

ERCOT manages the state's high-voltage bulk electricity grid. For questions about local outages at your home or business, or questions about rotating outage procedures for your neighborhood, contact the utility company or transmission provider listed on your electric bill.

AEP Texas

Austin Energy

Bandera Electric Cooperative

Bluebonnet Electric Cooperative

Brazos Electric Power Cooperative

Brownsville Public Utilities Board

Bryan Texas Utilities

CenterPoint Energy

College Station Utilities

CPS Energy – San Antonio

Denton Municipal Electric

Garland Power & Light

Guadalupe Valley Electric Cooperative

LCRA

Magic Valley Electric Cooperative

Nueces Electric Cooperative

Oncor

Pedernales Electric Cooperative

Rayburn County Electric Cooperative (call local co-op)

Sharyland Utilities

South Texas Electric Cooperative

Texas-New Mexico Power

Conservation Tips

<http://www.ercot.com/about/conservation/index.html>

<http://www.powertosavetexas.org/>

ERCOT Region

The ERCOT Region includes Houston, Dallas, Fort Worth, San Antonio, Austin, Corpus Christi, Abilene and the Rio Grande Valley. It does not include the El Paso area, the Texas Panhandle, Northeast Texas (Longview, Marshall and Texarkana), and Southeast Texas (Beaumont, Port Arthur, and the Woodlands). Region map:

<http://www.ercot.com/news/mediakit/maps/index.html>

The Electric Reliability Council of Texas, Inc., (ERCOT) manages the flow of electric power to approximately 24 million Texas customers – representing 90 percent of the state's electric load and 75 percent of the Texas land area. 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 550 generation units. ERCOT also manages financial settlement for the competitive wholesale bulk-power market and administers customer switching for more than 7 million Texans in competitive choice areas. ERCOT is a membership-based 501(c)(4) nonprofit corporation, governed by a board of directors and subject to oversight by the Public Utility Commission of Texas and the Texas Legislature.

Media Contact: media@ercot.com



NEWS RELEASE: Electric Reliability Council of Texas

Power Warning – Conservation CRITICAL

HIGH Risk of Rotating Outages

Conservation is critical to avoid electricity emergencies or the need for rotating outages during the peak hours of 3 to 7 p.m. Consumers should reduce their consumption of electricity as much as possible to help prevent an emergency.

- Turn thermostat up 2-3 degrees during the peak hours of 3 to 7 p.m.
- Set programmable thermostats to higher temperatures when no one is home.
- If home, use fans to feel 4-6 degrees cooler.
- Schedule pool pumps to run in the early morning or overnight hours; shut off between 4 to 6 p.m.
- Limit use of large appliances (dishwasher, washer, dryer, etc.) to morning or after 7 p.m.
- If you cook indoors from 3 to 7 p.m., use a microwave or slow cooker.
- Close blinds and drapes during late afternoon.

See more conservation tips at www.ercot.com/about/conservation/index.html.

Power Warnings are issued by the regional electric grid operator, the Electric Reliability Council of Texas (ERCOT), when there is a **likelihood that rotating outages will be needed** to reduce load.

Rotating outages are controlled, temporary interruptions of electrical service initiated by each utility when supplies of reserve power are exhausted. Without this safety valve, generators would overload and begin shutting down to avoid damage, risking a domino effect of a widespread, uncontrolled outage.

Rotating outages primarily affect residential neighborhoods and small businesses.

The outages are typically limited to 10-45 minutes before being rotated to a different neighborhood. Some customers may experience longer outages if power surges cause equipment failure during the restoration process. Customers can minimize power surges by turning off appliances, lights and other equipment, except for one task light to determine when power has been restored.

How to Track Electricity Demand

- View daily peak demand forecast, current load and available generation at <http://www.ercot.com/>

- Get real-time notices of energy emergency alerts by following [@ERCOT_ISO](#) on Twitter, liking [the Electric Reliability Council of Texas on Facebook](#), by signing up for our [Apple](#) or [Android](#) ERCOT Energy Saver mobile app (available for download at the Apple Store or Google Play), or by signing up for the EmergencyAlerts list on <http://lists.ercot.com>.

Consumer Assistance

Public Utility Commission Hotline – 1-888-782-8777

Call Your Electric Utility for Information about Local Outages

ERCOT manages the state's high-voltage bulk electricity grid. For questions about local outages at your home or business, or questions about rotating outage procedures for your neighborhood, contact the utility company or transmission provider listed on your electric bill.

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[Nueces Electric Cooperative](#)

[Oncor](#)

[Pedernales Electric Cooperative](#)

[Rayburn County Electric Cooperative \(contact local co-op\)](#)

[Sharyland Utilities](#)

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Power Emergency – Conservation CRITICAL; Rotating Outages in Progress**NEWS RELEASE: Electric Reliability Council of Texas**

Power Emergency – Conservation CRITICAL

Rotating Outages Have Begun

The Electric Reliability Council of Texas (ERCOT) has instructed utilities to begin rotating outages because there is not enough electric generation available to keep up with consumer demand.

Rotating outages are controlled, temporary interruptions of electric service, typically lasting 10-45 minutes per neighborhood. The locations and durations are determined by the local utilities.

The need for rotating outages likely will last through the peak electricity hours from 3 to 7 p.m.

Consumers and businesses are urged to reduce their electricity use to the lowest level possible, including these steps:

- Turn thermostat up 2-3 degrees during the peak hours of 3 to 7 p.m.
- Set programmable thermostats to higher temperatures when no one is home.
- If home, use fans to feel 4-6 degrees cooler.
- Schedule pool pumps to run in the early morning or overnight hours; shut off between 4 to 6 p.m.
- Limit use of large appliances (dishwasher, washer, dryer, etc.) to morning or after 7 p.m.
- If you cook indoors from 3 to 7 p.m., use a microwave or slow cooker.
- Close blinds and drapes during late afternoon.
-

See more conservation tips at www.ercot.com/about/conservation/index.html or www.powertosavetexas.org/

Background

A **Power Emergency** indicates that the regional electric grid operator, the Electric Reliability Council of Texas (ERCOT), has instructed utilities to implement rotating outages to reduce load.

Rotating outages are controlled, temporary interruptions of electrical service initiated by each utility when supplies of reserve power are exhausted. Without this safety valve, generators would overload and begin shutting down to avoid damage, risking a domino effect of a regionwide outage.

The outages are typically limited to 10-45 minutes before being rotated to a different neighborhood. Some customers may experience longer outages if power surges cause equipment failure during the restoration process. Customers can minimize power surges by turning off appliances, lights and other equipment, except for one task light to determine when power has been restored.

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Appendix A-3 – EEA Incoming Call Hotline Messages

Grid Condition Messages – To be recorded for incoming callers

EEA Level 3:

“[Text of Level 3 Media Advisory]

If you are able to access the Internet, you can find updates at www.ercot.com or on your mobile device on the ERCOT Energy Saver mobile app. You can also call this number back to get updates as they become available. Thank you for your patience during this event.

To repeat this message, please press 1.

Please note that ERCOT does not normally maintain a call center and is not equipped to answer large volumes of calls. However, if you have an ERCOT-related question that does not involve a power outage, you may leave a message — including your name, phone number, and a brief summary of your question — by waiting for the tone. We will return your call as soon as possible.”

EEA Level 3 Cancelled:

“[Text of Level 3 Cancelled]”

ERCOT has discontinued its instructions to transmission operators to involuntarily curtail customers using rotating outages. Any consumers continuing to experience outages should contact their local electricity providers. All ERCOT-directed load curtailments have been cancelled.

To repeat this message, please press 1.

