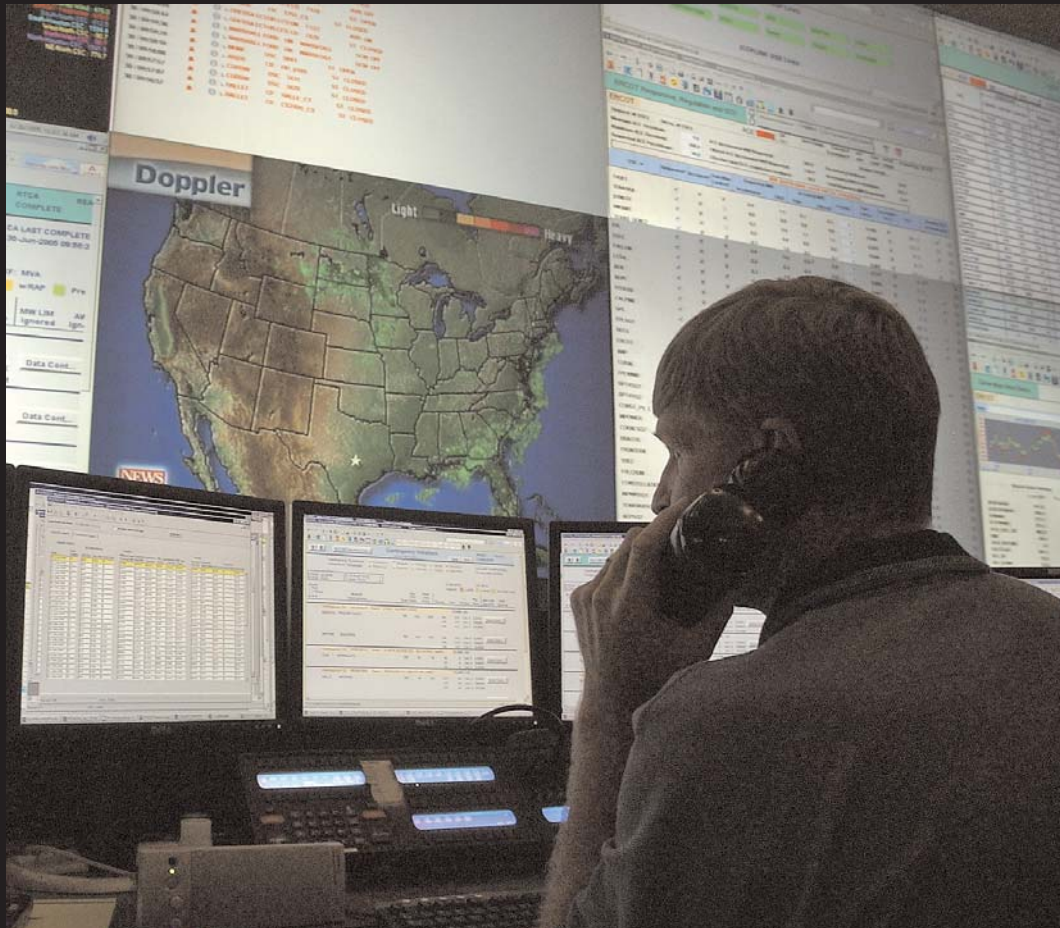




ELECTRIC RELIABILITY COUNCIL OF TEXAS 2008 ANNUAL REPORT



ERCOT QUICK FACTS

At a glance

- Customers served: 22 million
- Area served: 85% of Texas load, 75% of Texas land
- Generating units: 566
- High-voltage transmission: 40,327 miles
- Installed capacity: 80,076 megawatts (MW)
- Net dependable capacity: 72,712 MW
- Reserve margin: 16.8%
(minimum required 12.5%)
- Record peak demand: 62,339 MW (August 2006)
- Energy produced: 312 billion kilowatt-hours (2008)
- Market size: \$34 billion, based on 312,402 GWh market volume and average \$0.11/KWh rate
- Market participants: 828 active entities that generate, move, buy, sell or use electricity at wholesale level
- Wind generation: 8,000 MW – most in nation
- Demand response: 1,115 MW (equal to three major power plants) in load resource program

What do we do?

The Texas Legislature restructured the Texas electric market in 1999 by unbundling the investor-owned utilities and creating retail customer choice in those areas, and assigned ERCOT four primary responsibilities:

- System reliability – planning and operations
- Open access to transmission
- Retail switching process for customer choice – the only independent system operator with responsibilities as registration agent for retail transactions
- Wholesale market settlement for electricity production and delivery.

Other Organizational Functions

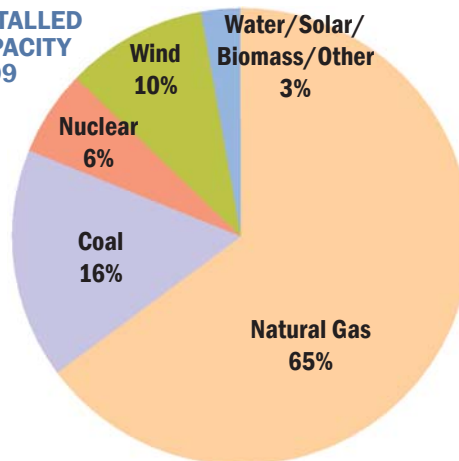
- Wholesale market (bilateral): ~95% of market
- Balancing energy/ancillary services market: ~5%
- System planning coordination
- Renewable Energy Credits management (statewide)
- Market participant/stakeholder activity support

How are we doing?

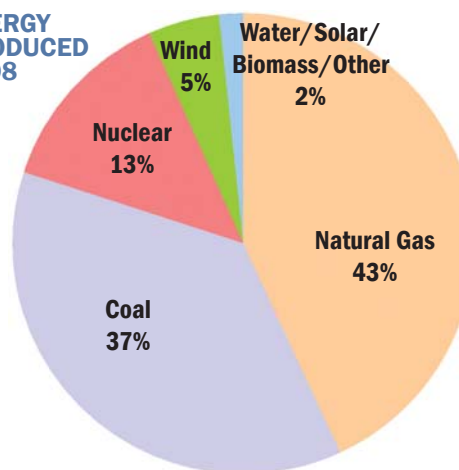
Transmission Investment

- 6,593 circuit miles of transmission improvements since 1999
- 2,888 circuit miles of transmission under study
- \$4.4 billion in transmission added since 1999
- \$3 billion under development in five-year plan
- \$4.93 billion under development to support 18,000 MW of new wind (CREZ Project)

INSTALLED CAPACITY 2009



ENERGY PRODUCED 2008



Generation Development

- 39,000 MW new generation added since 1996
- 9,000 MW generation committed for the future (with transmission contract and air permit)
- 97,000 MW of new generation requests under review, including ~ 48,000 MW wind, 12,300 MW nuclear, 24,000 MW natural gas, 7,500 MW coal, and 1,800 MW solar and biomass (April 2009)

Retail Service Switches to Competitive Retailers

- 47% of residential load (April 2009)
- 77% of small commercial load (April 2009)

What's ahead?

Advanced metering project; estimated launch in November 2009.

