



# TAC Update

Brad Jones  
TAC Chair

**ERCOT Board Meeting**  
**August 17, 2010**

# TAC Summary

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- 1 PRR for Approval
- 7 NPRRs for Approval
- 0 NPRRs for Parking Deck Consideration
- CRR Go-Live Recommendation
- Outage Scheduler Go-Live Recommendation
- Endorsement of Houston Import Project
- Quarterly Renewables Report
- Guiding Principles

# Revision Requests for Board Consideration

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- PRR847 Additional Exemptions for Uninstructed Resource Charge**
- NPRR218 Resolution of Alignment Item A71 - Add Protocol Description of the Power Balance Penalty Factor used in the SCED**
- NPRR228 Resolution of Alignment Items A2, A80, A83 and A93 - As-Built Treatment and Settlement of Combined Cycle Generation Resources in ERCOT Market Systems**
- NPRR233 Clarifying Method of Enforcing CRR Auction Limitation on Market Submissions**
- NPRR236 Resolution of Alignment Item A83 partially, A86, A87 partially, A88 partially, and A142 - Clarify Default Actions for Missing Data and Range of Valid Data Entries for Energy Offers**
- NPRR237 Resolution of Alignment Items A22, A143, A148, A153, A160 and A169 – Clarification of NERC Reliability Standards and MIS Posting Requirements**
- NPRR242 Synchronization of Nodal Protocols with PRR792**
- NPRR245 Protocol Synchronization and As-Built Clarification for RUC Shortfall Calculation Notice of Rejection of SCR741, Multi-Day Scheduling Capability**

## PRR847, Additional Exemptions for Uninstructed Resource Charge

Purpose (Formosa)	Proposes two changes to Uninstructed Resource Charge Process: (1) When QSE is given a verbal Dispatch Instruction from ERCOT, the QSE shall be exempt from any Uninstructed Resource Charge during the specified verbal Dispatch Instruction time period, provided that the QSE followed instructions to within the SCE of the verbal Dispatch Instruction given; and (2) After a LaaR has been activated, the QSE representing the LaaR can request a three hour extension for scheduling under the protocols, and during this rescheduling time, a Private Use Network shall not incur Uninstructed Resource Charges for three hours as the Load returns back to service.	
Market Impact	N/A	
System Change	No	N/A
TAC Vote	On 7/1/10, TAC unanimously voted to recommend approval of PRR847 as recommended by PRS in the 6/17/10 PRS Report with an effective date of August 1, 2010. On 7/20/10, the ERCOT Board remanded PRR847 to TAC. On 8/5/10, TAC unanimously voted to recommend approval of PRR847 as recommended by TAC in the 7/1/10 TAC Report.	
CEO Determination	No Opinion	
Effective Date	September 1, 2010	

PRR847, Additional Exemptions for Uninstructed Resource Charge

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Item Reviewed	No Impact	Impact	Description
Budget	★		
Staffing	★		
Computer Systems	★		
Business Functions	★		
Grid Operations	★		
Credit Monitoring/ Liability	★		

## NPRR218, Resolution of Alignment Item A71 - Add Protocol Description of the Power Balance Penalty Factor used in the SCED

Purpose (ERCOT)	This NPRR will add a description of the power balance penalty factor to the Nodal Protocol sections that describe the implemented constraint set utilized in the Security Constrained Economic Dispatch (SCED) optimization.	
Market Impact	No Impacts	
System Change	No	
TAC Vote	On 8/5/10, TAC unanimously voted to recommend approval of NPRR218 as recommended by PRS in the 7/22/10 PRS Report.	
CEO Determination	Necessary for Go-Live	
Effective Date	Upon Texas Nodal Market Implementation	

NPRR218, Resolution of Alignment Item A71 - Add Protocol Description of the Power Balance Penalty Factor used in the SCED

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Item Reviewed	No Impact	Impact	Description
Budget	★		
Staffing	★		
Computer Systems	★		
Business Functions	★		
Grid Operations	★		
Credit Monitoring/ Liability	★		

## NPRR228, Resolution of Alignment Items A2, A80, A83 and A93 - As-Built Treatment and Settlement of Combined Cycle Generation Resources in ERCOT Market Systems

Purpose (ERCOT)	This NPRR revises the Nodal Protocol language to include a description of the treatment and Settlement of Combined Cycle Generation Resources in the ERCOT Day-Ahead, reliability and Real-Time systems.	
Market Impact	No Impact	
System Change	No	
TAC Vote	On 8/5/10, TAC unanimously voted to recommend approval of NPRR228 as recommended by PRS in the 7/22/10 PRS Report and as revised by TAC.	
CEO Determination	Necessary for Go-Live	
Effective Date	Upon Texas Nodal Market Implementation	



