



**ERCOT Presentation to Joint
Senate Committees**

February 2, 2011 Grid Emergency Events

Trip Doggett, CEO

February 15, 2011

ERCOT Region: 22 Million Texans

75% of Texas land area
200,000 square miles

85% of Texas load

65,776 MW peak demand
Set Aug. 23, 2010

57,282 MW winter peak demand
Set Feb. 10, 2011

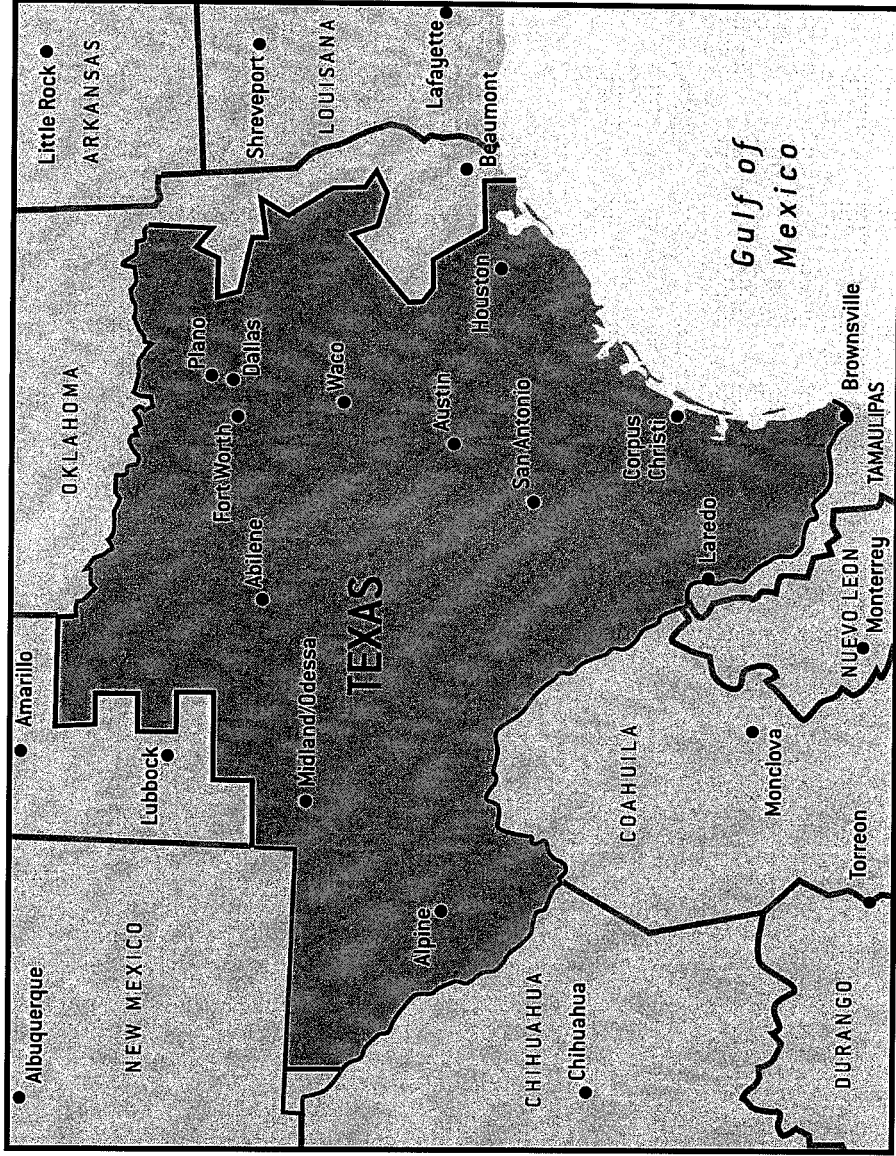
319 billion kilowatt-hours energy produced, 2010

\$32 billion market

22 million Texans served
~6.5 million households in competitive choice areas

ERCOT does not include:

- El Paso area
- Texas Panhandle
- Northeast Texas
 - Longview, Marshall and Texarkana
- Southeast Texas
 - Beaumont, Port Arthur, and the Woodlands



A record-breaking arctic front was approaching prior to February 2, 2011

Extremely Cold Weather Grips Texas

February 1, 2011
Major Winter Storm Expected to Develop Over Texas

February 2, 2011
Winter Returns with Fury

February 1, 2011
The Coldest Week for North Texas in 22 Years

February 1, 2011
A Strong Arctic Cold Front Will Move Through Deep South Texas on Tuesday

February 2, 2011
Deep Arctic Air Entrenched Across Texas

ERCOT's Pre-Event Preparation

Jan 28-31: Transmission outages – cancelled, withdrawn or delayed
 10-345 kV lines
 27-138 kV lines
 3-69 kV lines
 2-345/138 kV autotransformer
 1-138/69 kV autotransformer

Jan 31 at 6:30am:

Operating Condition Notice issued, "A cold front is approaching with temperatures anticipated to be in mid to low 18 degree range and maximum temperature expected to remain near or below freezing impacting 50% of more of major metropolitan areas. Estimated starting time Tuesday 2/1/11 09:00".

