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# Technical Advisory Committee (TAC) Update

Brad Jones and Kenan Ogelman  
TAC Chair and Vice Chair

**ERCOT Board Meeting**

**August 16, 2011**

## Summary of TAC Update

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### **Revision Requests Unanimously Recommended for Approval by TAC:**

- NPRR313, Revisions to the Resource Plan Reference to Current Operating Plan for EILS and Synchronous Condensers and Black Start Notification Requirements (formerly “Updating the Term Resource Plan to Current Operating Plan”)
- NPRR355, Adjust the Calculation of the Real-Time Settlement Point Price for a Load Zone
- NPRR356, EEA Changes Related to Dispatch Instructions and BLTs
- NPRR359, Monthly TDSP Load Report
- NPRR361, Real-Time Wind Power Production Data Transparency
- NPRR362, Changes to PRC Calculation
- NPRR369, Black Start Service Requirement Revisions – URGENT
- NPRR388, Clarification of Quick Start Generation Resource Performance Criteria - URGENT
- NPRR390, Clarification of the Applicability of the Use of the Refund Option – URGENT
- NPRR392, Credit Review During CRR Auction – URGENT
- SCR766, Load Zone Price Distributed by ICCP
- PGRR005, New Planning Guide Section 4, Transmission Planning Criteria (formerly “New Planning Guide Section 5, Planning Criteria”)

## Summary of TAC Update

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### **Revision Requests Non-Unanimously Recommended for Approval by TAC:**

- NPRR299, Remove Requirement for ERCOT Board Approval of PUCT, IMM, and FERC Required Reports
- NPRR347, Single Daily Settlement Invoice and Updates to Credit Calculations, including addition of a Minimum Collateral Exposure Component
- (formerly “Counter-Party Invoice and Single Daily Settlement Invoice”) - URGENT
- NPRR357, Revisions to Collateral Requirements concerning CRR Auctions (formerly “Multi-Month CRR Auction and Revisions to Collateral Requirements”) – URGENT

### **Review of Revision Request Changes to Project Prioritization List**

### **Notice of Guide Revisions Approved by TAC**

### **Holistic Approach to Congestion Irresolvable by SCED**

### **Future Agenda Items**

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**Revision Requests Unanimously Recommended  
for Approval by TAC**

## NPRR313, Revision to the Resource Plan Reference to Current Operating Plan for EILS and Synchronous Condensers and Black Start Notification Requirements

<p><b>Purpose</b> (Luminant)</p>	<p>This NPRR replaces the term “Resource Plan” with the term “Current Operating Plan” or “Availability Plan” in those instances where the change in terminology was not previously made. This NPRR also proposes adding a Black Start capable status indicator to the Availability Plan to allow ERCOT to settle payment for Black Start units programmatically; and also allows QSEs with Black Start units to provide all of the Black Start availability through the Availability Plan.</p>
<p><b>TAC Decision</b></p>	<p>On 7/7/11, TAC unanimously voted to recommend approval of NPRR313 as recommended in the 6/23/11 PRS Report.</p>
<p><b>Effective Date/Priority</b></p>	<p>Upon System Implementation – Priority High; Rank 30</p>
<p><b>ERCOT Impact</b></p>	<p>\$80k - \$85k (2011 Post Go-Live &amp; 2012 PPL Funding); impacts to Market Management System (MMS), Web Applications (WA), Settlements &amp; Billing (S&amp;B), and Enterprise Information Services (EIS).</p>
<p><b>Cost Benefit Analysis Highlights</b></p>	<p>Net (Cost) - Benefit of \$(5)k; Cost Benefit Ratio of 0.94</p> <ul style="list-style-type: none"> <li>• Corrects Protocol terminology.</li> <li>• Enhances MP compliance and reliability due to more accurate availability data for Black Start, RMR and synchronous condenser units.</li> </ul>

# NPRR355, Adjust the Calculation of the Real-Time Settlement Point Price for a Load Zone

<p><b>Purpose</b> (ERCOT)</p>	<p>This NPRR removes the energy-weighting in the current calculation for the Real-Time Settlement Point Price (RTSPP) for a Load Zone. It also adds a new RTSPP for a Load Zone that is energy-weighted (Real-Time Settlement Point Price Energy-Weighted (RTSPPEW)) and adjusts the appropriate formulas that use these prices. This NPRR also corrects the Real-Time Price for the Energy Metered for each Resource meter at bus (RTRMPR<sub>b</sub>) in the event that the Energy at bus near Real-Time (EBNRT) is less than or equal to zero.</p>
<p><b>TAC Decision</b></p>	<p>On 7/7/11, TAC unanimously voted to recommend approval of NPRR355 as recommended by PRS in the 6/23/11 PRS Report.</p>
<p><b>Effective Date/Priority</b></p>	<p>Upon System Implementation – Priority High; Rank 32.</p>
<p><b>ERCOT Impact</b></p>	<p>\$60k - \$75k (2011 Post Go-Live &amp; 2012 PPL Funding); impacts to MMS, Commercial Systems Integration (CSI), S&amp;B, Current Day Reports (CDR), and EIS.</p>
<p><b>Cost Benefit Analysis Highlights</b></p>	<p>Net (Cost) - Benefit of \$592k; Cost Benefit Ratio of 9.71</p> <ul style="list-style-type: none"> <li>• Ensures that for 15-minute intervals with no Congestion there will be no difference in the Load Zone, Resource Node and Hub 15-minute prices.</li> <li>• Eliminates payments or charges to CRR Account Holders when no Congestion.</li> <li>• Provides correct prices for schedules and for Load that varies throughout the 15-minute Settlement Interval.</li> </ul>