Please note that ERCOT does not normally maintain a call center and is not equipped to answer large volumes of calls. However, if you have an ERCOT-related question that does not involve a power outage, you may leave a message — including your name, phone number, and a brief summary of your question — by waiting for the tone. We will return your call as soon as possible.”

EEA Cancelled:

“[Text of Level 1 Cancelled Media Advisory]

ERCOT earlier discontinued its instructions to transmission operators to involuntarily curtail customers via rotating outages. Any consumers continuing to experience outages should contact their local electricity providers. All ERCOT-directed load curtailments have been cancelled.

To repeat this message, please press 1.

Please note that ERCOT does not normally maintain a call center and is not equipped to answer large volumes of calls. However, if you have an ERCOT-related question that does not involve a power outage, you may leave a message — including your name, phone number, and a brief summary of your question — by waiting for the tone. We will return your call as soon as possible.”

Appendix B: Hurricane Communications Materials

Crisis Communications Procedures

SAMPLE HURRICANE MEDIA ADVISORY



MEDIA ADVISORY: Electric Reliability Council of Texas

ERCOT ACTIVATES HURRICANE _____ WEB PAGE FOR GRID UPDATES

AUSTIN, [date] – ERCOT has activated a special Hurricane _____ Web page http://www._____ to disseminate timely information regarding the impact of Hurricane _____ on the ERCOT electric grid. The page includes:

- Electric grid updates
- Frequently asked questions
- Links to information resources

We will make updates as they become available, with best estimates on the numbers of customers out of service and major transmission lines that are out of service.

Consumer assistance

Public Utility Commission Hotline – 1-888-782-8777

Call your electric utility for information about local outages

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Media Contact: media@ercot.com

HURRICANE – FREQUENTLY ASKED QUESTIONS (FOR WEBSITE)

1. Who is responsible for getting my power back on?

Your electric distribution service provider has the responsibility to repair any damage and bring power back online. If any part of the high-voltage bulk transmission system has been disabled by the storm, ERCOT will work with these entities and with the generation plants in the market to ensure that power is restored safely.

You can find links to the websites of transmission and distribution providers and retail electric providers at our Hurricane _____ links page.

2. What is ERCOT's role?

ERCOT is the electric transmission grid operator. We ensure the reliability of the bulk transmission system, consisting of the high-voltage transmission network and the generators that feed that system. ERCOT maintains grid reliability by ensuring that generation matches load at all times, that transmission lines do not become overloaded, and that adequate reserves are available in case of unexpected events.

This can be especially challenging during an extreme weather event, when major transmission lines and generation facilities are subject to disruption from storm damage.

ERCOT does not have jurisdiction over the local, lower voltage distribution lines that are connected directly to homes and businesses.

3. What is ERCOT's biggest challenge in a hurricane?

Grid operators must be prepared to respond to sudden and dramatic losses of electric load, which can occur when a transmission or substation facility is disabled by storm damage. They must also be prepared to respond to a sudden loss of a generating unit due to storm damage. In these cases, ERCOT's operators will instruct other generators to adjust their output.

In a typical day, power companies in the ERCOT region rely on load forecasts, developed by ERCOT, which project variations in load with substantial accuracy. These forecasts are based on factors that are fairly constant — such as normal weather patterns and business cycles.

A hurricane poses much greater challenges because it can produce immediate dramatic drops in load.

One important point: because of the evacuations on the Gulf Coast, the load in the affected areas is already significantly lower than normal — with many residences, businesses and industrial facilities shut down. This reduces the size of the challenge and the risk to overall ERCOT system reliability.

4. Is ERCOT the grid operator for the entire Gulf Coast?

No. The ERCOT region includes 75 percent of the Texas land area, including all of the Gulf Coast except the Beaumont/Port Arthur/Orange area, and points north. That section of East Texas is served by Entergy Gulf States, Inc., and is part of the eastern U.S. grid interconnection.

The ERCOT grid is a separate interconnection, entirely located within the state of Texas, and one of three in the United States and Canada.

Storm damage and winds from Hurricane ____ are very capable of causing power outages in both the Entergy and ERCOT regions.

5. Does ERCOT own and maintain the power lines?

No. Transmission lines are owned and maintained by the transmission operators. In most cases, the transmission owner also owns the local distribution lines in your neighborhood.

Some transmission operators (CenterPoint, AEP Texas, Texas New Mexico Power, and Oncor) are fully regulated entities that were unbundled from previously vertical utilities in the deregulated market. Customers living in these service areas receive their electricity and electric bills from separate companies known as “retail electric providers.”

Other transmission operators are electric cooperatives or municipally owned utilities. The South Texas Electric Cooperative (STEC) and its six distribution cooperative members (Karnes, Wharton County, Jackson, Victoria, San Patricio and Nueces) serve a large section of the Gulf Coast.

6. How can a large-scale blackout be prevented?

ERCOT has emergency operation procedures that are designed to maintain systemwide reliability even if major outages occur in parts of the region. We work with transmission operators and generators, and rely on a sophisticated system of real-time communications from many hundreds of points on the electric grid.

7. What if it's a blackout specific to my neighborhood?

Many local areas are likely to lose power due to high winds and resulting damage from trees and debris. This does not necessarily mean that the transmission system has failed, but customers lose power nonetheless.

ERCOT's responsibility for electric grid operations and ensuring reliability extends only to the high-voltage transmission grid — it does not include local, lower voltage neighborhood distribution lines.

8. Will the ERCOT markets continue to operate during the hurricane?

Yes. ERCOT operates markets to provide balancing energy (to keep generation and load exactly balanced at all times) and to ensure adequate generating capacity reserves are available. We will continue to operate the markets unless we are overtaken by emergency events. We believe it is highly probable that the markets will continue to operate throughout the hurricane and its aftermath.

If the markets should have to be suspended, ERCOT will still have the authority to take steps to ensure the reliability of the system.

9. What has happened to the grid in previous hurricanes?

Hurricane Rita struck the eastern coast of Texas in 2005, causing significant electric outages in the region. Most of the affected areas were not in the ERCOT region. ERCOT assisted the neighboring grid operator, SPP, during the event.

Hurricane Alicia struck the Houston area in 1983. In that storm, significant electric service outages occurred in Houston and the surrounding area. Damage was less because the storm moved inland, and the winds weakened. ERCOT areas outside the storm path did not experience large power outages. It took several days to restore all service in the Houston area.

The effects of Hurricane _____ are expected to be _____. Larger outages will occur in the path of the storm, and it may take several days to restore service. Customers outside the storm path should not be affected.

10. What if I have a health emergency?

If you have a health emergency, please contact 911. You can get general hurricane information updates from the Texas State Operations Center by dialing 211.

HURRICANE SCRIPTS FOR INBOUND CALLS – TO BE RECORDED

Grid Condition Message – To be recorded for incoming callers...

“Thank you for calling the Electric Reliability Council of Texas. ERCOT is the independent electric grid operator for most of Texas, but does not own or maintain power lines.

If you are calling to request current grid conditions or any other information related to Hurricane ___, we encourage you to visit our special hurricane Web page at [www.ercot.com/___](http://www.ercot.com/).

If you are experiencing an emergency, please hang up and call 911.

If you are calling because of a power outage or other problem in your area, please call your electricity provider or transmission and distribution utility.

If you do not know which company serves your area, we have a recorded message with several phone numbers for companies in the areas affected by the hurricane. To listen to this message, please press ONE now.

If you are trying to reach a specific person at ERCOT, please press TWO now.

Please note that ERCOT does not maintain a call center and is not equipped to answer large volumes of calls. However, if you have an ERCOT-related question that does not involve a power outage related to the hurricane, you may leave a message — including your name, phone number, and a brief summary of your question — by pressing FOUR. We will return your call as soon as possible.”