Feb 1 at 4:00pm:

13 Generating Resources were committed in the Reliability Unit Commitment process.

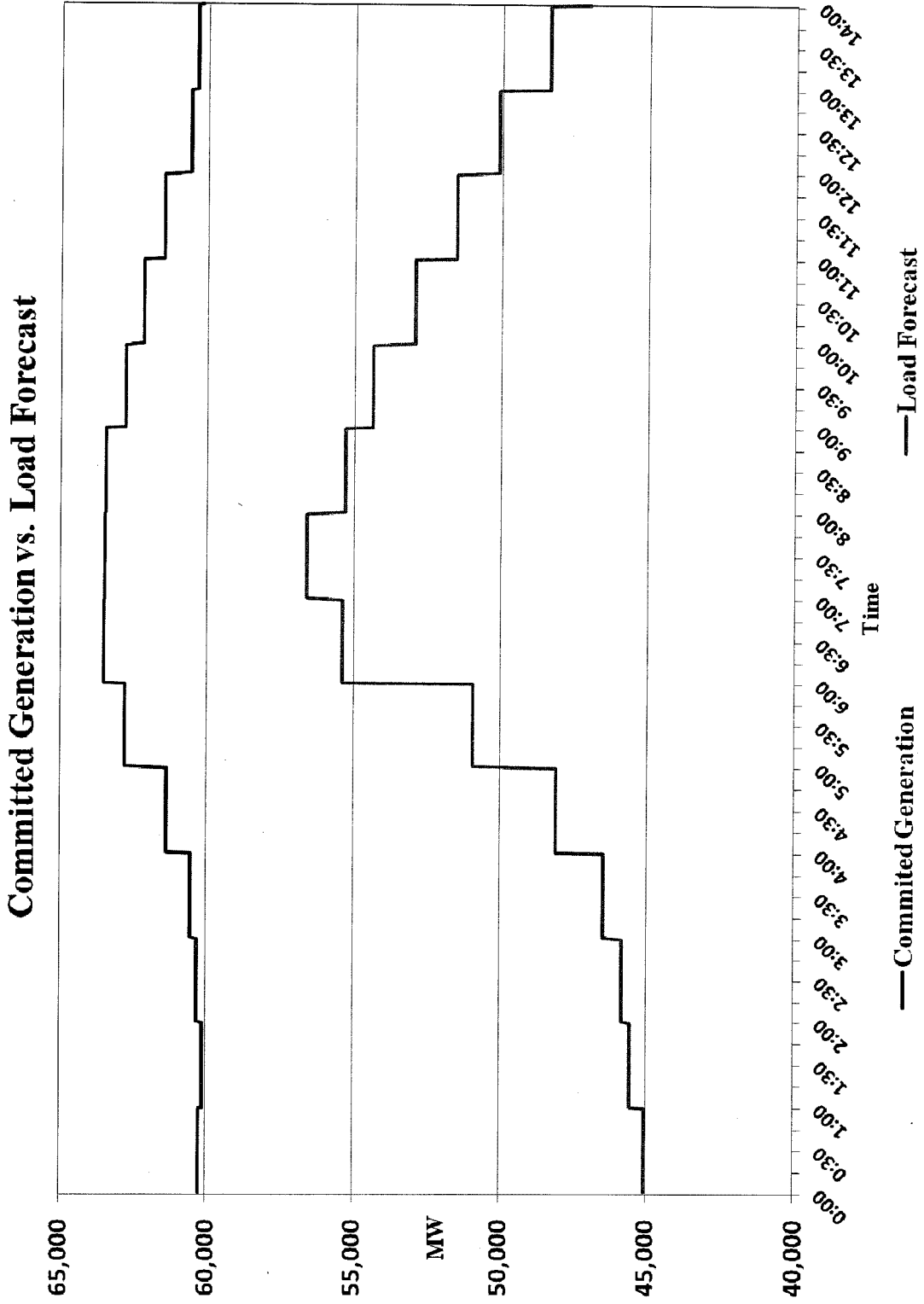


Jan 31 at 4:25am:
 Requested MCSES 8 to be on-line by 10:00 on Feb 1; this generator has a long start-up lead time.

Jan 31 at 10:30am:
 Requested LHSES 1 on-line burning oil.