# NPRR356, EEA Changes Related to Dispatch Instructions and BLTs

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<b>Purpose</b> (ERCOT)	This NPRR changes the need to issue Dispatch Instructions to suspend any ongoing ERCOT-required generating unit or Resource performance testing and moves the requirement to inquire about the availability of Block Load Transfers (BLTs) from Energy Emergency Alert (EEA) Level 2A to EEA Level 2B.
<b>TAC Decision</b>	On 7/7/11, TAC unanimously voted to recommend approval of NPRR356 as recommended by PRS in the 6/23/11 PRS Report.
<b>Effective Date/Priority</b>	September 1, 2011
<b>ERCOT Impact</b>	No impacts

# NPRR359, Monthly TDSP Load Report

<b>Purpose</b> (MIS Users Group)	This NPRR creates a new secure report to provide aggregate Load data for Transmission Service Providers (TSPs) and Distribution Service Providers (DSPs) in a monthly posting.
<b>TAC Decision</b>	On 7/7/11, TAC unanimously voted to recommend approval of NPRR359 as recommended by PRS in the 6/23/11 PRS Report.
<b>Effective Date/Priority</b>	Upon System Implementation – Priority High; Rank 33
<b>ERCOT Impact</b>	\$15k - \$20k (2011 Post Go-Live & 2012 PPL Funding); impacts to EIS and Market Information System (MIS).
<b>Cost Benefit Analysis Highlights</b>	Net (Cost) - Benefit of \$15k; Cost Benefit Ratio of 1.83 <ul style="list-style-type: none"> <li>• Assist TSPs and DSPs in performance reporting to NERC.</li> <li>• Cost savings to TSPs and DSPs for ERCOT to package the data in a monthly posting.</li> <li>• Provides MPs access to data used to meet NERC requirement.</li> </ul>



# NPRR361, Real-Time Wind Power Production Data Transparency

<p><b>Purpose</b> (MIS Users Group)</p>	<p>This NPRR adds a new public report to be posted every five minutes that provides, on both a system-wide and regional basis (west and north, south and Houston, are the two regions), the five-minute actual wind power production for a rolling historical 60-minute period; and changes the existing hourly report for Actual and Forecast Regional Wind Report to provide the following information on both a system-wide and regional basis: Aggregate Wind-powered Generation Resource Power Output, Aggregate Short-term Wind Power Forecast, Aggregate Wind-powered Generation Resource Production Potential, and Aggregate Current Operating Plan High Sustained Limits for On-Line WGRs.</p>
<p><b>TAC Decision</b></p>	<p>On 7/7/11, TAC unanimously voted to recommend approval of NPRR361 as recommended by PRS in the 6/23/11 PRS Report.</p>
<p><b>Effective Date/Priority</b></p>	<p>Upon System Implementation – Priority High; Rank 34.</p>
<p><b>ERCOT Impact</b></p>	<p>\$10k - \$15k (2011 Post Go-Live &amp; 2012 PPL Funding); impacts to CDR and MIS.</p>
<p><b>Cost Benefit Analysis Highlights</b></p>	<ul style="list-style-type: none"> <li>• Provides market with Real-Time wind power production data.</li> <li>• Provides increased visibility into ERCOT actual and forecasted system conditions.</li> </ul>

## NPRR362, Changes to PRC Calculation

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<b>Purpose</b> (ERCOT)	This NPRR aligns the Protocols with the current systems. The proposed changes properly reflect the current Responsive Reserve (RRS) which is supplied from Load Resources into the Physical Responsive Capability (PRC) calculation. This NPRR also deletes the method for calculating the PRC from EEA Levels 1 and 2.
<b>TAC Decision</b>	On 7/7/11, TAC unanimously voted to recommend approval of NPRR362 as amended by the 6/29/11 ERCOT comments.
<b>Effective Date/Priority</b>	September 1, 2011
<b>ERCOT Impact</b>	No impacts

## NPRR369, Black Start Service Requirement Revisions - URGENT

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<b>Purpose</b> (ERCOT)	This NPRR allows ERCOT to conduct quarterly testing of Black Start Resources and further proposes language changes that would allow a Resource Entity representing a contracted Black Start Resource to request that an alternate Generation Resource be substituted in place of the Black Start Resource if the alternate Generation Resource meets testing and verification under established qualification criteria to ensure Black Start Service.
<b>TAC Decision</b>	On 8/4/11, TAC unanimously voted to recommend approval of NPRR369 as amended by the 7/28/11 ERCOT comments.
<b>Effective Date/Priority</b>	September 1, 2011
<b>ERCOT Impact</b>	No impacts