Comprehensive nodal market implementation, anticipated launch in 2010, to include:

- Nodal locational marginal pricing for generation
- Congestion revenue rights
- Day-ahead energy and ancillary services co-optimized market
- Day-ahead and hourly reliability unit commitment.

CONTENTS

From the Chair: Building a Grid for the Future	5
From the CEO: Meeting Challenges Each Step of the Way	6
Vision and Mission	7
Grid Operations: Ensuring Reliability Day-to-Day	8
Generation, Transmission Planning: Planning Reliability for the Future	10
Renewable Energy: ERCOT Leads the Way	12
Market Operations: Ensuring a Fair and Competitive Market	13
Nodal Market Implementation: Redesign on Track for 2010 Completion	14
Texas Nodal: At a Glance	15
ERCOT Members: 2008	16
Five-year Summary: Financial, Operating, Retail Transactions Data	18
ERCOT Governance	19



The Electric Reliability Council of Texas (ERCOT) manages the flow of electric power to approximately 22 million Texas customers – representing 85 percent of the state’s electric load and 75 percent of the Texas land area. The ERCOT Region includes Houston, Dallas, Fort Worth, San Antonio, Austin, Corpus Christi, Abilene and the Rio Grande Valley. ERCOT 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).





Jan Newton
Chair, ERCOT Board

FROM THE CHAIR

Building a Grid for the Future

I accepted the chairmanship of the Electric Reliability Council of Texas (ERCOT) Board of Directors in December 2008. It could not have been a more challenging time to take the reins, and yet I am very excited and optimistic about ERCOT's future.

The issue looming ahead of us is the implementation of the nodal market. At its simplest level, the nodal structure will move ERCOT from four zones to 4,000 nodes, making it easier for ERCOT operators to identify and resolve congestion. A nodal market provides more granular pricing - sending better "market signals" to help industry investors identify exactly where new generation is needed and help ERCOT determine the best location for new transmission. These efficiencies are expected to yield lower costs for the wholesale market, and ultimately, for consumers.

But the nodal market redesign includes much more – it's a multi-layered engineering and business transformational program, involving hundreds of complex workflows and processes. Besides nodal locational marginal pricing for generation, the project will add a day-ahead energy and ancillary services co-optimized market, congestion revenue rights, and day-ahead and hourly reliability unit commitment. Other deliverables include a wind-forecasting service and enhanced load forecasting tools, information technology hardware, and infrastructure improvements which will help bring Texas' grid into the 21st century.

ERCOT has been a leader in integrating renewable generation, building transmission, and aggressively pursuing demand response programs. But we need a smart, agile electric grid to manage the increased demand, increased population, and increased market complexity that we are expecting in Texas. The nodal market design with its enhanced grid management tools will allow ERCOT to take advantage of new advances in renewable technologies, energy storage, plug-in vehicles, demand response, and efficiency programs while maintaining reliability.

On behalf of the ERCOT board, members and market participants, I want to thank Mark Armentrout for his outstanding leadership as chairman for the last three years. I hope to continue his excellent record and continue building on ERCOT's core strengths – maintaining reliability for the electric consumers in Texas, effectively managing the competitive electric markets in Texas, and serving as an expert planning resource for new and expanded energy resources in the state – none of which would be possible without the ERCOT employees. Our appreciation goes to them for their hard work and constant vigilance to build ERCOT's reputation as a world-class independent system operator.

A handwritten signature in blue ink that reads "Jan Newton". The signature is fluid and cursive.

Jan Newton
Chair, ERCOT Board of Directors



Bob Kahn
President and CEO

FROM THE CEO

Meeting Challenges Each Step of the Way

For the seventh year since ERCOT assumed management of the Texas electric grid, we successfully fulfilled our primary mission – maintaining the reliability of the grid – while handling numerous other responsibilities related to system planning, wholesale market settlement, retail switching, and running the day-to-day operations of the Texas electric market. As the ERCOT market matures and evolves, we continue to experience and meet new challenges.

The primary challenge we faced in 2008 was getting the Nodal Market Implementation Program back on track. A new project management office was created, along with tighter controls and new leadership. We developed a detailed, integrated schedule – painstakingly created over several months from the ground up. The new schedule is a comprehensive roadmap for getting to go-live that includes an “early warning system” to identify risks and problems before they become emergencies. I am confident that the nodal project is on track to launch by December 2010 – on schedule and on budget.

Leading the way with wind, transmission

We marked accomplishments in other areas, as well. Texas continues to make headlines as the top wind-producing state, and ERCOT is leading the way in reliably integrating increasing amounts of renewable generation. The Competitive Renewable Energy Zones (CREZ) initiative will expedite construction of \$5 billion in transmission lines to move 18,000 megawatts of renewable generation to the populous portions of the state.

In addition to the CREZ transmission, ERCOT is reviewing proposed transmission projects for the next five years totaling \$3 billion and expected to improve or add 2,888 circuit miles of transmission to the grid.

ERCOT continues to attract record-level interest from generation developers, as evidenced in the large amounts of proposals in the permitting or study phase, including more wind and nuclear announcements than any other state. ERCOT is currently reviewing almost 100,000 MW of generation requests, including close to 50,000 MW of wind projects.

We continue to focus on the need for increased fuel diversity. Reducing the ERCOT market’s reliance on natural gas capacity would have positive implications for reliability and price stability.

We are also working closely with the Public Utility Commission and market participants on advanced metering issues. Advanced meters are key to a modern power grid and a way to reduce energy consumption through mass market demand response.

Strengthening leadership, compliance focus

We strengthened the leadership team with the creation of three new positions including a chief operating officer to direct system operations, system planning, market operations, and compliance; and a chief administrative officer, consolidating the human resources and organizational development with project management and strategic planning for greater efficiency. We also added a chief compliance officer to centralize the compliance functions across the organization and further strengthen our focus on compliance.

In other notable successes during the year, ERCOT:

- Received a coveted “unqualified” opinion with “no exceptions” on the 2008 Statement on Auditing Standards (SAS) 70 audit prepared by PricewaterhouseCoopers. PwC’s audit covered controls related to the market settlements process, the information technology infrastructure that supports the markets, and security. The unqualified audit with no exceptions affirms the reliability of the foundational processes performed and data provided by ERCOT staff for each market participant.
- Updated liquidity plans to maintain stability of the electricity markets and successfully negotiated debt capacity increases and favorable debt pricing in spite of unprecedented financial market turmoil.
- Received high marks in a biannual market participant survey for staff performance and data communications provided to the market. The survey results indicated that market participants feel ERCOT staff is performing exceedingly well regarding accomplishment of corporate objectives, with the highest marks recorded for employees’ industry expertise and attitude.

I would like to echo the findings of the market participant survey by praising the expertise and diligent attitudes of ERCOT employees. Every day of the year, it is the employees’ skills and dedication that keep us moving forward with our eyes on the ERCOT mission – to nurture development of an effective and highly reliable electricity market in Texas.



Bob Kahn
President and CEO

VISION

ERCOT is recognized as a world-class independent system operator of reliable, open and non-discriminatory electric markets.

MISSION

ERCOT nurtures the development of an effective and highly reliable electricity market in Texas by:

- Providing independent advice to facilitate and enable innovation;
- Collaborating with customers, industry members, and regulators;
- Delivering high quality and cost-effective services;
- Developing a highly qualified expert staff.