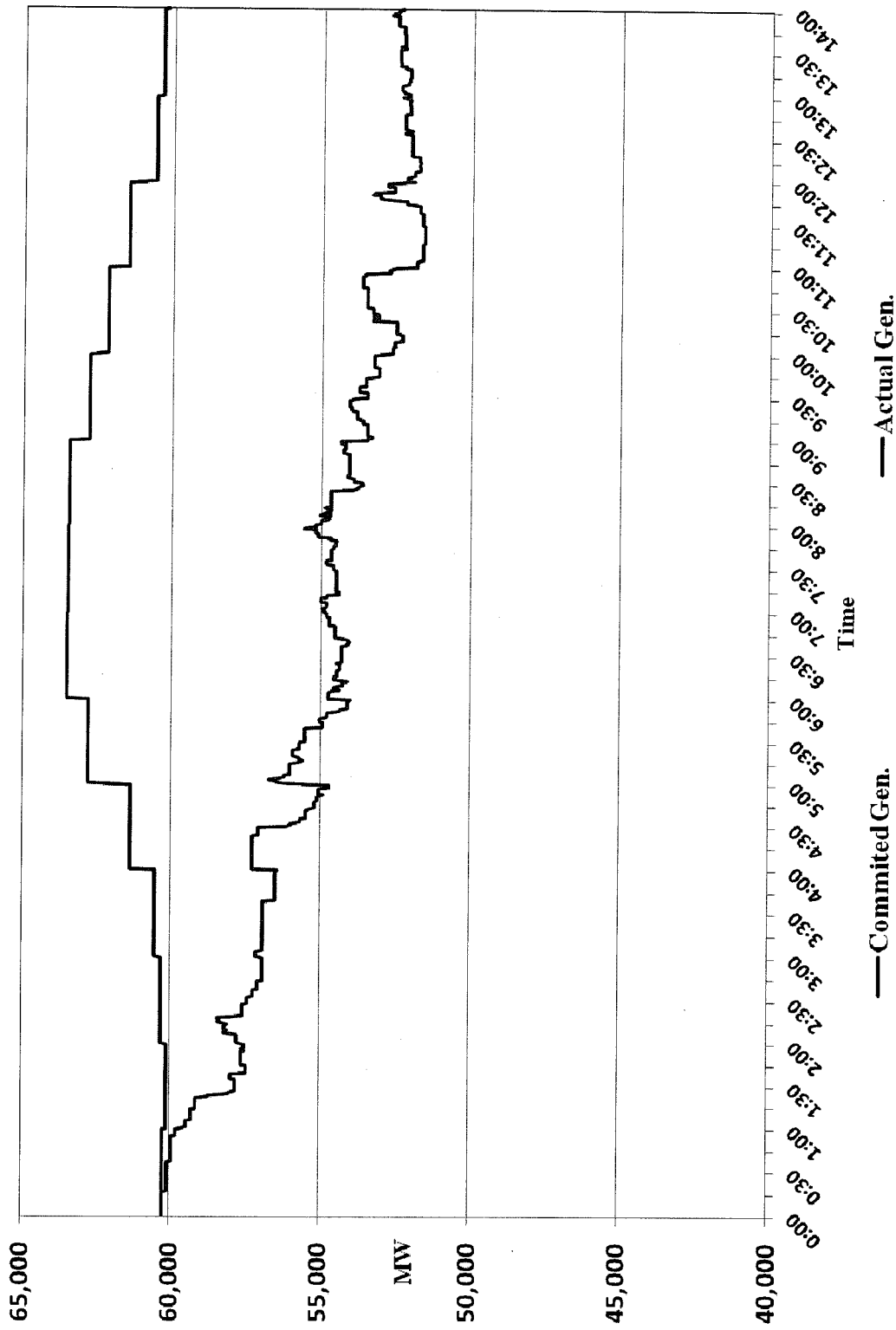
Feb 1 at 09:05am:
 Advisory issued, expecting temperatures in teens to low 20F; maximum temperatures near or below freezing impacting 50% or more of major metro areas.