TDSP Phone number message. [Tailor as appropriate depending on where the hurricane is projected to hit] NEED TO UPDATE WITH PHONE

“Following are phone numbers for the transmission and distribution service providers in the areas affected by Hurricane ___.

Customers in and north of the Beaumont-Port Arthur-Orange Tri-City area are served by Entergy Gulf States, which is not part of the ERCOT region. Entergy’s customer service line is 1-800-729-7483.

Most customers in the Houston area are served by CenterPoint Energy, 1-800-332-7143.

Customers along the Gulf Coast south of Houston, including the Corpus Christi area, are served by AEP Texas South, 1-800-277-2177.

Customers served by the Texas-New Mexico transmission and distribution utility, in some south and east Houston suburbs, may call TNMP at 1-888-866-7456.

Other areas along or near the coast are served by electric co-ops affiliated with the South Texas Electric Cooperative, 1-888-480-3534.

If your provider was not listed here, or if you are still not sure who to call, a helpful resource is the Customer Protection Division of the Public Utility Commission of Texas, at 1-888-782-8777.

Another excellent resource for help during the hurricane is the State Operations Center hurricane hotline, which may be reached simply by dialing 211.

If you have an ERCOT-related question that does not involve a power outage related to the hurricane, you may leave a message — including your name, phone number, and a brief summary of your question — by waiting for the tone. We will return your call as soon as possible.”

Appendix C: Crisis Communication Contacts Crisis Communications Procedures

Appendix C-1 – ERCOT Employee Contacts

The Corporate Communications staff will maintain lists of contact information for ERCOT employees who are part of the Crisis Communications Team, as well as, key contacts in System Operations, Web Services, Network Services and the executive team. The original copy will be saved on the Corporate Communications shared drive under Crisis Procedures.

Appendix C-2 – Government Contacts

The Corporate Communications staff will maintain lists for contacting constituents about grid conditions or emergencies. The original copy will be saved on the Corporate Communications shared drive under Crisis Procedures.

GridEmergency Distribution List

The distribution lists for PUC and government contacts are restricted lists managed through an offsite location – <http://lists.ercot.com>. The Manager of Communications is the list manager. Members of the Crisis Communications Team have “send” privileges to the list.

Emergency Notification System Distribution Lists

Government and regulatory representatives, as well as the public, may sign up for the EmergencyAlerts distribution list at <http://lists.ercot.com> to receive real-time grid emergency notifications.

Grid Operations owns and maintains the ENS system lists and scenarios, which can include multiple phone numbers and texting, in addition to emails. Corporate Communications assists Operations as needed in development and updating the distribution lists.

Appendix C-3 – Media Contacts

News Bulletins Distribution List

Any interested media, market participants or other stakeholders may self-subscribe to the “News_Bulletins” list on the ERCOT website. This distribution list, which is managed by the Manager of Communications, receives all news releases and news bulletins distributed by Corporate Communications.

News Media Conference Calls Procedures

In a situation of high media interest, the Crisis Communications Team may call a media conference call. The dial-in time and information is distributed to the News_Media_Only@lists.ercot.com. (As a “heads-up” notice, in widespread emergencies, the email is also sent to the public information officers and communications contacts for the market participants, as well as board members, PUC contacts and other government contacts.) When possible, these calls should be recorded and archived by designated Corporate Communications staff.

Emergency Notification System Distribution List for Media and Public

Media, as well as the public, may sign up for the EmergencyAlerts distribution list at <http://lists.ercot.com> to receive real-time grid emergency notifications. Delivery of these messages will follow automated ENS notifications, so there is a slight delay (approximately 10 minutes) in delivery.

Appendix C-4 – Market Participant Contacts

Corporate Communications also maintains a list of market participants' communications/media contacts. The list is updated periodically and checked prior to summer of each year. This list is used for the "GridEmergency" distribution list and the ENS automated notification system on any levels where media are notified.

Appendix C-5 – Grid Event Notification Lists Matrix

List	Description	Access	How to subscribe
Twitter	EEA notices publish automatically (triggered by ERCOT Control Room); manual posting of conservation requests, status updates	Open to public	Twitter link on ERCOT website or directly at @ERCOT_ISO
Facebook	Manual posting only; less timely than Twitter	Open to public	Facebook link on ERCOT website or directly at Electric Reliability Council of Texas page
Mobile app	EEA notices publish automatically (triggered by ERCOT Control Room); receipt requires authorization of push notifications	Open to public	Download ERCOT Energy Saver from Google Play or Apple app store on mobile devices.
EmergencyAlerts	EEA notices publish automatically (triggered by ERCOT Control Room)	Open to public	Subscribe at http://lists.ercot.com .
News_Bulletins	Email list for news releases	Open to public	Subscribe at http://lists.ercot.com .
News_Media_Only	Email list for press-only notices (press conferences, phoners, etc.)	Restricted	Subscribe at http://lists.ercot.com (requires authorization by Corporate Communications).
Internal emergency mailing lists	Contact information for market participants and other key audiences maintained by Corporate Communications	Restricted	Notify media@ercot.com or list owner directly
Market Notices	Wholesale Client Services	Open to public	Subscribe at http://lists.ercot.com .
Emergency Notification System	Automated emails, phone calls, text messages to targeted internal and external recipients	Restricted	System Operations maintains internal list; Corporate Communications maintains external list

Appendix D: Procedures for Using the Public Website
Crisis Communications Procedures

WEBSITE CRISIS COMMUNICATIONS PROCEDURES

In Case of Crisis:

During a crisis event, Corporate Communications will contact the ERCOT.com Web team to perform the following:

1. Deploy the home page Emergency “spotlight” via Web Content Manager.
2. Suspend all current rotating spotlights if needed and link to the most recent news release.
3. Link spotlights to current news release and other relevant content provided by Corporate Communications.
4. Send notifications via ERCOT Energy Saver app; update Twitter and Facebook; RSS feeds are updated automatically.

In addition, Corporate Communications will contact the ERCOT.com Web team contacts for assistance in deployment of the WCM application, news release updates and any other assistance to resolve technical issues as needed. If resources are not available, the priority phone list in *Appendix A* will be used and HelpDesk may be notified for assistance.

The Web team will maintain a file of pre-approved emergency home page spotlights.

Appendix E: In-Bound Calls Treatment Crisis Communications Procedures

CALL TREATMENT FOR EMERGENCY/CRISIS SITUATION

During a major event resulting in a high volume of incoming calls to the general ERCOT numbers, Client Services will implement and staff an emergency call center to handle incoming calls.

Corporate Communications will notify the Security Desk to forward main incoming extensions 3000 and 7000 to 4600 — an emergency phone tree. The Facilities Security Manager or Site Supervisor may initiate as needed if Corporate Communications is unavailable.

Calls that require responses and are not from media or government contacts will be sent to the emergency call center for handling.

Corporate Communications will record grid updates as available as a “Temporary Greeting” for the grid updates line.

For “Grid Message Mailbox” examples, see EEA examples in *Appendix A-2* and a Hurricane example in *Appendix B*.

Details of this call treatment and access numbers are confidential.

ERCOT Emergency Call Treatment

Call flow treatment diagram including passwords and personal contact information has been redacted from public version.

**Appendix F: Black Start
Crisis Communications Procedures**

BLACK START

In the event of a full system outage requiring use of the ERCOT Black Start Plan², the Vice President, Grid Planning and Operations, will contact the Crisis Communications Team. The Communications staff will work with System Operations throughout the outage to determine the appropriate information to release to the media and public. Channels used for communication will depend on the extent of the outage and what systems are affected. Procedures defined in ERCOT's Business Continuity Plan likely would be implemented in case of a cascading blackout situation.