# NPRR388, Clarification of Quick Start Generation Resource Performance Criteria - URGENT

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<b>Purpose</b> (Luminant)	This NPRR clarifies the requirements regarding the performance criteria of a Quick Start Generation Resource (QSGR) during a SCED deployment.
<b>TAC Decision</b>	On 8/4/11 TAC unanimously voted to recommend approval of NPRR388 as recommended by PRS in the 7/21/11 PRS Report.
<b>Effective Date/Priority</b>	September 1, 2011
<b>ERCOT Impact</b>	No system impacts; business processes will be revised.

# NPRR390, Clarification of the Applicability of the Use of the Refund Option - URGENT

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<b>Purpose</b> (ERCOT)	This NPRR clarifies the ability to request refund option Pre-Assigned Congestion Revenue Rights (PCRRs) across high voltage Direct Current Ties (DC Ties).
<b>TAC Decision</b>	On 8/4/11, TAC unanimously voted to recommend approval of NPRR390 as recommended by PRS in the 7/21/11 PRS Report.
<b>Effective Date/Priority</b>	September 1, 2011
<b>ERCOT Impact</b>	No impacts

# NPRR392, Credit Review During CRR Auction - URGENT

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<b>Purpose</b> (ERCOT)	This NPRR provides for a credit review on preliminary CRR Auction results before CRR Auction results are finalized and posted to ensure that post auction collateral requirements under Section 16, Registration and Qualification of Market Participants, for the proposed CRR awards are within a Counter-Party's Available Credit Limit (ACL).
<b>TAC Decision</b>	On 8/4/11, TAC unanimously voted to recommend approval of NPRR392 as recommended by PRS in the 7/21/11 PRS Report.
<b>Effective Date/Priority</b>	September 1, 2011
<b>ERCOT Impact</b>	No system impacts; minor business function impacts to CRR and Credit business functions.

## SCR766, Load Zone and Hub LMPs Distributed by ICCP

<b>Purpose</b> (WMS)	This SCR allows the price data to be transferred to the EMS for distribution over ICCP links, as soon as the five-minute Load Zone and Hub prices are calculated in Real-Time.
<b>TAC Decision</b>	On 7/7/11, TAC unanimously voted to recommend approval of SCR766 as recommended by PRS in the 6/23/11 PRS Report.
<b>Effective Date/Priority</b>	Upon System Implementation – Priority High; Rank 40.
<b>ERCOT Impact</b>	\$13k - \$15k (2011 Post Go-Live Funding); impacts to MMS and EMS; Inter-Control Center Communications Protocol (ICCP) handbook will be updated.
<b>Cost Benefit Analysis Highlights</b>	Net (Cost) - Benefit of \$106k; Cost Benefit Ratio of 8.57 <ul style="list-style-type: none"> <li>• Allows loads to be more responsive to prices; therefore, could lower the average prices loads will pay.</li> </ul>

## PGRR005, New Planning Guide Section 4, Transmission Planning Criteria

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<b>Purpose</b> (PLWG)	This PGRR adds new Section 6.5 to the Planning Guide, moving existing Nodal Operating Guide and Annual Load Data Request (ALDR) Procedure language into the Planning Guide.
<b>TAC Decision</b>	On 7/7/11, TAC unanimously voted to recommend approval of PGRR005 as amended by the 6/30/11 ERCOT comments and as revised by TAC.
<b>Effective Date/Priority</b>	September 1, 2011
<b>ERCOT Impact</b>	No impacts



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**Revision Requests Non-Unanimously Recommended  
for Approval by TAC**

# NPRR299, Remove Requirement for ERCOT Board Approval of PUCT, IMM, and FERC Required Reports

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<b>Purpose</b> (ERCOT)	This NPRR modifies the Nodal Protocols to better capture the requirement for ERCOT to prepare and submit reports in accordance with its regulatory requirements and removes the need for the ERCOT Board, Public Utility Commission of Texas (PUCT) Staff and Independent Market Monitor (IMM) to approve a schedule and format for reports.
<b>TAC Decision</b>	On 7/7/11, TAC voted to recommend approval of NPRR299 as recommended by PRS in the 6/23/11 PRS Report. There was one abstention from the Consumer Market Segment.
<b>Effective Date/Priority</b>	September 1, 2011
<b>ERCOT Impact</b>	No impacts

## NPRR347, Single Daily Settlement and Updates to Credit Calculations, including Addition of a Minimum Collateral Exposure Component - URGENT

