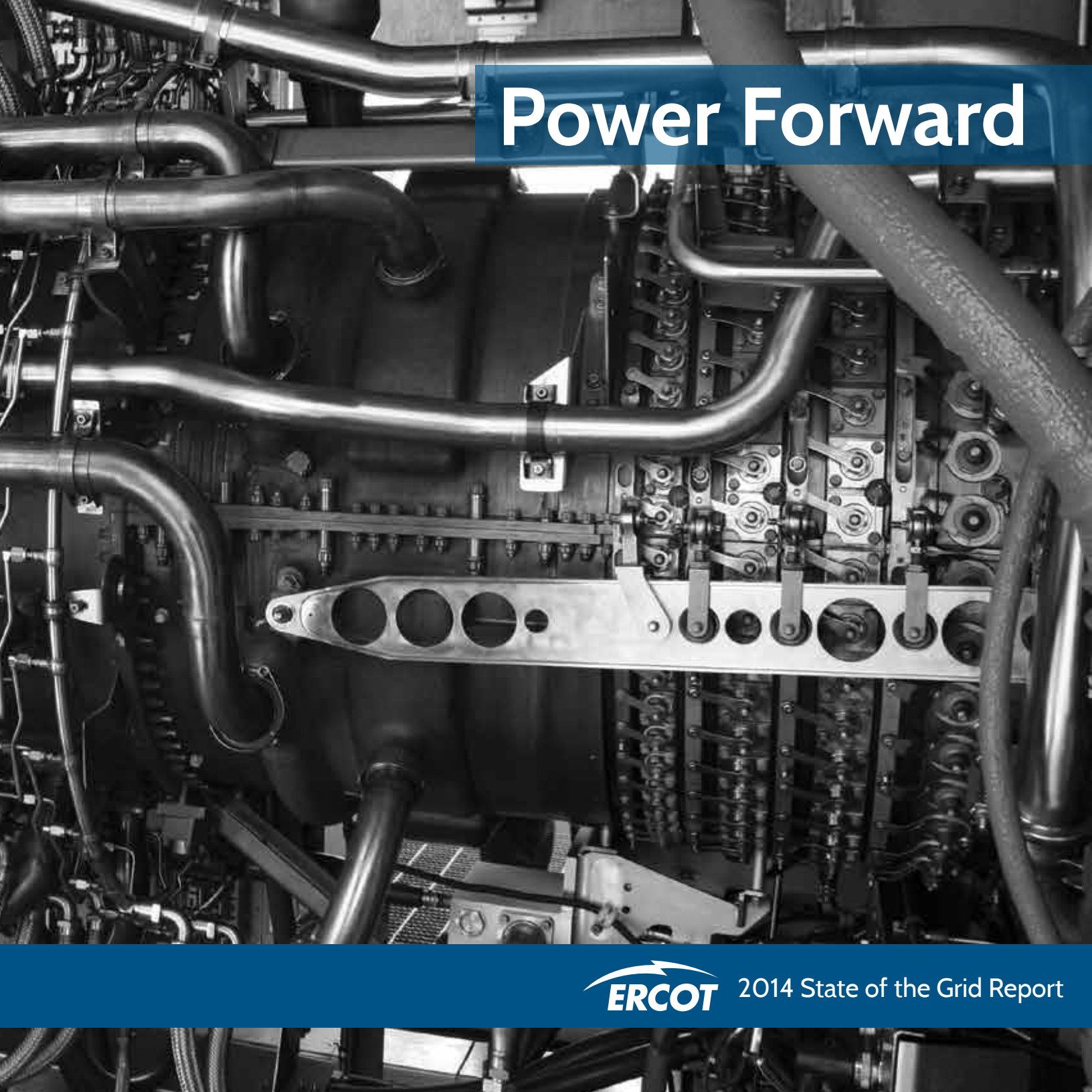

Power Forward

ERCOT 2014 State of the Grid Report

ERCOT

The Electric Reliability Council of Texas (ERCOT) manages the flow of electric power to 24 million Texas customers — representing about 90 percent of the state's electric load. As the independent system operator for the region, ERCOT schedules power on an electric grid that connects more than 43,000 miles of transmission lines and 550 generation units. ERCOT also operates and performs financial settlement for the competitive wholesale bulk-power market and administers retail switching for more than 7 million premises 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. ERCOT's members include consumers, cooperatives, generators, power marketers, retail electric providers, investor-owned electric utilities (transmission and distribution providers), and municipally owned electric utilities.

Message from leaders

In a year that began with colder weather than we usually experience in most of Texas, the Electric Reliability Council of Texas (ERCOT) in 2014 successfully maintained a reliable grid under a variety of conditions while also preparing for new challenges and opportunities ahead.

Our growing region exceeded several monthly records during the cold early months. Although there were some challenges and the need to call for conservation on several days, ERCOT employees managed those situations successfully and worked effectively with market participants to maintain a reliable grid.

By summer, more than 2,100 MW of new gas-fired generation was ready to meet peak demand, which fell short of previous records and even slightly below the previous year. New wind generation continued to connect to ERCOT at a rapid pace, and increased interest in utility-scale solar and energy storage emerged.

The opportunities presented by new technologies, combined with an ever-increasing awareness of how and when people use electric power, makes for dynamic times in the electric industry in Texas. While the physical laws that move electrons along the power grid remain constant, concepts that were largely "what ifs" just a few decades ago are becoming possibilities today.

During the early 20th century, access to electricity began to change how people lived in most of Texas. By the end of that century, ERCOT was operating the electric grid for most of the state and preparing for retail deregulation. Now, more than a decade into the 21st century, through our nodal market, we are integrating increasing amounts of renewable energy into the grid. We also are beginning to understand more about how information technology can open new doors for demand response and more efficient energy use.

ERCOT employees and market participants are at the forefront of this revolution. This year's State of the Grid Report celebrates our shared commitment to the electric grid and competitive markets that are powering the Texas economy.

We hope you enjoy learning more about ERCOT's efforts to power forward.

Trip Doggett

Craven Crowell

ERCOT President and CEO Trip Doggett (left) and Chairman of the ERCOT Board of Directors Craven Crowell

ERCOT Board of Directors

Craven Crowell
Chair
(Unaffiliated)

Judy Walsh
Vice Chair
(Unaffiliated)

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Office of Public Utility Counsel, Ex Officio
(Residential Consumers)

Jorge Bermudez
(Unaffiliated)

Mark Carpenter
Oncor Electric Delivery
(Investor-Owned Utilities)

Read Comstock
Direct Energy LP
(Independent Retail Electric Providers)

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President and Chief Executive Officer,
ERCOT (Ex-officio)

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(Industrial Consumers)

Keith Emery
Tenaska Power Services
(Independent Power Marketers)

Nick Fehrenbach
City of Dallas
(Commercial Consumers)

Michehl Gent
(Unaffiliated)

Kevin Gresham
E.ON North America LLC
(Independent Generators)

Clifton Karnei
Brazos Electric Power Cooperative, Inc.
(Cooperatives)

Donna Nelson
Chair, Public Utility Commission of Texas
(Ex-officio, non-voting)

Karl Pfirrmann
(Unaffiliated)

Carolyn Shellman
CPS Energy
(Municipally Owned Utilities)

Segment Alternates

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Exelon Corporation
(Independent Generators)

Mike Kezar
South Texas Electric Cooperative Inc.
(Electric Cooperatives)

Jean Ryall Porter
CCNG Power
(Independent Power Marketers)

Wade Smith
American Electric Power
(Investor-Owned Utilities)

John Werner
Source Power & Gas LLC
(Independent Retail Electric Providers)

Phil Williams
Denton Municipal Electric
(Municipally Owned Utilities)

In memory of Andrew J. Dalton (1972-2015)

The board and staff of ERCOT salute Andrew Dalton's contributions to the ERCOT Board of Directors.

As counsel for Valero Energy Corporation, Andrew represented industrial consumers on the ERCOT Board of Directors from 2005 through 2014, serving as chair of the board's Human Resources and Governance Committee from 2010 through 2012 and as vice chair in 2009.

Andrew, who also was mayor of Garden Ridge, Texas, consistently provided thoughtful input and true leadership. He will be missed greatly by all who had the honor to know him.

