

## Long-Term Study Opportunity

*Expanding the transmission planning process...*

Earlier this year, ERCOT ISO was awarded a Department of Energy (DOE) Recovery Act grant to expand the long-term planning effort for the ERCOT Interconnection. The scope of the study is a twenty year outlook on the electric system in the region and to expand the transmission planning process to solicit more input from government agencies and non-government organizations (NGOs). ERCOT ISO is required by state law to provide a long-term assessment, and the DOE funding allows ERCOT to expand and improve the process to include more details that were previously not readily available.

Since it is impossible to predict the future (at this time, anyway) – looking out twenty years seems to be a worthless effort. However, information extracted from evaluating possible outcomes of a

*continued on page 4*

## NEXT LTS TASK FORCE MEETING

ERCOT AUSTIN MET CENTER

DECEMBER 2, 2010, 9:30AM – 3:30PM

### AGENDA TOPICS

- PROJECT STATUS
- 2011 MEETING SCHEDULE AND PROJECT PLAN
- ENVIRONMENTAL CONSIDERATIONS FOR TRANSMISSION PLANNING
- MODELING SOFTWARE REVIEW
- SCENARIO DEVELOPMENT – NEXT STEPS
- LOAD MODELING – NEXT STEPS

## Modeling Software Decision

*And the winner is...*



In August, ERCOT ISO issued a request for proposal (RFP) to identify software that will assist development of long range resource planning solutions through scenario analysis. Three proposals were received, and presentations by each company were made during the last week of September.

The evaluations have been submitted, considering the needs identified during the RFP development process as well as the abilities of existing ERCOT tools. A decision has been made, however, due to procurement processes, ERCOT cannot disclose the selected vendor until the RFP process is

*continued on page 3*

## INSIDE THIS ISSUE

- 1 Long-Term Study Opportunity
- 1 Modeling Software Decision
- 2 Highlights of September LTS Task Force Meeting
- 3 Scenario Development Status Report
- 3 Load Analysis Update
- 4 Emerging Technology Analysis
- 4 LTS General Information

# Highlights of September Long-Term Study Task Force Meeting

Thanks to our special guests from CCET and SMU.

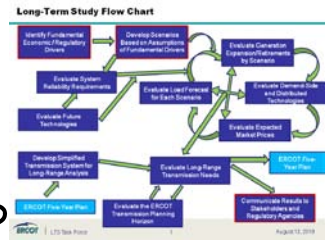
The Long-Term Study (LTS) Task Force convened on September 24, 2010. After introductions, Warren Lasher presented a project status report and diagram of the project plan, shown below. The review of the project plan led to many interesting questions and discussions about the project. As a side note, be glad he didn't use the original flow diagram shown to the right. Mr. Lasher also led a discussion to gain group input on participation and attendance.

Dr. Holloway with Center for Commercialization of Electric Technologies (CCET) delivered a presentation entitled "Discovery Across Texas." Dr. Holloway also coordinated a panel discussion on CCET projects consisting of Craig Lobel, Michael Dittmer, and Bill Bojorquez. They represented the community of the future, smart grid portal planning, and synchrophasor projects respectively.