NPRR228, Resolution of Alignment Items A2, A80, A83 and A93 - As-Built Treatment and Settlement of Combined Cycle Generation Resources in ERCOT Market Systems

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Item Reviewed	No Impact	Impact	Description
Budget	★		
Staffing	★		
Computer Systems	★		
Business Functions	★		
Grid Operations	★		
Credit Monitoring/ Liability	★		

## NPRR233, Clarifying Method of Enforcing CRR Auction Limitation on Market Submissions

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Purpose (ERCOT)	This NPRR clarifies the procedures and system configurations that will be utilized to ensure market transactions for CRR Auctions do not exceed the system capabilities.	
Market Impact	Estimated cost in the \$50,000 to \$100,000 range.	
System Change	Yes	Minor modifications will be made to the CRR Application
TAC Vote	On 8/5/10, TAC unanimously voted to recommend approval of NPRR233 as recommended by PRS in the 7/22/10 PRS Report.	
CEO Determination	Necessary for Go-Live	
Effective Date	Upon Texas Nodal Market Implementation	

## NPRR233, Clarifying Method of Enforcing CRR Auction Limitation on Market Submissions

Item Reviewed	No Impact	Impact	Description
Budget			\$50,000 to \$100,000
Staffing			
Computer Systems			Minor modifications will be made to the CRR Application
Business Functions			
Grid Operations			
Credit Monitoring/ Liability			

NPRR236, Resolution of Alignment Item A83 partially, A86, A87 partially, A88 partially, and A142 - Clarify Default Actions for Missing Data and Range of Valid Data Entries for Energy Offers

Purpose (ERCOT)	This NPRR clarifies system actions if the QSE cancels a Resource Parameter submission, if a Current Operating Plan (COP) is not submitted for any hour, and/or if a conflict in Resource Status is encountered. It also clarifies that in each hour only one Combined Cycle Generation Resource in a Combined Cycle Train may be assigned one of the On-Line Resource Status codes.	
Market Impact	No Impact	
System Change	No	
TAC Vote	On 8/5/10, TAC unanimously voted to recommend approval of NPRR236 as recommended by PRS in the 7/22/10 PRS Report.	
CEO Determination	Necessary for Go-Live	
Effective Date	Upon Texas Nodal Market Implementation	

NPRR236, Resolution of Alignment Item A83 partially, A86, A87 partially, A88 partially, and A142 - Clarify Default Actions for Missing Data and Range of Valid Data Entries for Energy Offers

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Item Reviewed	No Impact	Impact	Description
Budget	★		
Staffing	★		
Computer Systems	★		
Business Functions	★		
Grid Operations	★		
Credit Monitoring/ Liability	★		

NPRR237, Resolution of Alignment Items A22, A143, A148, A153, A160 and A169 – Clarification of NERC Reliability Standards and MIS Posting Requirements

Purpose (ERCOT)	This NPRR resolves Alignment Items A22, A143, A148, A153, A160 and A169 by clarifying the role of North American Electric Reliability Corporation (NERC) Reliability Standards in relation to Protocols and several Market Information System (MIS) posting requirements.	
Market Impact	No Impact	
System Change	No	
TAC Vote	On 8/5/10, TAC unanimously voted to recommend approval of NPRR237 as recommended by PRS in the 7/22/10 PRS Report and as revised by TAC.	
CEO Determination	Necessary for Go-Live	
Effective Date	Upon Texas Nodal Market Implementation	

NPRR237, Resolution of Alignment Items A22, A143, A148, A153, A160 and A169 – Clarification of NERC Reliability Standards and MIS Posting Requirements

Item Reviewed	No Impact	Impact	Description
Budget	★		
Staffing	★		
Computer Systems	★		
Business Functions	★		
Grid Operations	★		
Credit Monitoring/ Liability	★		

## NPRR242, Synchronization of Nodal Protocols with PRR792

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Purpose (ERCOT)	This NPRR synchronizes the Nodal Protocols with PRR792, Revised Renewable Portfolio Standards Allocation Process, Pursuant to P.U.C. Subst. R. 25.173, approved by the ERCOT Board on January 20, 2009.	
Market Impact	No Impact	
System Change	No	
TAC Vote	On 8/5/10, TAC unanimously voted to recommend approval of NPRR242 as recommended by PRS in the 7/22/10 PRS Report.	
CEO Determination	Necessary for Go-Live	
Effective Date	Upon Texas Nodal Market Implementation	