ERCOT Executives

H.B. "Trip" Doggett
President and Chief Executive Officer

Jerry Dreyer
Senior Vice President and Chief Information Officer

Brad Jones
Senior Vice President and Chief Operations Officer

Bill Magness
General Counsel, Senior Vice President of Governance, Risk and Compliance and Corporate Secretary

Betty Day
Vice President of Governance, Risk and Compliance

Theresa Gage
Vice President of External Affairs and Corporate Communications

Charles B. Manning, Jr.
Chief Compliance Officer and Executive Advisor

Ken McIntyre
Vice President of Grid Planning and Operations

Michael Petterson
Vice President and Chief Financial Officer

Jeyant Tamby
Chief of Staff

Diane Williams
Vice President of Human Resources

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Power Forward:
Electric reliability in the 21st century

ERCOT serves the public by ensuring a reliable grid, efficient electricity markets, open access to the transmission system and retail choice. Its success relies on a consistent focus on this fundamental mission while continuing to power forward in a changing world.

At the dawn of the 21st century, ERCOT was at the center of significant change in the Texas electric market. Today, about 24 million Texans rely on the ERCOT grid for the power that keeps their homes and businesses humming, day and night. In fact, about 90 percent of the electricity used in Texas flows through the ERCOT grid, one of three interconnections in North America.

The people who operate the ERCOT grid today are integrating energy sources and employing technologies and market concepts that were just beginning to emerge at the end of the 20th century. ERCOT works closely with stakeholders, regulators and policymakers to continue improving efficiency, transparency and flexibility in its grid and market operations as these technological advances open new doors.

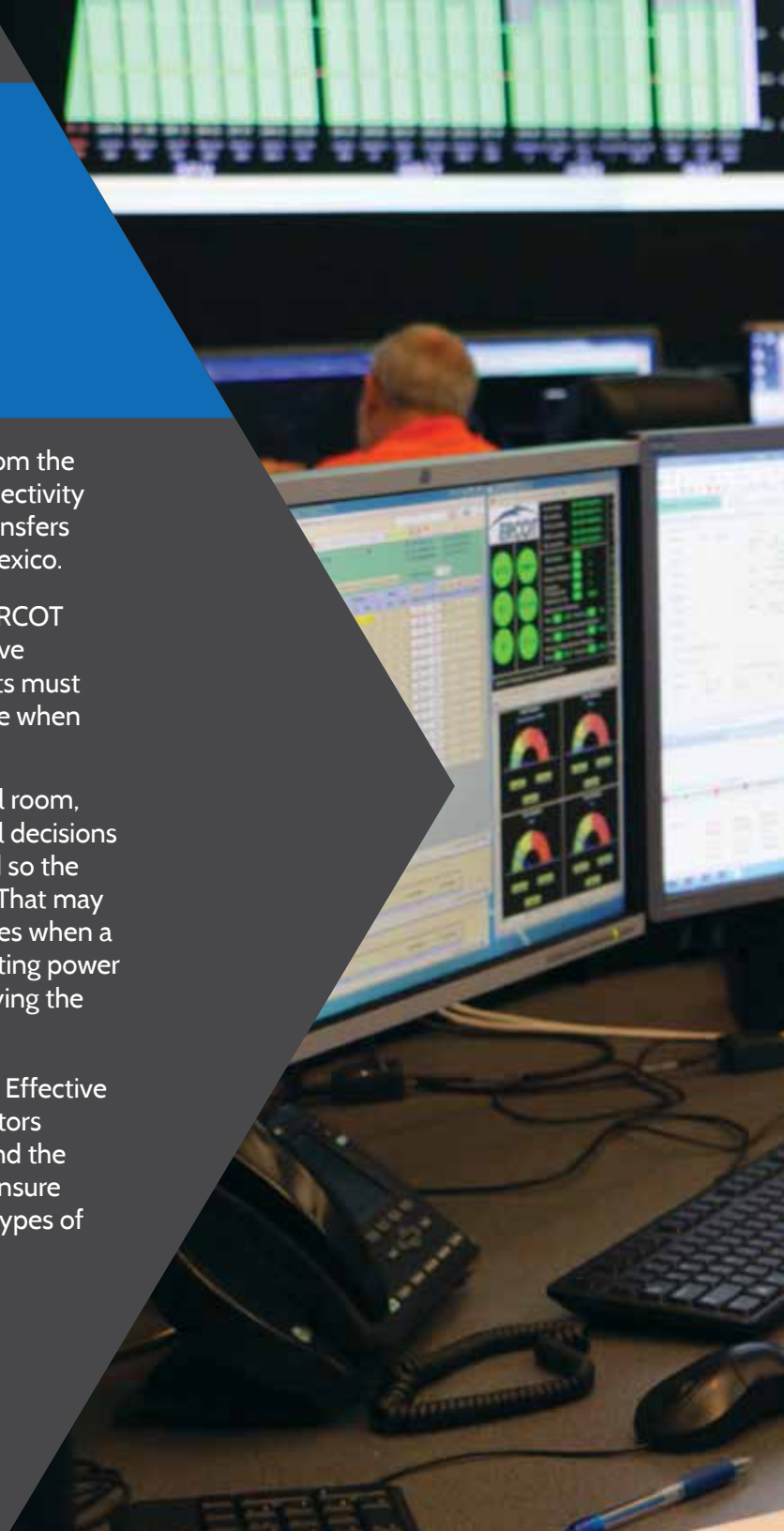
Keeping calm and maintaining reliability

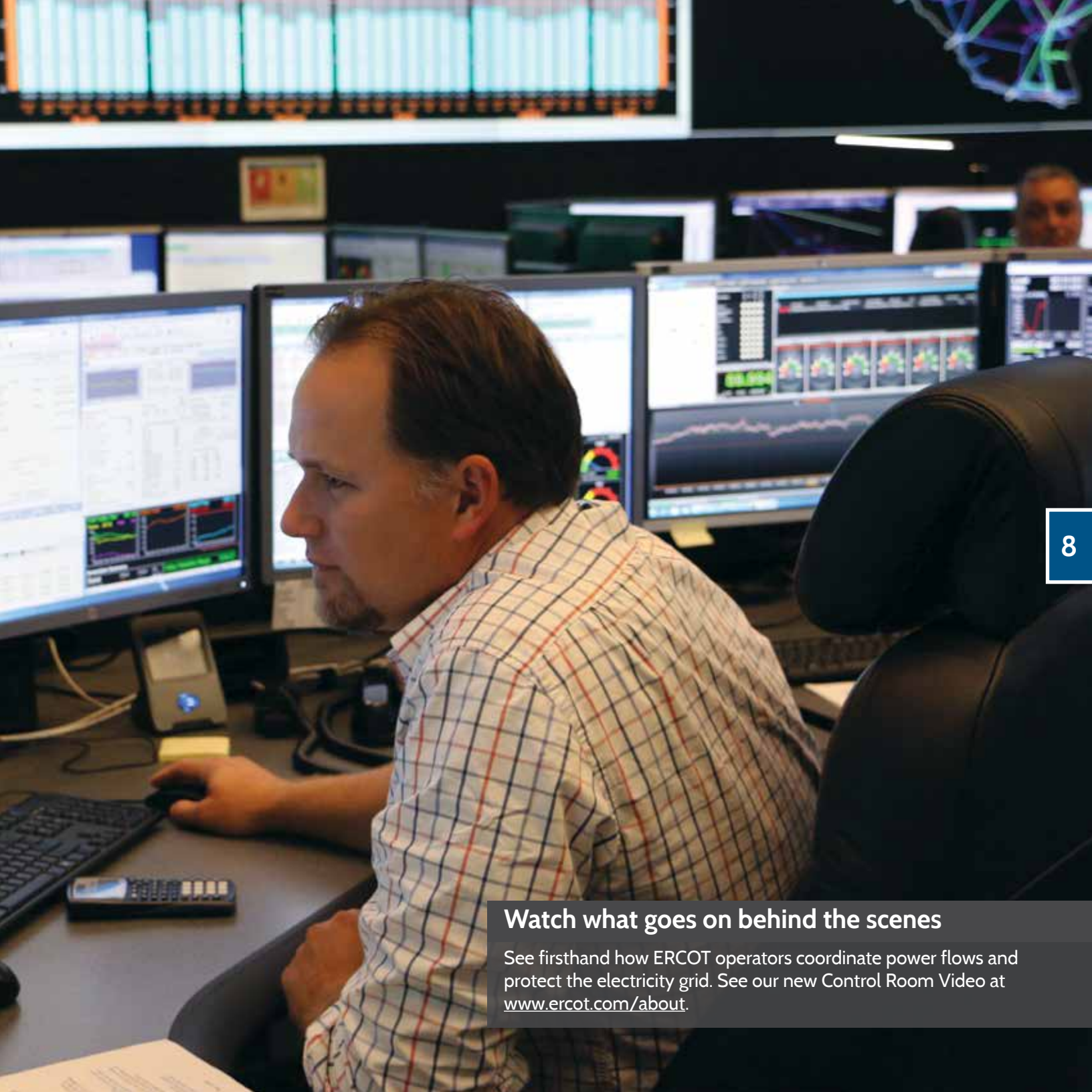
The grid that serves most of Texas operates separately from the Eastern and Western Interconnections, with limited connectivity through five direct-current ties that allow small power transfers — up to 1,256 MW — to and from other U.S. grids and Mexico.