ERCOT will not publicly release the names of specific plants utilized in the Black Start Plan. The detailed Black Start Plan is a confidential document.

ERCOT Corporate Communications staff participates as needed in drills and other activities to ensure understanding of the Black Start procedures, at a high level, and the appropriate messages that would be needed in such a situation.

² A high-level description of the Black Start Plan is included in ERCOT Protocols, Section 6.5.9.6.

Attachment H

Assessment of Reliability and Adequacy of the ERCOT System during Extremely Cold or Extremely Hot Weather Conditions

Extreme Weather Reliability Assessment

(H) An assessment of the reliability and adequacy of the ERCOT system during extremely cold or extremely hot weather conditions, including information regarding steps to be taken by power generation companies and utilities to prepare their assets for extreme weather events.

Overview

ERCOT's assessment of system reliability during extreme weather is based primarily on its summer and winter Seasonal Assessments of Resource Adequacy (SARA), which are issued on May 1 and November 1 of each year, respectively. The most recent versions of each of these reports are attached. To further assist in evaluating grid reliability during extreme weather conditions, and to verify implementation of generator weatherization procedures, ERCOT has scheduled site visits for approximately 80 generators between November 2015 and February 2016. The methodologies are described below. Prior to starting these visits, two workshops were held. ERCOT held a workshop in conjunction with Texas RE to highlight issues that were identified during the 2014-2015 site visits, best practices and lessons learned. Texas RE held a workshop in conjunction with ERCOT that focused on wind generation winter preparation, communications to ERCOT during icing conditions or extreme cold weather, and observations from ERCOT real-time operations.

Assessment of Generator Weatherization Plan Implementation

ERCOT used the following criteria to select sites for weatherization plan review this winter:

- Generator resources that experienced freeze issues during winter 2014-2015.
- New generator resources.
- Generators that were identified as needing improvements.
- A randomly selected group of generators.

In all cases, ERCOT's goal was to determine if plants had implemented the weatherization plans they had provided. As part of these visits, ERCOT asked to see any checklists of elements that needed to be protected, whether such work had been completed, and whether procedures were in place to ensure that the checklists were followed.

ERCOT's review included the following items:

- Identify the cause of the unit trip during cold weather events, if applicable. Physically examine element. Is it sufficiently protected?
- Did this unit experience any equipment freeze issues due to frozen equipment during winter 2014-2015?
- Does the plant have a checklist of elements to be protected?
- What type of heat tracing, if any, does the plant use on critical instrumentation?
- Is there a procedure to confirm heat tracing is functioning properly?
- Is there a maintenance record of amperage reading compared to design criteria?
- Will procedure detect if heat tracing is interrupted mid-length?

- Is there a record of maintenance on instrument air?
- Identify how moisture is removed from instrument air. Verify periodic blow downs, air dryers, dew point monitoring.
- Have all work orders related to weatherization been completed?
- Has all insulation been inspected during the Fall?
- What improvements has the plant made based on experiences in recent cold weather events?
- Are winter weather supplies listed on the checklist and are they stored on-site?
- Does the plant do an annual extreme cold weather drill or training?
- Do the operators train for the loss of a drum level, steam flow or feedwater transmitter?
- Does the unit have capability for alternate fuel? If so, when was the last time fuel oil capability tested?
- Has plant management and maintenance personnel reviewed the NERC Guideline Generator Unit Winter Weather Readiness – Current Industry Practices?
- Has plant management and maintenance personnel reviewed the NERC lessons learned for Resource Entities related to cold weather?
- Additional questions were added related to fuel supplies to the facility and any experienced issues from 2014-2015 winter events.
- Do wind generators have cold weather packages? Is backup power provided for any turbine so that the cold weather package is not affected when the turbine is shut down?

ERCOT's review of plants indicates that the majority of plants are following their weatherization plans. ERCOT identified no plants that had substantially failed to implement their weatherization plans in the prior year reviews.

ERCOT's common recommendations to plants included:

- Develop yearly records for heat trace maintenance amperage readings comparing to design criteria.
- Conduct annual table top or plant drill for an extreme cold weather event with records of attendance.
- Maintain records detailing when extreme cold weather procedures were put into place.
- Incorporate lessons learned into plant weatherization plan.

Recommended Steps to Prepare Generators for Extreme Weather

Rule 25.362(i)(2)(H) requires ERCOT to describe “information regarding steps to be taken by power generation companies and utilities to prepare their assets for extreme weather events.” Below is a list of general steps generating entities can follow to ensure their assets are prepared for extreme weather:

- Adequate maintenance and inspection of its freeze protection elements be conducted on a timely and repetitive basis.
- Inspect and maintain each generating unit’s heat tracing equipment due to the noted typical heat trace failure rates.
- Inspect and maintain each unit’s thermal insulation.

- Erect adequate wind breaks and enclosures where needed.
- Develop and annually conduct winter-specific and plant-specific operator awareness and maintenance training.
- Take steps to ensure that winterization supplies and equipment are in place before the winter season, that adequate staffing is in place for cold weather events, and that preventative action in anticipation of such events is taken in a timely manner.
- Ensure all insulating materials and wind breaks are removed before operation during the summer season.

Conclusion

Based on the most recent SARA for winter 2015-2016, ERCOT has concluded that, with a normal outage rate and under expected weather conditions, ERCOT should have sufficient generation capacity to serve forecasted peak demand.

Because ERCOT's analysis in conducting site visits is necessarily limited to determining whether each plant operator has followed the plant's weatherization procedures, ERCOT takes no opinion on whether the measures taken by any particular generator are sufficient to prevent any outage of the unit during certain extreme weather conditions.

However, ERCOT's review of the plants suggests that these generators have made progress in addressing weatherization deficiencies. Generators are incorporating improvements identified in weatherization workshops and addressing recommendations from prior site visits. ERCOT expects that the units visited would be better equipped to withstand extreme conditions such as those experienced in February 2011.

FINAL
Seasonal Assessment of Resource Adequacy for the ERCOT Region (SARA)
Summer 2015

SUMMARY

The ERCOT Region is expected to have sufficient installed generating capacity to serve forecasted peak demands in the upcoming summer season (June - September 2015). The forecasted available generating reserve capacity has increased since the Preliminary Summer SARA was released on March 1, 2015. The primary reason for this change is the summer weather forecast, which generally indicates milder conditions than the 12-year normal forecast used in the Preliminary Summer SARA. As a result, the load forecast for summer has decreased by 1,071 MW, from 69,057 MW to 67,986 MW. Also contributing to the higher forecasted reserve capacity is an increase in planned capacity additions expected to be available by the start of the summer season.

For the summer season, expected new planned capacity additions now include the natural gas-fired 790 MW Panda Temple II facility (717 MW summer rating), which previously was forecasted to be available in August and is now expected in May 2015. The construction schedule has also changed for the planned 341 MW gas-fired project, Ector County Energy Center G (294 MW summer rating, and formerly called Goldsmith Peakers). This facility has been delayed into the fall 2015 season. The forecast for planned wind additions is 1,265 nameplate MW, with a summer Peak Average Capacity Contribution of 152 MW. This capacity contribution was derived by applying the methodology to calculate summer Peak Average Wind Capacity Percentages approved by the ERCOT Board of Directors in October 2014. This methodology currently results in 12 percent for non-coastal resources and 56 percent for coastal resources.

Due to recent rainfall, the three R.W. Miller gas-fired steam units (summer capacity rating of 403 MW) previously on extended outage due to insufficient cooling water are now expected to be available for the summer season. Based on ERCOT's drought risk analysis, no other changes to unit capacities due to drought conditions are anticipated or reflected in the summer assessment. ERCOT will continue to monitor the potential effect of drought conditions on generation capacity.

