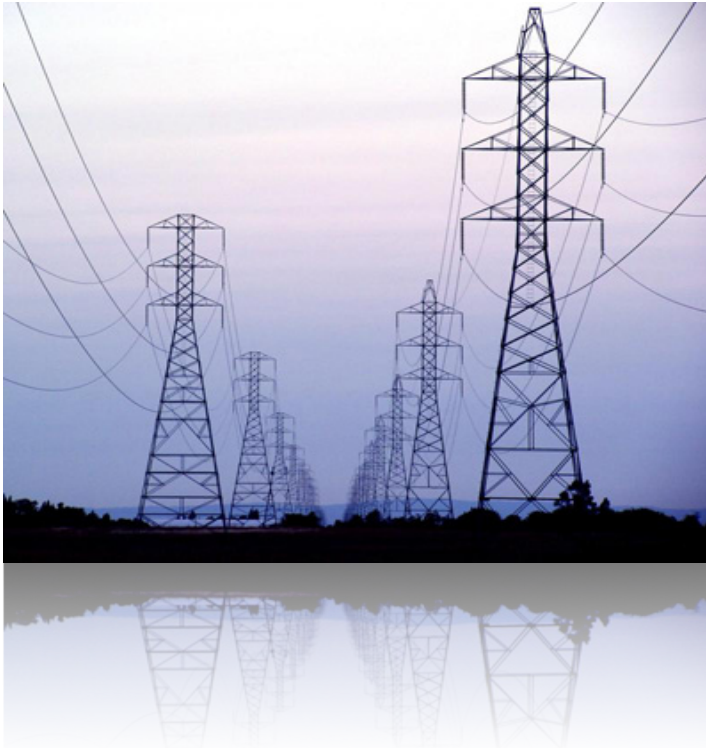


ERCOT LTS UPDATE

LTS Stakeholders

Planning for the next generation of infrastructure



KEY LTS MEETING DATES:

SEPTEMBER 29TH
ETWG (W/ LTS COMPONENT)

SEPTEMBER 30TH
DSWG (W/ LTS COMPONENT)

OCTOBER 4TH
LTS
CANCELED

OCTOBER 12TH
WMS (W/LTS COMPONENT)

OCTOBER 14TH
LTS/RPG MEETING

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			

KEY PROJECT MILESTONES

Process for Progress

As the project milestone chart indicates above, LTS staff and stakeholders have recently reached a key project inflection point.

With the development of a Business as Usual Case (BAU Case), a simplified model of the network (the Network Model), and the initial review of the Ventyx expanded suite of software, it is now time for further development and ratification of a series of alternative futures.

To that end, ERCOT LTS staff, in discussions with our DOE liaison, has determined that integrating the efforts and expertise of the various standing ERCOT working groups into the ERCOT LTS

process will result in an array of scenarios that represent a broad set of potential futures from which to develop forward transmission planning scenarios.

ERCOT LTS staff elected to schedule meetings with the chair/vice-chairs of TAC, WMS, RMS, DSWG, ETWG and other relevant on-going ERCOT workgroups to discuss relevant deliverables for input into the LTS process. (For a draft list of Key Deliverables see page 5.)

Thank you for your patience as we work to further refine the LTS process.



*mutantur omnia nos et
mutamur in illis...*

*non est ad astra
mollis e terris via...*

qui tacet consentire...

The “End-Game”



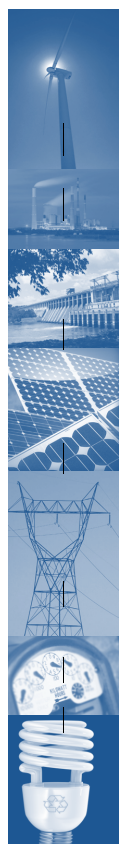
*Nulla elementum condimentum
libero. Curabitur ornare mauris dolor.*

If LTS has not quite reached the beginning of the end, it has certainly begun to approach the end of the beginning. With that in mind, ERCOT LTS staff and the project facilitator have begun contacting key stakeholders to discuss what the *end-product* of the effort looks like – and, indeed – at what level the *end-product* of the efforts is “endorsed”.

Key ERCOT executives have acknowledged that the LTS work product, as an enhanced Long Term Study, merits review by the ERCOT Board.

While the LTS planning process outcome does not confer an endorsement of any particular project, the LTS will, in fact, establish a framework that may

Continued on Page 4...



ERCOT Interconnection
Long-Term Transmission Analysis
2010 – 2030
Interim Report
Volume 1: Project Status Update

Long-Term Study Task Force
Electric Reliability Council of Texas, Inc.

Topic A and B Phase 1 Report
August, 2011

LTS Interim Report

On September 7th, LTS Staff released a final version of the required Interim Report. For those of you that have been unable to review it fully – the Cliff Notes version goes something like this.

