

# ERCOT Electricity Market 2010

Simulation of Zonal and Nodal Market



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This report summarizes the results of extensive hourly simulations of the current zonal and the proposed nodal ERCOT electricity market. Forecasts for energy and A/S prices, TCRs, LMPs, and congestion costs (CRRs) for 2010 are included in the report. The Table of Contents of the report is presented below. Clients can obtain customized reports for additional details such as generator performance, hourly LMPs, transmission congestion, and other information of interest to market participants.

The simulation of the ERCOT market was conducted using UPLAN Network Power Model, which is used extensively by most market participants including ERCOT ISO.

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(Subject to Change without Notice)

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## ***LCG Offering***

For this analysis, a total of ten (10) zonal scenarios of various CSC limits, outages, and loads were developed and simulated using UPLAN Network Power Model. The scenarios provide a range of zonal market performance including zonal prices, CSC congestion, shadow prices, and other information.

The report also includes a detailed nodal simulation that provides LMPs, congestion, wind curtailment and other nodal information. It offers a window to the nodal market operation which is scheduled to be implemented in December 2010.

Valuable information on expected costs, revenues, prices, energy and ancillary services in 2010 for both zonal and nodal market is available for market participants.

LCG can extract individual participants' loads, generators, and costs information and provide a custom report which may include hourly generator performance, wind curtailment, LMPs, and transmission congestion costs.

UPLAN Network Power Model replicates the behavior of regional power markets and power systems to simulate the financial and physical operations of entire grids. It simulates the bidding process for the Energy and Ancillary Service markets and dispatches generators hourly, using region-specific protocols. UPLAN is extensively used in ERCOT for zonal and nodal studies for various stakeholders including ERCOT ISO. It is typically utilized to assess business risks associated with capital investments in new and existing generation and transmission

## ***Deliverables***

- Summary of input assumptions of the ERCOT system including generation, loads, fuel prices and transmission
- Annual and monthly zonal prices and TCR values
- The average, standard deviation and volatility of peak and off-peak zonal prices (in implied heat rate)
- The average, standard deviation and volatility of the TCR values
- Annual and monthly nodal prices at each zone and hub prices
- One hour consultation
- Custom Report (some suggested output)
  - Hub and zonal prices
  - LMPs at client designated nodes (up to 150 nodes)
  - Monthly costs and revenues of individual client generators
  - Wind generation and curtailment (up to 20 wind farms)
  - Cost benefit and Congestion analysis of a proposed transmission project
  - Impact of CREZ Scenario 2 wind addition and transmission upgrade
  - Simulation of additional scenarios

## ***Products***

ERCOT Electricity Market 2010 (Zonal Market & TCRs)  
ERCOT Electricity Market 2010 (Zonal & Nodal Market Simulation)  
Custom Report

## ***Contact***

Participants who are interested in a preview of an abbreviated report via webcast may contact Julie Chien at 650-962-9670x110 or send email to [Julie.chien@energyonline.com](mailto:Julie.chien@energyonline.com).