Its relative isolation from other power grids means that ERCOT is responsible for ensuring there is sufficient power to serve consumer needs within its own electricity island. Forecasts must be accurate, and scheduled resources need to be available when called upon to provide energy to the grid.

The nerve center of daily operations is the ERCOT control room, where well-trained operators and other staff make critical decisions to maintain the balance of electricity supply and demand so the grid is able to continue moving power where it's needed. That may mean dispatching additional generation and load resources when a generation unit trips or demand increases rapidly, redirecting power flows when a transmission facility risks overload, or notifying the public when the need for conservation becomes critical.

Each operator has a specific role in maintaining reliability. Effective communication and cutting-edge technology help operators coordinate the interaction between the electric market and the grid. ERCOT operators test their knowledge regularly to ensure they are prepared to respond appropriately to the same types of worst-case scenarios they strive every day to prevent.





Watch what goes on behind the scenes

See firsthand how ERCOT operators coordinate power flows and protect the electricity grid. See our new Control Room Video at www.ercot.com/about.

Simulated training scenarios combine high pressure and low risk

Besides working to minimize the probability of a significant grid event, ERCOT takes additional steps to ensure its own staff — and others who can affect electric reliability — are ready to respond to any emergency.

ERCOT's operator training seminars, where operators are trained and tested in simulated events on control room procedures designed to prevent or respond to outages, have become the model for Independent System Operators in North America. Moving beyond the traditional tabletop exercise, ERCOT trains operators by putting them in realistic simulated situations — ranging from weather issues to security breaches — that force participants to make wise decisions and take timely actions to prevent, avert or respond to a fictional failure of the grid.

As operators become accustomed to these scenarios and apply their skills over time, they are more likely to make the right call in a real situation, regardless of the cause. And, as quick responses to threatening conditions become second nature, they are better prepared to remain calm as real-life pressures increase.

Recognizing that this simulated scenario preparation can benefit overall grid reliability, ERCOT has opened its seminars to market participant transmission and power plant operators, as well as control room operators from other ISOs.

ERCOT in late 2013 also participated in GridEx II, the second nationwide grid security exercise conducted by the North American Electric Reliability Corporation (NERC). GridEx II involved more than 230 organizations, most of which participated from their own locations, as well as the U.S. Department of Homeland Security, the Federal Bureau of Investigations, and the U.S. Department of Energy.

ERCOT continued training and developing staff expertise using its own emergency planning scenarios, including a simulated cascading blackout that involved emergency responders from all over the state as operator trainees simulated system restoration following a fictional widespread storm event.

Each exercise — whether it involves only internal staff or a broad spectrum of participants from within and outside the electric industry — is another opportunity to test and refine each department's emergency response plans.

Providing ideal environments and teams that work

ERCOT in 2014 also completed a significant renovation of its Taylor and Bastrop control rooms, designed to provide an ideal, safe environment to continue operating successfully.

The project included technology and security improvements to create an even more conducive environment for sharp focus and concentration, high levels of situational awareness, and excellent decision-making. From more flexible work spaces to improved presentation of screen data, upgrades are focused on the human interaction with information and the need for control room staff — from operators to shift engineers and supervisors — to assimilate what they see and respond quickly to dynamic situations.

During 2014, ERCOT's Grid Planning and Operations organization also restructured to help build on cross-functional collaboration between long- and short-term planning and real-time operations. The revised structure is designed to enable staff to connect planning decisions and operational impacts more effectively and improve overall communication, decision-making and preparedness.

Reliability coordinator operators are required to complete 200 hours of continuing education every three years.

A forward look at reliability and resource adequacy

In a state that continues to grow by about 1,000 residents a day, some impacts, such as new subdivisions and increased traffic, are very visible. The impacts of growth in electricity use and the ability of existing facilities to keep up with that demand can be harder to observe, especially when looking into the future.

After extreme conditions in 2011 exposed potential future concerns, policymakers, stakeholders and staff focused efforts on future resource adequacy. Studies indicated ERCOT could see planning reserve margins drop below established reliability targets as growth continues, especially if 2011 conditions return.

Research also indicated that wholesale energy prices during scarcity conditions were not adequate to attract new investment in the generation facilities needed to serve expected future peak power demand. In response, the Public Utility Commission of Texas (PUC) increased the systemwide offer cap in increments, to $7,000 per megawatt-hour (MWh) by summer 2014 and up to $9,000 per MWh by summer 2015.

In early 2014, tight conditions during two extreme cold snaps sent prices to the previous offer cap of $5,000 per MWh during about 20 intervals — about 1.5 hours — in the security-constrained economic dispatch (SCED) system.

Although peak demand has not yet repeated or surpassed levels seen in 2011, ERCOT planners continue to monitor and prepare for future expectations. The ERCOT market also has made some adjustments, both by addressing pricing concerns and by further developing its demand response options.

The PUC continues to evaluate whether ERCOT's reliability targets are on point. Meanwhile, ERCOT generation developers added more than 2,100 MW of new gas-fired generation and nearly 1,500 MW of new wind generation in 2014, as well as a 38-MW utility-scale solar project.

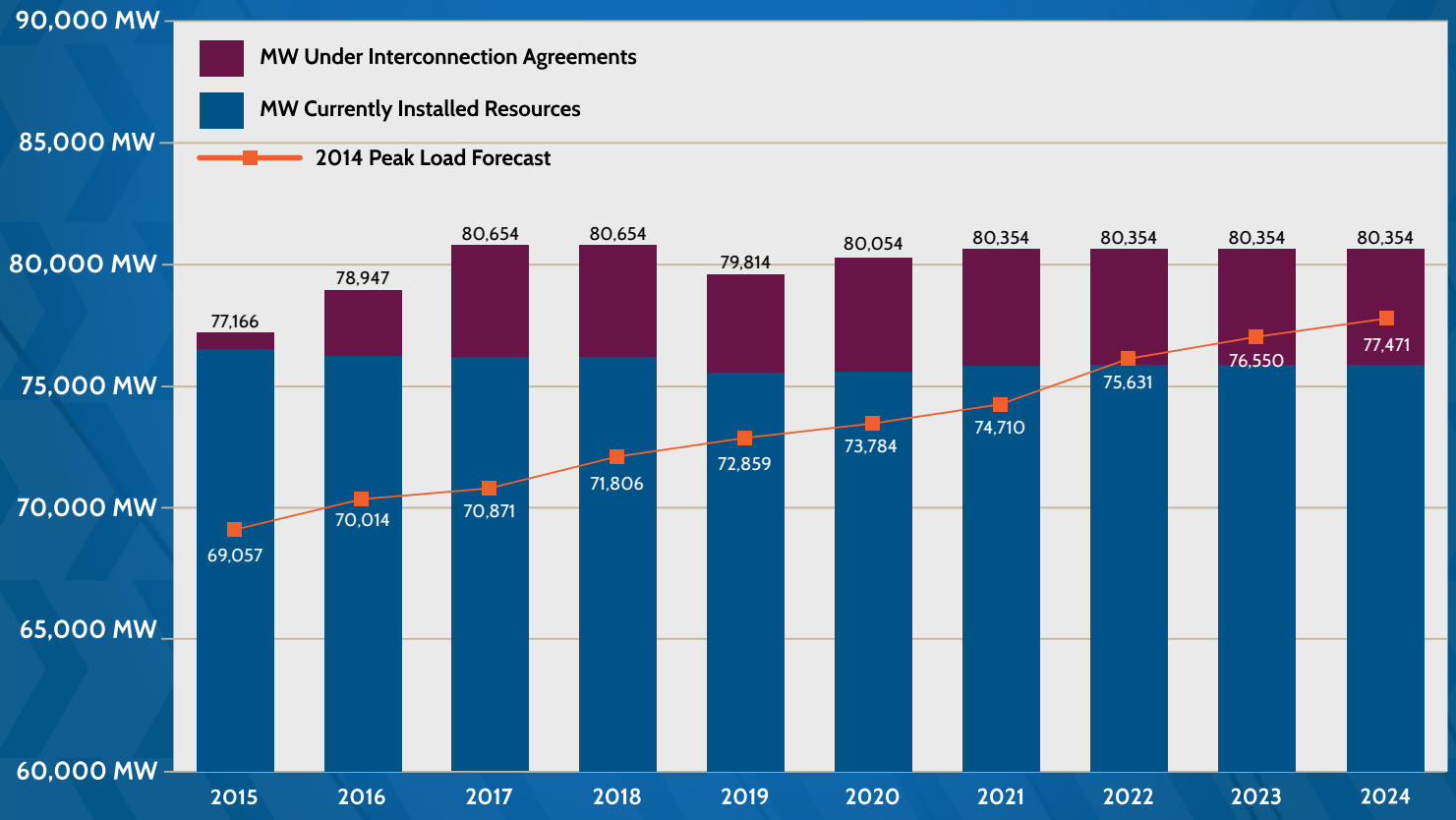
The future looks bright: Refining the outlook

ERCOT's Capacity, Demand and Reserves report is a 10-year resource adequacy outlook, which is updated twice annually. Although the outlook could change, the most recent update, released in December 2014, showed significant improvement compared to recent years.