To fulfill its statutory obligations established by the Texas Legislature, ERCOT will:

- Ensure access to the transmission and distribution systems for all buyers and sellers of electricity on nondiscriminatory terms;
- Ensure the reliability and adequacy of the regional electric network;
- Ensure that information relating to a customer’s choice of retail electric providers is conveyed in a timely manner to the persons who need the information;
- Ensure that electricity production and delivery are accurately accounted for among the generators and wholesale buyers and sellers in the region.

GRID OPERATIONS

Ensuring Reliability Day-to-Day

Operators weather two hurricanes

ERCOT successfully fulfilled its primary responsibility to maintain reliability of the grid despite two hurricanes and several emergency events in 2008.

Hurricane Dolly made landfall as a Category 1 storm on July 23 at South Padre Island, with 85 mph winds. ERCOT operators managed significant transmission and generation outages in the southern portion of the ERCOT grid. Customer outages during the hurricane's aftermath exceeded 224,600 in the Rio Grande Valley area, and 28 high-voltage transmission lines were knocked out of service.

On September 13, Hurricane Ike hit Galveston as a Category 2 hurricane with winds of 110 mph, becoming the country's third most destructive hurricane as measured in property damage. More than 100 high-voltage transmission lines and 35 generation units were knocked out of service initially, affecting service to approximately 2.1 million customers in the ERCOT region. ERCOT's system operators quickly responded to the sudden and dramatic losses of electric load caused when the storm disabled electric lines and generating units, keeping the rest of the grid intact.

Load resources deployed twice for low frequency events

Twice during the year, ERCOT operators initiated emergency procedures to manage a sudden drop in frequency or operating reserves. The first event occurred on February 26 when a cold front moved through the state resulting in an unexpected drop in wind energy production after the front's passage at the same time that system load was increasing and several other power providers were falling below their scheduled energy production.

Faced with a drop in frequency, the operators moved directly to the second stage of emergency procedures which activated ERCOT's demand response program, Loads Acting as Resource (LAARs), adding approximately 1,100 MW of resources within a 10-minute period. LAARs are primarily large industrial and commercial users who are paid to curtail their electricity use as need-

ed for reliable grid operation. Other than the load resources, which were mostly restored within an hour and a half, no customers in the ERCOT region lost power due to the event. The interruptible load resources were also activated August 11 to assist in restoring the frequency following the loss of a 1,662 MW generating plant.

On June 18, ERCOT operators initiated emergency procedures when operating reserves dropped below the target minimum of 2,300 MW. The primary reason was hotter-than-forecasted temperatures in several areas of the region. Load was 2,100 MW higher than the day-ahead load forecast due to temperature predictions lower than actual. Operators brought on additional generation and cancelled the emergency procedures within two hours.

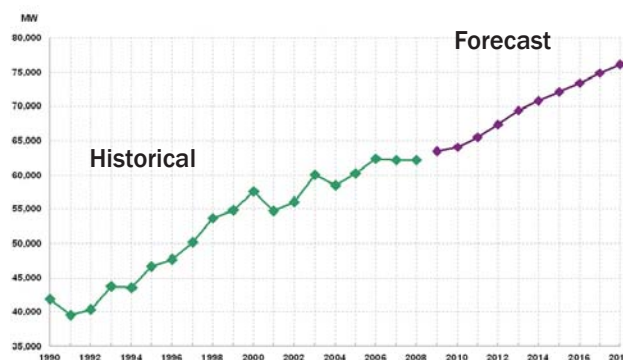
Total energy production up 1.7 percent

Energy consumed in the ERCOT region in 2008 totaled 312,401 gigawatts, a 1.7 percent increase over 2007. The month of June had the highest increase at 11.8 percent, followed by July with 11.3 percent and May with 9.6 percent.

Wind energy marked the largest percentage increase in energy generation, going from 2.9 percent of total energy in 2007 to 4.9 percent in 2008.

The peak demand for 2008 was 62,174 MW, recorded on Monday, August 4, for the 4-5 p.m. hour, representing

PEAK DEMANDS, 1990-2014



0.1 percent less than the 2007 peak of 62,188 MW and 0.3 percent less than the all-time peak of 62,339 MW (August 2006).

Also during 2008, system operations:

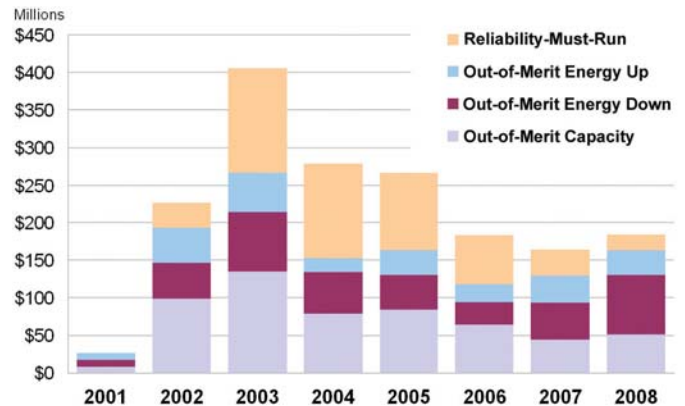
- Received an internal audit rating of 99.4 percent compliance with operating procedures, exceeding the goal of 98 percent;
- Received a finding of “No exceptions” from a North American Electric Reliability Corporation (NERC) Readiness Review in April;
- Implemented a new optimized selection method for black-start resources, resulting in a savings of \$1.6 million in the annual cost;
- Implemented a real-time commercially-significant-constraint limit calculator enabling ERCOT to maximize the transfer between congestion zones while maintaining reliability;
- Changed the ancillary service requirement methodology to accommodate the rapid increase in intermittent wind generation;
- Processed more than 35,000 planned transmission outage requests.

Board acts quickly to address congestion issues

Zonal congestion costs (between the four congestion zones) had been trending downward over the past few years, from \$146 million in 2001 to \$52 million in 2007, but costs in 2008 increased to \$360 million, primarily due to a combination of events, including transmission constraints, high fuel costs, and increased wind generation.

The ERCOT Board of Directors implemented emergency market rule changes in early summer to mitigate the high congestion costs. They approved a protocol revision that modified long-standing market rules – allowing the system operators to resolve a particular type of transmission congestion with more efficient local-

INTRAZONAL (LOCAL) CONGESTION COSTS



congestion management techniques, rather than zonal-congestion management. Under local-congestion management, ERCOT operations is able to deploy individual generation units that provide the greatest relief on a constraint rather than zonal generation portfolios.

In a second emergency meeting, the board approved a change imposing a cap on the market clearing price for energy which is produced through the bid stack, setting it at no more than the bid ceiling price.

Local congestion up slightly

Intra-zonal – or local – congestion costs were slightly higher in 2008 at \$184.2 million, compared to \$164.4 million in 2007. Local congestion costs have been trending downward since the 2003 high of \$405.1 million. Local congestion costs are highly dependent on local generation availability, limits of the transmission infrastructure, local area demand, and projected load growth.

