

ERCOT LTS UPDATE

July 2012

2 - BAU's complete

The business as usual scenario is complete for the Base Case / all technologies.

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KEMA to Present

DNV Kema was recently awarded an RFP for an assessment of Ancillary Services Requirements.

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Sneak Preview of S2

ERCOT will present the Nat-Gas Retirement Sensitivity of the BAU scenario in the July 2012 Quarterly meeting

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Black and Veatch / Sandia National Labs to continue Drought Sensitivity

The Department of Energy's Office of Electricity and Black and Veatch are supporting ERCOT in their long-range transmission planning. Specifically, both entities are helping ERCOT consider the implications of water constraints on future resource economics and constraints.

One aspect of this effort is to determine the medium-term (up to the year 2030) impacts of future climate and drought scenarios on electricity generation. The approach uses a method that projects future climate and water demands to determine stream flows, water temperatures and water storage in reservoirs. These water and climate data are then compared to past performance data and power plant characteristics to infer the likelihood that summer power generation could be curtailed at a power plant. Additionally, water availability and cost data are developed for five sources of water, including unappropriated surface water, unappropriated groundwater, appropriated water, municipal waste water and brackish groundwater.

Sandia National Labs will present a summary of their findings thus far. When compared to future planned demands for water (across all use sectors) these results provide detailed information to support siting of future thermoelectric power generation. This presentation will provide background, methods and results of this analysis.

KEY LTS MEETING DATE:

7/13: Joint RPG / LTS

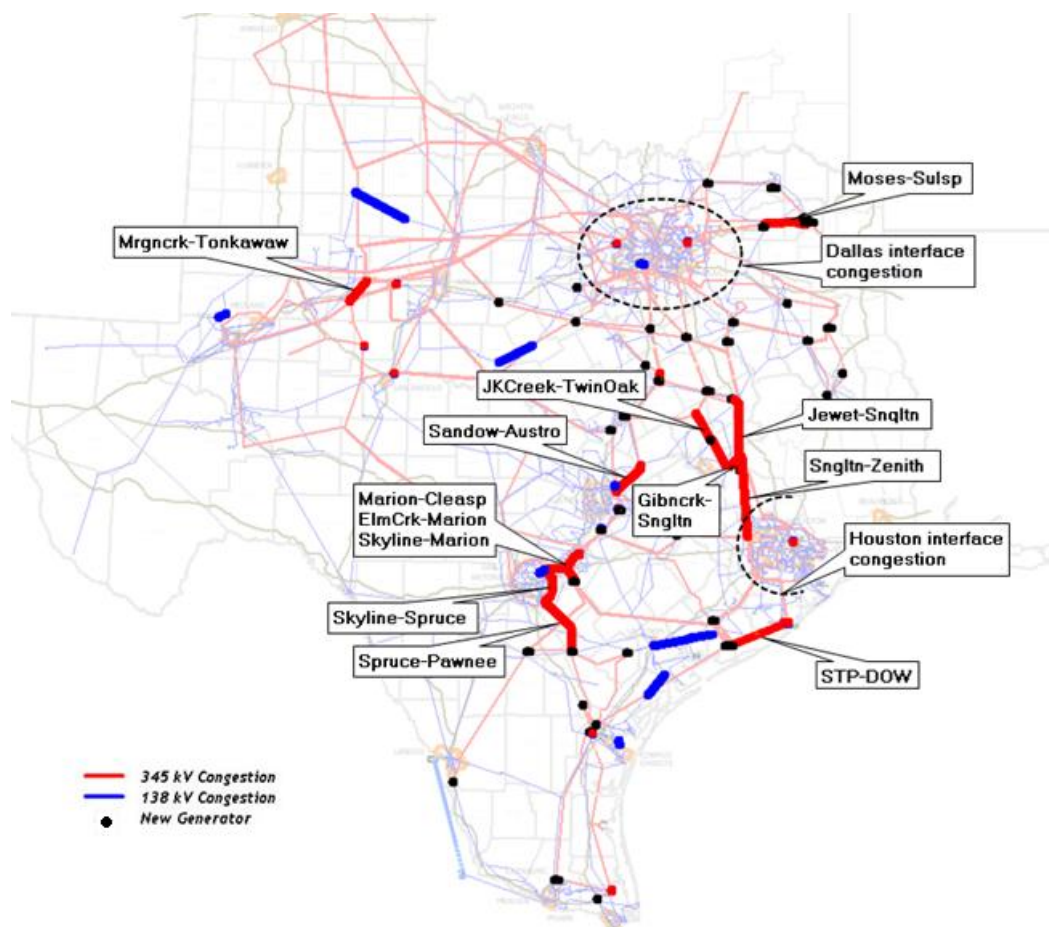


BAU S-1 Results

The transmission results from the Business as Usual Scenario with all technologies will be presented on July 13th, 2012.

The transmission system assessment for the Business As Usual (BAU) Scenario, characterized by a continuation of current market conditions, is nearly complete. This sensitivity, unlike the first BAU study, considers all technologies (solar, demand response, compressed air energy storage (CAES), and geothermal, gravity power,) as eligible for inclusion in the LTS model (predicated by economics.) The previous BAU study resource build was limited to traditional thermal and wind resources.

