

Second Quarter 2009 External Transactions & Other Market Impacts

May 14, 2009

1:30 - 3:30 p.m.

WebEx Web Conference

Basics

- Presentation is available on ISO New England (ISO) Web site:
 - [Support > Training > Course Materials > External Transactions](#)
- Entire broadcast (audio & visual) is being recorded
 - File will be posted within two business days to External Transactions training area of ISO Web site

Basics (cont.)

- Questions and Answers (open lines)
- Evaluation
- Presenters
 - Michael Zeoli - System Operations Support
 - Davor Tomasic - Market Analysis & Settlements

Session Information

- Information in this presentation is for illustrative and training purposes
- **Filing** on *Competitive Offer Requirement RE: Capacity Imports*
 - March 20, 2009 – [ER09-873-000](#)
 - Requested effective date is July 1, 2009
 - For duration of Installed Capacity Transition Period; ends 5/31/2010
- **Order** on *Proposed Revisions to the Treatment of External Transactions in the Capacity and Energy Markets*
 - May 20, 2008 – [ER08-697-000](#)
 - Effective July 1, 2009

Objective

- Provide details on the July 1, 2009, changes in the treatment of External Transactions in the capacity and energy markets.

Topics to Be Covered

- Competitive Offer Assessment for Capacity-backed Priced Import Transactions
 - How competitive offer levels are determined
 - Where data is available to Market Participants
 - Examples of when capacity penalties will result
- Transmission Reservation Flexibility for Capacity-backed Priced Import Transactions
 - Where transmission reservation flexibility applies
 - Requesting transmission reservation flexibility
 - Submitting daily energy transactions
 - Downloading the energy transactions

Competitive Offer Assessment for Capacity Backed Priced Import Transactions

Overview of Competitive Offer Levels

- Filing requires that External Transactions associated with ICAP Import Contracts be priced competitively
- Impacts submissions in the Day-Ahead and Real-Time Energy Markets (DAM and RTM)
- Final hourly competitive offers are the maximum of the daily ex-ante competitive offer and hourly ex-post market outcome prices at relevant external interface for market day
- Ex-ante and final competitive offer levels will be available on ISO Web site

Ex-Ante Competitive Offer Level

- Individual \$/MWh value calculated for all six external interfaces
 - Maximum of Phase I/II and Highgate HVDC used as single competitive offer level for both of these Hydro Quebec (HQ) interfaces
- Daily price applied to all hours of the day
- Published to ISO Web site no later than 10:30 a.m. day before the Operating Day
 - Markets > Other Markets Data > Installed Capacity > ICAP Import Offer Data

Ex-Ante Competitive Offer Level (cont.)

- 99th percentile of the fuel-adjusted Real-Time (RT) hourly interface prices, during on-peak hours with net imports from the previous 30 days
 - Real-Time Locational Based Marginal Prices (LBMP) for New York interfaces, ISO real-time Locational Marginal Prices (LMP) for others
 - Intercontinental Exchange fuel index prices used for fuel adjustments (www.theice.com)
 - Northern New York AC interface prices adjusted by Tansco Z6 (NY)
 - All other interface prices adjusted by average of Algonquin Citygates, TGP-Z6 200L, and Dracut
 - If no on-peak hours with net imports, all on-peak hours used

Ex-Post Competitive Offer Levels

- Hourly level for each hour of the day, for each external interface
- Based on actual market outcomes
- NYISO Interfaces:
 - Maximum of NYISO LBMP [(Day-Ahead (DA) or Real-Time (RT))]
- New Brunswick
 - ISO RT LMP
- HQ Interfaces:
 - Maximum of
 - ISO RT LMP at Phase I/II HVDC or Highgate
 - HQ-NYISO LBMP (DA or RT)

Final Competitive Offer Levels

- Final hourly competitive offer levels are maximum of daily ex-ante and hourly ex-post outcome for each external interface
- 24 hourly competitive offer levels each day, for each external interface
 - The two HQ interfaces will have the same values
- Published daily on ISO Web site
 - [Markets > Other Markets Data > Installed Capacity > ICAP Import Offer Data](#)
- Ex-ante and final values are downloadable as CSV file

Changes to ICAP Import Contract Penalties

Section Topics

- Changes to *Failure to Offer Penalty* as it will be imposed with the introduction of competitive offer changes to Market Rule 1
- Changes to *Failure to Deliver Penalty* as it will be imposed with the introduction of competitive offer changes to Market Rule 1