Moving to the nodal market design will allow more efficient congestion management through improved dispatch efficiencies at the individual resource level every five minutes, rather than by portfolio every 15 minutes.

GENERATION, TRANSMISSION PLANNING

Planning Reliability for the Future

New generation improves outlook

Generation developers continue to show an interest in the ERCOT market as evidenced by 4,245 MW of new installed generation in 2008. In addition, more than 9,000 MW of committed future generation (with completed interconnection agreements and necessary air permits) and approximately 97,000 MW of proposed generation was under review at the end of April 2009.

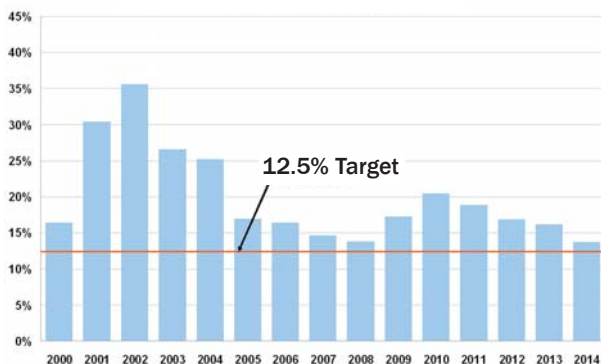
The reserve margin forecast improved in 2009 to 16.8 percent, well above the 12.5 percent minimum required. (Reserve margins are assessments based on best estimates of a snapshot in time; the assessments change as new generation is added and old generation is mothballed or decommissioned, and load forecasts change based on changing economic conditions and other factors.)

In 2008, new installed and committed generation included 5,040 MW from gas-fired units, 4,046 MW from coal, 5,040 MW from wind, and 145 MW from biomass.

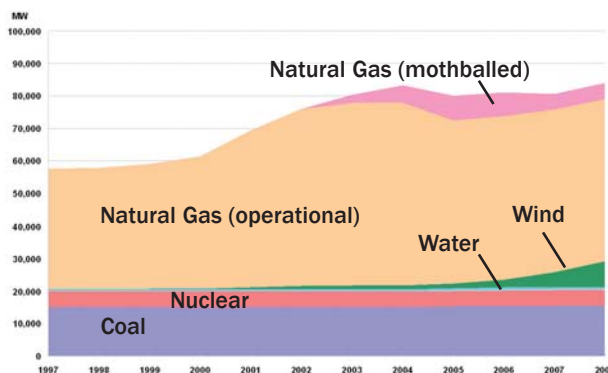
Generation that became operational in 2008 included:

- 80 MW, coal, J T Deely Upgrade, Bexar County
- 193 MW, gas, Laredo Peaking Power Plant, Webb County
- 275 MW, gas, Quail Run Energy Center 2, Ector County
- 275 MW, gas, Colorado Bend Energy Center 2, Wharton County

ERCOT RESERVE MARGINS, 2000-2014



GENERATION CAPACITY BY FUEL TYPE, 1997-2008



- 332 MW, gas, Victoria Power Station, Victoria County
- 3,220 MW, wind, at multiple locations.

Major generation committed for 2009 and beyond includes:

- 581 MW, coal, Sandow 5, Milam County
- 750 MW, coal, J K Spruce 2, Bexar County
- 925 MW, coal, Sandy Creek 1, McLennan County
- 1,710 MW, coal, Oak Grove SES, Robertson County
- 544 MW, gas, Cedar Bayou 4, Chambers County
- 255 MW, gas, Bosque Expansion, Bosque County
- 178 MW, gas, Winchester Power Park, Fayette County
- 244 MW, gas, South Houston Green Power, Galveston County
- 327 MW, gas, Nueces Bay 7 Repowering, Nueces County
- 200 MW, gas, Pearsall Expansion, Frio County
- 360 MW, gas, Barney Davis 2 Repowering, Nueces County
- 50 MW, gas, TECO Central Plant, Harris County
- 1,792 MW, gas, Cobisa-Greenville, Hunt County
- 2,702 MW, renewable (wind and biomass), at multiple locations.

A new consideration in last year's assessment was 143 MW of demand supplanted by energy efficiency

conservation efforts as reported to the Public Utility Commission by ERCOT member utilities, in compliance with Legislative House Bill 3693 (2007). Load decrease for 2009-2013 was estimated at 160 MW.

The forecasted growth rate for peak demand over the next five years is 2.2 percent, slightly higher than the forecasted growth rate of 1.9 percent in 2008.

Transmission improvements total almost half a billion dollars

ERCOT's annual transmission planning report issued in December 2008 included \$3 billion in proposed projects for the next five years, expected to improve or add 2,888 circuit miles of transmission and more than 17,000 megavolt ampere (MVA) of autotransformer capacity to the grid.

The major planned transmission additions in the five-year plan include:

- Waller-Prairie View-Seaway-Macedonia line reconductor, 138 kV, 22 circuit miles, Coast area, operational 2010
- Robertson-Watson Chapel line rebuild, 138 kV, 21.6 circuit miles, East area, operational 2010
- Twin Oaks-Bell County SE line addition, 345 kV, 88 circuit miles, East - North Central area, operational 2011
- Oklaunion-Bowman line addition, 345 kV, 50 circuit miles, North area, operational 2012
- Hutto Switch-Salado Switch line addition and Switching Station, 345 kV, 73.8 circuit miles, North Central - South Central areas, operational 2010
- Uvalde Area Project, 138 kV, 77.5 circuit miles, South Central - West areas, operational 2011
- Zorn/Clear Springs-Gilleland Creek-Hutto Switch line addition, 345 kV, 172.5 circuit miles, South Central area, operational 2012.

Transmission projects approved in 2008 totaled \$255 million, and the amount for projects completed in 2008 was \$453 million.

Since 2008, ERCOT transmission service providers have completed more than 620 circuit miles of transmission lines and approximately 2,934 MVA of autotransformer capacity, with an estimated capital cost of \$629 million.

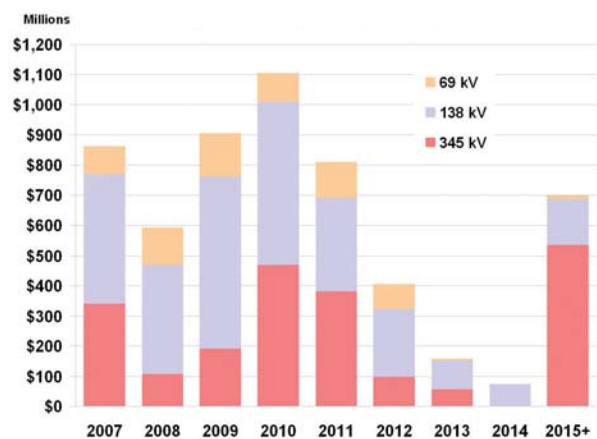
ERCOT staff completed the analyses and recommendations for 16 transmission projects through the Regional Planning Group review process and processed 140 generation interconnection requests and completed more than 146 interconnection screening studies.

Along with the five-year transmission report, ERCOT also filed the Long-Term System Assessment which looks at transmission and generation options for the next 10 years. The long-term system report is filed with the Texas Legislature in each even-numbered year, as required by Senate Bill 20, and is intended to provide guidance to ERCOT and ERCOT market participants in evaluating system needs.