A forward look at peak power consumption

In addition to seeing some growth in generation investment, ERCOT has implemented a unique new load forecasting methodology. The new approach more effectively reflects the changing relationship between economic factors and electricity use and demand.

Capacity, Demand and Reserves Report (December 2014)



Previous load forecasts focused primarily on employment expectations and aligned peak demand projections with specific financial forecasts. However, in recent years, the relationship between the economy and peak demand energy use changed, in part because consumers have more tools to help them use energy more efficiently.

The new forecast, based on growth in customer accounts, captures the different growth patterns that occur among residential, business and industrial consumers. The model will adapt over time and can adjust inputs and forecasts to reflect changing conditions.

The updated outlook anticipates that peak demand, measured in megawatts, will grow by about 1.3 percent a year in the next 10 years, compared to actual increases of about 1.1 percent in the past 10 years and projected growth rates as high as 2.5 percent in some previous forecasts. Peak demand in 2014 actually decreased from 2013.

Similar impacts are expected for forecasted energy use over the years. However, 2014 energy use exceeded the 1.8 percent annual growth forecasts, due mainly to consumption levels during the extremely cold winter months early in the year.

Gauging future generation during peak demand

Because reliability requires balancing energy supply and demand, planners also must know how much capacity is likely to be available when power demand peaks to assess resource adequacy effectively.

Forecasts consider traditional generation resources at full nameplate capacity, minus any power used on-site, because their output can be controlled by operators. Intermittent renewable resources, such as wind power, present a planning challenge because performance over periods of peak demand can be difficult to predict.

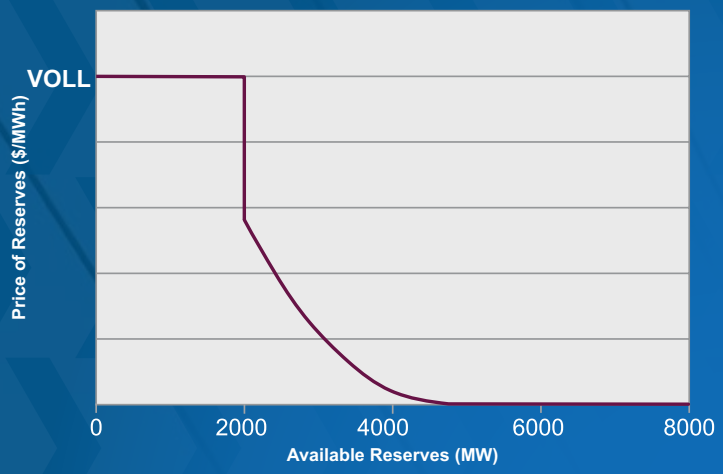
Additionally, wind power facilities on the Texas Gulf Coast tend to perform better over peak while the wind in West Texas typically blows more at night. Regional wind patterns also change seasonally. These characteristics affect how much wind generation is available to the grid at different times of the day and year.

In previous CDRs, forecasters had estimated wind generation during peak demand at 8.7 percent of installed capacity, based on probabilistic calculations. In October 2014, the ERCOT Board of Directors approved a new forecasting methodology that considers the facilities' location and historical performance over a six-year study period.

Current Peak Average Wind Capacity Percentages Now Used to Estimate the Contribution in Forecasts

Affected Report	Coastal	Non-coastal
Summer and Fall Assessments	56%	12%
Winter and Spring Assessments	36%	19%

The Operating Reserve Demand Curve (ORDC)



Moving scarcity pricing forward

In June 2014, ERCOT implemented the Operating Reserves Demand Curve (ORDC). This market-based pricing mechanism will help ensure that ERCOT energy prices reflect the increasing value of electricity as the risk for rotating outages increases.

The actual "price adder" curve follows the likelihood that an outage could occur (Loss of Load Probability) and the potential for customer impacts in case of such an outage (Value of Lost Load, or VOLL). The curve begins around 4,000 MW of operating reserves, peaking when reserves drop to 2,000 MW or less. At that point, the ORDC will automatically adjust energy prices to the established VOLL. So, although the systemwide offer cap limits offers to $7,000 per MWh, the VOLL adjustment can result in prices up to $9,000 per MWh using the ORDC.

Market powers reliability forward

ERCOT staff and stakeholders in 2014 continued exploring future ancillary services, recognizing that evolving technologies and changing grid characteristics will create different reliability challenges. Ancillary services are the capacity ERCOT secures on the market to address sudden operational changes that could threaten reliability.

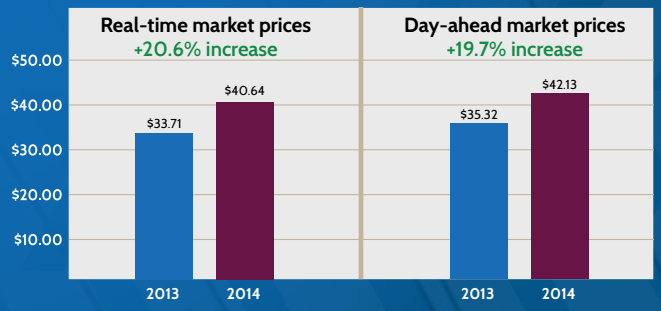
By year's end, the Future Ancillary Services Team (FAST) had identified several new ancillary services products to consider for the future, including improvements to regulation up and down services and a new suite of frequency-responsive reserve services to support changing needs. The proposed Ancillary Service Redesign is now in stakeholder review, and ERCOT expects implementation of any changes will occur three years after final board approval.

During the FAST discussions, ERCOT experts also saw opportunities for some immediate improvements to the products it secures from the market to support reliability. As a result, the grid operator will acquire different quantities of certain services at different times, depending on likely operational needs, and will assign different values to reserves that can respond instantly to a system need.

2014 Wholesale Prices

Wholesale market prices in the ERCOT day-ahead and real-time markets both rose by about 20 percent on average in 2014, due mainly to higher natural gas prices early in the year. Prices in late 2014 dropped as gas prices decreased.

