Improving Real-Time and Intra-Hour Trading/Scheduling and New Market Formations

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• To improve Real-Time and Intra-Hour trading/scheduling in Bilateral Markets
  – Review the OATI implementation of three new markets created in the last two years
  – Examine the need for alternative market structures
  – Analyze features and emerging trends
  – Share the operating experience
REQUIREMENTS FOR THE NEW MARKET

• Must be relatively inexpensive to deploy and operate
• Quick installation cycle
• Be flexible to support regional requirements
• Facilitate congestion management via transmission capacity management
• Provide additional user services (transmission, scheduling, price discovery)
• Preserve and support participant’s legacy software investment and business practices
• Allow for increased speed of full transaction
• Provide transparency
• Respond quickly to accommodate variable resources
WHAT ARE THESE MARKETS?

• Southern Company Energy Auction - operational in April, 2009
• Florida Cost Based Broker System (FCBBS) - operational in October, 2009
• Joint Initiative Intra-Hour Transaction Accelerator Platform (I-TAP) - scheduled for deployment in fourth quarter, 2011
SOUTHERN ENERGY AUCTION DETAILS

- Organized by Southern Company
- Operated by an independent auction administrator
- Monitored by independent auction monitor
- Next Hour and Day Ahead markets for firm and recallable energy
- Market wide clearing at intersection of bid and offer price curves
- Market wide clearing price for settlement
- Multiple Buyers and Sellers
- Bilateral billing
- Credit limits enforced in clearing
- Auto-generated Energy ID for NERC tags
- Provided via OATI webMarket
FLORIDA COST BASED BROKER SYSTEM DETAILS

- Organized by consortium of several Florida Utilities that formed the Florida Cost-Based Broker System, Inc.
- Operated by independent market administrator
- Next hour market for energy
- Bilateral clearing of bid/offer stacks
- Maximum savings objective function - highest priced bid matched against lowest priced offer
- Lowest cost transmission path with adequate ATC selected for each transaction
- Automated transmission procurement and scheduling
- Automated tag creation
- No human intervention after placement of initial bid/offer
- Cradle-to-grave automation - market automatically consummates transaction, buys optimal transmission path, creates NERC tag
- Bilateral settlement
- Provided via OATI webMarket
INTRA-HOUR TRANSACTION ACCELERATOR PLATFORM (I-TAP) DETAILS

• Sponsored by three Western grid groups: Columbia Grid, Northern Tier Transmission Group and WestConnect with currently 17 market participants and growing
• Operated by market administrator
• Bilateral trading only, users post energy and capacity bids and offers on I-TAP trading board
• WECC products and compliant trading strips supported (hourly, daily, monthly, or user defined)
• Intra-hour postings down to one minute granularity
• Price discovery
• On-line negotiation support tools (trade Instant Messenger and counteroffer posting) integrated directly into trading paradigm
• In or out-of-market trade creation
INTRA-HOUR TRANSACTION ACCELERATOR PLATFORM (I-TAP) DETAILS (CONTINUED)

- Transmission grid includes 28 providers covering most of the Western Grid
- Transmission path analysis (cost and ATC discovery) before and/or after financial transaction consummation
- Participant transmission portfolio maintenance
- Scheduling for Intra-Hour, hourly, and daily:
  - ATC services for all path/provider service combinations
  - Automatic transmission route generation
  - On-the-fly transmission purchases or use of existing rights
  - Tag creation for I-TAP transaction
  - Integration with OASIS, e-Tag, and participant trading and scheduling systems
  - Provided via OATI webExchange
FUNCTIONAL BLOCKS OF WEBMARKET

OATI webMarket

- Alarming/Notification Module
- Credit Management
- Market Monitor
- Archival, Report, and Audit Trail
- Market Administration and Operation
- Settlement Billing
- Deal Automation
- Bulletin Board
- Auction
- Matching
- GUI
- API
- Bids/Offer

Market Participant

M.P. Backend Systems
- Billing
- Scheduling
- Settlements
- Credit
- Other

External Systems

- ATC
- e-Tag
- OASIS

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REGIONAL GROUPS BENEFIT OF THE NEW MARKET PLATFORM

- Ability to transact in limited time periods
- Ability to respond to variable resources
- Increased transparency of transactions
- Advanced communications
- Ability to perform Automatic Scheduling
- Savings to end consumers
FUTURE EMERGING TRENDS IN NORTH AMERICAN MARKETS

• New markets must support regional product lineups
• New markets must support short-term trades caused by proliferation of variable generation resources
• Flexible sub-hour trading intervals must be supported
• Trading environment must seamlessly integrate with relevant regional transmission, scheduling, and security systems (e-Tag, OASIS, etc.)
• Participants require flexible and non-restricted on-line negotiation facilities
• Low cost of deployment and operation required
• New markets must be flexible and able to support emerging FERC requirements (i.e. intra-hour scheduling)
THANK YOU

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