Major conclusions in the 10-year report included:

- Additional import capacity into Houston is needed.
- Load growth in two areas (north of Dallas in Cooke and Grayson Counties and in western Williamson County) may result in the need for long-lead time transmission projects in the next 10 years.

TRANSMISSION IMPROVEMENTS



Numbers are based on projects being completed in the designated year and may not reflect actual investment in that year. Costs may be spread over several years.

RENEWABLE ENERGY

ERCOT Leads the Way

Commission approves plans for 18,000 MW of wind generation

ERCOT has continued to gain recognition as a national leader in integrating wind energy. At the end of 2008, ERCOT had more than 8,000 MW of installed wind generation, significantly ahead of the rest of the country, including Iowa, 2,790 MW, and California, 2,517 MW (Source: American Wind Energy Association). More than 2,000 MW of additional wind plants are scheduled to begin operations over the next two years, and approximately 50,000 MW are in various stages of interconnection studies.

Installation of wind generation has outpaced the capabilities of the current transmission system which can accommodate a maximum 4,500 MW of wind energy transfer from West Texas where it is located to load centers elsewhere in ERCOT. However, ERCOT again is leading the nation in expediting transmission to move power from the wind zones to the more populous areas. Last year the Public Utility Commission approved a \$5 billion transmission plan to support more than 18,000 MW of renewable generation. Construction on the new transmission may begin as early as 2010.

ERCOT system planning provided expert testimony and related support in development and designation of the Competitive Renewable Energy Zones and transmission plans, as directed by Texas Senate Bill 20 (2005) and the Public Utility Commission.

Renewable energy credit program leads the nation

The Texas Renewable Energy Credits (REC) program is the longest running and the most active in the country and is accomplishing its goal of helping to bring “clean” renewable resources into Texas at a record pace.

ERCOT administered the REC trading program for 93 resource entities in 2008, issuing more than 17.2 million RECs to Texas renewable energy generation companies – a 70 percent increase over 2007.

RECs are stock-like certificates that correspond to actual megawatts of renewable energy. Each REC represents one megawatt-hour of renewable energy produced.

The state’s 135 competitive retail electricity providers retired 6.7 million RECs to satisfy the annual mandate within the portfolio standard. An additional 6.8 million RECs were retired in the voluntary market to substantiate “green energy” purchases, far surpassing last year’s 1.6 million. This marked the first time that the voluntary retirements totaled more than the mandated retirements.

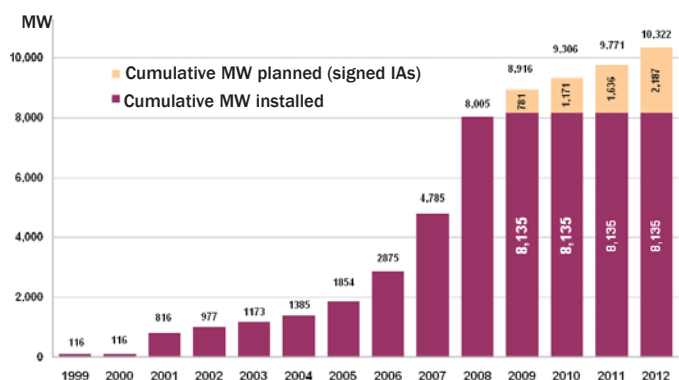
Under the Texas program, retail electric providers must acquire and retire RECs based on their load-ratio share of the renewable portfolio standard annual mandate. Electric providers may also retire RECs voluntarily to substantiate claims of green energy to consumers.

The REC trading program was established as part of the Legislature’s restructuring of the state’s electricity market in 1999 to increase incentives for renewable energy production through a renewable portfolio standard. The Texas program was the first of its kind in the nation when it began in 2001.

The original statutory goal of the program was to install 2,000 MW of additional, new renewable resource generation in Texas by the year 2009. That goal was surpassed three years ahead of schedule in 2006. The Legislature more than doubled the goal in 2007, making the target 5,000 MW by 2015 and 10,000 MW by 2025, including 500 MW from non-wind renewable resources such as solar, biomass, landfill gas and geothermal.

Texas has rapidly moved beyond the original goals. More than 7,000 MW of wind power has been added since 2001. The installed wind capacity in ERCOT was 8,005 MW at the end of 2008 and expected to pass 9,000 MW by the end of 2010.

INSTALLED WIND CAPACITY (MAY 2009)



MARKET OPERATIONS

Ensuring a Fair and Competitive Market

Retail transactions top 31 million since market launch

ERCOT is unique among independent system operators with its central role in assuring conveyance of retail customer switch requests, move-ins and move-outs, and meter-read data.

In 2008, ERCOT processed 4.7 million retail transactions – including retail switches, move-ins and move-outs and other transactions – above the 98 percent performance target for all four quarters. The total number of retail transactions completed since the market opened June 1, 2001 topped 31 million at the end of 2008.

The Texas retail electricity market continued to set the standard nationally for active customer switching. By year's end, 45 percent of residential customers were served by a retail electric provider other than the incumbent utility, compared with 41 percent in 2007. Also, 50 percent of the small commercial load and 75 percent of industrial load was served by a non-incumbent provider.

ERCOT coordinated and executed five market-wide mass-transition events during the year for competitive retailers who exited the market. The total number of transfers was 44,109 (comprised of 5,943 transferred to an acquiring competitive retailer and 38,166 transferred to a retailer designated as provider-of-last-resort). Each event was executed within the new timelines outlined by the market in 2007.

More than 19 new retail electric providers joined the ERCOT market in 2008, compared with 14 in 2007.

Settlements, billing staff process data for \$34 billion market

Managing the data and the wholesale settlements and billings processes that support the estimated \$34 billion market is a critical function of market operations. ERCOT staff processed more than 145,604 wholesale statements with 99 percent within protocol, and 8,244 invoices with 100 percent timeliness.

Other accomplishments in the markets division included:

- 99.96 percent accuracy on ERCOT polled-settlement meter data provided for settlements;

- 99.93 percent of interval data recorder metering data captured by true-up settlements.

ERCOT staff supports market, stakeholder process

ERCOT staff played a critical role in the stakeholder process by providing meeting management and technical support for numerous stakeholder meetings in 2008. The market rules staff managed all activities for 156 new revision requests and completed 553 recommendation reports. Market rules responded to more than 1,800 meeting requests, and provided support to the Technical Advisory Committee and its subcommittees for more than 140 days of meetings.

Retail client services staff provided business support for 101 market participant entities involved in day-to-day ERCOT operations, drafted and distributed 459 retail market notices, and delivered structured education sessions for 460 individuals.

Wholesale client services maintained a 99.35 percent rate for timely resolution of settlement disputes with a dispute volume averaging 140 disputes per month. Wholesale client services also delivered 364 hours of structured market training to 700 market participants and facilitated the complex start-up process of 19 new generation sites – an unprecedented number – deploying a new interconnect coordination process.

The market operations support staff captured approximately 22,000 interval data recorder usage reads per month in 2008.

The data integrity department completed an upgrade of the Lodestar application which added new functionality required for the nodal project and also improved batch processing times.

