

TCC Automation Project Update

Market Issues Working Group
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TCC Automation Project

✓ Project Phases

- *Phase 1 – Auction Awards Process – Complete*
- *Phase 2 – Inventory Management – In-progress*
- *Phase 3 – Web-based Bid/Offer Submittal – Future*

✓ Phase 2 Status

- *Currently in the design phase - Design work scheduled to be completed Q3-07*
- *Working to define requirements for both internal users and external MP facing functionality*
- *This is the heart of the automation effort and is a fairly large project – Over 100 use cases defined so far.*
- *Primary goal is to provide a system to manage and track TCC inventory and activities associated with preparing and conducting the OPF execution*

TCC Automation Project

Phase 2 – TCC Inventory Management

- ✓ Design and development approach, like Phase 1 will be parsed into iterations that build on each other leading up to final production deployment

Iteration	Business Requirements)
1	-Automation of the creation of all auction input data -Proactive i-Hedge server based auction engine infrastructure design
2	-Automation of Inventory maintenance -Inventory Views
3	-Integration between Phase 1 and 2
4	-Automation of Feasibility analysis inputs and ETCNL/RCRR Nominations -Auction Allocation Rights Nomination process
5	-Auction Round Modeling
6	-Automation of Subsidiary auction information; MP info, PTIDs and Translation files
7	-Interactive and Automated Collateral Management
8	-Secondary Market (TCC re-registration) -Auction Calendar -Further integration with Billing and Settlement System, Data Warehousing -Reporting Requirements -Data Conversion

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Phase 2 – TCC Inventory Management

- ✓ **Iteration 1: Automation of Auction input data**
 - *Input Data Sources:*
 - Bids/Offers
 - Auction Parameters
 - Scaling Factors (allocation of capacity across auction rounds and inventory types)
 - TCC Inventory
 - ETCNL/RCRR Nominations and Residual Capacity
 - Positioning for future integration with server based Optimal Power Flow model (input-side)

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Phase 2 – TCC Inventory Management

✓ Iteration 2: Inventory Maintenance

- *Transactions against inventory:*
 - Change MW Value
 - Change Ownership
 - Invalidate
 - Change contract dates
 - Sell a portion of a contract
 - Convert a contract

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Phase 2 – TCC Inventory Management

✓ Iteration 3: Creating Awards and Inventory

- Creation of Inventory data from auction awards
- Internal application user interface enhancements to support all new functionality
- Positioning for future integration with server based Optimal Power Flow model (output-side)

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Phase 2 – TCC Inventory Management

✓ Iteration 4: Feasibility Information and Nominations

- Import and interpret two sets of Feasibility Information into the application (Aggregated and Disaggregated analysis)
- Create Feasibility Reports for Nominations
- User Interface for Transmission Owners to perform Nominations
- Create ETCNL and RCRR TCCs
- Create offers for the auction from the remaining un-nominated feasibility
- Create Internal AMO tools to manage this process through the application
- Similar functionality likely needed for AARs

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Phase 2 – TCC Inventory Management

✓ Iteration 5: Auction Round Modeling

- Auction Round Modeling capabilities in the application to support the analysis of multiple scenarios.
- To be used by AMO for conducting studies and non-production OPF executions

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Phase 2 – TCC Inventory Management

✓ Iteration 6: Subsidiary Auction Information

- TCC Market Participant information to be housed and maintained in the application
- PTID information for TCC auctions to be housed and maintained in the application
- Binding Constraint Report translation information to be housed and maintained in the application

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Phase 2 – TCC Inventory Management

✓ Iteration 7: Manage TCC Collateral Obligations

- NYISO will report and maintain the total posted collateral for a market participant in the TCC market
- Market participants can view a collateral summary broken apart by components (bids, offers, unsettled awards, holding requirements for current contracts)
- The application will dynamically calculate the collateral obligations of a market participant in the TCC market based on all components
- Collateral Offsetting and TCC Cancellation

Collateral Offsetting and TCC Cancellation Opportunities – MP Name

TCC ID	Start Date	End Date	POI	POW	TCCs	MCP	Collateral Obligation	Status	Request Cancellation	
12345	11/1/2005	10/31/2006	22223	44445	2	(\$60,000)	\$120,000		<input checked="" type="checkbox"/>	
12346	5/1/2006	10/31/2006	44445	22223	1	\$75,986	\$75,986			<input checked="" type="checkbox"/>
12347	5/1/2006	10/31/2006	44445	22223	1	\$75,986	\$75,986			<input checked="" type="checkbox"/>
Total Collateral for Release									\$467,958	
12345	11/1/2005	10/31/2006	22223	44445	2	(\$60,000)	\$120,000		<input checked="" type="checkbox"/>	
12346	5/1/2006	10/31/2006	44445	22223	2	\$75,986	\$75,986			<input checked="" type="checkbox"/>
12347	5/1/2006	10/31/2006	44445	22223	2	\$75,986	\$75,986			<input checked="" type="checkbox"/>
Total Collateral for Release									\$467,958	

Dynamically calculated

Save as xls

Save as csv

Submit

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Phase 2 – TCC Inventory Management

- ✓ **Iteration 8: Secondary Market Transaction, System Integration and Auction Calendar**
 - Secondary Market Transactions and accompanying acknowledgement will be available to market participants through the application (sell a portion of the TCC, convert a contract, change ownership of a TCC)
 - Credit checking on the secondary market transactions
 - Auction Calendar
 - Reporting Requirements; both internal and external

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Phase 2 – TCC Inventory Management

- ✓ Proactively thinking about the following issues throughout Phase 2 design:
 - *End State Auction*
 - *Bid and Offer automation (phase 3)*
 - *Future Integration with i-Hedge server based auction engine*

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Phase 2 – TCC Inventory Management

- ✓ **Summary of proposed deliverables for Market Participants**
 - *Views of Inventory by a variety of parameters (contract dates, effective dates, contract types, period of time, point in time)*
 - *ETCNL/RCRR Nomination process*
 - *Auction Allocation Rights Nomination Process*
 - *Automated Management of TCC Collateral Obligations*
 - *Requests for Collateral Offsetting and TCC Cancellation*
 - *Facilitation of the Secondary Market (transactions against inventory)*
 - *Auction Calendar*
 - *Robust Reporting on inventory elements*

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Phase 2 – TCC Inventory Management

- ✓ **Summary of proposed deliverables for NYISO**
 - *Automated Management of Inventory*
 - *Automated auction input preparation*
 - *Automated Management of information requirements for inventory management*
 - *Automation of ETCNL/RCRR Nomination and AAR Nomination processes*
 - *Automation of the creation of all feasibility auction inputs*
 - *Pro-active i-Hedge server based auction engine design*
 - *Dynamic and fully inclusive TCC Collateral Management*
 - *Integration with other NYISO applications for settlement and data retention*

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Phase 2 – TCC Inventory Management

✓ Market Participant Involvement:

- *What inventory reports would be most useful?*
- *What would be the most commonly performed transactions in a secondary market?*
- *What type of TCC/Auction information is most useful in the calendar?*
- *Transmission Owners – Can improvements be made to the format of the feasibility nominations reports?*
- *Does the collateral offsetting proposal provide procedural benefit?*
- *What are some opportunities for improvement based on the current application?*

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Phase 2 – TCC Inventory Management

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