At this time, ERCOT does not anticipate changes to available generation capacity for the summer season due to compliance with the Cross-State Air Pollution Rule (CSAPR) or Mercury and Air Toxics Standards (MATS). CSAPR came into effect on January 1, 2015, and the compliance deadline for the MATS rule for units that have not received compliance extensions is April 15, 2015. Confidential survey information gathered in March 2015 indicates that coal generators are expected to be compliant with CSAPR, and are either compliant with MATS or have received a one-year compliance extension. ERCOT continues to monitor implementation and consults with generation resource owners on their compliance plans for CSAPR, MATS and other environmental regulations.

Operational Resources (excluding wind), MW		Switchable Capacity Total, MW		Switchable Capacity Unavailable to ERCOT, MW		Mothball Resources, MW		Private Use Network Capacity Contribution, MW		Non-Coastal Wind Resources Capacity Contribution, MW		Coastal Wind Resources Capacity Contribution, MW		RMR Resources to be under Contract, MW		Non-Synchronous Ties Capacity Contribution, MW		Planned Resources (not wind) with signed IA and Air Permit, MW		Planned Non-Coastal Wind with signed IA, MW		Planned Coastal Wind with signed IA, MW		[a] Total Resources, MW		[b] Peak Demand, MW		[c] Reserve Capacity (a - b), MW	
3,496		3,496		3,496		1,875		4,344		1,366		941		0		717		152		77,684		67,986		9,698					

Peak Load		Forecasted Summer Season		Extreme Load / Typical Generation		Extreme Outages		[d] Total Uses of Reserve Capacity		[e] Capacity Available for Operating Reserves (c-d), MW	
3,469	3,469	3,26	3,26	3,405	3,405	3,169	3,169	6,972	6,972	3,503	3,503

Less than 2,300 MW indicates risk of EEA1

Seasonal Load Adjustment:		
Typical Maintenance Outages	320	320
Typical Forced Outages	2,405	2,405
90th Percentile Forced Outages	2,726	2,726
Total Uses of Reserve Capacity	6,095	6,095
Capacity Available for Operating Reserves (c-d), MW	3,503	3,503
Less than 2,300 MW indicates risk of EEA1		

Based on current Seasonal Maximum Sustainable Limits reported through the unit registration process.		
3,496	3,496	
Mothball units plus Probability of return responses of Motbball Resource owners	1,875	
Average capability of the top 20 hours in the summer peak seasons for the past three years (2012-2014)	4,344	
Based on 12% of installed capacity for non-coastal wind resources per ERCOT Nodal Protocols Section 3.2.6.2.2	1,366	
Based on 52% of installed capacity for coastal wind resources per ERCOT Nodal Protocols Section 3.2.6.2.2	941	
No RMR Resources currently under contract	0	
Average capability of the top 20 hours in the summer peak seasons for the past three years (2012-2014)	517	
Based on in-service dates provided by developers of generation resources	717	
Based on in-service dates provided by developers of generation resources and 12% of installed capacity for non-coastal wind resources	152	
Based on in-service dates provided by developers of generation resources and 52% of installed capacity for coastal wind resources	0	
Summer peak forecast is based on a "milder" summer weather forecast similar to 2013 & 2014	77,684	
Summer peak forecast is based on a "milder" summer weather forecast similar to 2013 & 2014	67,986	

Based on historical average of planned outages for June through September (weather data).		
Typical Maintenance Outages	320	320
Typical Forced Outages	2,405	2,405
90th Percentile Forced Outages	2,726	2,726

Based on historical average of forced outages for June through September (weather data).		
Typical Maintenance Outages	320	320
Typical Forced Outages	2,405	2,405
90th Percentile Forced Outages	2,726	2,726

Based on historical forced outages assuming a 90% confidence interval		
Typical Maintenance Outages	320	320
Typical Forced Outages	2,405	2,405
90th Percentile Forced Outages	2,726	2,726

GENERATION INTERCONNECTION PROJECT CODE	UNIT NAME	UNIT CODE	2015
176 T H WHARTON STG 3		THW_THWST_3	104.0
177 T H WHARTON CTG 41		THW_THWG741	57.0
178 T H WHARTON CTG 42		THW_THWG742	57.0
179 T H WHARTON CTG 43		THW_THWG743	57.0
180 T H WHARTON CTG 44		THW_THWG744	57.0
181 T H WHARTON STG 4		THW_THWST_4	104.0
182 TEXAS CITY CTG A		TXCTY_CTA	96.6
183 TEXAS CITY CTG B		TXCTY_CTB	96.6
184 TEXAS CITY CTG C		TXCTY_CTC	96.6
185 TEXAS CITY STG		TXCTY_ST	131.6
186 VICTORIA POWER STATION CTG 6		VICTORIA_VICTORG6	160.0
187 VICTORIA POWER STATION STG 5		VICTORIA_VICTORG5	125.0
188 WICHITA FALLS CTG 1		WFCOGEN_UNIT1	20.0
189 WICHITA FALLS CTG 2		WFCOGEN_UNIT2	20.0
190 WICHITA FALLS CTG 3		WFCOGEN_UNIT3	20.0
191 WICHITA FALLS STG 4		WFCOGEN_UNIT4	20.0
192 WISE-TRACTEBEL POWER CTG 1		WCPP_CT1	212.0
193 WISE-TRACTEBEL POWER CTG 2		WCPP_CT2	241.0
194 WISE-TRACTEBEL POWER STG 1		WCPP_ST1	212.5
195 WOLF HOLLOW POWER CTG 1		WHCCS_CT1	212.5
196 WOLF HOLLOW POWER CTG 2		WHCCS_CT2	280.0
197 WOLF HOLLOW POWER STG		WHCCS_STG	20.0
198 ATKINS CTG 7		ATKINS_ATKNSG7	2016
199 DANSBY CTG 2		DANSBY_DANSBYG2	2004
200 DANSBY CTG 3		DANSBY_DANSBYG3	2010
201 DECKER CREEK CTG 1		DECKER_DPGT_1	1989
202 DECKER CREEK CTG 2		DECKER_DPGT_2	1989
203 DECKER CREEK CTG 3		DECKER_DPGT_3	1989
204 DECKER CREEK CTG 4		DECKER_DPGT_4	1989
205 DECORDOVA CTG 1		DCSES_CT10	71.0
206 DECORDOVA CTG 2		DCSES_CT20	70.0
207 DECORDOVA CTG 3		DCSES_CT30	69.0
208 DECORDOVA CTG 4		DCSES_CT40	68.0
209 EXTEX LAPORTE GEN STN CTG 1		AZ_AZ_G1	38.0
210 EXTEX LAPORTE GEN STN CTG 2		AZ_AZ_G2	46.0
211 EXTEX LAPORTE GEN STN CTG 3		AZ_AZ_G3	46.0
212 EXTEX LAPORTE GEN STN CTG 4		AZ_AZ_G4	58.0
213 GREENS BAYOU CTG 73		GBY_GBYGT73	56.0
214 GREENS BAYOU CTG 74		GBY_GBYGT74	46.0
215 GREENS BAYOU CTG 81		GBY_GBYGT81	46.0
216 GREENS BAYOU CTG 82		GBY_GBYGT82	58.0
217 GREENS BAYOU CTG 83		GBY_GBYGT83	56.0
218 GREENS BAYOU CTG 84		GBY_GBYGT84	46.0
219 GREENVILLE IC ENGINE PLANT		STEAM_ENGINE_1	8.4