Annual Average Prices

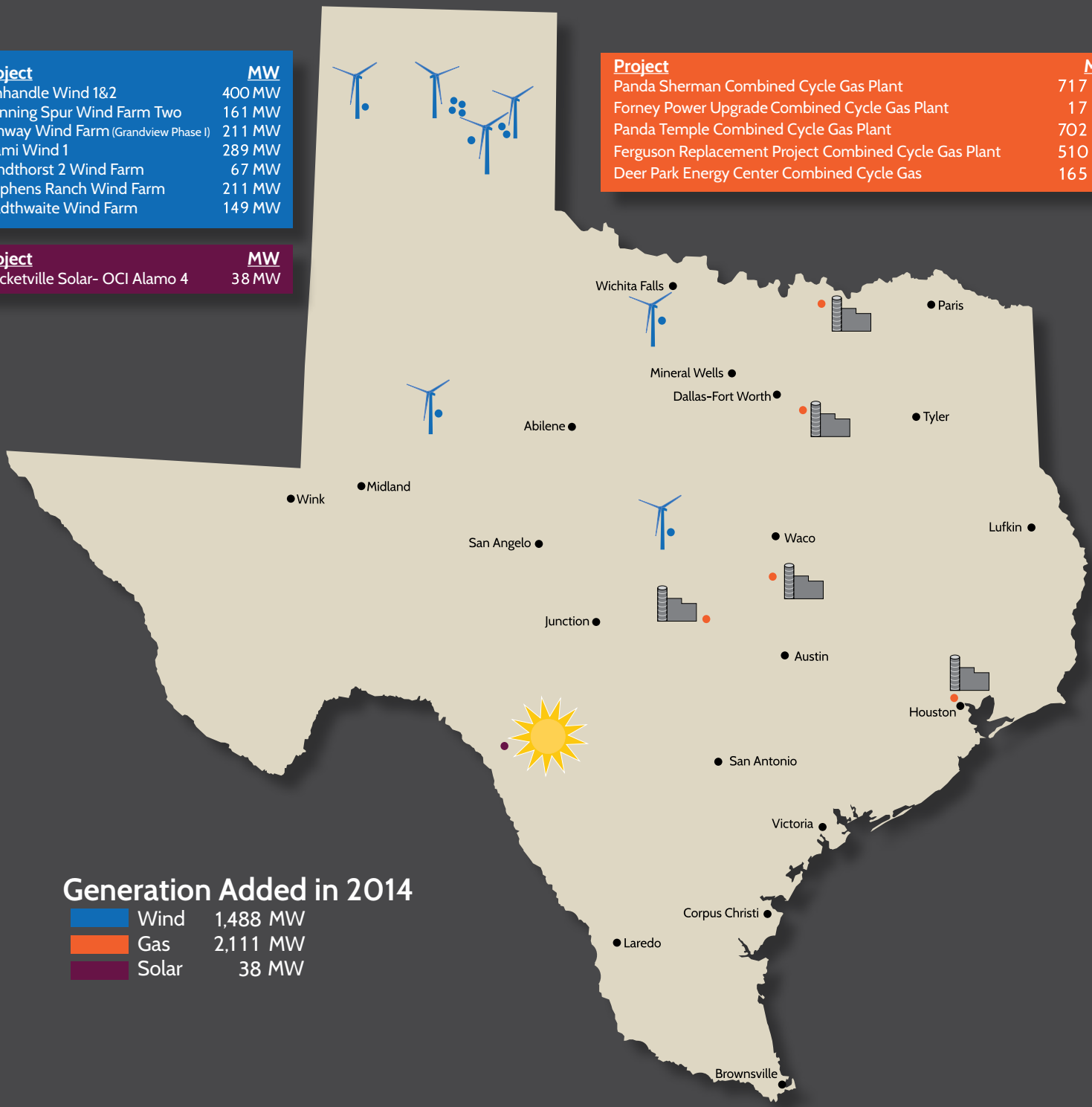


Source: Potomac Economics (Independent Market Monitor)
Prices reflect load-weighted average settlement point load zone prices in ERCOT real-time and day-ahead markets. Load zone prices include 15-minute wholesale energy prices, including the effects of transmission congestion in affected load zones.

Project	MW
Panhandle Wind 1&2	400 MW
Spinning Spur Wind Farm Two	161 MW
Conway Wind Farm (Grandview Phase I)	211 MW
Miami Wind 1	289 MW
Windthorst 2 Wind Farm	67 MW
Stephens Ranch Wind Farm	211 MW
Goldthwaite Wind Farm	149 MW

Project	MW
Bracketville Solar- OCI Alamo 4	38 MW

Project	MW
Panda Sherman Combined Cycle Gas Plant	717 MW
Forney Power Upgrade Combined Cycle Gas Plant	17 MW
Panda Temple Combined Cycle Gas Plant	702 MW
Ferguson Replacement Project Combined Cycle Gas Plant	510 MW
Deer Park Energy Center Combined Cycle Gas	165 MW



Generation Added in 2014

Wind	1,488	MW
Gas	2,111	MW
Solar	38	MW

Planning tomorrow's power grid, the backbone of reliability

ERCOT planners continually evaluate and plan for future transmission needs at key locations within the ERCOT grid.

While it is important to ensure there is adequate generation to keep up with peak demand requirements, the transmission system also must be sufficient to move power where it's needed, whenever it's needed. The grid also must be designed to remain reliable, even if some facilities become unavailable during planned maintenance or unexpected outages.

Much like a crowded highway at rush hour, the electric grid can experience congestion during periods when demand is high or some circuits are unavailable. This congestion can affect the cost and availability of power.

Transmission planners work with market participants to develop a Long-Term System Assessment every other year. This study evaluates several possible scenarios that could affect future transmission needs at key locations within the ERCOT grid, based on scenarios that identify the likely types, locations and timing of expected new generation. Each year, an Electric System Constraints and Needs Report defines a six-year outlook for project priorities.

Some high-priority projects identified in previous studies seek to address long-term reliability concerns in growing areas such as the Rio Grande Valley, the Houston metropolitan area, and the Permian Basin area of West Texas. These studies identify areas where improvements are needed to address congestion, typically in areas where demand for electricity is high.

Addressing growing needs in growing regions

Rio Grande Valley

ERCOT has worked closely with transmission providers in the Lower Rio Grande Valley to address reliability concerns in this growing region, where peak demand already surpasses the area's generation capacity. Capacity to import power from other parts of the grid is limited to less than half the region's peak demand, and these conditions have already created operational challenges in 2014.

More than $1.3 billion in improvements are in progress and scheduled for completion by mid-2016 to help support growing demand in this area. More improvements likely will be needed in the future, especially in light of one power plant's recently announced plans to send its output to the Mexican power grid along with new North American Electric Reliability Corporation (NERC) reliability standards that go into effect in 2016.

Houston

Houston is one of the largest seaports and petrochemical centers in the nation, and its population is growing at a rate of 100,000 people per year. Electricity consumption in the metro area has begun to push the limits of the region's energy infrastructure.

The ERCOT board in April 2014 approved a $590 million project to increase power import capacity to the Houston area by 2018, in part to serve anticipated growth in industrial load, as well as continuing growth among residential and commercial consumers. Prior to construction, the project requires final approval by the PUC.

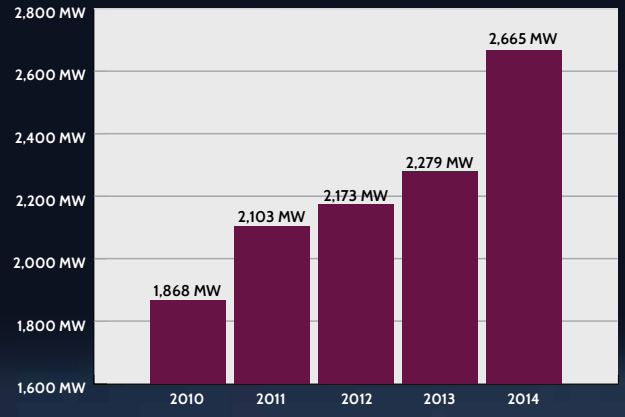
West Texas

Peak demand for electricity in the zone around the Permian Basin has increased by more than 40 percent since 2010, driven in large part by the rapid growth of oil and gas exploration and production in the region, along with the higher energy demand associated with modern horizontal drilling practices.

ERCOT continues to work closely with transmission and distribution providers, as well as oil and gas industry representatives, to ensure a plan is in place to serve this cornerstone of the Texas economy well into the future.

In 2014 alone, following release of an initial study in 2013, transmission providers invested about $299 million in improvements to the electric grid serving West Texas, and plan another $950 million in improvements through 2020.

Far West Weather Zone Annual Peak (2010-2104)



Connecting tomorrow's resources to today's grid

As renewable energy sources become less expensive and ongoing regulatory developments create a more uncertain environment for some traditional generation sources, ERCOT is seeing growth in wind and solar resources and expects future growth in energy storage.