The testing department completed successful testing of ten capital projects, including execution of 4,919 test scripts, in addition to 3,122 test scripts for testing maintenance releases. The testing staff administered three market-wide test flights required for retail market certification. In addition, the department participated in ongoing nodal testing activities, executing more than 19,000 tests scripts and resolving over 1,700 defects.

NODAL MARKET IMPLEMENTATION

Market Redesign on Track for 2010 Completion

New integrated schedule keeping critical path on track

Texas Nodal Market Implementation is a complex engineering and business transformational program, involving hundreds of detailed workflows and processes. The project is expected to improve the market's price signals, dispatch efficiencies and its ability to directly assign local congestion, creating generation operating efficiencies that could be passed on to the consumer in the form of savings.

On February 17, 2009, the ERCOT Board of Directors approved a not-to-exceed budget of \$658.7 million for Texas Nodal's implementation work and an expanded schedule with a go-live date of December 2010.

A number of concrete actions have been taken to ensure Texas Nodal is completed on time and under budget:

- Hired energy consultant Utilicast to provide candid third-party assessments of the program's progress and risks;
- Created the Special Nodal Program Subcommittee of the Board to improve coordination between the committee, board and Utilicast;
- Hired a "nodal czar" to oversee nodal implementation and a market-readiness project leader to ensure market participants' systems are ready for nodal;
- Removed contingency funds from the nodal budget and placed them under board control;
- Approved a protocol revision that gives the ERCOT CEO discretion over future proposed nodal changes.

ERCOT is keeping Texas Nodal on schedule by maintaining tight controls over the program and budget. Critical-path activities are closely monitored. A formalized risk- and issue-management process ties into third-party audits and adds another layer of controls to delivery management. Key senior staff with extensive nodal-implementation experience have been brought on board.

The program's projects have been reorganized into core and supporting projects, replacing the previous silo project delivery with an enterprise program delivery approach. The integrated program schedule has helped

identify individual projects' impacts across the program. These moves have already paid strong dividends. Since Texas Nodal was re-planned in June 2008, it has hit all of its scheduled tasks on the critical path.

82 percent of core systems complete

Texas Nodal is a "best-of-breed" project using – for the first time anywhere – the Common Information Model (CIM) for integration of applications that use the network model. In January 2009, the nodal team prepared a CIM-based model, whose data fed into downstream market-management and energy management systems. These systems were able to import the CIM-based model's data and successfully run their own applications, moving ERCOT one step closer to an enterprise-integrated solution.

An estimated 82 percent of the core systems – those necessary to run the grid and market – have been developed. The bulk of the work that lies ahead includes integration and testing these systems, which has been underway since October 2008. Products must first pass functional acceptance testing of their stand-alone capabilities before they can enter the integrated testing environment, where their interfaces with other products are tested. Those systems will still have to be tested in the marketplace and with market participant systems – an estimated 10-month effort – and ERCOT and market participant users trained on those systems.

In February 2008, Texas Nodal completed an ERCOT-wide hardware/software/data migration, moving more than 40 terabytes of data into a new IBM environment to support nodal.

In June ERCOT successfully controlled the electric grid for two hours and completed a load-frequency test using the nodal systems. Other 2008 milestones include:

- Completion of a successful mock auction of Congestion Revenue Rights (March);
- ERCOT execution of day-ahead and adjustment-period markets (May);
- Testing of application interfaces (began in October);
- First-time State Estimator standard with improved telemetry, reaching the quality measure of 97 percent convergence (November).

TEXAS NODAL

At a Glance

Zonal Market



In today's zonal market, the grid is divided into Congestion Management Zones (CMZs), which are defined by the Commercially Significant Constraints (CSCs). Several limitations have been identified with the current zonal model:

- Insufficient price transparency – This results in less efficient power dispatch, less efficient congestion management tools and muted or distorted signals for investment.
- Resources grouped by portfolio – Qualified scheduling entities (QSEs) submit schedules for a group of resources (portfolio) in a specific zone, and ERCOT operators have limited options to efficiently resolve congestion.
- Indirect assignment of local congestion – Participants who contribute to local congestion are not appropriately assigned the associated costs.

Nodal Market

Moving to a nodal design will satisfy the PUC order to directly assign local congestion. In the nodal market, the grid will consist of more than 4,000 nodes, replacing today's CMZs. The Texas Nodal design is expected to achieve lower overall costs through:



- Improved price signals – More granular pricing will encourage additional generation and/or transmission investment in the proper locations.
- Improved dispatch efficiencies – Dispatching at the resource level will yield a lower overall cost of power supply and more efficient congestion management.
- More direct assignment of local congestion – Settlement prices are based on locational marginal costs.

SUMMARY OF CHANGES

Today's Zonal Market

Tomorrow's Nodal Market

Transmission congestion rights	Congestion revenue rights
No day-ahead energy market Day-ahead market for ancillary services procured for capacity	Day-ahead energy and ancillary services co-optimized market
Replacement reserve service and out-of-merit capacity	Day-ahead reliability unit commitment
Hour-ahead studies	Hourly reliability unit commitment
Portfolio-based offers by zone	Resource-specific for local congestion
Balancing energy service (BES) every 15 minutes Zonal congestion management by portfolio for CSCs Resource-specific for local congestion	Security constrained economic dispatch generally every five minutes (still 15-minute settlement) All congestion management will be resource-specific Enhanced load frequency control
Zonal average shift factors for resources	Actual shift factors for resources
Zonal market clearing prices for BES for generation and loads	Nodal locational marginal pricing (LMP) for generation Zonal weighted LMP for loads

ERCOT MEMBERS

2008

CONSUMERS

Air Liquide Large Industries US
Air Products and Chemicals
Austin White Lime
BOC Gases
Chaparral Steel Midlothian
Chevron USA
CMC Steel Texas
Dow Chemical Company (The)
EPCO Holdings
Halliburton Energy Services
Lyondell Chemical Company
Marathon Petroleum Company
Nucor
Occidental Chemical Corp.
Pioneer Natural Resources USA
Praxair
Shell Oil Products
Texas Industries
Texas Instruments
Valero Services

Associate Member
Nustar Logistics

LARGE COMMERCIAL CONSUMERS

City of Abilene
City of Alamo
City of Alice
City of Allen
City of Arlington
City of Brownwood
City of Carrollton
City of Corpus Christi
City of Dallas
City of Dilley
City of Duncanville
City of Euless
City of Farmers Branch
City of Harker Heights
City of Irving
City of Killeen
City of La Feria
City of Lewisville
City of McAllen
City of McKinney
City of Mercedes
City of Midlothian
City of Mission
City of Missouri City

City of North Richland Hills
City of Odessa
City of Plano
City of Port Aransas
City of Portland
City of Port Lavaca
City of Rockport
City of San Angelo
City of Sherman
City of Sugar Land
City of Sweetwater
City of Texas City
City of The Colony
City of Tyler
City of Victoria
City of Waxahachie
HEB Grocery Company
Town of Addison
Town of Flower Mound
Wal-Mart Stores