GENERATION INTERCONNECTION	UNIT NAME	PROJECT CODE	UNIT CODE
220 GREENVILLE IC ENGINE PLANT		10INR0070	STEAM_ENGINE_2
221 GREENVILLE IC ENGINE PLANT		10INR0070	STEAM_ENGINE_3
222 LAREDO CTG 4		08INR0064	LARDVFTN_G4
223 LAREDO CTG 5		08INR0064	LARDVFTN_G5
224 LEON CREEK PEAKER CTG 1		04INR0009	LEON_CRK_LCPCT1
225 LEON CREEK PEAKER CTG 2		04INR0009	LEON_CRK_LCPCT2
226 LEON CREEK PEAKER CTG 3		04INR0009	LEON_CRK_LCPCT3
227 LEON CREEK PEAKER CTG 4		04INR0009	LEON_CRK_LCPCT4
228 MORGAN CREEK CTG 1		MGSSES_CT1	MGSSES_CT1
229 MORGAN CREEK CTG 2		MGSSES_CT2	MGSSES_CT2
230 MORGAN CREEK CTG 3		MGSSES_CT3	MGSSES_CT3
231 MORGAN CREEK CTG 4		MGSSES_CT4	MGSSES_CT4
232 MORGAN CREEK CTG 5		MGSSES_CT5	MGSSES_CT5
233 MORGAN CREEK CTG 6		MGSSES_CT6	MGSSES_CT6
234 PEARSONIC ENGINE PLANT A		09INR0079a	PEARSON2_AGR_A
235 PEARSONIC ENGINE PLANT B		09INR0079a	PEARSON2_AGR_B
236 PEARSONIC ENGINE PLANT C		09INR0079b	PEARSON2_AGR_C
237 PEARSONIC ENGINE PLANT D		09INR0079b	PEARSON2_AGR_D
238 PERMIAN BASIN CTG 1		PB2SES_CT1	PB2SES_CT1
239 PERMIAN BASIN CTG 2		PB2SES_CT2	PB2SES_CT2
240 PERMIAN BASIN CTG 3		PB2SES_CT3	PB2SES_CT3
241 PERMIAN BASIN CTG 4		PB2SES_CT4	PB2SES_CT4
242 PERMIAN BASIN CTG 5		PB2SES_CT5	PB2SES_CT5
243 R W MILLER CTG 4		MIL_MILLERG4	MIL_MILLERG4
244 R W MILLER CTG 5		MIL_MILLERG5	MIL_MILLERG5
245 RAY OLINGER CTG 4		OILINGR_OLING_4	OILINGR_OLING_4
246 SAM RAYBURN CTG 1		RAYBURN_RAYBURG1	RAYBURN_RAYBURG1
247 SAM RAYBURN CTG 2		RAYBURN_RAYBURG2	RAYBURN_RAYBURG2
248 SAN JACINTO SES CTG 1		SJS_SJS_G1	HARRIS
249 SAN JACINTO SES CTG 2		SJS_SJS_G2	HARRIS
250 SANDHILL ENERGY CENTER CTG 1		SANDHSYD_SH1	TRAVIS
251 SANDHILL ENERGY CENTER CTG 2		SANDHSYD_SH2	TRAVIS
252 SANDHILL ENERGY CENTER CTG 3		SANDHSYD_SH3	TRAVIS
253 SANDHILL ENERGY CENTER CTG 4		SANDHSYD_SH4	TRAVIS
254 SANDHILL ENERGY CENTER CTG 6		SANDHSYD_SH6	TRAVIS
255 SANDHILL ENERGY CENTER CTG 7		SANDHSYD_SH7	CAMERON
256 SILAS RAY CTG 10		SILASRAY_SILAS_10	HARRIS
257 T H WHARTON CTG 51		THW_THWGT51	HARRIS
258 T H WHARTON CTG 52		THW_THWGT52	HARRIS
259 T H WHARTON CTG 53		THW_THWGT53	HARRIS
260 T H WHARTON CTG 54		THW_THWGT54	HARRIS
261 T H WHARTON CTG 55		THW_THWGT55	HARRIS
262 T H WHARTON CTG 56		THW_THWGT56	HARRIS
263 T H WHARTON CTG G1		THW_THWGT_1	HARRIS

GENERATION INTERCONNECTION PROJECT CODE	UNIT NAME	UNIT CODE	2015	START YEAR	
				ZONE	FUEL
264 TEXAS GULF SULPHUR		TGF_TGFGT_1	79.0	SOUTH	GAS
265 V H BRAUNIG CTG 5	09INR0028	BRAUNIG_VHB6CT5	48.0	SOUTH	GAS
266 V H BRAUNIG CTG 6	09INR0028	BRAUNIG_VHB6CT6	48.0	SOUTH	GAS
267 V H BRAUNIG CTG 7	09INR0028	BRAUNIG_VHB6CT7	48.0	SOUTH	GAS
268 V H BRAUNIG CTG 8	09INR0028	BRAUNIG_VHB6CT8	48.0	SOUTH	GAS
269 W A PARISH CTG 1		WAP_WAPGT_1	13.0	HOUSTON	GAS
270 W A PARISH - PETRA NOVA CTG	12INR0086	PNPL_GT2	13.0	HOUSTON	GAS
271 WINCHESTER POWER PARK CTG 1	09INR0027	WIPOPA_WPP_G1	74.0	SOUTH	GAS
272 WINCHESTER POWER PARK CTG 2	09INR0027	WIPOPA_WPP_G2	44.0	SOUTH	GAS
273 WINCHESTER POWER PARK CTG 3	09INR0027	WIPOPA_WPP_G3	44.0	SOUTH	GAS
274 WINCHESTER POWER PARK CTG 4	09INR0027	WIPOPA_WPP_G4	44.0	COASTAL	GAS
275 B M DAVIS STG U1		B_DAVIS_B_DAVID1	335.0	COASTAL	GAS
276 CEDAR BAYOU STG U1		CBY_CBY_G1	745.0	HOUSTON	GAS
277 CEDAR BAYOU STG U2		CBY_CBY_G2	749.0	HOUSTON	GAS
278 DANSBY STG U1		DANSBY_DANSBYG1	110.0	NORTH	GAS
279 DECKER CREEK STG U1		DECKER_DPG1	315.0	NORTH	GAS
280 DECKER CREEK STG U2		DECKER_DPG2	420.0	NORTH	GAS
281 GRAHAM STG U1		GRSES_UNIT1	255.0	WEST	GAS
282 GRAHAM STG U2		GRSES_UNIT2	390.0	WEST	GAS
283 GREENS BAYOU STG U5		GBY_GBY_5	371.0	HOUSTON	GAS
284 HANDLEY STG U3		HLSSES_UNIT3	395.0	NORTH	GAS
285 HANDLEY STG U4		HLSSES_UNIT4	435.0	NORTH	GAS
286 HANDLEY STG U5		HLSSES_UNIT5	435.0	NORTH	GAS
287 LAKE HUBBARD STG U1		LHSSES_UNIT1	392.0	NORTH	GAS
288 LAKE HUBBARD STG U2		LHSSES_UNIT2A	515.0	NORTH	GAS
289 MOUNTAIN CREEK STG U6		MCSES_UNIT6	120.0	NORTH	GAS
290 MOUNTAIN CREEK STG U7		MCSES_UNIT7	115.0	NORTH	GAS
291 MOUNTAIN CREEK STG U8		MCSES_UNIT8	565.0	NORTH	GAS
292 O W SOMMERS STG U1		CALAVERS_OWS1	420.0	NORTH	GAS
293 O W SOMMERS STG U2		CALAVERS_OWS2	420.0	NORTH	GAS
294 PEARSALL STG U1		PEARSALL_PEAR_1	25.0	SOUTH	GAS
295 PEARSALL STG U2		PEARSALL_PEAR_2	25.0	SOUTH	GAS
296 PEARSALL STG U3		PEARSALL_PEAR_3	25.0	SOUTH	GAS
297 POWERLANE PLANT STG U1		STEAM_STEAM_1	20.0	NORTH	GAS
298 POWERLANE PLANT STG U2		STEAM_STEAM_2	26.0	NORTH	GAS
299 POWERLANE PLANT STG U3		STEAM_STEAM_3	41.0	NORTH	GAS
300 R W MILLER STG U1		MIL_MILLERG1	75.0	NORTH	GAS
301 R W MILLER STG U2		MIL_MILLERG2	120.0	NORTH	GAS
302 R W MILLER STG U3		MIL_MILLERG3	208.0	NORTH	GAS
303 RAY OLINGER STG U1		OLINGR_OLING_1	78.0	NORTH	GAS
304 RAY OLINGER STG U2		OLINGR_OLING_2	107.0	NORTH	GAS
305 RAY OLINGER STG U3		OLINGR_OLING_3	146.0	NORTH	GAS
306 SIM GIDEON STG U1		GIDEON_GIDEONG1	130.0	SOUTH	GAS
307 SIM GIDEON STG U2		GIDEON_GIDEONG2	135.0	SOUTH	GAS