ERCOT preparations

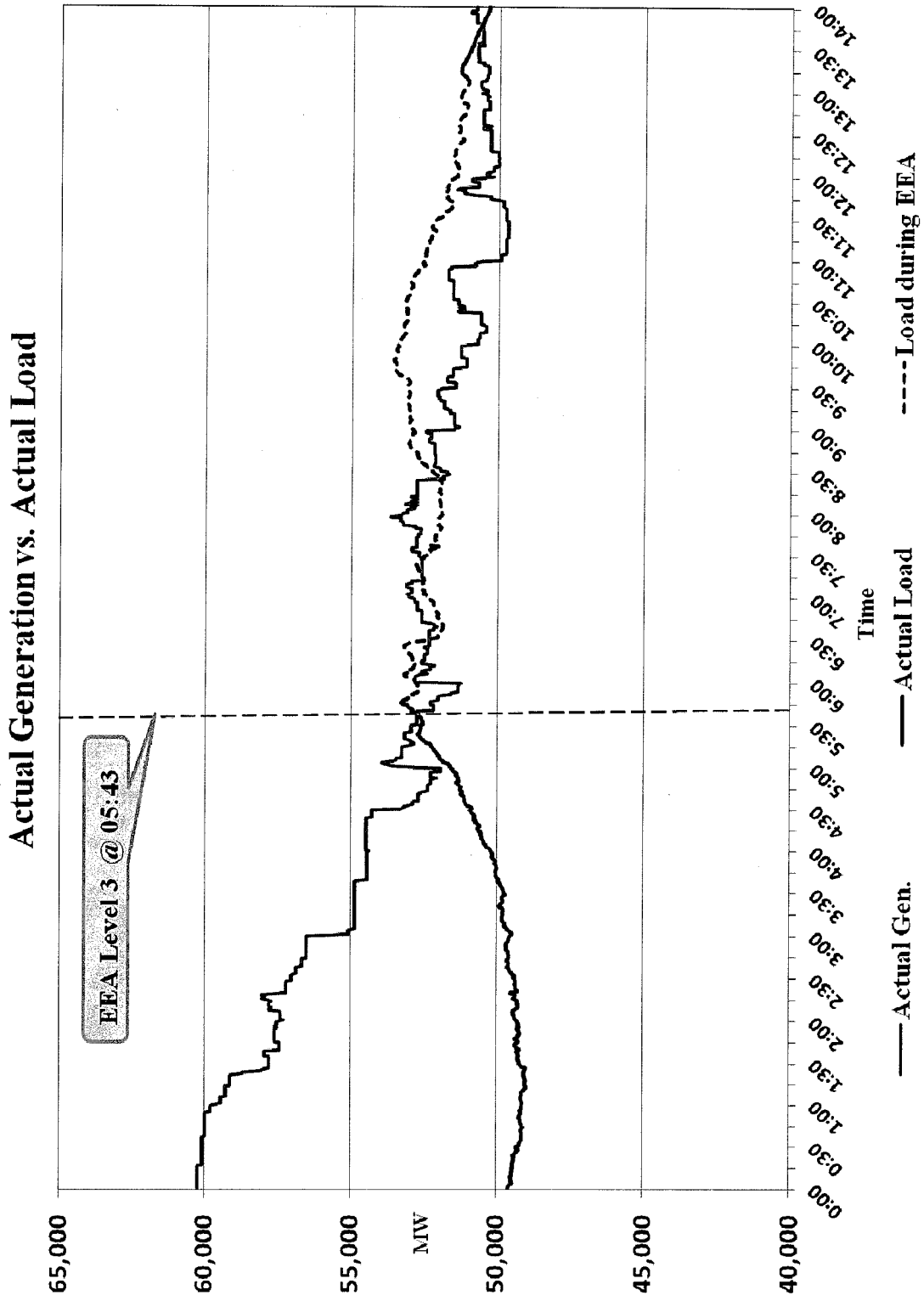


More than 8,000 megawatts (MW) of generation unexpectedly dropped offline overnight