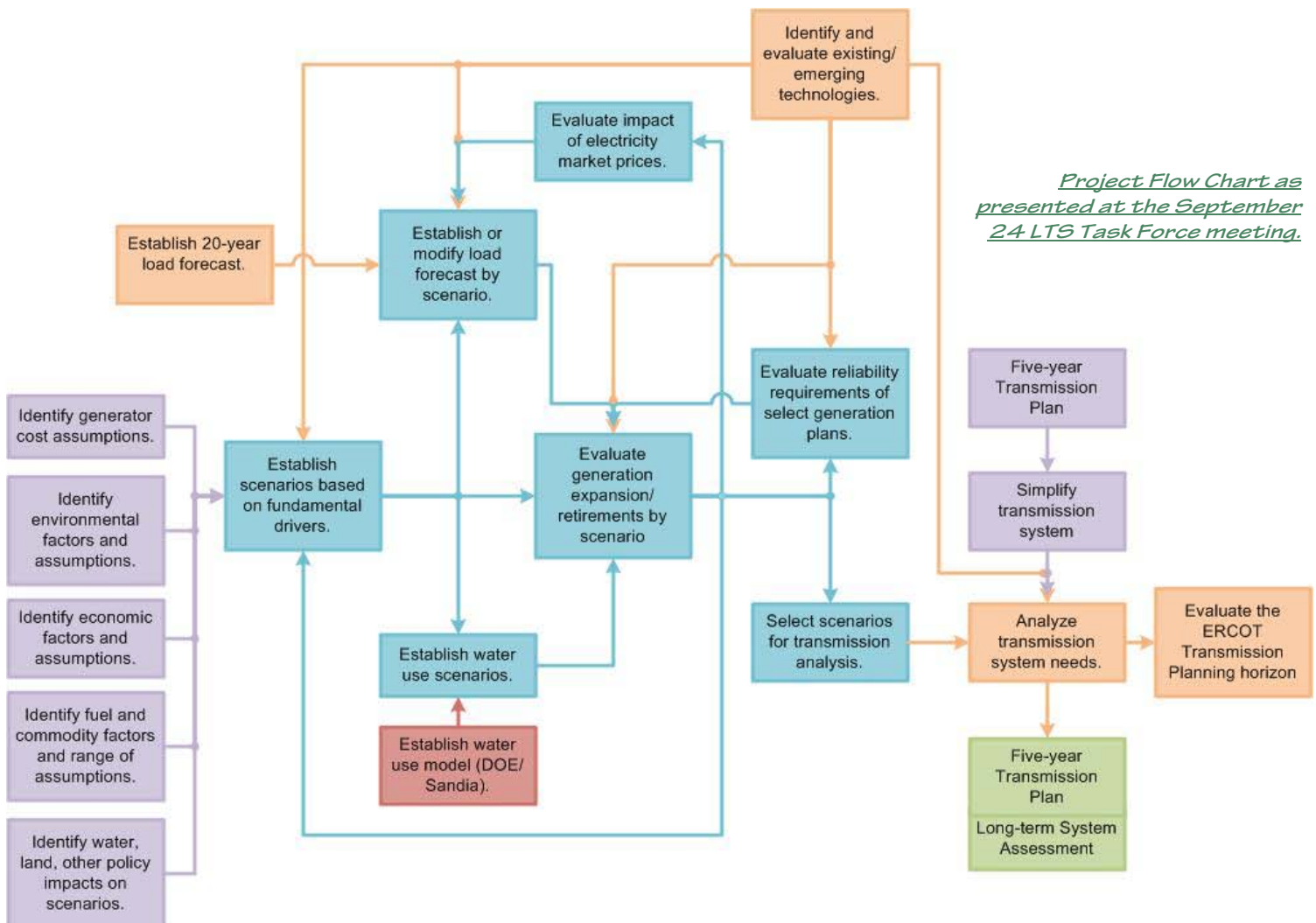
The last agenda item for the day was a presentation by Dr. Blackwell of Southern Methodist University on "Geothermal Energy Potential of Texas."

The presentations and meeting notes are available on the September meeting page found [here](#). Questions? Please contact [longtermstudy@ercot.com](mailto:longtermstudy@ercot.com). ❖

*Original Project Flow Chart*



*Project Flow Chart as presented at the September 24 LTS Task Force meeting.*



## Scenario Development Status Report

*How DO you eat an elephant? And how does that affect THIS project?*

ERCOT staff has been working on developing multiple scenarios to use as a basis for the long-term planning futures. In general, these scenarios identify assumptions for the following areas:

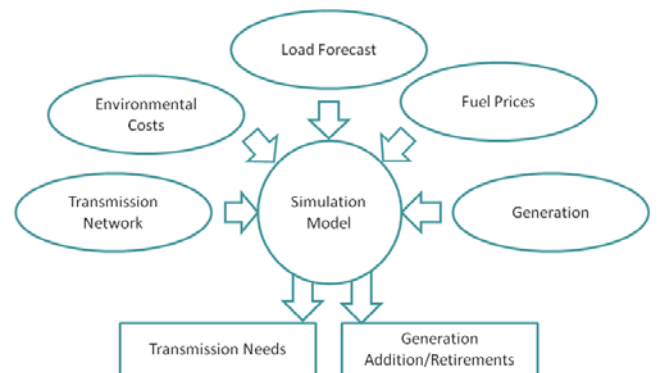
- Load growth and alternatives to load growth
- Fuel and other commodity prices
- Environmental policies and costs
- Financial policies and costs

The Scenario Development Working Group (SDWG) has met several times to review and provide input on the scenario development effort. Additional review and input is requested. To review the scenarios and the detailed assumptions, please visit the SDWG meeting page for [September 10](#). Documents posted include:

- Scenario assumptions spreadsheet
- Levelized cost assumptions
- Long-term load forecast model description
- Scenario assumptions presentation

Due to the size of this elephant, the approach will continue to evolve into manageable pieces. This will be a topic at the December 2 Long-Term Study (LTS) Task Force meeting. Please remember, the most valuable input to this process, however, is information and validation from industry and agency experts. ❖

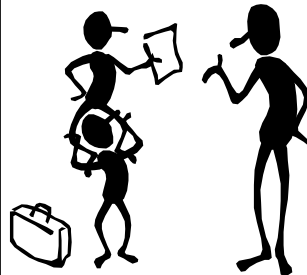
## Model Inputs and Outputs



September 24, 2010

*Modeling Software Decision - continued from page 1*

finalized, including notifying submitters of the completion of the selection process. We plan to have this process complete in time for the December 2 Long-Term Study task force meeting.