## NPRR242, Synchronization of Nodal Protocols with PRR792

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Item Reviewed	No Impact	Impact	Description
Budget	★		
Staffing	★		
Computer Systems	★		
Business Functions	★		
Grid Operations	★		
Credit Monitoring/ Liability	★		

## NPRR245, Protocol Synchronization and As-Built Clarification for RUC Shortfall Calculation

Purpose (ERCOT)	This NPRR proposes revisions to paragraphs (9) and (10) of Section 5.7.4.1.1, Capacity Shortfall Ratio Share, to conform these paragraphs with paragraph (1), and to clarify how to perform Settlements pursuant to paragraph (1).	
Market Impact	No Impact	
System Change	No	
TAC Vote	On 8/5/10, TAC unanimously voted to recommend approval of NPRR245 as recommended by PRS in the 7/22/10 PRS Report.	
CEO Determination	Necessary for Go-Live	
Effective Date	Upon Texas Nodal Market Implementation	

# NPRR245, Protocol Synchronization and As-Built Clarification for RUC Shortfall Calculation

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Item Reviewed	No Impact	Impact	Description
Budget	★		
Staffing	★		
Computer Systems	★		
Business Functions	★		
Grid Operations	★		
Credit Monitoring/ Liability	★		

# Guide Revision Requests approved by TAC

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- **COPMGRR018, Updates to References of IDR and/or IDR Meter in the Commercial Operations Market Guide Due to the Proposed Definition of IDR Meter in PRR845**
  - Due to the proposed definition of an IDR Meter in Protocol Revision Request (PRR) 845, Definition for IDR Meters and Optional Removal of IDR Meters at a Premise Where an Advanced Meter Can be Provisioned, the COPMG is being updated to provide clarification of appropriate terminology.
- **COPMGRR020, Creating Subsection 10.3, Unregistered Distributed Generation Reports**
  - To comply with the reporting requirements as outlined in Nodal Protocol Revision Request (NPRR) 208, Registration and Settlement of Distributed Generation (DG) Less Than One MW. The following two items are requirements for Non-Opt-In Entities (NOIEs):
    - Reporting by NOIEs to ERCOT for unregistered DG behind NOIE tie meters as described in paragraph (2)(e) of Nodal Protocol Section 10.2.2, TSP and DSP Metered Entities (see NPRR208).
    - Quarterly ERCOT Public Reports for total unregistered DG in the ERCOT market as described in Nodal Protocol Section 16.5, Registration of a Resource Entity (see NPRR208).
  - A new business process will need to be put in place to produce the quarterly reports on the total unregistered Distributed Generation (DG) above 50 kW and below the current DG registration threshold. To support the new process a query will be built and a mechanism for the market to provide the required information will be implemented. **Due to impact, will require Board vote (scheduled for September).**
- **COPMGRR021, Market Participant Market Notice Process**
  - Updates Section 5 and Appendix A to add a Market Participant Market Notice process for communicating Market Participant planned maintenance and unplanned system outages or business processing failures. Also included are updates to Section 5 and Appendix A to reflect the revisions proposed in COPMGRR019, Revisions for Texas Nodal Market Implementation and Synchronization with PRR821, Update of Section 21, Process for Protocol Revision.

# Guide Revision Requests approved by TAC (Continued)

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- **NOGRR034, Rescind Telemetry Performance Calculation Exclusions**
  - Proposes the removal of language which allows Market Participants to, at their discretion, have any of their telemetry performance data excluded from the periodic calculations in the Telemetry Performance Monitoring Program.
- **NOGRR038, Synchronization with OGRR243, Disturbance Monitoring Requirements Clarification**
  - Synchronizes the Nodal Operating Guides with OGRR243 by changing data recording and reporting requirements for equipment operating at 100kV or above at Facilities where fault recording equipment is required.
- **CMGRR011, Revisions for Texas Nodal Market Implementation and Synchronization with PRR821**
  - Revises the CMG in anticipation of Texas Nodal Market implementation. Revisions will be grey-boxed until the Texas Nodal Market Implementation Date (TNMID) where appropriate. This CMGRR also revises Section 17, Process for Competitive Metering Guide Revisions, to more effectively align with the current stakeholder process, consistent with revisions made to the Protocols pursuant to Protocol Revision Request (PRR) 821, Update of Section 21, Process for Protocol Revision, and with other existing language in Protocol Section 21. This CMGRR also proposes general clean-up of the CMG and provides changes in support of PRR845, Definition for IDR Meters and Optional Removal of IDR Meters at a Premise Where an Advanced Meter Can be Provisioned.

