ERCOT LTS UPDATE

November, 2011

LTS Leverages Demand Side Working Group Expertise

ERCOT is working with the Demand Side Working Group (DSWG) to develop modeling inputs representative of potential demand responsive resources. To model demand resources in the context of the Long Term Study, we need stakeholder assistance. Specifically, to determine the economy and system benefits of the emergence of various Demand Side Resources over the next twenty years, we need the following operational and cost characteristics:

- Availability (time of day, duration)
- Fatigue rate (de-ration of available resources due to previous use)
- Ramp Rates (responsiveness)
- Capital Costs (up-front subsidies or procurement costs)
- Variable Costs (consumer payments to incent/guarantee participation)

ERCOT and the DSWG elected to use a previous study on Demand Response, performed by The Brattle Group, as a starting point. "A National Assessment of Demand Response Potential," a FERC commissioned study, provided a state by state assessment of potential resources within each of the 50 U.S. states. From this assessment, DSWG and ERCOT will expand the findings to include "Texas-Specific" estimates of potential demand-side resources achievable from Residential Consumers over the next twenty years. Future discussions focusing on Texas Specific estimates for Industrial and Commercial Resources shall continue in the next DSWG meeting (December 16th, 2011.)

KEY LTS MEETING DATES:

12/9: RPG – Cancelled

12/7: WMS

12/14: ETWG

12/16: DSWG

1/13: LTS*

*LTS Materials: To be Posted on 1/6 for the 1/13 meeting

Key Project Milestones

Milestone	Kick-off Meetings	Draft Interim Report due to DOE	Interim Report due to DOE	LTSA for State Legislature	Draft Final Report	Final Report due to DOE
Timeline	April, 2010	June, 2011	August, 2011	December, 2012	April, 2013	June, 2013
Work Product	Initial Development Business as Usual Case (BAU) & Modeling		Alternative Scenario Development & Modeling		Final work product	
Stakeholder Process	Monthly introductory meetings		Quarterly LTS meetings with interim workgroup meetings			

Scenario Development

ERCOT, as part of the long-term study and other planning needs, is in the process of formulating a series of alternate forward scenarios. These proposed alternative futures will be discussed in detail at the January 13th, 2012 LTS/RPG Joint Meeting.

ERCOT is currently working with stakeholders to finalize an initial set of scenarios for the long-term study. Previous discussions have resulted in a set of draft scenarios; you can see a list of these here:

http://www.ercot.com/content/committees/other/lts/keydocs/2011/Scenario_Development_Matrix_Rev_6_0.xls

Analysis of the first of these scenarios, a Business As Usual Scenario (characterized by a continuation of current market conditions) has been underway for the past several months. ERCOT has presented potential resource expansions based on this scenario at previous Long-Term Study Task Force (LTSTF) meetings, and ERCOT is currently evaluating transmission needs for this scenario. Following discussions at the September LTSTF meeting, ERCOT has been working with the Demand-Side Working Group and the Emerging Technologies Working Group on potential scenarios that focus on the impacts of demand-side resources and distributed resources. ERCOT is also working with Sandia National Laboratory and other organizations on a sustained drought scenario (you can see more info on this on page 3).

In addition to these efforts, in order to bookend the potential impacts of resource changes on grid reliability, ERCOT proposes to include a scenario with expansion of renewable resources in the initial set of scenarios for transmission needs analysis. A detailed discussion of these scenarios will be held during the Joint Long-Term Study Task Force/Regional Planning Group meeting scheduled to be held at the ERCOT MET Center on January 13, 2012. If you have any comments regarding the scenario development process, please send them to: longtermstudy@LISTS.ERCOT.COM.

Drought Impact Activity and LTS

ERCOT is participating with both Sandia National Laboratory (Sandia) and Western Electricity Coordination Council (WECC) in analysis of the potential impact of drought on electric generation availability for input into long term transmission modeling and planning efforts. It is part of a larger Department of Energy (DOE) sponsored, national laboratory led, research effort to develop tools related to the interdependency of energy and water.