### Next Steps

Upon agreement with the selected vendor, ERCOT staff will begin working with the vendor to consolidate, validate and improve model data for the ERCOT system to provide a consistent basis for all scenarios. ❖

## Load Analysis Update

*Energy efficiency - is it in there?*

Since the [May](#) meeting, the ERCOT Load Analysis team has completed development of an updated forecasting model. The updated model allows for the easy quantification of economic and weather impacts on the various future scenarios that are developed by the scenario development effort. Currently, the hourly demand neural network model is being refined.

Future efforts for the Load Analysis team include:

- Development of an Energy Efficiency model,
- Development of a Distributed Generation model,
- Development of a Demand Response/Customer Price Responsiveness model, and
- Development of an Electric Vehicle model.

Watch for more information on these models in future load analysis updates. ❖



## Emerging Technology Analysis

### How will we meet electricity needs in the future?

The technology analysis team has been catching up on the trends – documenting information on generation, transmission, storage, load-shifting technologies, and more. An initial list of technologies that may affect the ERCOT region in the next 20 years was reviewed with the Long-Term Study (LTS) Task Force in [July](#).

The purpose of this analysis is to encourage ERCOT staff as well as LTS Task Force participants to look “outside-the-box” of the traditional electric system. This analysis will provide details to support the models, reports, and findings of the long-term study, including:

- Description
- Development status
- Positive attributes
- Restrictions
- Potential benefits and impacts to the ERCOT region
- Quantitative assumptions for capital costs, efficiencies, ramp rates, emissions, O&M costs, etc. where available
- Expected time to market
- Likelihood to impact ERCOT region

The results of this effort will be documented and submitted as part of the reporting efforts required by the Department of Energy as well as to support other ERCOT reporting requirements. ❖

variety of futures can provide invaluable guidance to near-term planning efforts leading to a cost-effective transmission system. This effort can also provide input to policy-makers by identifying possible impacts of policy mandates.

In order to get results that can truly add value, however, input is needed from a cross section of the electric industry – including a variety of market participants, consultants, manufacturers, state agencies, and non-government organizations – as well as a cross section of knowledge – from economists to engineers to environmentalists. The Long-Term Study (LTS) Task Force was created as a meeting-of-the-minds. The knowledge and validation provided by the Task Force is invaluable to planning, evaluating, and reviewing all phases of this project.

Additional information on the grant can be found on the [LTS web page](#). ❖



### COMMUNICATION

EMAIL: [LONGTERMSTUDY@ERCOT.COM](mailto:LONGTERMSTUDY@ERCOT.COM)

PHONE: 512-248-3152

MAIL LISTS: [HTTP://LISTS.ERCOT.COM](http://lists.ercot.com)

[LONGTERMSTUDY, SCENARIO\\_DEVELOPMENT](#)

### INFORMATION

LONG-TERM STUDY TASK FORCE

[HTTP://WWW.ERCOT.COM/COMMITTEES/OTHER/LTS](http://www.ercot.com/committees/other/lts)

SCENARIO DEVELOPMENT WORKING GROUP

[HTTP://WWW.ERCOT.COM/COMMITTEES/OTHER/LTS/SDWG](http://www.ercot.com/committees/other/lts/sdwg)

### MISSION STATEMENT

THE LONG-TERM STUDY TASK FORCE PROVIDES THE PRIMARY FORUM FOR DISCUSSION BETWEEN REPRESENTATIVES OF APPROPRIATE STATE AGENCIES, NON-GOVERNMENTAL ORGANIZATIONS, POLICY-MAKERS, OTHER PLANNING STAKEHOLDERS, AND ERCOT STAFF REGARDING ISSUES AFFECTING LONG-RANGE POWER SYSTEM PLANNING IN THE ERCOT REGION AND SPECIFIC INPUTS, RESULTS AND FEEDBACK ON LONG-TERM PLANNING STUDIES.