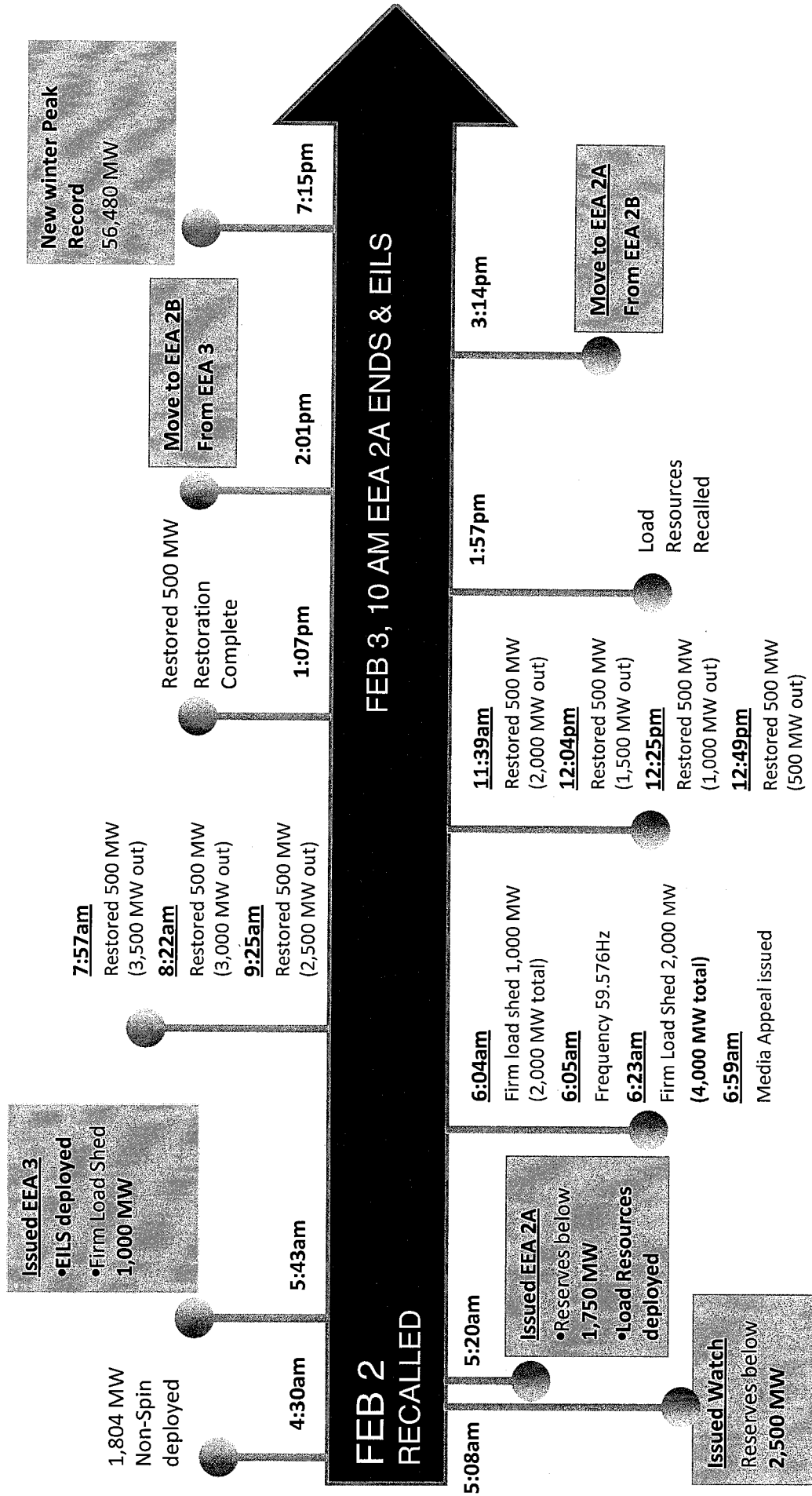
Committed Generation vs. Actual Generation



ERCOT implemented emergency procedures when available generation was no longer sufficient to serve the load