<b>Purpose</b> (ERCOT)	<p>This NPRR combines the DAM and the Real-Time Market (RTM) Invoices into a single daily Settlement Invoice for these activities for each Qualified Scheduling Entity QSE and CRR Account Holder; requires: (a) adaptation of the language for partial payments &amp; late fees; (b) adaptation of the language for the Default Uplift Invoice; (c) changes to related credit formulas; &amp; (d) automation of the minimum collateral calculation given an increase in the frequency of the calculation; proposes reducing the average daily transaction extrapolated multiplier from 40 to 35 days based on the median reduction in exposure of approximately five days.</p>
<b>TAC Decision</b>	<p>On 8/4/11 TAC voted to recommend approval of NPRR347 as amended by the 8/3/11 ERCOT comments with a recommended priority of Critical and rank of 9.44. There were one opposing vote and one abstention both from the Independent Generator Market Segment.</p>
<b>Effective Date/Priority</b>	<p>Upon System Implementation – Priority Critical; Rank 9.44</p>
<b>ERCOT Impact</b>	<p>\$430k - \$460k (2011 Post Go-Live &amp; 2012 PPL Funding); impacts to Market Participant Registration (REG), S&amp;B, Credit management (CMM), MIS, EIS,E), Dispute Analysis Tools (DIS), and Financial Transfer Tools (FT); impacts to Settlements business processes</p>
<b>Cost Benefit Analysis Highlights</b>	<p>Net (Cost) - Benefit of \$2.55M; Cost Benefit Ratio of 6.67</p> <ul style="list-style-type: none"> <li>• Potential to reduce the timeframe for cash clearing for an Operating Day and correspondingly reduces required collateral.</li> <li>• Potential efficiencies: 35% reduction in RTM cash clearing time; 50% reduction in volume of Invoices per month market-wide; reduction in wires costs; and reduction in credit exposure for historical activity.</li> </ul>

# NPRR357, Revisions to Collateral Requirements Concerning CRR Auctions - URGENT

<b>Purpose</b> (Luminant)	This NPRR proposes revisions to collateral requirements for CRR Auctions including a pre-CRR Auction screening process to determine the maximum potential exposure of each CRR Account Holder.
<b>TAC Decision</b>	On 8/4/11, TAC voted to recommend approval of NPRR357 as amended by the 8/4/11 ERCOT comments with a recommended priority of High and a rank of 20.5. There was one opposing vote from the Independent Generator Market Segment and two abstentions from the Independent Generator and Independent Retail Electric Provider (IREP) Market Segments.
<b>Effective Date/Priority</b>	Upon System Implementation – Priority High; Rank 20.5
<b>ERCOT Impact</b>	\$95k-\$105k (2011 Post Go-Live & 2012 PPL Funding); impacts to CRR, ISM & MIS; updates to credit business functions
<b>Cost Benefit Analysis Highlights</b>	Net (Cost) - Benefit of \$3.6M; Cost Benefit Ratio of 37.0 <ul style="list-style-type: none"> <li>• Increases market liquidity and right-sizes credit risk.</li> </ul>

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## **Review of Recommended Revision Request Changes to Project Prioritization List (PPL)**

## New NPRRs/SCRs Recommended for Board Approval

2011 Priority	2011 Rank	Source Doc	Approval Status	Project Number	Project Name	2011 Budget Range	Project Status	Projected Start Date	Projected End Date	Funding Source	Source
1- Critical	9.44	NPRR347	Pending Board Approval	NPRR347	Single Daily Settlement Invoice and Updates to Credit Calculations	\$430k-\$460k	Not Started	TBD	TBD	Post Go-Live	ERCOT
2-High	20.5	NPRR357	Pending Board Approval	NPRR357	Revisions to Collateral Requirements Concerning CRR Auctions	\$95k-\$105k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	30	NPRR313	Pending Board Approval	NPRR313	Updating the Term Resource Plan to Current Operating Plan / Availability Plan	\$80k-\$85k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	32	NPRR355	Pending Board Approval	NPRR355	Adjust the Calculation of the Real-Time Settlement Point Price for a Load Zone	\$60k-\$75k	Not Started	TBD	TBD	Post Go-Live	ERCOT
2-High	33	NPRR359	Pending Board Approval	NPRR359	Monthly TDSP Load Report	\$15k-\$20k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	34	NPRR361	Pending Board Approval	NPRR361	Real-Time Wind Power Production Data Transparency	\$10k-\$15k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	40	SCR766	Pending Board Approval	SCR766	Load Zone Price Distributed by ICCP	\$13k-\$15k	Not Started	Aug 2011	Oct 2011	Post Go-Live	Market
						\$703k-\$775k					