Failure of ICAP Contract to Offer or Deliver

- Market Rule 1, Section III.8.3.7.3
- Two penalties can be applied:
 - Penalty for Failure to Offer
 - Penalty for Failure to Deliver
- For self-scheduled ICAP contracts, both penalties can be applicable only for on-peak hours within the month
- For priced ICAP contracts, both penalties can be applicable for all hours

Changes to Failure to Offer Penalty

- **Failure to Offer Penalty** is assessed on ICAP contracts that fail to do one of the following for any applicable hour of any day of the ICAP contract for a month:
 - Submit External Transactions **competitively** into DAM
 - Submit External Transactions **competitively** into RTM
- A **Failure to Offer Penalty** that would result from a violation of the competitive offer requirement is not applicable if the energy is *delivered* in real time for the *full amount of the ICAP contract*

Examples of Failure to Offer Penalty

ICAP Contract MW	Ex-Ante Comp Level	DA/RT Offer Price	Final Comp Level	Delivered in RT	Penalty	Reason
120	\$198	\$220	\$204	NO	YES	Violated Final Competitive Offer Level
120	\$198	\$220	\$225	YES/NO	NO	Did not Violate Final Competitive Offer Level
120	\$198	\$220	\$204	YES	NO	Delivered in RT
120	\$225	\$220	\$225	NO	NO	Did not Violate Final Competitive Offer Level

Changes to Failure to Deliver Penalty

- Assessed to the External Transactions (and consequently to ICAP Contracts) that fail to deliver in RT when requested by ISO
- Based on hourly violations
- Any megawatt (MW) amount delivered below the requested value in an hour is considered a delivery shortfall
 - Delivery shortfall is the difference between requested and delivered MW in each hour
 - Delivery shortfall can only be positive or zero

Changes to Failure to Deliver Penalty (cont.)

- Delivery Penalty is calculated as:
$$\frac{(\# \text{ of monthly hours with shortfall})}{(\# \text{ of monthly hours requested})} \times \text{UCAP value of ICAP Contract} \times \text{Transition Rate} \times 2$$
 - **Note:** As a consequence, just one failed hour a month may incur the *full value* of monthly penalty
- Requested MW is what was selected by the ISO as input into the hourly check-out process with the neighboring Control Area or Balancing Authority

Additional Failure to Deliver Penalty Exceptions

- Hourly violations are not applicable if:
 - RT NYISO external node LBMP is greater than the corresponding ISO RT external node LMP for the hour
 - Unless during system-wide Operating Procedure 4 (OP4): Action during a Capacity Deficiency

Examples of Failure to Deliver Penalty for Priced Transactions

Assumptions: ISO's LMP= 112 [\$/MWh], NYISO's LBMP = 109 [\$/MWh]

NY Cleared MW	NE Offered MW	NE Offered Price (\$/MWh)	Delivered MW	Penalty	Reason
80	80	98	80	NO	Delivered
0	80	98	0	YES	Did not deliver
50	80	98	50	YES	Shortfall 30 MW (80-50)

NOTE: All transactions in example are assumed requested

Examples of Failure to Deliver Penalty for Priced Transactions

Assumptions: ISO's LMP= 112 [\$/MWh], NYISO's LBMP = 126 [\$/MWh],

NY Cleared MW	NE Offered MW	NE Offered Price (\$/MWh)	Delivered MW	Penalty	Reason
80	80	98	80	NO	Delivered
0	80	98	0	NO*	NYISO LMP > ISO LMP
50	80	98	50	NO*	NYISO LMP > ISO LMP

* Unless OP4 hour

NOTE: All transactions in example are assumed requested

Frequently Asked Questions

Q: Can over-delivery in one hour offset the delivery shortfall in another hour?

A: No. Each hour is treated separately

Q: Is there a cap for ICAP Contract penalties?