The report itself provides, in two volumes, a status update for the overall project. In Volume I current project status, contributions from the stakeholders to date, and a summary of expected future work is detailed. Volume II provides a detailed description of the tools and processes that have been acquired or developed for the LTS process. These tools include a methodology for reducing the complexity of the ERCOT grid for more focused long-range transmission analysis, a set of modeling processes that analyze the future economic viability of potential resources, a process for location of new resources and an initial review of import capacity needs into ERCOT's fast growing urban areas. The report also delineates the initial technical analysis completed for the project.

Importantly, these tools form the foundation for the next phase of the effort.

The Long-Range Study Task Force Interim report also details the general consensus surrounding an initial future scenario for resource expansion and transmission planning analysis – a Business as Usual scenario, characterized by no significant market or regulatory changes from current conditions.

Further analysis of this scenario continues, but it will be foundational to the effort to create models that deviate from that case.

The LTS Interim Report also requested further stakeholder input. Among the issues going forward, the following were identified as high priority:

Continued on page 4...

End Game... (Continued from page 2)

Influence shorter term planning processes. To that end, now is the time to leverage increased stakeholder participation to ensure that LTS plans are robust enough to accurately reflect potential future outcomes.

In the Eastern Interconnect Process 72 variants are being distilled to 8 scenarios that are being distilled to 3 non-binding future “plans” to arrive in October, 2012.

In the Western Planning Process, a foundational list of 33 likely projects under a 10-year horizon was generated as a part of the process.

In each of those plans, an emphasis on common elements is front and center – and both have made clear to date what the expected process outcome will be at their respective conclusion.

In ERCOT, the end-game is still being defined – but to that end, we have the next 21 months.

LTS Interim Report Summary... (Continued from page 3)

- Development of a robust set of potential future scenarios
- Provision of operational performance and financial data for solar generation technologies
- Input into the market potential for demand-side resources and energy-efficiency programs in future scenarios
- Provision of operational and financial data regarding energy storage technologies
- Development of potential growth forecasts of electric vehicle use, and the possibility of electrification of other parts of the transportation industry

For those interested in further details on the LTS Interim Report, it is available at:

<http://www.ercot.com/committees/other/lts/>

UPCOMING EFFORTS



LTS/Workgroup Development

To date, ERCOT LTS Staff have requested (or are in the process of requesting) that the following ERCOT workgroups take responsibility for further developing information necessary for forward scenarios:

WMS

ETWG

DSWG

Draft List of Key Workgroup Deliverables

The following list of draft workgroup deliverables, developed by ERCOT LTS staff from stakeholder comments on the LTS interim report and a review of material discussed to date, delineates some key areas where inputs to the process of modeling potential scenarios is desired. This list of key gaps in information will be discussed at the next LTS meeting scheduled for October 14th.

Economic

- Fuel Prices
 - Natural Gas Prices – Long Term / Short Term outlook
 - Coal Prices – PRB being the new default?
- Emission price and allowance availability
- Residential urbanization and its impact on load growth
- Modeling of continued economic uncertainty
- Revenue Adequacy for generator build
- Cost Estimates for Transmission Infrastructure
 - Urban versus rural development costs differences
 - Cost escalation assumptions

Expanded Interconnections:

- System ties between SPP, Entergy, Mexico, WECC
- Expanded DC ties / Interconnection Projects

Energy Efficiency and Demand Response

- Best approach to model these options
- Energy Efficiency – is it only a load modifier?
- Potential Growth of DSM, ideal DSM sites, penetration rates
 - Load modified
 - Load modeled as resources

Renewable / Emerging Technologies

- Capital Costs, O&M, and learning curve cost savings associated with renewable emerging technologies
- Modeling Storage and Solar
- On Shore, Coastal, and Off-shore Wind

Generation expansion

- Identification of likely or known Brownfield sites
- Designation of Transmission Friendly Interconnection areas
- Selection of Area Specific Generation Dispatches
- Water availability issues and limitations on generation development
- Emissions issues and limitations on generation development

Market Design

- Required Reserve margins for the 20 year horizon
- Mechanisms to incent / reward capacity development
- Mechanisms to incent / reward energy efficiency and demand response
- Market Rules, potential capacity market
- Adequacy of regulating reserves in light of increased integration of non-dispatchable resources

Regulatory

- Incorporation of pending and/or potential environmental regulation
- Energy Policy regarding incentives: present and future
- Water Policy

Study Design

- Iterative Economic Planning vs. 20 Year look
 - Establishing bridges between the LTS and shorter planning horizons
 - Transmission and Generation Contingency Development
-

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*dimidium facti qui
coepit habet*

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