# Project Prioritization List (PPL) – 8/8/2011

2011 Priority	2011 Rank	Source Doc	Approval Status	Project Number	Project Name	2011 Budget Range	Project Status	Projected Start Date	Projected End Date	Funding Source	Source
1- Critical	0.1		Board Approved		Nodal Stabilization	\$10M-\$12M	Execution	Dec 2010	Oct 2011	Post Go-Live	Nodal Post Go-Live
1- Critical	0.11	NPRR302	Board Approved	NPRR302	Correct Fuel Type Language for Mitigated Offer Cap	<\$5k	Complete	Jan 2011	Mar 2011	Post Go-Live	Market
1- Critical	0.12		Board Approved		Planning Model	Funded by Stabilization	Complete	2010	Apr 2011	Post Go-Live	Nodal Post Go-Live
1- Critical	1		Board Approved	11000_01 10015_01 10016_01	Data Center Buildout	\$25M-\$30M	Execution	Oct 2009	Feb 2012	PPL	ERCOT
1- Critical	1.5		ERCOT Approved	80001_01	Met Center Disposition	<\$20k	Complete	2009	Jan 2011	PPL	ERCOT
1- Critical	2		Board Approved	99911	Minor Cap - Critical	\$500k-\$1M	Execution	Jan 2011	Dec 2011	PPL	ERCOT
1- Critical	3	NPRR294	Board Approved	11002_01	Texas SET 4.0	\$1M-\$2M	Planning	Feb 2011	June 2012	PPL	PUCT / Market
1- Critical	3.5	SCR760	Board Approved	SCR760	Recommended Changes Needed for Information Model Mgr and Topology Processor for Planning Models	\$500k-\$1M	Planning	Apr 2011	Apr 2013	Post Go-Live	Market
1- Critical	4		Board Approved	90006_02	Information Lifecycle Mgmt – Mkt Systems, Archive, Reporting	\$1M-\$2M	Planning	Jan 2010	Jan 2012	PPL	ERCOT
1- Critical	5		Board Approved	11003_01	Cyber Security Project #1	\$500k-\$1M	Planning	June 2011	Jan 2012	PPL	ERCOT
1- Critical	6		Board Approved	10052_01	Settlement System Upgrade	\$1M-\$2M	Planning	Mar 2010	2013	PPL	ERCOT
1- Critical	7		Board Approved	005_01	Cyber Security Project #2	\$250k-\$500k	Planning	June 2011	Jan 2012	PPL	ERCOT
1- Critical	8		Board Approved	11005_01	IT Security Infrastructure Upgrade	\$100k-\$250k	Execution	May 2011	Aug 2011	PPL	ERCOT

# Project Prioritization List (PPL) – 8/8/2011

2011 Priority	2011 Rank	Source Doc	Approval Status	Project Number	Project Name	2011 Budget Range	Project Status	Projected Start Date	Projected End Date	Funding Source	Source
1- Critical	8.4	NPRR348	Pending Board Approval	NPRR348	Generation Resource Start-Up and Shut-Down Process	\$80k-\$85k	Not Started	TBD	TBD	Post Go-Live	ERCOT
1- Critical	8.5	NPRR258	Board Approved	NPRR258	Sync with PRR824 and PRR833	\$55k-\$60k	Not Started	Aug 2011	Oct 2011	Post Go-Live	Parking Deck
1- Critical	9		Board Approved	11006_01	MarkeTrak Upgrade and Enhancements (PLANNING)	\$100k-\$250k	Not Started	July 2011	2012	PPL	PUCT / Market
1- Critical	9.2	NPRR329	Board Approved	NPRR329	Security Classification Changes for Extracts/Reports	\$5k-\$10k	Complete	Apr 2011	May 2011	Post Go-Live	Market
1- Critical	9.21	SCR764	Board Approved	SCR764	Public Access to Select MIS Dashboards	\$80k-\$125k	Execution	June 2011	Dec 2011	Post Go-Live	Market
1- Critical	9.22	NPRR350	Board Approved	NPRR350	Change to the Security Classification of the System Ancillary Service Capacity Monitor Dashboard	\$5k-\$10k	Execution	June 2011	Aug 2011	Post Go-Live	Market
1- Critical	9.25	SCR765	Board Approved	SCR765	Public Aggregated Wind Dashboard	\$37k-\$45k	Not Started	Aug 2011	Oct 2011	Post Go-Live	Market
1- Critical	9.3	NPRR339	Board Approved	NPRR339	Modifications to Heuristic Rules to Determine LMP at De-energized Electrical Bus and Treatment of CRR Offers at De-energized Settlement Points	<\$100k	Execution	June 2011	Sept 2011	Post Go-Live	ERCOT
1- Critical	9.41	NPRR285	Board Approved	NPRR285	Generation Resource Base Point Deviation Charge Corrections	\$30k-\$40k	Complete	Apr 2011	May 2011	Post Go-Live	Market
1- Critical	9.42	NPRR282	Board Approved	NPRR282	Dynamic Ramp Rates Use in SCED	\$30k-\$35k	Execution	May 2011	July 2011	Post Go-Live	Market
1- Critical	9.43		Board Approved		Deferred Defects and Workaround Processes	\$2M-\$3M	Execution	Dec 2010	Dec 2011	Post Go-Live	Nodal Post Go-Live
1- Critical	9.44	NPRR347	Pending Board Approval	NPRR347	Single Daily Settlement Invoice and Updates to Credit Calculations	\$430k-\$460k	Not Started	TBD	TBD	Post Go-Live	ERCOT
1- Critical	9.45	NPRR322	Board Approved	NPRR322	Real-Time PTP Option Modeling	\$100k-\$105k	Not Started	TBD	TBD	Post Go-Live	Market