The updated resource build included up to 2,200 MW of residential demand response, as well as an estimation of existing industrial demand response. The remaining economic build between 2017 and 2032 included combined-cycle and simple cycle gas plants. Similarities in the transmission system needs between the two sensitivities allowed transmission engineers to further study import limitations into major load zones. The reliability and economic implications of this study will be presented at the July 13th, 2012 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			

KEMA DNV RFP Award: Assessment of adequacy of resource builds to maintain current reliability rules

ERCOT issued an RFP seeking a tool or tools to determine the ability of a resource build to maintain system frequency, balance, and other reliability rules. DNV - KEMA was awarded a contract for their proprietary KERMIT model. The contract retains KEMA's expertise to calibrate a representation of the ERCOT system with the KERMIT model. Once calibrated, the ERCOT specific KERMIT model will be used to diagnose the efficacy of scenario-specific resource builds to maintain system frequency for extreme ramps or system disturbances.

KEMA and ERCOT are working together to develop and test resource builds for two scenarios: the Business as Usual case with high natural Gas price sensitivity and the Environmental - Base Scenario. Both scenarios are likely to suggest that increasingly large proportions of intermittent generation will be economic in the future, given scenario specific assumptions. Upon completion of the study, ERCOT will review the complementary ancillary services portfolios and determine the societal cost and benefits of significant changes of the existing resource mix.

Please join us at our next meeting, Friday, July 13th. KEMA will present the capabilities of the KERMIT tool, and review the scope of the newly contracted ancillary services study.



Key Contact Information

Communication

Email: longtermstudy@ercot.com

Hudson@stratusenergy.com

Wlasher@ercot.com

Phone: 512-248-3151

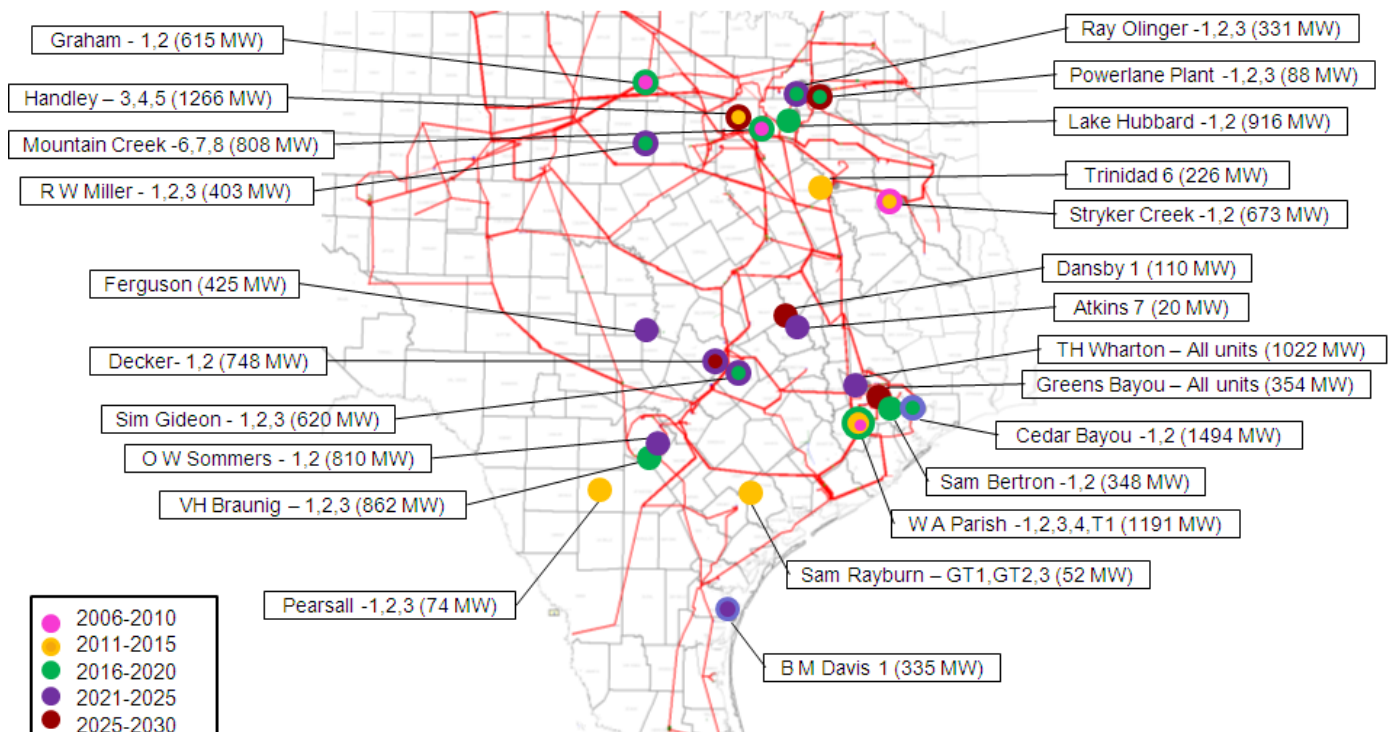
Lists: <http://list.ercot.com> (longtermstudy, scenario_development)

Information

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

Preview of Scenario 2: BAU / NG Retirements

ERCOT is actively studying the “retirements” sensitivity to the Business as usual scenario. This sensitivity assumes that all natural gas fired plants will retire on their 50th year of commercial operations. Retired sites are eligible for repowering, subject to air quality attainment status of the county. This scenario will be “previewed” at the next quarterly meeting on July 13th, 2012.



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