## Nodal Parking Deck – Approved by ERCOT Board

Source Document	Title	Priority	Board Approved
NPRR208	Registration and Settlement of Distributed Generation (DG) Less Than One MW	Critical	7/20/10
SCR756	Enhancements to the MarkeTrak Application	Critical	7/20/10
NPRR131	Ancillary Service Trades with ERCOT	High	1/19/10
NPRR146	ICCP Telemetry Information Submittals	High	6/15/10
NPRR181	FIP Definition Revision	High	1/19/10
NPRR207	Unit Deselection (formerly “Hour Start Unit Deselection and Half Hour Start Unit RUC Clawback”).	High	7/20/10
NPRR210	Wind Forecasting Change to P50, Synchronization with PRR841	High	6/15/10

## Nodal Parking Deck – Approved by ERCOT Board

Source Document	Title	Priority	Board Approved
NPRR222	Half-Hour Start Unit RUC Clawback (Companion to NPRR207).	High	7/20/10
NPRR153	Generation Resource Fixed Quantity Block Offer	Medium	1/19/10
NPRR164	Resubmitting Ancillary Service Offers in SASM	Medium	1/19/10
SCR755	ERCOT.com Website Enhancements	Medium	2/16/10

## Nodal Parking Deck – Pending Approval

Source Document	Title	Priority	Status
NPRR240	Proxy Energy Offer Curve	TBD	Pending PRS Impact Analysis Approval
NPRR241	Aggregate Incremental Liability (AIL) Calculation and Credit Reports Publish Corrections	TBD	Pending PRS Impact Analysis Approval
NPRR251	Sync of PRR845, Definition for IDR Meters and Optional Removal of IDR Meters at a Premise Where an Advanced Meter Can be Provisioned	High	Pending at PRS; RMS approved 7/14/2010
NOGRR034	Rescind Telemetry Performance Calculation Exclusions	Medium	Pending at Board; TAC approved 8/5/10
SCR759	acLineSegment Name Length Increase in Information Model Manager	TBD	Pending at ROS



## Outage Scheduler Go-Live Decision

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**TAC unanimously certified that all Market Readiness Criteria have been met, for purposes of ERCOT Protocols Section 21.12.3, regarding Outage Scheduler Go-Live on November 1, 2010.**

# TAC's Outage Scheduler Certification – Unanimous Approval 8/5/10

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WHEREAS, Protocols Section 21.12.3 (Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provisions) provides that before a “part of the nodal market design may start operation,” a vote of the Technical Advisory Committee (TAC) is required affirming that the “Market Readiness Criteria for that part of the nodal market design have been met”

WHEREAS, the Section 21.12.3 certification by TAC, Electric Reliability Council of Texas, Inc. (ERCOT) staff, and the ERCOT Board of Directors regarding the satisfaction of “Market Readiness Criteria” for a particular part of the nodal market design will result in ERCOT issuing “two Notices alerting Market Participants to the effective date of Nodal Protocol sections and the retirement of Zonal Protocol sections, as applicable”;

WHEREAS, the Protocols do not define the term “Market Readiness Criteria,” and ERCOT, in conjunction with Market Participants, has developed specific metrics and a Nodal Readiness Scorecard that are used to determine the progress of specific parts of the nodal market design in meeting the criteria necessary for implementing the Nodal Protocols and starting operations;

WHEREAS, the members of TAC recognize that there are issues that remain to be addressed regarding the implementation and operation of the Outage Scheduler before the Texas Nodal Market Implementation Date (TNMID), but that none of those issues should prevent the Outage Scheduler Go-Live on November 1, 2010, which is an integral occurrence in the progress toward meeting the TNMID on schedule;

WHEREAS, TAC has reviewed the market readiness metrics documentation underlying ERCOT staff’s recommendation regarding the Outage Scheduler part of the nodal market design, and has conducted due diligence on ERCOT staff’s conclusion that the Outage Scheduler has satisfied all of the steps necessary to make the declaration of market readiness required by Section 21.12.3, in order to authorize Outage Scheduler Go-Live on November 1, 2010;

THEREFORE be it RESOLVED, that this Resolution shall serve as the TAC certification that all Market Readiness Criteria have been met, for purposes of ERCOT Protocols Section 21.12.3, regarding Outage Scheduler Go-Live on November 1, 2010.