RESIDENTIAL CONSUMERS

Office of Public Utility Counsel
TAC Residential Consumer
Representative

SMALL COMMERCIAL CONSUMERS

City of Bedford
City of Belton
City of Benbrook
City of Carrizo Springs
City of Cedar Hill
City of Charlotte
City of Cisco
City of Cleburne
City of Colleyville
City of Colorado City
City of Commerce
City of Copperas Cove
City of Corinth
City of Crockett
City of Eastland
City of Forest Hill
City of Frisco
City of Gainesville
City of George West
City of Grand Prairie
City of Harlingen
City of Los Fresnos
City of Murphy

City of Ovilla
City of Paris
City of Point Comfort
City of Red Oak
City of Robinson
City of Rowlett
City of Snyder
City of University Park
City of Whitney
City of Woodway
J. C. Penney Corporation
Town of Highland Park
Town of Laguna Vista
Town of South Padre Island
Town of Woodsboro

Associate Member
Travis Wolff

COOPERATIVES

Bandera Electric Cooperative
Bartlett Electric Cooperative
Brazos Electric Power Cooperative
Coleman County Electric Cooperative
Comanche Electric Cooperative
Concho Valley Electric Cooperative
Cooke County Electric Cooperative
CoServ Electric
Fort Belknap Electric Cooperative
Golden Spread Electric Cooperative
Grayson-Collin Electric Cooperative
Guadalupe Valley Electric Cooperative
Hamilton County Electric Cooperative
Heart of Texas Electric Cooperative
HILCO Electric Cooperative
J-A-C Electric Cooperative
Karnes Electric Cooperative
Lower Colorado River Authority
Magic Valley Electric Cooperative
Medina Electric Cooperative
Mid-South Electric Cooperative Synergy
Navarro County Electric Cooperative
Navasota Valley Electric Cooperative
Nueces Electric Cooperative
Rayburn Country Electric Cooperative
Rio Grande Electric Cooperative
San Bernard Electric Cooperative
San Patricio Electric Cooperative
South Plains Electric Cooperative
South Texas Electric Cooperative
Southwest Texas Electric Cooperative

Tri-County Electric Cooperative
United Electric Cooperative Services
Victoria Electric Cooperative
Wharton County Electric Cooperative
Wise Electric Cooperative

INDEPENDENT GENERATORS

AES Corporation
Airtricity
Calpine Corporation
Cielo Wind Power
Dynege Power Corp.
Edison Mission Marketing & Trading
Formosa Plastics Corp., Texas
FPL Energy
Gregory Power Partners
International Power America Svc
Invenergy Wind Development
Kelson Energy Inc.
Navasota Energy Management
NRG Texas
PSEG Texgen I
RES America Developments
Signal Hill Wichita Falls Power
Suez Energy Marketing NA
Sweetwater Wind 2
Topaz Power Group LLC
Westar Energy
Wolf Hollow I

Associate Members

Bosque Power Company
Constellation Energy Control Guadalupe-Blanco River Auth.
NuCoastal Power Corporation
PSEG Texas
Tenaska Energy
Texas Petrochemicals
Whirlwind Energy

INDEPENDENT POWER MARKETERS

Aquila Inc. dba Aquila Networks
Bear Energy
BP Energy
Cargill Power Markets
Citigroup Energy

Constellation Energy Commodities
Coral Power
DB Energy Trading
Endure Energy
EPIC Merchant Energy TX
Exelon Generation Company
Fortis Energy Marketing & Trading
J. Aron & Company
Keystone Energy Partners
Lehman Brothers Commodity Services
Morgan Stanley Capital Group
North American Energy Credit and Clearing-Delivery LLC
PPM Energy Inc.
Rainbow Energy Marketing
Reliant Energy
Tenaska Power Services Co.
UBS AG, London Branch
Associate Members
ConocoPhillips Company
Eagle Energy Partners I
Edison Mission Mktg & Trading
Occidental Power Services
PSEG Energy Resources
Xtend Energy

INDEPENDENT RETAIL ELECTRIC PROVIDERS

Accent Energy Texas
Cirro Group
Cities Aggregation Power Project
Commerce Energy
Consolidated Edison Solutions
Direct Energy
Energy Services Providers of Texas
Green Mountain Energy Company
Integrays Energy Services of Texas
Just Energy Texas LP dba US Energy Savings
Liberty Power Texas
Pepco Energy Services
Semptra Energy Solutions
South Texas Aggregation Project
Spark Energy
StarTex Power
Strategic Energy
Stream SPE Ltd. dba Stream Energy
Tara Energy
Texas Power
TriEagle Energy

Associate Members

Ambit Energy
Andeler Corporation
Blu Power of Texas
BOC Energy Services
Brubaker & Associates
Champion Energy Services
Constellation NewEnergy
Econnergy Energy Co. Inc.
Gexa Energy
Himalaya Power
J. Pollock
Sitara Energy
Suez Energy Resources NA

INVESTOR-OWNED UTILITIES

American Electric Power Service Corporation
CenterPoint Houston Electric
First Choice Power Special Purpose
Oncor Electric Delivery Company
Sharyland Utilities
Associate Members
Electric Transmission Texas
EnergyCo Marketing & Trading
Luminant Generation Company
Texas-New Mexico Power Company
TXU Energy Retail Company

MUNICIPALS

Austin Energy
Brownsville Public Utilities
Bryan Texas Utilities
City of College Station
City of Georgetown
CPS Energy
Denton Municipal Electric
Floresville Electric Light & Power System
Garland Power & Light
GEUS
Kerrville Public Utility Board
New Braunfels Utilities
Texas Municipal Power Agency

Associate Member

City of Bastrop

FIVE-YEAR SUMMARY

Financial, Operating, Retail Transactions Data

FINANCIAL DATA (\$/millions)	2004	2005	2006	2007	2008
Revenue	129.7	127.9	135.1	165.9 ¹	187.0 ²
Direct Operating Expenses	79.1	80.8	85.9	115.8	141.1
Depreciation/Amortization	44.7	49.0	42.2	33.9	31.9
Net Interest Expense/(Income)	8.0	7.7	5.4	4.3	7.0
Total Expenses	131.8	137.5	133.5	154.0	180.0
Debt: Long Term	149.0	134.1	108.0	181.8	280.7
Debt: Short Term	29.4	26.1	73.1	77.1	60.2
Capital Expenditures	59.7	25.3	68.2	132.7	139.8
Administration Fee (per MWh)	\$0.44	\$0.42	\$0.417	\$0.417	\$0.417

NOTE: 2008 Audited Financial Statements (PricewaterhouseCoopers) are posted on www.ercot.com in News/Reports section.

