
 - f. Control Areas will inform their Security Center of hardships incurred or anticipated in maintaining all units on line during minimum load hours. Control Areas will attempt solutions worked out on an informal basis through Security Centers.
- E. Each Control Area will report back to their respective Security Center when they are in compliance with the alert.
- F. Security Centers will cancel Wet Weather, Cold Weather or Severe Cold Weather Alerts as soon as weather conditions permit.

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C. SHORT SUPPLY ADVISORY

The ERCOT Security Centers will review projected conditions and will notify the Control Areas when a capacity short supply (available generating capacity will not meet forecast peak loads and spinning reserve requirements) is possible. Upon notification, each Control Area will review its particular situation and report back to the respective Security Center if any corrective actions can be taken.

If after confirming that the forecasted conditions still indicate that short supply conditions are highly probable, the Security Centers will issue an ERCOT Short Supply Advisory. Upon notification of this advisory, each Control Area will prepare to implement applicable steps of the Emergency Electric Curtailment Plan (EECP). The designated Security Center will notify the ERCOT office of the advisory.

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D. EMERGENCY ELECTRIC CURTAILMENT PLAN

I. GENERAL

At times it may be necessary to reduce electrical demand on one or more of the ERCOT member systems because of a temporary decrease in available electricity supply. The reduction in supply could be caused by emergency outages of generators, transmission equipment, or other critical facilities; by short-term unavailability of fuel or generation; or by requirements or orders of government agencies. To provide an orderly, predetermined procedure for curtailing demand during such emergencies, ERCOT has established this Emergency Electric Curtailment Plan (EECP).

The objective of the EECP is to provide for maximum possible continuity of service while maintaining the integrity of the ERCOT bulk power transmission system in order to reduce the chance of cascading outages.

II. OPERATING PROCEDURES

The Control Area operators, in coordination with the ERCOT Security Centers, have the authority to make and carry through decisions which are required to operate the ERCOT System during emergency or adverse conditions. Each Control Area will have sufficiently detailed operating procedures for emergency or short supply situations and for restoration of service in the event of a partial or complete system shutdown. These procedures will be distributed to the personnel responsible for performing specified tasks to handle emergencies, remedy short supply situations, or restore service.

Each Control Area will endeavor to maintain transmission ties intact if at all possible. This will: (1) permit rendering the maximum assistance to a utility experiencing a deficiency in generation, (2) minimize the possibility of cascading loss to other parts of the system, and (3) assist in restoring operation to normal.

These emergency operating procedures will contain information for the following:

- a. Utilization and redistribution of spinning reserve to the extent permitted by system conditions.
- b. Maximum utilization of system capability.
- c. Maintain station service for nuclear generating facilities.
- d. Securing startup power for power generating plants.
- e. Operating power generating plants isolated from ERCOT without communication.

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D. EMERGENCY ELECTRIC CURTAILMENT PLAN (cont.)

- f. Restoration of service to critical loads such as:
 - Military facilities.
 - Facilities necessary to restore the electric utility system.
 - Law enforcement organizations and facilities affecting public health.
 - Communication facilities.
 - Larger groups of customers.
- g. Restoration of service to all customers following major system disturbances.

III. IMPLEMENTATION

The Security Centers shall be responsible for monitoring the system, declaring the emergency, notifying all Control Areas, and coordinating the implementation of the following steps while maintaining the maximum transfer limitations. The Security Centers will evaluate conditions and may request that Control Area(s) utilize generation control modes as appropriate. One Security Center will be designated to implement the plan.

The deficit Control Area(s) will take the lead in implementing the applicable steps and in shedding load. For the purpose of this plan, deficit Control Area is one that cannot maintain its load and responsive spinning reserve obligations without ERCOT emergency assistance.

Some of the steps will not be applicable if transfer limitations exist. There may be insufficient time to implement all steps. The Security Centers can immediately implement Condition 8 of the plan any time the system frequency is below 59.8 Hz and will immediately implement Condition 8 any time the frequency is below 59.5 Hz.

Percentages for Condition 8 will be based on previous year's Control Area peak loads, as reported to ERCOT, and will be reviewed by the Security Centers and modified annually.

When implementing the plan, Security Centers declare the conditions; Control Areas implement actions under that condition (and all above if not previously accomplished) and report back to the Security Centers when accomplished. The steps for implementing the plan are contained on the following page.

**IMPLEMENTATION STEPS OF THE
ERCOT EMERGENCY ELECTRIC CURTAILMENT PLAN**

CONDITION 1 - MAINTAIN ERCOT RESPONSIVE SPINNING RESERVE OBLIGATION

- ALL CONTROL AREAS
 - Order needed available units on line.
 - Utilize non-ERCOT resources as available.
- SECURITY CENTERS
 - Distribute available reserves among Control Areas up to maximum transfer capability or until each Control Area has only one-half of its spinning reserve requirement remaining.

CONDITION 2 - MAINTAIN ERCOT SPINNING RESERVE EQUAL TO LARGEST UNIT IN OPERATION

- DEFICIT CONTROL AREAS
 - Remove all interruptible load.
 - Reduce customer loads by reducing distribution voltage or other load management measures.

CONDITION 3

- ALL CONTROL AREAS
 - Remove increments of interruptible load that are not controlled by high set underfrequency relays.
 - Reduce in-house non-essential loads.

CONDITION 4

- ALL CONTROL AREAS
 - Remove all remaining increments of interruptible loads limited only by the amount of load required to prevent damage to customers' equipment.

CONDITION 5

- DEFICIT CONTROL AREAS
 - Utilize other resources outside ERCOT by implementing block load transfer schemes.
 - Request voluntary curtailment of large industrial customers.
 - Appeal by media for voluntary load reduction.
- SECURITY CENTERS
 - Redistribute available reserves among Control Areas up to maximum transfer capability.

CONDITION 6 - MAINTAIN 60.0 Hz (NO AVAILABLE SPINNING RESERVE)

- ALL CONTROL AREAS
 - Reduce customer loads by reducing distribution voltage or other load management measures.
 - Request voluntary curtailment of large industrial customers.
 - Utilize other resources outside ERCOT by implementing block load transfer schemes.
 - Appeal by media for voluntary load reduction.
 - Confirm that all generators are at maximum generation and other resources are being maximized.

CONDITION 7 - MAINTAIN 59.8 Hz OR GREATER AND MAXIMUM TRANSFER LIMITATIONS

SECURITY CENTERS will direct Control Areas that cannot meet their load without ERCOT emergency assistance to shed as much firm load as possible to eliminate the deficiency, keeping in mind the need to protect the safety and health of the community and the essential human needs of the citizens.

CONDITION 8 - MAINTAIN 59.8 Hz AND MAINTAIN MAXIMUM TRANSFER LIMITATIONS

SECURITY CENTERS will direct ALL CONTROL AREAS to shed 100 MW blocks of firm load distributed as listed below in order to maintain a steady state system frequency of 59.8 Hz.

COA = 3.4	CPL = 7.6	HLP = 28.0	STEC = 0.7	TUE = 41.7
COB = 0.4	CPS = 6.5	LCRA = 4.8	TMPP = 4.1	WTU = 2.8