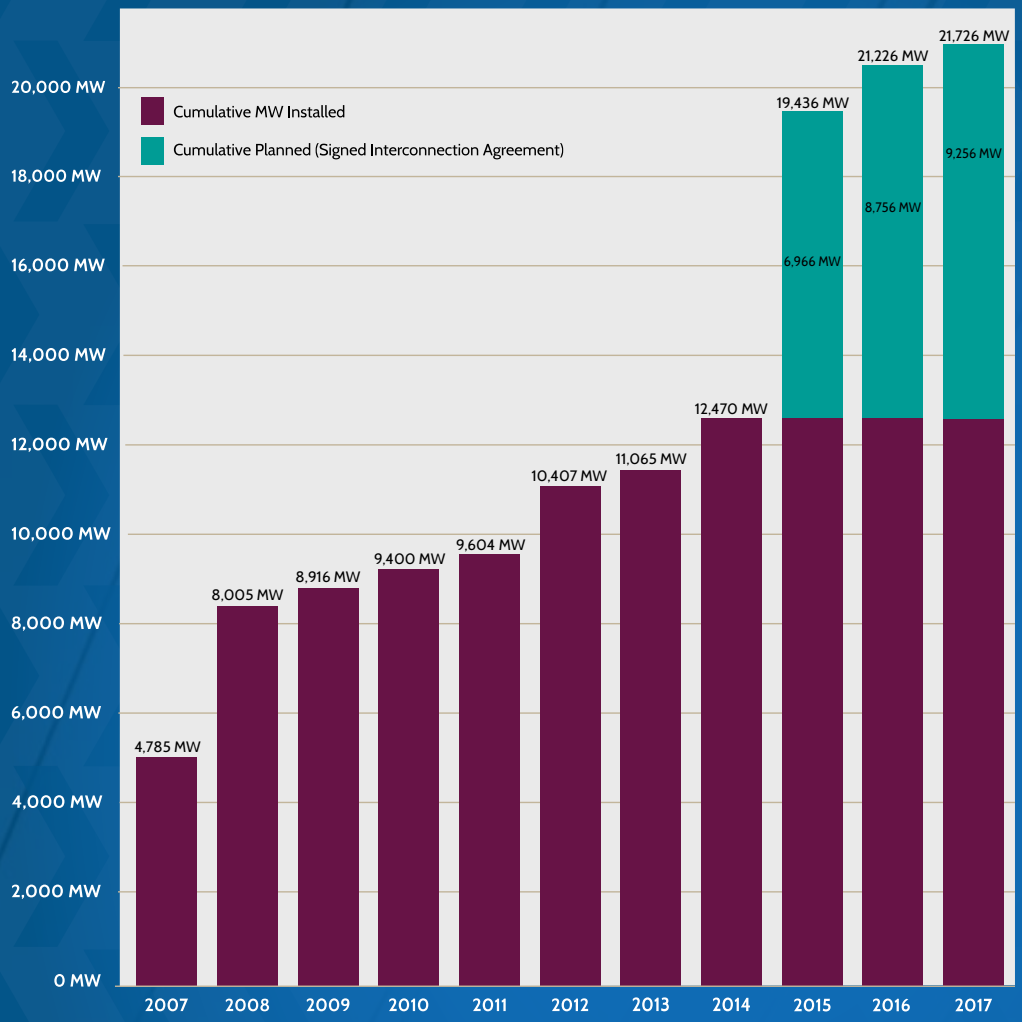
Although utility-scale solar power still represents less than 1 percent of capacity and energy production in the ERCOT region, it is poised for significant growth in the coming years. By the end of 2014, more than 6,000 MW was under study and another 385 MW had agreements in place to connect to the ERCOT grid in the next couple of years.

Some of this new development is showing up along the transmission pathways created by the 3,600 miles of Competitive Renewable Energy Zone projects completed in 2013. In 2014, ERCOT added 38 MW of new utility-scale solar generation capacity, bringing total installed solar capacity to more than 150 MW.

Wind Generation

- **Wind generation record:** 10,957 MW (December 25, 2014)
- In 2014, wind provided 36.1 million MWh of energy in the ERCOT region.
- Wind generation in the ERCOT region in 2013 represented about 20 percent of the total wind generation in the United States.
- Wind in the ERCOT region typically blows more during the shoulder months — October, November, March, April and May — and can vary quite a bit due to weather events and time of day.

ERCOT Wind Installations by Year (as of December 2014)



The data presented here is based upon the latest registration data provided to ERCOT by the resource owners and can change without notice. Any capacity changes will be reflected in current and subsequent years' totals. Scheduling delays are also reflected in the planned projects as information is received.

This chart reflects planned units in the calendar year of installation, rather than installation by peak of year shown.

Wind continues to gain ground

In ERCOT, Texas continues to lead the nation in wind generation capacity and ended 2014 with 12,470 MW of installed capacity, including the addition of 1,488 MW in new generation. During 2014, wind power provided 10.6 percent of the total energy consumed in ERCOT.

As wind capacity grew, this resource continued to set new records throughout the year, breaking 10,000 MW for the first time March 26, when instantaneous output reached 10,296 MW a little before 11 p.m. By year's end, output neared 11,000 MW, when wind generation provided 10,957 MW to the grid, nearly 34 percent of total demand, at 10:25 p.m. on Dec. 25.

Storage finding a place in the reliability mix

ERCOT added new rules to the books in 2014 to help define how storage resources, which currently total 36 MW of battery-storage capacity, provide Fast-Responding Regulation Service. Although no new storage facilities were developed in ERCOT in 2014, nearly 600 MW of new storage capacity is being studied for possible future integration.