The main objectives of the study are as follows:

- Review the literature on drought and electricity generation
- Analyze historical drought events
- Obtain consensus on drought study design parameters
- Quantify the risk to electricity generation (both hydroelectric and thermoelectric) from the design drought scenarios within the WECC and ERCOT interconnections

Numerous drought analyses have identified and measured historical droughts in various ways, depending on which impacts of droughts are to be managed. The key elements of a design drought for impact analysis are its duration, frequency, severity, and spatial pattern, as well as temperature deviation during the drought.

Results from the hydroelectric and thermoelectric analysis are combined to determine the maximum total percentage of electricity generation that might be lost for each scenario. The results of the 10th Percentile Scenario are shown below.

Continued Page 4…

NGO PARTICIPATION

The LTS TF project specifically includes outreach efforts to involve non-profit Non-Governmental Organizations (NGOs) that have not traditionally participated in ERCOT's planning activities. In addition, the project budget includes funds for NGO representatives to request reimbursement for their time and expenses incurred while participating in the project.

ERCOT urges representatives of NGOs that have an interest in electric transmission planning in the ERCOT Interconnection to learn about the ERCOT project, register to receive project updates, and participate in meetings and planning activities.

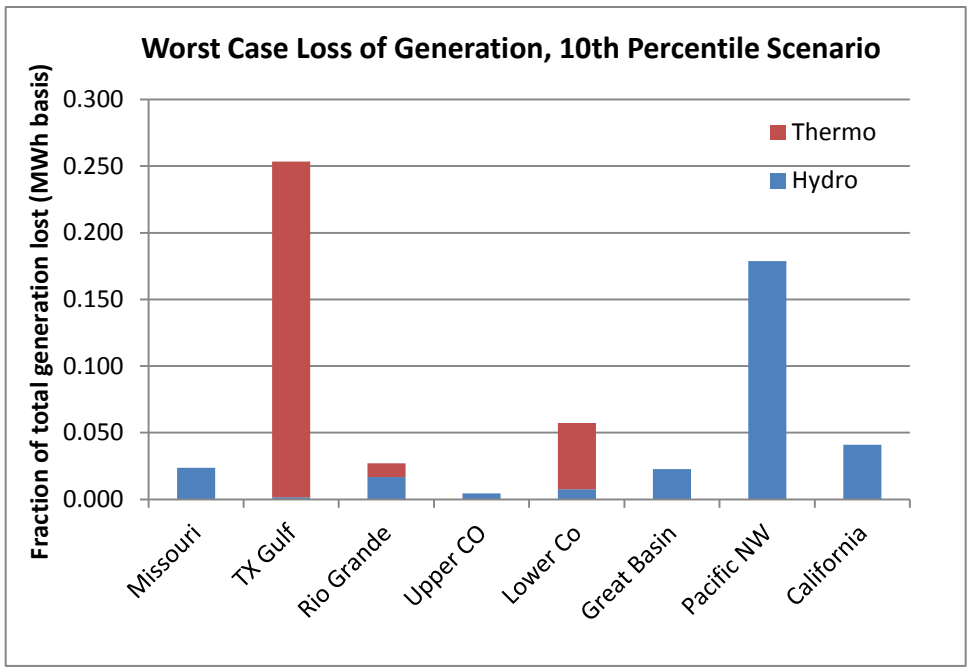
Ongoing Efforts

DSWG

ERCOT LTS will attend the December 16th DSWG Meeting to focus on industrial and commercial demand side resources.

The figure shows the worst-case loss of electricity generation for the basin as a fraction of the total annual electricity generation in a normal year, in terms of megawatt hours generated.

The results represent the amount of replacement generation or reduction in load that would be required if no reserve capacity was available and mitigation actions were not taken. The Texas Gulf Coast basin shows a 25% loss of generation, almost entirely from lost thermoelectric generation. This risk appears to be driven by the extreme nature of the drought in this basin, with drought flows equaling only 31% of normal levels.



Key Contact Information

Communication

Email: *longtermstudy@ercot.com*

Hudson@stratusenergy.com

Wlasher@ercot.com

Phone: *512-248-3151*

Lists: *http:list.ercot.com (longtermstudy, scenario_development)*

Information

Long Term Study *http://www.ercot.com/committees/other/lts*

The Electric Reliability Council of Texas ensures a reliable electric grid and efficient electricity markets.

ERCOT