



# Utilicast, LLC

Nodal Program Review of PJM Forklift  
and System Integrator Options

December 9, 2008

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# Nodal Options – PJM Forklift Option

Although there are benefits to adopting an existing RTO's market construct, there are a number of potential impacts to consider that may make this option prohibitive

## Benefits

- Market construct is tried and tested. Limited risk of flaw in the mark design and is acceptable to Market Monitoring
- Vendor applications are implemented and tested limiting the amount of rework and testing
- Market Participants can adapt quickly as they have experience operating and interfacing in this market construct.
- As the processes and applications are established, there is the potential for ERCOT to implement quicker and cheaper.

## Potential Impacts

- There will not be a perfect fit. There are fundamental differences between the PJMs Market Rules and ERCOTs Market Protocols including:
- FERC pro-forma Transmission Tariff is not applicable to ERCOT
- Capacity Markets are not required for ERCOT market
- Limited Ancillary Services market
- Complex Congestion Revenue Rights in ERCOT- NOIE, options and obligations, settlement
- Retail choice obligations – larger at ERCOT than PJM
- Day Ahead Market requirements – co optimization of markets, price caps
- LMP calculated with average rather than marginal losses
- Market Settlement – unique for each RTO

# Nodal Options – PJM Forklift Option *(continued)*

## **Potential Impacts** *(Continued)*

- Lengthy stakeholder process required to review and accept the new market construct (Market Participants and PCUT)
- Limited reuse of current applications (70% complete) resulting in loss on investment – applications and processes would need to be reengineered to PJM market and reliability construct
- Market Participants will need to reconfigure their applications consistent the new market construct

## **High Level Approach**

To provide an insight on the work effort required, the following high level tasks would need to be completed to implement PJMs market construct:

- Conduct an impact assessment to identify differences in: Market rules, Network Model, Business Processes, Applications, Infrastructure Requirements, Data Requirements, Support Tools, Training and Support
- Execute the stakeholder process to gain approval from the Market Participants and PUCT based on the impact analysis
- Procure the processes and applications from PJM and its vendors
- Reengineer ERCOT business processes based on agreed market construct
- Assemble implementation team
- Design, configure, test , integration test and deploy processes, applications and infrastructure
- Manage Participant readiness
- Run new market trails
- Train ERCOT staff and Market Participants on the new applications

# Nodal Options – System Integrator

The overall impact of engaging a Systems Integrator at this stage on the implementation would be to replace the Project Management Office

## Characteristics of a good Systems Integrator

- Provide industry knowledge - understanding of wholesale energy markets and reliability, assess business requirements, capabilities and processes
- Provide a Single Solutions Integrator with overall responsibility to configure, test and implement the selected technology solutions, consistent with the required business processes, on time and on budget
- Operates the Program Management Office to provide centralized management and progress reporting of project deliverables
- Educates and develop the relevant client personnel in the new business processes and applications

## Areas to consider

- The System Integrator is not a systems integration testing service provider. They provide complete business systems from requirements definition to post production support
- To commit to an on-time on-budget implementation, the System Integrator requires a model that gives them ownership and control over the complete solution including PMO and core projects. This usually means a contingent of their staff managing and implementing the solution – this would require a replacement of resources currently working on the Nodal Program
- Taking on a program near completion is not a preferred model for a System integrators - tend to add value and reduce risk when engaged from the beginning of the program where they can partner with vendors and manage the setup of the PMO and core sub-projects –
- There are limited vendors available in the market with the credentials to be the system integrator for ERCOT – Accenture, Deloitte, Structure Group

# Nodal Options – System Integrator *(continued)*

## **Areas to consider** *(Continued)*

- There will be a learning curve for the System Integrator that will impact the project schedule
- The RFP process to engage the System Integrator can be time consuming and may impact the project schedule

## **High Level Approach**

To provide an insight on the work effort required, the following high level tasks would need to be completed to engage a System Integrator

- Initiate an RFP process including, develop and issue an RFI, develop and issue an RFP, manage vendor inquiries and clarifications, assess RFP responses, select vendor and negotiate contracts.
- Replace PMO and core project team staff with system integrator team
- Implement project management procedures including performance metrics and deliverables consistent with System Integration Vendor contract
- Educate System Integration team on requirements and implementation progress to date
- Assign responsibility for vendor management and program delivery to the System Integrator

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Nodal Program Review  
Timeline Update

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## **Timeline for Utilicast Nodal Program Review Report #8 (New Integrated Schedule and Budget Validation)**

- ❑ November 10, 2008 – Review Start Date.
- ❑ November 17, 2008 – Utilicast Review Team representatives to meet with the Nodal Program Committee of the Board of Directors to discuss review objectives and progress.
- ❑ December 5, 2008 – Utilicast draft report provided to Internal Audit.
- ❑ December 8, 2008 – Utilicast to meet with the Nodal Program Committee of the Board of Directors to discuss the draft review report.
- ❑ December 9, 2008 – Utilicast to make a presentation to the full Board of Directors on the draft review report results (in Executive Session).
- ❑ December 19, 2008 – Utilicast final report provided to Internal Audit.
- ❑ January 19, 2009 – Utilicast presentation to the Nodal Program Committee.
- ❑ January 20, 2009 – Utilicast to make a presentation to the full Board of Directors on the final review report results (in Public Session).