# Project Prioritization List (PPL) – 8/8/2011

2011 Priority	2011 Rank	Source Doc	Approval Status	Project Number	Project Name	2011 Budget Range	Project Status	Projected Start Date	Projected End Date	Funding Source	Source
1-Critical	9.46	NPRR376	Board Approved	NPRR376	CRR Volume Limitation Enhancements	\$50k-\$55k	Execution	July 2011	Sept 2011	Post Go-Live	Market
2-High	9.5	NPRR307	Board Approved	NPRR307	Change SASM Offer Procedures	\$15k-\$20k	Complete	Apr 2011	May 2011	Post Go-Live	Market
2-High	9.5	NPRR341	Board Approved	NPRR341	Remove Ancillary Service Offers from SASM that do not Meet the Lead Time	\$10k-\$15k	Execution	June 2011	July 2011	Post Go-Live	ERCOT
2-High	10		Board Approved	50088_01	Data Research and Reporting	\$500k-\$1M	Execution	Nov 2006	Sept 2011	PPL	ERCOT
2-High	11		Board Approved	10055_01	Data Agg Performance Improvements	\$250k-\$500k	Planning	Sept 2010	Oct 2011	PPL	ERCOT
2-High	12		Board Approved	10031_01	Enterprise Records Management Automation (ERMA)	<\$50k	Complete	Jan 2010	June 2011	PPL	ERCOT
2-High	12.5		ERCOT Approved	11009_01	Fire Alarm System Upgrade	\$100k-\$250k	Complete	Feb 2011	June 2011	PPL	ERCOT
2-High	12.75	NPRR323	Board Approved	NPRR323	Correct DAM Credit Exposure Language and Enable Qualified Expiring CRRs to Offset PTP Bid Exposure	\$375k-\$475k	Execution	Apr 2011	Sept 2011	Post Go-Live	Market
2-High	12.76	NPRR310	Board Approved	NPRR310	Expand Output Schedule Acceptable Range to Include HSL and LSL	\$10k-\$15k	Not Started	Aug 2011	Sept 2011	Post Go-Live	Market
2-High	12.77	SCR762	Board Approved	SCR762	Enable a Single Step Cancel/Resubmit of Trades	\$25k-\$30k	Not Started	Aug 2011	Sept 2011	Post Go-Live	ERCOT
2-High	12.78	SCR761	Board Approved	SCR761	Provide Price Republication Notifications via API and Provide Price Corrections via XML	\$50k-\$63k	Not Started	Aug 2011	Dec 2011	Post Go-Live	Market
2-High	12.79	SCR763	Board Approved	SCR763	Modify COP Validation Rule for RRS	\$10k-\$15k	Not Started	Aug 2011	Sept 2011	Post Go-Live	ERCOT

# Project Prioritization List (PPL) – 8/8/2011

2011 Priority	2011 Rank	Source Doc	Approval Status	Project Number	Project Name	2011 Budget Range	Project Status	Projected Start Date	Projected End Date	Funding Source	Source
2-High	12.8	NPRR320	Board Approved	NPRR320	Minimum PTP Option Bid and Settlement	\$110k-\$120k	Execution	June 2011	Oct 2011	Post Go-Live	Market
2-High	12.9	NPRR326	Board Approved	NPRR326	Adjust the Calculation of the Real-Time Settlement Point Price for a Resource Node	\$15k-\$20k	Not Started	TBD	TBD	Post Go-Live	ERCOT
2-High	13	NPRR290	Board Approved	NPRR290	ERCOT Publication of DAM PSS/E Files	\$25k-\$30k	Execution	July 2011	Sept 2011	Post Go-Live	Market
2-High	13.1	NPRR343	Board Approved	NPRR343	CRR Bid and PTP Obligation Bid Criteria Change	\$400k-\$450k	Planning	June 2011	Dec 2011	Post Go-Live	ERCOT
2-High	13.2	NPRR321	Pending Board Approval	NPRR321	Allow Change to Energy Offer Curve MW Amounts in the Adjustment Period for Qualifying Facilities	\$15k-\$20k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	14	NPRR293	Board Approved	NPRR293	Requirement to Post PTP Obligation Quantities Awarded in DAM	\$12k-\$15k	Complete	Apr 2011	May 2011	Post Go-Live	Market
2-High	14	NPRR303	Board Approved	NPRR303	Requirement to Post PTP Options Cleared in the DAM or Taken to Real Time	<\$5k	Complete	Apr 2011	May 2011	Post Go-Live	Market
2-High	14.5	NPRR379	Pending Board Approval	NPRR379	EILS Dispatch Sequence and Performance Criteria Upgrades	\$55k-\$65k	Not Started	TBD	TBD	Post Go-Live	ERCOT
2-High	15		Board Approved		Parking Deck Initiatives	\$1.0M-\$1.5M	Execution	Feb 2011	Mar 2012	Post Go-Live	Nodal Post Go-Live
2-High	15.1	NPRR208	Board Approved	NPRR208	Registration & Settlement of Distributed Generation (DG) <1 MW	\$5k-\$10k	Execution	Apr 2011	Aug 2011	Post Go-Live	Parking Deck
2-High	15.2	NPRR251	Board Approved	NPRR251	Sync PRR845, Definition for IDR Meters and Optional Removal of IDR Meters at a Premise Where an Advanced Meter Can be Provisioned	\$30k-\$50k	Not Started	Sept 2011	Oct 2011	Post Go-Live	Parking Deck
2-High	15.3	NPRR316	Board Approved	NPRR316	Negative Self-Arranged Ancillary Services Quantity	\$15k-\$20k	Not Started	June 2011	Sept 2011	Post Go-Live	Market