GENERATION INTERCONNECTION	PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	START YEAR	2015
UNIT NAME							200.1
528 LOS VIENTOS WIND I	11INR0033	LV1_LV1A	WILLACY	WIND	COASTAL	2013	2016
529 LOS VIENTOS WIND II	11INR0033	LV1_LV1B	WILLACY	WIND	COASTAL	2013	99.8
530 MAGIC VALLEY WIND (REDFISH) 1A	10INR0060	REDFISH_MV1A	WILLACY	WIND	COASTAL	2012	103.5
531 MAGIC VALLEY WIND (REDFISH) 1B	10INR0060	REDFISH_MV1B	WILLACY	WIND	COASTAL	2012	179.9
532 PAPALOTE CREEK WIND FARM	08INR0012a	PAP1_PAP1	SAN PATRICIO	WIND	COASTAL	2009	200.1
533 PAPALOTE CREEK WIND FARM II	08INR0012b	COTTON_PAP2	SAN PATRICIO	WIND	COASTAL	2010	160.8
534 PENASCAL WIND 1	06INR0022a	PENA_UNIT1	KENEDY	WIND	COASTAL	2009	141.6
535 PENASCAL WIND 2	06INR0022b	PENA_UNIT2	KENEDY	WIND	COASTAL	2009	100.8
536 PENASCAL WIND 3	06INR0022b	PENA3_UNIT3	KENEDY	WIND	COASTAL	2011	9.0
537 HARBOR WIND		DG_NUECE_6UNITS	NUECES	WIND	COASTAL	2012	1,680.4
538 Wind Capacity Sub-total (Coastal Counties)							13,059.8
539 Wind Capacity Total (All Counties)							
540		RMR_CAP_CONT		GAS			-
541 Reliability Must-Run (RMR) Capacity							
542							
543 Non-Synchronous Tie Resources							
544 EAGLE PASS TIE		DC_S	MAVERICK	SOUTH		30.0	
545 EAST TIE		DC_E	FANNIN	NORTH		600.0	
546 LAREDO VFT TIE		DC_L	WEBB	SOUTH		100.0	
547 NORTH TIE		DC_N	WILBARGER	WEST		220.0	
548 SHARYLAND RAILROAD TIE		DC_R	HIDALGO	SOUTH		150.0	
549 SHARYLAND RAILROAD TIE (FUTURE)		DC_R2	HIDALGO	SOUTH		20.0	
550 Non-Synchronous Ties Total						1,120.0	
551 Non-Synchronous Ties Capacity Contribution (Top 20 Hours)		DCTIE_CAP_CONT	OTHER			516.7	
552							
553 Planned Resources with Executed SGIA, Air Permit, GHG Permit and Water Rights							
554 TEXAS CLEAN ENERGY PROJECT	13INR0023	PANDA_T2_TMPL2CT1	ECTOR	COAL	WEST	2018	-
555 PANDA TEMPLE II CTG1	10INR0020b	PANDA_T2_TMPL2CT2	BELL	GAS	NORTH	2015	191.2
556 PANDA TEMPLE II CTG2	10INR0020b	PANDA_T2_TMPL2ST1	BELL	GAS	NORTH	2015	191.2
557 PANDA TEMPLE II STG	10INR0020b		MITCHELL	GAS	NORTH	2015	334.7
558 FGE TEXAS I	6INR0010		HALE	GAS	WEST	2017	-
559 ANTELOPE STATION IC & CTG	13INR0028		ECTOR	GAS	PANHANDLE	2016	-
560 ECTOR COUNTY ENERGY [ECEC_G1-2]	14INR0039		CAMERON	GAS	WEST	2015	-
561 LA PALOMA ENERGY CENTER	6INR0004		GALVESTON	GAS	COASTAL	2017	-
562 PHR PEAKERS [BAC_CTG1-6]	14INR0038		COLORADO	GAS	HOUSTON	2016	-
563 SKY GLOBAL POWER ONE	6INR0057		WHARTON	GAS	SOUTH	2016	-
564 INDECK WHARTON ENERGY CENTER	15INR0023		HARRIS	GAS	SOUTH	2017	-
565 PONDERA KING PROJECT	10INR0022		ANGELINA	GAS	HOUSTON	2017	-
566 PINECREST ENERGY CENTER	16INR0006		HIDALGO	GAS	NORTH	2017	-
567 STEC RED GATE IC PLANT	14INR0040		UVALDE	SOLAR	SOUTH	2016	-
568 OCIALAMO 5 SOLAR (DOWNIE RANCH) [HELIOS_UNI]	15INR0036		PECOS	SOLAR	SOUTH	2015	-
569 EAST PECON SOLAR	16INR0073		PECOS	SOLAR	WEST	2016	-
570 OCIALAMO 6 SOLAR	15INR0070_1		PECOS	SOLAR	WEST	2016	-
571 RE ROSEROCK SOLAR	16INR0048						