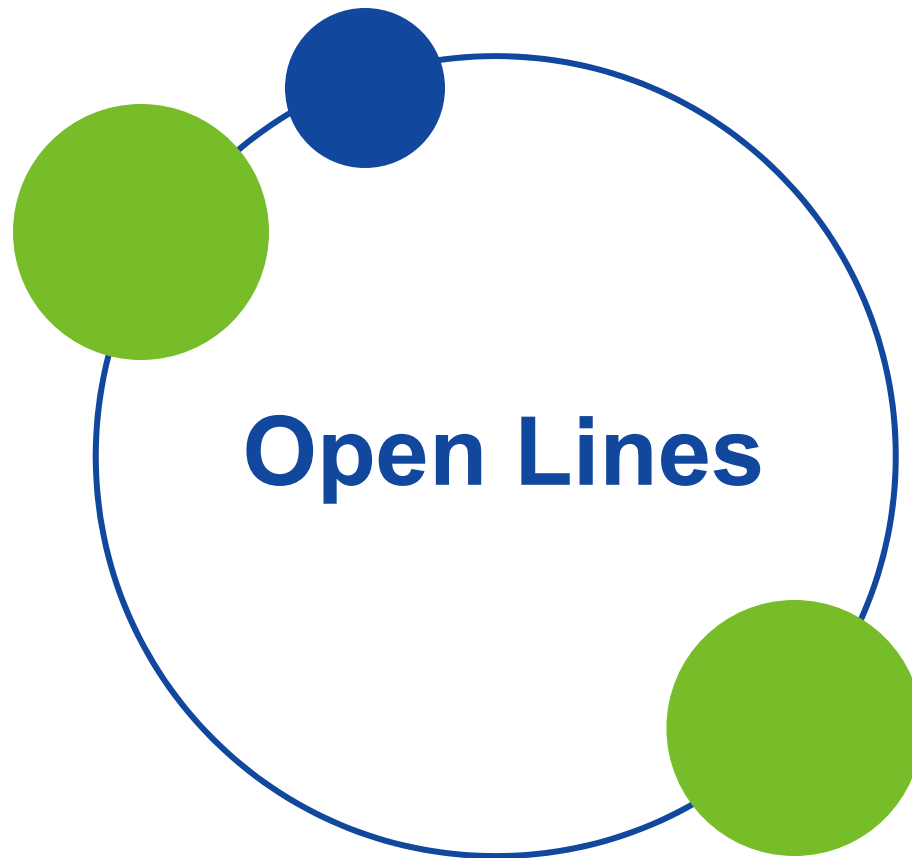
A: Yes. The total Offer plus Delivery Penalty cap is set at $2 \times \text{Monthly UCAP} \times \text{the ICAP Transition Rate}$

Q: Can same ICAP contract get *Failure to Offer* and *Failure to Deliver* penalties?

A: Yes

Section Summary

- Competitive Offer Assessment for Capacity-backed Priced Import Transactions
 - Determination of competitive offer levels
 - Availability of Data for Market Participants
 - Penalty Examples related to the Installed Capacity (ICAP) market



Reminder: Q&A's are being recorded

Transmission Reservation Flexibility for Capacity-backed Priced Import Transactions

Section Topics

- Concept of flexible transmission rights
- Using Internal Bilateral Transaction User Interface (IBT UI) to submit requests for flexible transmission rights
- Submitting External Transactions using flexible transmission rights
- Downloading External Transaction data

Concepts of Transmission Reservation Flexibility

Concept of Flexible Transmission Reservations

- Flexible reservations introduced to enable energy importers at HQ Phase I/II HVDC interface to have flexibility for making decisions regarding the linking of transmission reservations to energy transactions **supporting ICAP Contracts** up to one hour before the hour in which the transactions will flow
- Currently, there are 600 MW of total flexible transmission reservations available (hourly) on HQ Phase I/II HVDC interface

Requesting Transmission Reservation Flexibility

Working with Flexible Transmission Reservations

- **May be** requested by importers
- Will be prorated by ISO if more than 600 MW are requested
- Three step process:
 1. Participant enters ICAP Contract with flexible reservations (submitting a request through IBT UI)
 - Specifies ICAP Contract, duration, MW value, flexible reservations requested MW value
 2. ISO grants full or prorated amount
 3. Participant declines or accepts flexible reservation MW as granted by the ISO

User Interface Location for Flexible Reservations

SMD Applications Home Page

Market System → SMD Applications Home Page

Internal Transactions

External Transactions

Bids & Offers
(Registered Users)

Customer and Asset
Management System

Financial Transmission Rights
(Registered Users)