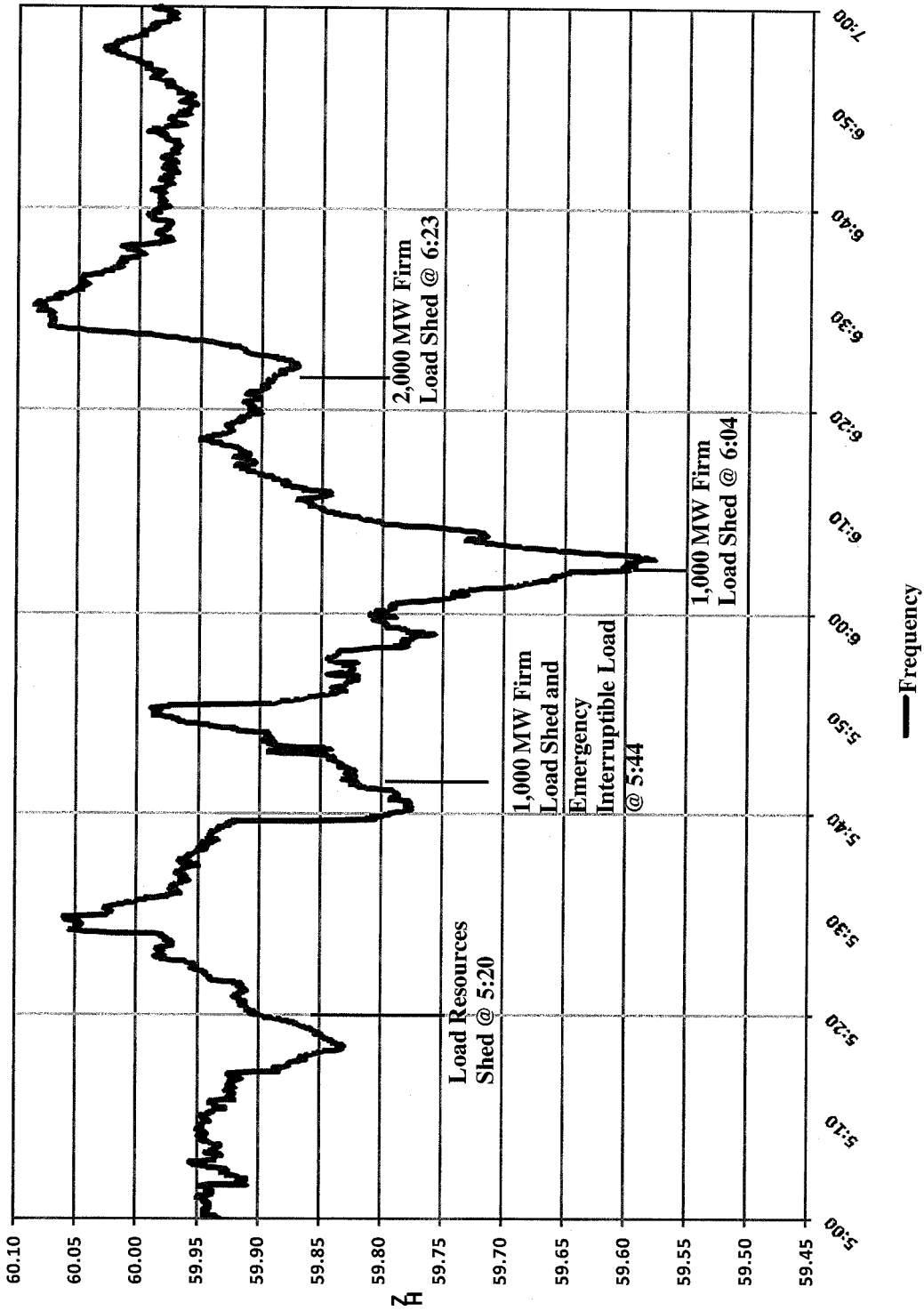


A timeline of the emergency steps that were taken leading to rotating outages in ERCOT