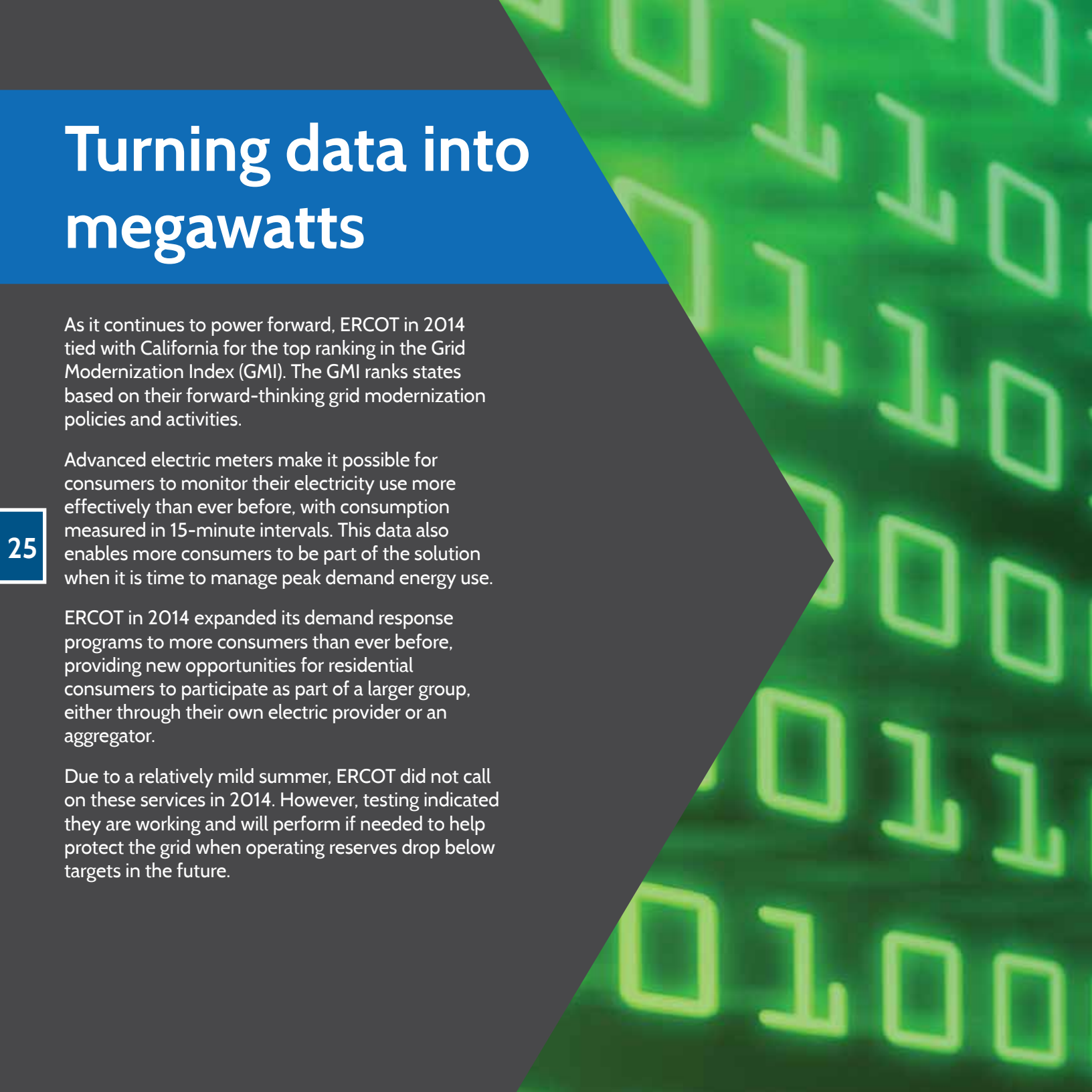
Turning data into megawatts

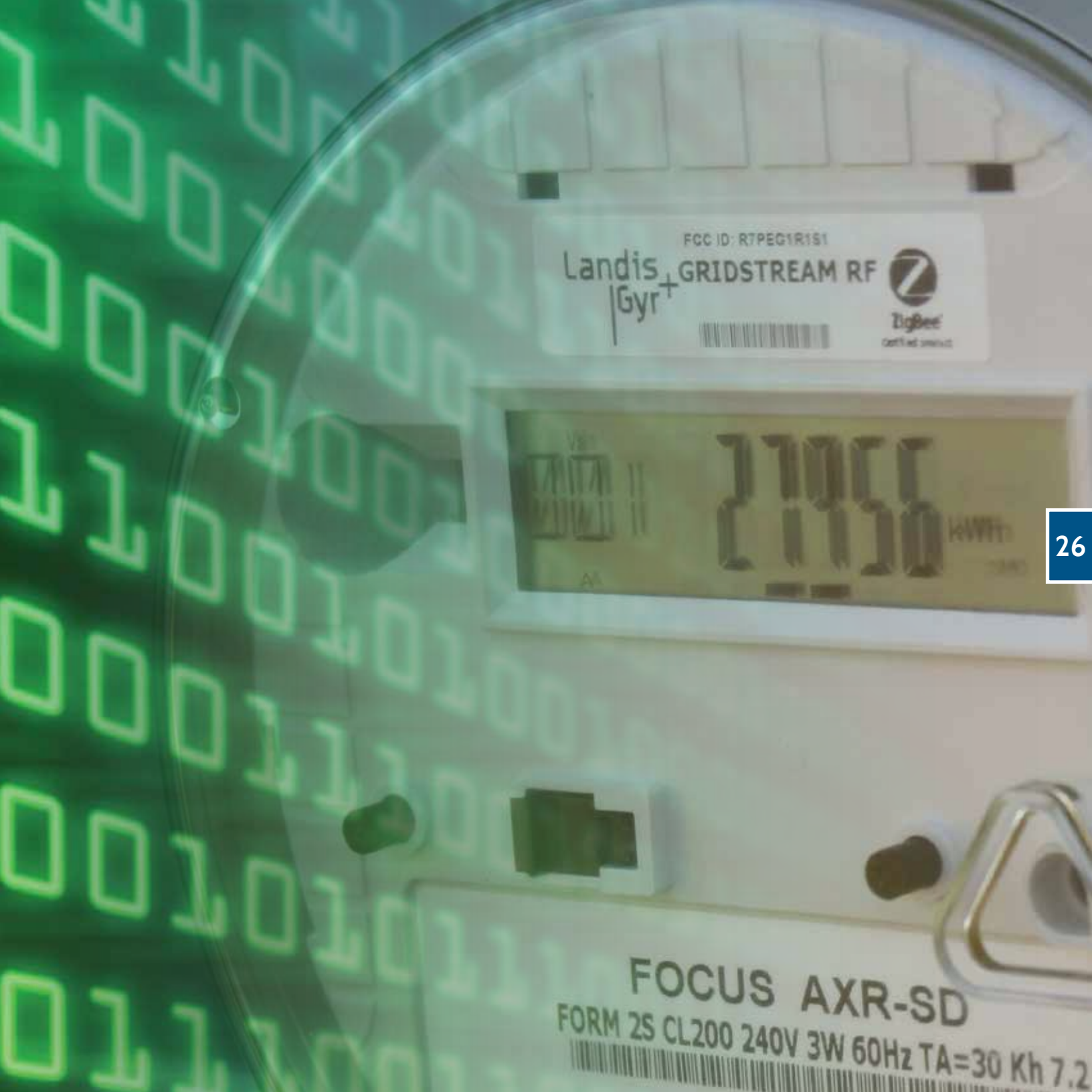
As it continues to power forward, ERCOT in 2014 tied with California for the top ranking in the Grid Modernization Index (GMI). The GMI ranks states based on their forward-thinking grid modernization policies and activities.

Advanced electric meters make it possible for consumers to monitor their electricity use more effectively than ever before, with consumption measured in 15-minute intervals. This data also enables more consumers to be part of the solution when it is time to manage peak demand energy use.

ERCOT in 2014 expanded its demand response programs to more consumers than ever before, providing new opportunities for residential consumers to participate as part of a larger group, either through their own electric provider or an aggregator.

Due to a relatively mild summer, ERCOT did not call on these services in 2014. However, testing indicated they are working and will perform if needed to help protect the grid when operating reserves drop below targets in the future.

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Demand Response Resources

More than 2,100 MW in demand response resources, include:

- Load Resources (mostly large industrial) ~1,390 MW
- Emergency Response Service (commercial and industrial) ~850 MW
- Utility load management programs ~220 MW

Expanding access to demand response

Two programs grew from pilots to services in 2014: a 30-minute Emergency Response Service (ERS), which allows participants up to 30 minutes to reduce demand by a set amount, and Weather-Sensitive ERS, which focuses on moderating air-conditioning use when conditions are tight.

ERCOT contracts for these resources three times a year for four-month contract terms. For summer 2014, ERCOT had secured more than 450 MW of combined 10- and 30-minute ERS products to call upon if needed over the late afternoon peak demand hours. By fall, ERS had grown to more than 600 MW, and ERCOT is seeing that number trending upward for the future.

Additionally, more than 60,000 households were enrolled in Weather-Sensitive ERS by Aug. 1, 2014, with nearly 22 MW available to call upon if needed.

ERCOT in 2014 also laid the framework and created rules for load resources to participate in the real-time energy market. "Loads in SCED," the opportunity to sell demand response into ERCOT's real-time market, is now a reality, and ERCOT expects to qualify the first eligible resources — also residential aggregations — by summer of 2015.

The power of ERCOT people, at work and in the community

ERCOT's success depends on the dedication of about 700 employees, who came to Texas from all over the world and often are widely recognized in their respective fields.

As experts in areas such as power system and electrical engineering, information technology, cyber security, accounting and finance, and legal fields, these employees have numerous opportunities to solve real-world challenges and help others.

Employees also help move the industry forward by presenting at conferences and special events and sharing their experiences and expertise in various publications.

Global energy industry leaders often visit Texas to better understand its world-class electric market and unique power grid, and these ERCOT experts are at the core of this success.

ERCOT employees are problem solvers, and that characteristic extends beyond their job descriptions into the community, both inside and outside the workplace.

These contributions will continue to make a difference.

Employees raised $1,500 for a project to install solar-powered lighting in a Taylor park as part of the award-winning BLADE (Beginners Learning Alternative Designs for Energy) program, which enables ERCOT experts to coach future problem solvers and even inspire their interest in the electricity industry and engineering.

Bringing energy to the community

Employees have many opportunities to make a difference in the community. Some examples from 2014 include:

- ERCOT's Military/Veterans Services team volunteered about 200 hours and helped raise more than $4,000 to sponsor Honor Flight, sending five World War II veterans to Washington, D.C.
- Volunteers played Santa, providing toys, shoes and socks for 102 children through the CASA and Thrall Giving Tree programs.
- Employees raised $7,670 for the March of Dimes and participated in the Annual March for Babies event.
- The highly competitive ERCOT Annual Holiday Food Drive garnered donations of 2,590 bags of food for Shepherd's Heart Food Pantry in Taylor.
- United Way of Williamson County recognized ERCOT as Volunteer Partner of the Year in recognition of $26,500 it received in employee donations.

Bidding farewell to an ERCOT original

In 2014, ERCOT said goodbye to one of its earliest employees, Kent Saathoff, who retired in January. During Kent's 25-year tenure, he saw ERCOT grow from a handful of employees during its early years as the Central Operating Coordinator of 10 control areas to one of the first Independent System Operators, with a single control area for the entire interconnection.

Developing tomorrow's subject matter experts

In addition to a variety of regular internship opportunities, which attracted about 30 aspiring professionals in summer 2014, ERCOT has two unique programs to recruit and train new engineers and technical staff.

Building Information Technology Staff (BITS): This entry-level IT program focuses on the professional and technical growth of IT professionals. The 12- to 18-month program exposes participants to multiple facets of information technology — including IT development, infrastructure and operations — in a real-world environment. Participants work closely with a mentor as they complete training and assignments and support recruitment efforts. Two BITS participants in 2014 accepted permanent ERCOT positions as of January 2015.

Engineer Development Program (EDP): This program helps launch and build the careers of new, entry-level ERCOT engineers and interns. During the 12- to 16-month program, engineers learn the fundamentals of power engineering and the grid, while being exposed to 14 different engineering departments and receiving access to mentors, field trips and special assignments. After graduation, engineers advance to one of four areas of expertise: grid coordination, market operations, system operations and system planning. Eight ERCOT engineers have graduated from the program since its inception in 2012.



Accountable to tomorrow's Texans today

Stakeholder process: Engaging market participants

ERCOT market participants provide input into ERCOT rules and operations through numerous forums, which include the Technical Advisory Committee, the Commercial Operations Subcommittee, the Protocol Revision Subcommittee, the Reliability and Operations Subcommittee, the Retail Market Subcommittee and the Wholesale Market Subcommittee. A Regional Planning Group and Long-Term Study Task Force work with staff to develop six-year and long-term transmission planning studies, and various working groups address specific topics as needed.

Through stakeholder processes, ERCOT in 2014 completed more than 100 revision requests to its Nodal Protocols and other guidelines to support market and grid operations.