# Project Prioritization List (PPL) – 8/8/2011

2011 Priority	2011 Rank	Source Doc	Approval Status	Project Number	Project Name	2011 Budget Range	Project Status	Projected Start Date	Projected End Date	Funding Source	Source
2-High	15.4	NPRR314	Board Approved	NPRR314	Requirement to Post Generation Resources Temporal Constraints	\$32k-\$39k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	16		Board Approved		Decommissioning Efforts	\$275k-\$325k	Execution	Jan 2011	Sept 2011	Post Go-Live	Nodal Post Go-Live
2-High	17		Board Approved		Program Risk Items	\$1.0M-\$1.5M	Execution	Mar 2011	Dec 2011	Post Go-Live	Nodal Post Go-Live
2-High	18		Board Approved	10018_01	Annual Storage Growth	<\$50k	Execution	Jan 2011	Apr 2011	PPL	ERCOT
2-High	19		Board Approved		Hardware and Software Systems License & Maintenance	\$7M-\$8M	Execution	Jan 2011	Dec 2011	Post Go-Live	Nodal Post Go-Live
2-High	20	NPRR221	ERCOT Approved	NPRR221	Automate Default Invoice	\$50k-\$75k	Execution	Apr 2011	Aug 2011	Post Go-Live	ERCOT
2-High	20.5	NPRR357	Pending Board Approval	NPRR357	Revisions to Collateral Requirements Concerning CRR Auctions	\$95k-\$105k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	21	NPRR338	Board Approved	NPRR338	Modifications to Support Revenue Neutrality	\$4k-\$5k	Not Started	July 2011	Aug 2011	Post Go-Live	ERCOT
2-High	22	NPRR346	Board Approved	NPRR346	Removal of Redundant Posting Requirement Related to Electrical Bus Changes	<\$2.5k	Not Started	TBD	TBD	Post Go-Live	ERCOT
2-High	23		ERCOT Approved	004-01	Cyber Security Project #3	\$250k-\$500k	Planning	June 2011	Dec 2011	PPL	ERCOT
2-High	25		ERCOT Approved		Cyber Security Facilities Remodeling	\$200k-\$250k	Planning	June 2011	TBD	PPL	ERCOT
2-High	25		ERCOT Approved		Human Resources Facilities Remodeling	\$250k-\$300k	Planning	June 2011	TBD	PPL	ERCOT
2-High	26		ERCOT Approved		Impact Assessment Labor Funds	\$100k	Execution	Apr 2011	Dec 2011	PPL	ERCOT

# Project Prioritization List (PPL) – 8/8/2011

2011 Priority	2011 Rank	Source Doc	Approval Status	Project Number	Project Name	2011 Budget Range	Project Status	Projected Start Date	Projected End Date	Funding Source	Source
2-High	27		ERCOT Approved		Shipping/Receiving Remodeling	\$200k-\$250k	Planning	June 2011	TBD	PPL	ERCOT
2-High	30	NPRR313	Pending Board Approval	NPRR313	Updating the Term Resource Plan to Current Operating Plan / Availability Plan	\$80k-\$85k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	31	NPRR354	Pending Board Approval	NPRR354	Revisions to Non-Spin Performance Criteria Language and Provision for ICCP Telemetry of Non-Spin Deployment	\$100k-\$110k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	32	NPRR355	Pending Board Approval	NPRR355	Adjust the Calculation of the Real-Time Settlement Point Price for a Load Zone	\$60k-\$75k	Not Started	TBD	TBD	Post Go-Live	ERCOT
2-High	32.5	NPRR360	Pending Board Approval	NPRR360	Summary Report of HDL and LDL	\$30k-\$35k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	32.6	NPRR382	Pending Board Approval	NPRR382	Verbal RUC Committed or Decommited Resources Report	\$25k-\$30k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	32.7	NPRR383	Pending Board Approval	NPRR383	Unconfirmed Trades Reports	\$25k-\$30k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	33	NPRR359	Pending Board Approval	NPRR359	Monthly TDSP Load Report	\$15k-\$20k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	34	NPRR361	Pending Board Approval	NPRR361	Real-Time Wind Power Production Data Transparency	\$10k-\$15k	Not Started	TBD	TBD	Post Go-Live	Market
2-High	36		ERCOT Approved	001-43	EDW Platform Evaluation	\$250k-\$300k	Planning	June 2011	TBD	Post Go-Live	ERCOT
2-High	40	SCR766	Pending Board Approval	SCR766	Load Zone Price Distributed by ICCP	\$13k-\$15k	Not Started	Aug 2011	Oct 2011	Post Go-Live	Market
<b>PPL Cutline and Summary</b>					2011 Project Budget = \$36,364,000		\$32,598,663	Variance = \$3,765,337			
<b>Nodal Post Go-Live Summary</b>					Nodal Post Go-Live Budget = \$25,191,000		\$22,890,977	Variance = \$2,300,023			