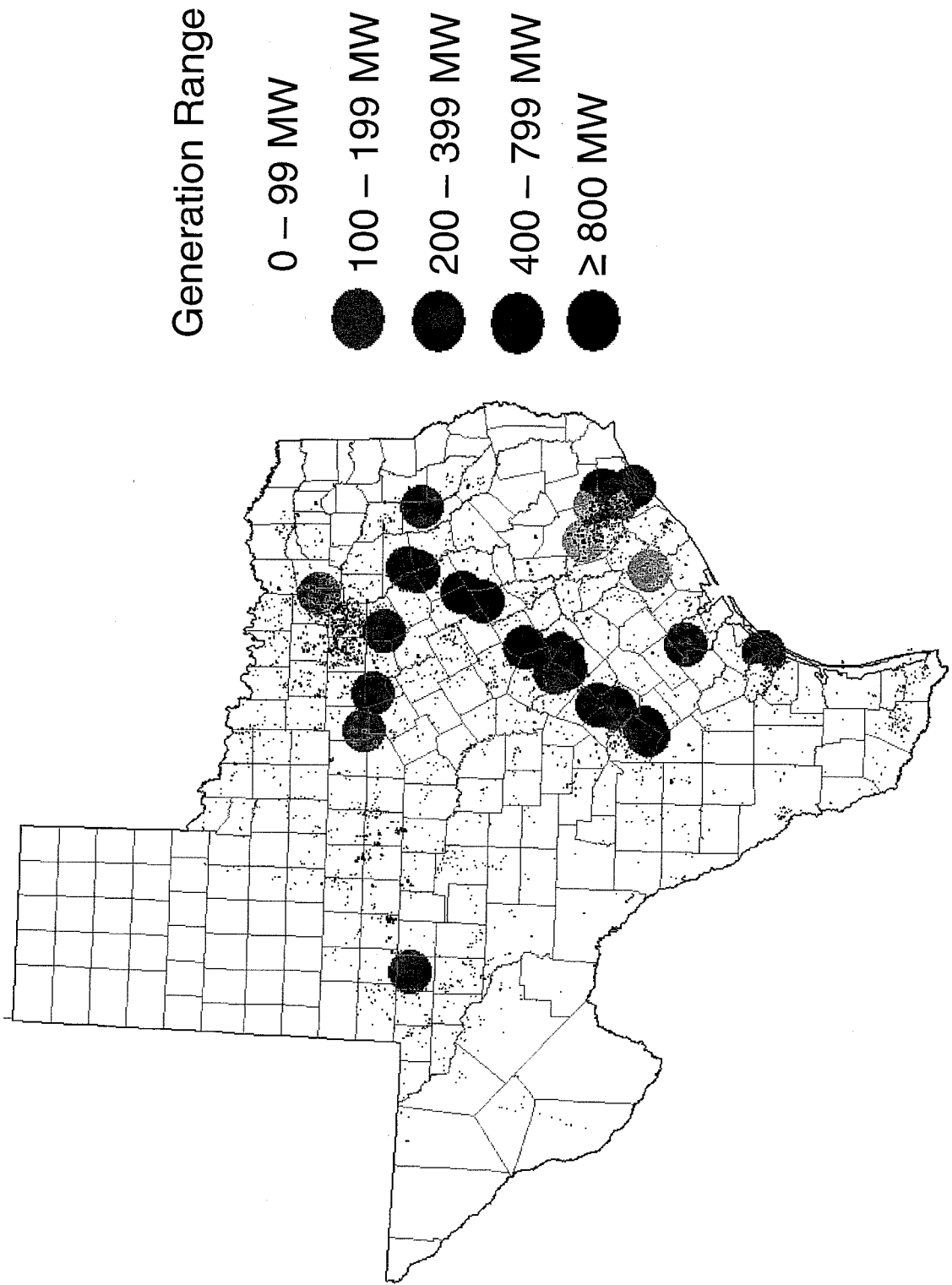


The ERCOT System responded as expected

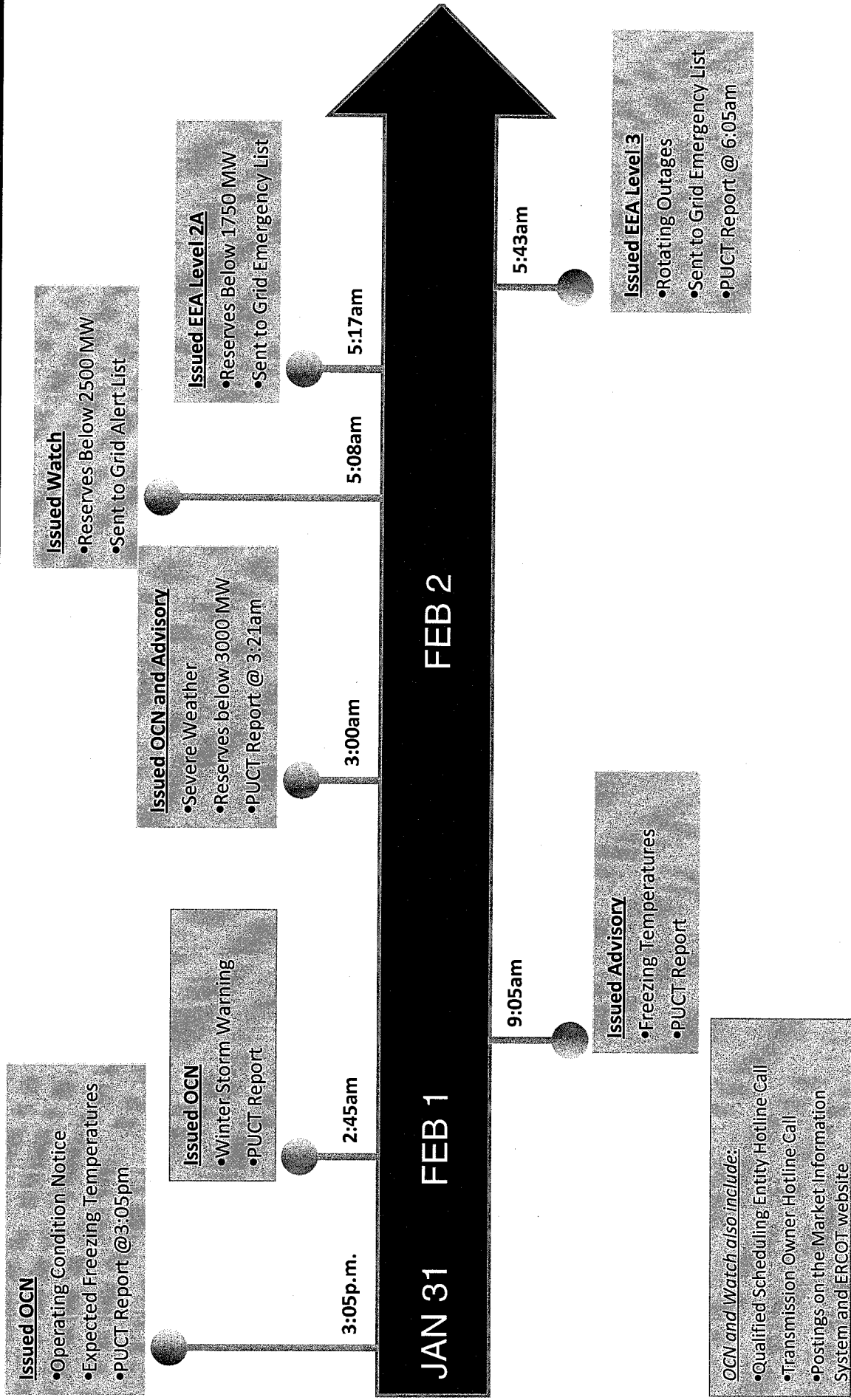
Frequency vs. Load Shed



The generation loss was system-wide and covered units of all ages and multiple types of fuel



ERCOT experienced communications challenges due to the rapidly-unfolding events



Interagency Cooperation

- ERCOT was advised that some units could generate more power if additional natural gas became available to the unit or if generators could temporarily surpass air emissions limits.
- PUC and RRC Commissioners and Staff worked cooperatively to assess specific situations and work with industry on natural gas issues.
- PUC and TCEQ Commissioners and Staff worked with ERCOT to develop a plan for encouraging addition of available generation resources to the ERCOT electric grid.