Governance and regulatory oversight: Experts on the dais

ERCOT's 16-member Board of Directors includes representatives and alternates from each market sector: retail electric providers, independent generators, independent power marketers, investor-owned utilities, municipal utilities and cooperatives. The board also includes three consumer representatives (one of whom is the Public Counsel appointed by the Governor to head the state's Office of Public Utility Counsel), five unaffiliated members and two ex-officio members: the ERCOT chief executive and the PUC chairman, a non-voting member.

As directed by the Texas Legislature, the PUC oversees ERCOT, approves its biennial budget and develops the substantive rules that guide the Texas electric market. The North American Electric Reliability Corporation (NERC), the Texas Reliability Entity and the Federal Energy Regulatory (FERC) regulate federal reliability standards.

ERCOT President and CEO Trip Doggett and Chairman of the ERCOT Board of Directors Craven Crowell thank outgoing board members Brad Cox (Tenaska) and Mark Dreyfus (Austin Energy).

Special Thanks

Page 5-6 photo courtesy of Panda Power Funds • *Page 11-12* photo courtesy of Lower Colorado River Authority • *Page 17-18* photo courtesy of NextEra Energy Resources • *Page 19* photo courtesy of Port of Brownsville • *Page 21-22* access to Webberville Solar Farm courtesy of Austin Energy • *Page 31-32* BLADE photos courtesy of Joe Burgess • *Page 36* photo courtesy of Earle Robinson, BTU

At a glance

- About 90% of Texas load
- 24 million consumers
- Competitive-choice customers: 75% of load
  - More than 7 million electric-service IDs (premises)
- More than 43,000 circuit miles of high-voltage transmission
- 550 generating units
- More than 74,000 megawatts (MW) capacity for peak demand
  - *One megawatt of electricity can power about 200 Texas homes during periods of peak demand.*
- Record peak demand: 68,305 MW (Aug. 3, 2011)
- Energy used in 2014: 340 billion kilowatt-hours
  - A 2.5 percent increase compared to 2013
- Market participants: More than 1,100 active entities that generate, move, buy, sell or use wholesale electricity

Transmission Investment and Development

- $14.9 billion in transmission added since 1999
- 14,120 circuit miles of transmission improvements since 1999
- 553 circuit miles of transmission planned
- $5.5 billion under development in six-year plan

Generation Development

- 50,000 MW new generation added since 1999
  - 143 older units decommissioned
- 13,390 MW generation committed for the future (with transmission contract and air permit)
- 62,000 MW of active generation requests under review, including more than 23,900 MW of wind (December 2014)

Retail Service Switches

- 90% of residential customers (August 2014)
- 91% of small non-residential customers (August 2014)
- 97% of large non-residential customers (August 2014)
- 198 certified competitive retail electric providers

Connect with us:

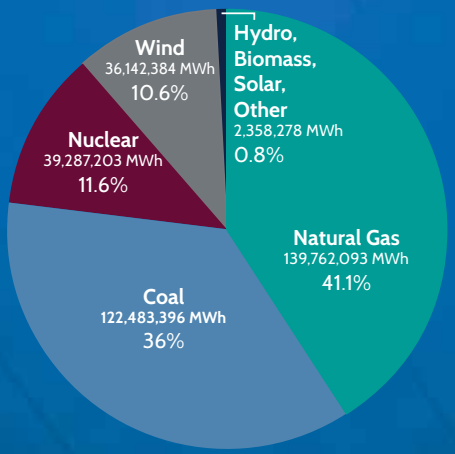
ERCOT_ISO

Electric Reliability Council of Texas

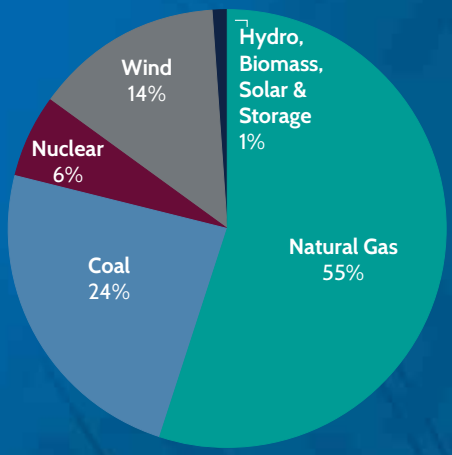
ERCOT Energy Saver App

ANDROID APP ON Google play

Available on the App Store



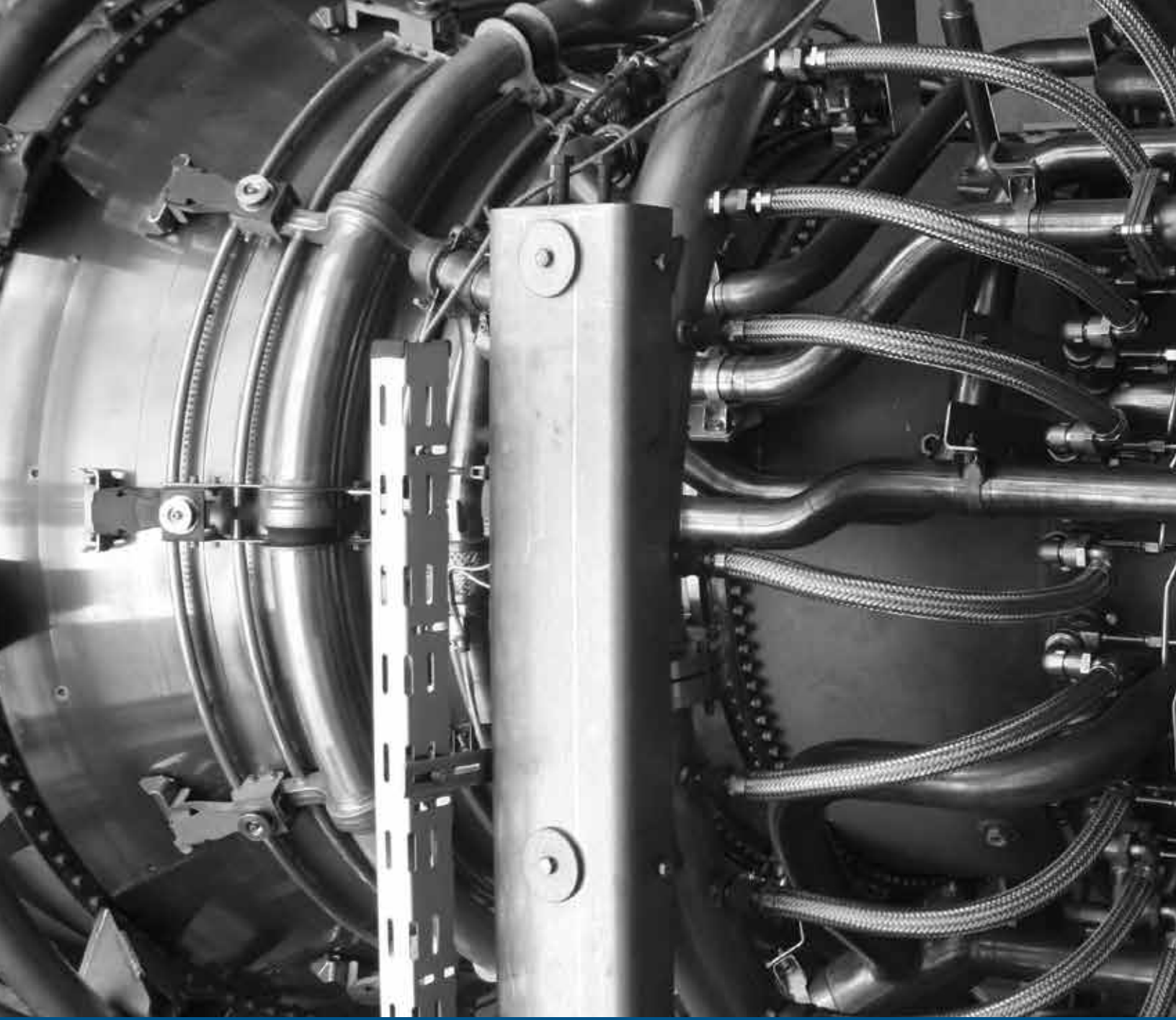
Energy Use 2014
340,033,353 MWh



2014 Generation Capacity
effective December 2014

In memory of Earle B. Robinson III

When ERCOT staff visited Bryan Texas Utilities' Ronald C. Dansby Power Plant in spring 2014, Earle Robinson, a BTU production support operator, proudly shared this photo of the plant and Lake Bryan. He also graciously provided an extensive tour of the facility, from its original natural gas-fired plant to two newer combustion turbine units. Earle enthusiastically shared his story and an unbridled passion for power production. Two weeks later, he died tragically following a fire at the Atkins Power Plant in Bryan. With deep sadness and respect, ERCOT salutes Earle Robinson.



February 2015

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