GENERATION INTERCONNECTION PROJECT CODE	UNIT NAME	UNIT CODE	COUNTY	FUEL SOLAR	ZONE WEST	START YEAR	2015
572 SUNEDISON BUCKTHORN WESTEX (OAK SOLAR)		15INR0045					717.1
573 Planned Capacity Total (Not Wind)							
574	575 Planned Wind Resources with Executed SGIA	12INR0034b	BORDEN	WIND	WEST	2015	165.0
	576 STEPHENS RANCH PH 2 [SRWE1_SRWE2]	13INR0010a	PARMER	WIND	PANHANDLE	2016	-
	577 MARIAH WIND PH a	13INR0010b	PARMER	WIND	PANHANDLE	2017	-
	578 MARIAH WIND PH b	11INR0054	SAN PATRICIO	WIND	COASTAL	2016	-
	579 MIDWAY FARMS WIND	14INR0023	BRISCOE	WIND	PANHANDLE	2015	200.0
	580 LONGHORN ENERGY NORTH [LHORN_N_UNIT1-2]	14INR0023b	BRISCOE	WIND	PANHANDLE	2016	-
	581 LONGHORN ENERGY SOUTH	13INR0005b	CARSON	WIND	PANHANDLE	2016	-
	582 GRANDVIEW PHASE 2 (CONWAY)	11INR0079a	CLAY	WIND	WEST	2015	-
	583 SHANNON WIND [SHANNONW_UNIT_1]	06INR0022c	KENEDY	WIND	COASTAL	2015	-
	584 BAFFIN WIND (PENASCAL 3) [BAFFIN_UNIT1-2]	08INR0018	HOWARD	WIND	WEST	2015	-
	585 GUNSLIGHT MOUNTAIN WIND	14INR0072	BRISCOE	WIND	PANHANDLE	2015	-
	586 BRISCOE WIND FARM	11INR0057	CAMERON	WIND	COASTAL	2015	-
	587 CAMERON COUNTY WIND	12INR0029	SWISHER	WIND	PANHANDLE	2016	-
	588 COMANCHE RUN WIND	13INR0020a	GLASSCOCK	WIND	WEST	2015	-
	589 CPV RATTLESNAKE DEN PH 1 [RSNAKE_G-2]	13INR0020b	BAYLOR	WIND	WEST	2015	300.0
	590 CPV RATTLESNAKE DEN PH 2	12INR0070	CASTRO	WIND	PANHANDLE	2015	200.0
	591 GREEN PASTURES WIND [GPASTURE_WIND_I & II]	13INR0059a	COMANCHE	WIND	NORTH	2015	200.0
	592 HEREFORD WIND [HRFDWIND_WIND_G & V]	13INR0050	STARR	WIND	SOUTH	2015	-
	593 LOGANS GAP WIND 1 [LGW_UNIT1-2]	13INR0052	GRAY	WIND	PANHANDLE	2016	-
	594 LOS VIENTOS III WIND [LV3_UNIT_1]	14INR0012b	GRAY	WIND	PANHANDLE	2017	-
	595 MIAMI WIND 1b	12INR0018	NUECES	WIND	COASTAL	2016	-
	596 PAMPA WIND	11INR0062	RANDALL	WIND	PANHANDLE	2015	-
	597 PATRIOT WIND (PETRONILLA)	14INR0032a	JIM HOGG	WIND	SOUTH	2015	-
	598 ROUTE 66 WIND [ROUTE_66_WIND1]	12INR0068	FLOYD	WIND	PANHANDLE	2015	-
	599 SENDERO WIND ENERGY	14INR0025a	FLOYD	WIND	PANHANDLE	2016	-
	600 SOUTH PLAINS WIND 1 [SPLAIN1_WIND1-2]	14INR0025b	OLDHAM	WIND	PANHANDLE	2015	-
	601 SOUTH PLAINS WIND II	14INR0053	DICKENS	WIND	PANHANDLE	2015	-
	602 SPINNING SPUR 3 [SSPURTW0_SS3WIND1-2]	14INR0047	CASTRO	WIND	PANHANDLE	2017	-
	603 WAKE WIND ENERGY	10INR0009	ZAPATA	WIND	SOUTH	2015	-
	604 CAPROCK WIND	13INR0055	STARR	WIND	SOUTH	2016	-
	605 JAVELINA WIND ENERGY	15INR0037	DEAF SMITH	WIND	PANHANDLE	2016	-
	606 LOS VIENTOS IV WIND	15INR0021	CARSON	WIND	PANHANDLE	2016	-
	607 LOS VIENTOS V WIND	15INR0050	RANDALL	WIND	PANHANDLE	2016	-
	608 PALO DURO WIND	14INR0030c	GRAY	WIND	PANHANDLE	2016	-
	609 PANHANDLE WIND PH 3	15INR0079	PARMER	WIND	PANHANDLE	2016	-
	610 PULLMAN ROAD WIND	14INR0062	PARMER	WIND	PANHANDLE	2016	-
	611 SALT FORK WIND	13INR0010d	PARMER	WIND	PANHANDLE	2016	-
	612 SCANDIA WIND PH d	13INR0010e	PARMER	WIND	PANHANDLE	2016	-
	613 SCANDIA WIND PH e	13INR0010f	CAMERON	WIND	COASTAL	2016	-
	614 SCANDIA WIND PH f	14INR0013					
	615 SAN ROMAN WIND						

GENERATION INTERCONNECTION PROJECT CODE	UNIT CODE	COUNTY	FUEL	ZONE	START YEAR	2015
616 CHANGING WINDS	CASTRO	WIND	PANHANDLE	2016	-	
617 ELECTRA WIND	WILBARGER	WIND	WEST	2016	-	
618 SOUTH PLAINS WIND III	FLOYD	WIND	PANHANDLE	2016	-	
619 TORRECLLAS WIND A	WEBB	WIND	SOUTH	2016	-	
620 TORRECLLAS WIND B	WEBB	WIND	SOUTH	2016	-	
621 Planned Wind Capacity Total						1,265.0
622						1,265.0
623 Planned Wind Capacity Sub-total (Non-Coastal Counties)						
624 Planned Wind Capacity Sub-total (by Coastal County)						
625	CAMERON	WIND	COASTAL	-		
626	WILLACY	WIND	COASTAL	-		
627	KENEDY	WIND	COASTAL	-		
628	KLEBERG	WIND	COASTAL	-		
629	NUECES	WIND	COASTAL	-		
630	SAN PATRICIO	WIND	COASTAL	-		
631	REFUGIO	WIND	COASTAL	-		
632	ARANSAS	WIND	COASTAL	-		
633	CALHOUN	WIND	COASTAL	-		
634	MATAGORDA	WIND	COASTAL	-		
635	BRAZORIA	WIND	COASTAL	-		
636 Planned Wind Capacity Sub-total (All Coastal Counties)						
637	CAMERON	GAS	COASTAL	1953	10.0	
	BEXAR	COAL	SOUTH	2018	-	
	BEXAR	COAL	SOUTH	2018	-	
	HARRIS	GAS	HOUSTON	1967	13.0	
	HARRIS	GAS	HOUSTON	1958	118.0	
	HARRIS	GAS	HOUSTON	1956	174.0	
	HARRIS	GAS	HOUSTON	1959	211.0	
	HARRIS	GAS	HOUSTON	1960	211.0	
	HARRIS	GAS	HOUSTON	1960	737.0	
638 Mothballed Resources						
639 SILAS RAY CTG 5	SILASRAY_SILAS_5					
640 J T DEELY U1 (MOTHBALLED)	CALAVERS_JTD1_M					
641 J T DEELY U2 (MOTHBALLED)	CALAVERS_JTD2_M					
642 S R BERTRON CTG 2	SRB_SRGBT_2					
643 S R BERTRON U1	SRB_SRBT_G1					
644 S R BERTRON U2	SRB_SRBT_G2					
645 S R BERTRON U3	SRB_SRBT_G3					
646 S R BERTRON U4	SRB_SRBT_G4					
647 Total Mothballed Capacity						
648	RUSK	COAL	NORTH	1979	805.0	
	TITUS	COAL	NORTH	1974	535.0	
	TITUS	COAL	NORTH	1975	535.0	
649 Seasonal Mothballed Resources						
650 MARTIN LAKE U3	MLSES_UNIT3					
651 MONTICELLO U1	MLSES_UNIT1					
652 MONTICELLO U2	MLSES_UNIT2					
653 Total Seasonal Mothballed Capacity						
654	PARKER	GAS	NORTH	1958	18.0	
	PARKER	GAS	NORTH	1958	18.0	
	PARKER	GAS	NORTH	1963	39.0	
	WARD	GAS	WEST	1973	515.0	
655 Retiring Resources Unavailable to ERCOT						
656 NORTH TEXAS CTG 1	NTX_NTX_1					
657 NORTH TEXAS CTG 2	NTX_NTX_2					
658 NORTH TEXAS CTG 3	NTX_NTX_3					
659 PERMIAN BASIN SES U6	PBSES_UNIT6					