ERCOT's next steps

ERCOT will continue to review the actions leading up to this event and the handling of event itself.

- ERCOT is providing information to assist in the investigations currently underway.
- ERCOT will be an active participant in the discussion related to the adequate weatherization of generation units.
- ERCOT will work with transmission providers to study the potential use of advanced meters in selective load reduction.
- ERCOT is reviewing all communications policies related to grid emergencies.
- ERCOT has already implemented changes that will provide automated notice to the State Operations Center (SOC) and the PUC.
- ERCOT will implement a “phone bank” that will temporarily increase staff during emergency situations to respond to incoming calls.

ERCOT- Waived Privacy

RESOURCE ENTITY	RESOURCE NAME	Primary Fuel Type	County
AIR LIQUIDE LARGE INDUSTRIES US LP (RE)	AIR LIQUIDE LARGE INDUSTRIES US LP (RE)_BYU_BYU_G2	Natural Gas	Harris
AIR LIQUIDE LARGE INDUSTRIES US LP (RE)	AIR LIQUIDE LARGE INDUSTRIES US LP (RE)_BYU_BYU_G4	Natural Gas	Harris
BASTROP ENERGY PARTNERS LP	BASTROP ENERGY PARTNERS LP_BASTEN_GTG2100	Natural Gas	Bastrop
BRAZOS ELECTRIC POWER CO OP INC (RES)	BRAZOS ELECTRIC POWER CO OP INC (RES)_MIL MILLERG2	Natural Gas	Palo Pinto
BRAZOS ELECTRIC POWER CO OP INC (RES)	BRAZOS ELECTRIC POWER CO OP INC (RES)_MIL MILLERG2	Natural Gas	Palo Pinto
EXTEX LAPORTE LP 2	EXTEX LAPORTE LP 2_HILSES_UNIT3	Natural Gas	Tarrant
EXTEX LAPORTE LP 2	EXTEX LAPORTE LP 2_MCSES_UNIT7	Natural Gas	Dallas
EXTEX-LAPORTE LP	EXTEX-LAPORTE LP_AZ_AZ_G2	Natural Gas	Harris
EXTEX-LAPORTE LP	EXTEX-LAPORTE LP_AZ_AZ_G3	Natural Gas	Harris
FRONTERA GENERAL LIMITED PARTNERSHIP	FRONTERA GENERAL LIMITED PARTNERSHIP_FRONTERA_FRONTTEG1	Natural Gas	Hidalgo
FRONTERA GENERAL LIMITED PARTNERSHIP	FRONTERA GENERAL LIMITED PARTNERSHIP_FRONTERA_FRONTTEG2	Natural Gas	Hidalgo
FRONTERA GENERAL LIMITED PARTNERSHIP	FRONTERA GENERAL LIMITED PARTNERSHIP_FRONTERA_FRONTTEG3	Waste heat	Hidalgo
GUADALUPE POWER PARTNERS LP	GUADALUPE POWER PARTNERS LP_GUADG_GAS1	Natural Gas	Guadalupe
GUADALUPE POWER PARTNERS LP	GUADALUPE POWER PARTNERS LP_GUADG_GAS2	Natural Gas	Guadalupe
GUADALUPE POWER PARTNERS LP	GUADALUPE POWER PARTNERS LP_GUADG_STM5	Natural Gas	Guadalupe
HAYS ENERGY LP	HAYS ENERGY LP_HAYSEN_HAYSENG1	Natural Gas	Hays
HAYS ENERGY LP	HAYS ENERGY LP_HAYSEN_HAYSENG2	Natural Gas	Hays
HAYS ENERGY LP	HAYS ENERGY LP_HAYSEN_HAYSENG3	Natural Gas	Hays
HAYS ENERGY LP	HAYS ENERGY LP_HAYSEN_HAYSENG4	Natural Gas	Hays
MIDLOTHIAN ENERGY LP	MIDLOTHIAN ENERGY LP_MDANP_CT1	Natural Gas	Ellis
MIDLOTHIAN ENERGY LP	MIDLOTHIAN ENERGY LP_MDANP_CT4	Natural Gas	Ellis
MIDLOTHIAN ENERGY LP	MIDLOTHIAN ENERGY LP_MDANP_CT5	Natural Gas	Ellis
ODESSA-ECTOR POWER PARTNERS LP	ODESSA-ECTOR POWER PARTNERS LP_OECCS_CT22	Natural Gas	Ector