OPERATING DATA	2004	2005	2006	2007	2008
Peak Demand (MW)	58,531	60,274	62,339	62,188	62,174
Energy (GWh)	289,113	299,219	305,692	307,064	312,401
Reserve Margin (%)	25.2	16.5	16.4	14.6	13.8
Transmission Improvements (\$ millions) ³	\$360.1	\$557.4	\$749.4	\$919.5	\$453.0
Wind Generation, Cumulative (MW)	1,385	1,854	2,875	4,785	8,005
Local Congestion Costs (\$ millions) ⁴	\$279.0	\$266.6	\$183.6	164.4	184.2

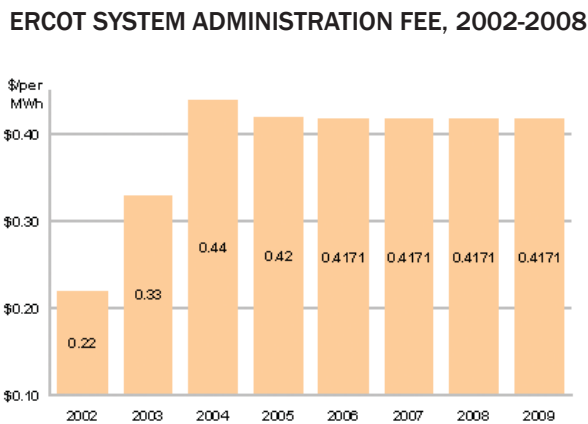
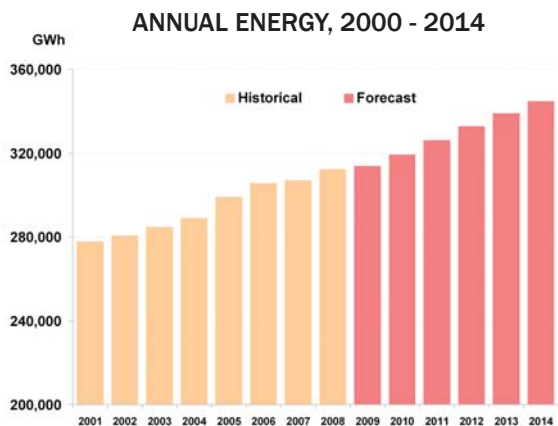
RETAIL TRANSACTIONS DATA	2004	2005	2006	2007	2008
Competitive Choice Customers (millions)	6.1	6.2	6.3	6.4	6.5
Switches Completed (cumulative)	1,646,346	2,287,492	3,134,197	3,849,436	4,762,043
Switches by Year	457,517	641,146	846,705	715,239	822,607
Residential	335,253	479,830	656,218	578,727	662,566
Small Non-residential	121,210	160,339	189,482	135,586	159,216
Large Non-residential	1,054	976	1,004	926	825
Migration from Native Affiliate Retail Electric Provider					
Residential (%)	21.4	30.2	37.9	43.2	46.2
Small Non-Residential (%)	59.1	66.2	70.0	72.9	75.5
Large Non-Residential (%)	64.7	71.8	72.4	73.0	73.6
Competitive Retail Total Transactions (000's)	89,060	92,368	94,857	93,684	95,440

¹ Includes \$32 million from nodal surcharge and \$2 million from NERC ERO fee

² Includes \$47.8 million from nodal surcharge and \$2.1 million from NERC ERO fee

³ Based on projects completed in the designated year; may not reflect annual costs since costs may be spread over several years

⁴ Methodology has changed during the five-year period. Past years' updated to reflect changes following re-settlements and true-ups.



ERCOT GOVERNANCE

Board of Directors

Chairman

Jan Newton
Chairman
(unaffiliated)

Vice Chairman

Michehl Gent
Vice Chairman
(unaffiliated)

Mark Armentrout
(unaffiliated)

Don Ballard
Office of Public Utility
Counsel
(residential consumer,
ex-officio)

Brad Cox
Tenaska Power Services
(independent power
marketer)

Andrew Dalton
Valero Energy Corporation
(industrial consumer)

Miguel Espinosa
(unaffiliated)

Nick Fehrenbach
City of Dallas
(commercial consumer)

Bob Helton
International Power
America
(independent generator)

Charles Jenkins
Oncor Electric Delivery
(investor-owned utility)

Bob Kahn
CEO, ERCOT
(*ex-officio*)

Clifton Karnei
Brazos Electric
Cooperative
(cooperative)

Alton D. "Dee" Patton
(unaffiliated)

Barry T. Smitherman
Chairman
Public Utility Commission
(*ex-officio*, non-voting)

Robert Thomas
Green Mountain Energy
(retail electric provider)

Dan Wilkerson
Bryan Texas Utilities
(municipal utility)

Segment Alternates

Steve Bartley
CPS Energy
(municipal utility)

Deryl Brown
Hudson Energy Services
(retail electric provider)

Calvin Crowder
Electric Transmission
Texas (investor-owned
utility)

Mike Packard
South Texas Electric
Cooperative (cooperative)

Jean Ryall
Constellation Energy
Commodities
(independent power
marketer)

Mark Walker
NRG Texas
(independent generator)

ERCOT Officers

Bob Kahn
President and
Chief Executive Officer

Mike Cleary
Senior Vice President and
Chief Technology Officer

H.B. "Trip" Doggett
Senior Vice President and
Chief Operations Officer

Steve Byone
Vice President and
Chief Financial Officer

Nancy Capezzuti
Vice President and
Chief Administrative Officer

Mike Grable
Vice President and
General Counsel

Charles B. Manning, Jr.
Vice President and
Chief Compliance Officer

Richard Morgan
Interim Vice President and
Chief Information Officer

Kent Saathoff
Vice President of System
Planning and Operations

Board, Stakeholder Process

The ERCOT Board of Directors has general overall responsibility for managing the affairs of ERCOT, including approval of the budget and capital spending priorities, approval of revisions to ERCOT protocols and guides, and endorsement of major new transmission infrastructure recommendations. ERCOT's 16-member "hybrid" board includes five independent (or unaffiliated) members; three consumer segment representatives (industrial, commercial and residential); the ERCOT CEO; the Public Utility Commission chairman (non-voting), and six representatives from each of the industry segments – investor-owned utilities (or transmission owners), municipally-owned utilities, cooperatives, generators, power marketers and retail electric providers.

The Board also oversees the affairs of the Texas Regional Entity (Texas RE), the independent division that FERC established in 2006 to serve as the regional entity for the ERCOT region, pursuant to the reliability provisions of the federal Energy Policy Act of 2005 (EPAAct).

Under the Board's oversight, ERCOT's stakeholder process is responsible for developing policies, procedures, and guidelines for power grid coordination, reliability, and market operations. Six standing committees and subcommittees supported by numerous working groups and task forces function within the stakeholder process.

Legislative Oversight

Other than on issues arising under federal EPAAct provisions, ERCOT is subject to oversight by the Texas Legislature and is fully regulated by the Public Utility Commission of Texas (PUC). The PUC approves the ERCOT system administration fee, which provides 98 percent of ERCOT's revenues, and has general oversight authority including the ability to conduct or order audits. Texas RE funds under EPAAct are administered separately. For most purposes, ERCOT, like the PUC, is accountable to the Texas Legislature and its jurisdictional committees. For EPAAct purposes, ERCOT is accountable to the Texas RE, NERC, and the Federal Energy Regulatory Commission.

The Electric Reliability Council of Texas (ERCOT) manages the flow of electric power to approximately 22 million Texas customers – representing 85 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 40,000 miles of transmission lines and more than 550 generation units. ERCOT also manages financial settlement for the competitive wholesale bulk-power market and administers customer switching for 6.5 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.



Electric Reliability Council of Texas, Inc.

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Austin TX 78744
512/225-7000**

**Taylor
2705 West Lake Drive
Taylor TX 76574
512/248-3000**