# Notice of Guide Revisions Approved by TAC

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**TAC did not take action on any Market Guide Revision Requests in August.**

## Holistic Approach to Congestion Irresolvable by SCED

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- On May 17, 2011, the ERCOT Board revised the ERCOT Business Practice, Setting the Shadow Price Caps and Power Balance Penalties in Security Constrained Economic Dispatch (SCED), as a result ERCOT analysis after the number of hours in which the Valley import limit was exceeded resulting in the constraint reaching the Shadow Price cap of \$5000.
- The Board also directed TAC to report back with a recommendation for a holistic methodology for setting appropriate Shadow Price caps for constraints not resolvable by SCED and a recommendation for addressing gaps between operations and planning processes to be able to identify constraints not resolvable by SCED.
- A WMS TF developed a recommendation on a holistic approach that WMS ultimately recommended to TAC.
- TAC revised the WMS recommendation and with a vote of 24 in favor, 3 opposed (Cooperative (2) and IOU) and 2 abstentions (IOU and Industrial Consumer), and recommended a revised ERCOT Business Practice to the Board as summarized on the following slides.

## Summary of TAC Recommendation for a Holistic Approach to Congestion Irresolvable by SCED

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### When is a constraint identified as irresolvable?

A non-competitive constraint is deemed irresolvable if the constraint cannot be resolved through SCED dispatch for more than two consecutive hours for more than 4 consecutive days or more than 20 hours in a rolling thirty day period. Those hours will be priced at the current shadow price cap pursuant to Section 3.5., *Current Values for the Transmission Shadow Price Caps in the ERCOT Business Practice Manual for Setting the Shadow Price Caps and Power Balance Penalties in SCED.*

## Summary of TAC Recommendation for a Holistic Approach to Congestion Irresolvable by SCED

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### How does ERCOT determine the Irresolvable Shadow Price Cap?

- Irresolvable Shadow Price Cap in a calendar year = Minimum of A or B until net margin threshold exceeded then implement C
  - A = current value for the Transmission Shadow Price Cap in Section 3.5 of the ERCOT Business Practice Manual for Setting Shadow Price Caps and Power Balance Penalties in SCED
  - B= max of (Mitigated Offer Cap of lowest shift factor unit/shift factor of lowest unit used to resolve constraint) or \$2000 per MW
- C=If net margin exceeds \$95,000 per MW/year, then adjust Transmission Shadow Price Cap for Irresolvable Non-Competitive Constraint to maximum of (Mitigated Offer Cap of lowest shift factor unit/shift factor of lowest unit used to resolve constraint) or currently effective LCAP pursuant to PUC Subst. R. 25.505 for the remainder of the calendar year.
- C shall not exceed \$2000 per MW.
- Determine net margin based upon resource node LMP of unit with highest shift factor impact on the irresolvable constraint during congested intervals for the irresolvable constraint



## Summary of TAC Recommendation for a Holistic Approach to Congestion Irresolvable by SCED

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### When does ERCOT terminate the Irresolvable Shadow Price Cap for the constraint?

ERCOT terminates the Irresolvable Shadow Price Cap when ERCOT determines the constraint is resolvable and ERCOT must provide 30 day notice to the market before implementation. The Irresolvable Shadow Price cap would increase to the current transmission shadow price cap pursuant to the Business Practice Manual.

## Future Agenda Items

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NPRR321, Allow Change to Energy Offer Curve MW Amounts in the Adjustment Period for Qualifying Facilities.

NPRR348, Generation Resource Start-Up and Shut-Down Process

NPRR354, Revisions to Non-Spin Performance Criteria Language and Provision for ICCP Telemetry of Non-Spin Deployment

NPRR358, Clarification of Responsible Entity for Binding Obligations

NPRR360, Summary Report of HDL and LDL

NPRR374, Modification of SCR Process and Urgency Requirements

NPRR375, Extend the Reporting Horizon for CDR Inputs

NPRR379, EILS Dispatch Sequence and Performance Criteria Upgrades

NPRR380, Minor Changes to Default Uplift Invoice

NPRR382, Verbal RUC Committed or Decommitted Resources Report

NPRR383, Unconfirmed Trades Reports

NPRR384, Revisions to Support SCR766 , Load Zone and Hub LMPs Distributed by ICCP