## CRR Scheduler Go-Live Decision

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**TAC unanimously certified that all Market Readiness Criteria have been met, for purposes of ERCOT Protocols Section 21.12.3, regarding Congestion Revenue Rights Go-Live in October 2010.**

# TAC's CRR Certification – Unanimous Approval 8/5/10

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WHEREAS, Protocols Section 21.12.3 (Notice to Market Participants of Effective Date for Nodal Protocol Provisions and Retirement of Zonal Protocol Provisions) provides that before a “part of the nodal market design may start operation,” a vote of the Technical Advisory Committee (TAC) is required affirming that the “Market Readiness Criteria for that part of the nodal market design have been met”

WHEREAS, the Section 21.12.3 certification by TAC, Electric Reliability Council of Texas, Inc. (ERCOT) staff, and the ERCOT Board of Directors regarding the satisfaction of “Market Readiness Criteria” for a particular part of the nodal market design will result in ERCOT issuing “two Notices alerting Market Participants to the effective date of Nodal Protocol sections and the retirement of Zonal Protocol sections, as applicable”;

WHEREAS, the Protocols do not define the term “Market Readiness Criteria,” and ERCOT, in conjunction with Market Participants, has developed specific metrics and a Nodal Readiness Scorecard that are used to determine the progress of specific parts of the nodal market design in meeting the criteria necessary for implementing the Nodal Protocols and starting operations;

WHEREAS, the members of TAC recognize that there are issues that remain to be addressed regarding the implementation and operation of the Congestion Revenue Rights before the Texas Nodal Market Implementation Date (TNMID), but that none of those issues should prevent the Congestion Revenue Rights Go-Live in October 2010, which is an integral occurrence in the progress toward meeting the TNMID on schedule;

WHEREAS, TAC has reviewed the market readiness metrics documentation underlying ERCOT staff’s recommendation regarding the Congestion Revenue Rights part of the nodal market design, and has conducted due diligence on ERCOT staff’s conclusion that the Congestion Revenue Rights has satisfied all of the steps necessary to make the declaration of market readiness required by Section 21.12.3, in order to authorize Congestion Revenue Rights Go-Live in October 2010;

THEREFORE be it RESOLVED, that this Resolution shall serve as the TAC certification that all Market Readiness Criteria have been met, for purposes of ERCOT Protocols Section 21.12.3, regarding Congestion Revenue Rights Go-Live in October 2010;

FURTHERMORE, TAC directs that status updates regarding outstanding issues be provided at future TAC meetings.

## TAC Endorses Houston Import Project

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- **TAC endorses the Houston Import Project as presented by ERCOT Staff including the following improvements**
  - Build Fayetteville – Zenith 345 kV double circuit line (approx. 60 miles on a new ROW) so that each circuit Rate B is approximately 2800 MVA
  - Loop Fayette Power Project – Salem 345 kV line into Fayetteville 345 kV substation
  - Upgrade Fayette Power Project – Fayetteville 345 kV double circuit lines so that the Rate B of each circuit is approximately 1900 MVA
  - Expand the Fayetteville Substation with four new line terminations and Zenith Substation with two new line terminations
  - Upgrade the Bellaire – Brays – H.O. Clarke Plant 138 kV line terminal equipment so that the circuit Rate B for the two 138 kV sections is 893 MVA and 561 MVA, respectively
- **Estimated Capital Cost = \$175M**
- **2014 Annual Generator Revenue Savings = \$45.4M**

## Quarterly Renewables Report Highlights - 2Q10

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- **Total new wind generation capacity in ERCOT increased from 9,117 MW to 9,317 MW, an increase of 200 MW from the last report.**
- **The legislative “target” of 10,000 MW of installed new renewable capacity by 2025 was achieved in 2Q10.**
- **For the 6 months ending June 30, 2010, wind generation supplied 8.7% of the total energy produced in ERCOT**
- **On June 12, 2010, ERCOT recorded a new high for instantaneous wind output of 7,016 MW, which represented 15.8% of the load being served at the time**
- **For the second quarter in a row, no new interconnection agreements were signed for renewable resources in ERCOT. Three non-renewable plants totaling 3,616 MW signed interconnection agreements in the same 2 quarters.**

# Guiding Principles of the Nodal Market

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- TAC approved a set of guiding principles of the Nodal market on 7/1/10.
  
- According to the document, an NPRR or market change proposal should strive to further the following guiding principles of the Nodal Market:
  - Improve price signals
  - Improve dispatch efficiencies
  - Improve transparency into market operations
  - Improve or enhance key components of the Nodal Market
  - Improve reliability
  - Improve the Retail or Wholesale Markets
  - Appropriately assign Compliance/Responsibilities
  - Directly address new legislation, Public Utility Commission of Texas (PUCT) rules or North American Electric Reliability Corporation (NERC) standards.
  - Address recommendations of the Independent Market Monitor (IMM), PUCT or ERCOT Board
  - Clarify Protocols