Forward Reserve Market
Auction

Submit Meter Reading

CROW
Outage Scheduler

Submit Peak Contribution

Forward Reserve Assignment

Submit Network Load

Forward Capacity Tracking System

Financial Assurance
Management

Forward Capacity Market
Reconfiguration Auction

Creating ICAP External (Contract) with Flexible Reservations

Search Contract Create Contract File Upload File Download

Entering New Contract...User: VIU1

Contract Type

- Energy Day Ahead
- Energy Real Time
- Load Real Time
- Regulation Real Time
- ICAP Internal
- ICAP External
- ICAP External Flexible Reservation**
- Forward Reserve TMNSR
- Forward Reserve TMOR

ID	Market	Buyer	Status	Schedules
				No schedule

Requesting Flexible MW for Months of Contract Duration

Search Contract
Create Contract
File Upload
File Download

Editing Contract... User: VIU1

Contract ID	47854	Reference	Flex 1
Contract Type	ICAP FLEX RESERVATION	Location	409
Start Date	06/01/2009 01:00:00	MW Amount	600.000
End Date	10/31/2009 24:00:00	Confirm	Contract and Schedule
Buyer (Originator)	VIU1	Extend Until	<input type="text"/> 24:00 ...
Seller	HQPP	Terminate	<input type="text"/> <input type="text"/> ...
Asset ID	(CONTROL_AREA)	Status	Pending

Reset
Submit

Viewing Schedules...


Contract: 47854

Schedules			
Month	Flex MW Requested	Flex MW Granted	Confirm
June	<input type="text" value="600"/>		N
July	<input type="text" value="600"/>		N
August	<input type="text" value="600"/>		N
September	<input type="text" value="600"/>		N
October	<input type="text" value="600"/>		N

Reset
Submit

Contracts

ID	Market	Buyer	Seller	Effective Period	Status	Schedules
47854	ICAP Flex	VIU1	HQPP	06/01/2009 - 10/31/2009	New	June ▾



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Requesting Flexible MW Amounts for Months of Contract Duration (cont.)

The screenshot displays the 'Editing Contract...' interface for contract 47854. The contract details include: Contract ID 47854, Reference Flex 1, Contract Type ICAP FLEX RESERVATION, Location 409, Start Date 06/01/2009 01:00:00, End Date 10/31/2009 24:00:00, MW Amount 600.000, Buyer (Originator) VIU1, Seller HQPP, and Asset ID (CONTROL_AREA). The status is Pending. A 'Viewing Schedules...' window is open, showing a table of schedules for months June through October, with a 'Flex MW Requested' column containing the value 600 for each month. The 'Confirm' column shows 'N' for all months. The interface includes buttons for 'Reset' and 'Submit'.

Month	Flex MW Requested	Flex MW Granted	Confirm
June	600		N
July	600		N
August	600		N
September	600		N
October	600		N

- Participant can change the flexible reservation MW requested here for each contract month
 - MW value can be changed any number of times before they are granted
- ISO will grant flexible reservations month by month, starting five business days before the obligation month begins

ISO Response

Participant Action Required

Search Contract Create Contract File Upload File Download

Editing Contract... User: VIU1

Contract ID	47854	Reference	Flex 1
Contract Type	ICAP FLEX RESERVATION	Location	409
Start Date	06/01/2009 01:00:00	MW Amount	600.000
End Date	10/31/2009 24:00:00	Confirm	Contract and Schedule
Buyer (Originator)	VIU1	Extend Until	<input type="text"/> 24:00 ...
Seller	HQPP	Terminate	<input type="text"/> <input type="text"/> ...
Asset ID	(CONTROL_AREA)	Status	Pending

Reset Submit

Contracts

ID	Market	Buyer	Seller	Effective Period	Status	Schedules
47843	ICAP Flex	VIU1	HQPP	05/01/2009 - 04/30/2010	New	
47844	ICAP Flex	VIU1	HQPP	05/01/2009 - 10/31/2009	New	
47845	ICAP Flex	VIU1	HQPP	06/01/2009 - 01/31/2010	New	
47848	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	Cncl	
47849	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	Cncl	
47850	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	New	
47851	ICAP Flex	VIU1	HQPP	06/01/2009 - 04/30/2010	New	
47852	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	New	
47853	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	New	
47854	ICAP Flex	VIU1	HQPP	06/01/2009 - 10/31/2009	New	June ▾

Viewing Schedules... Contract: 47854

Month	Flex MW Requested	Flex MW Granted	Confirm
June	<input type="text"/> 100	100	<input type="checkbox"/>
July	<input type="text"/> 200	100	<input type="checkbox"/>
August	<input type="text"/> 600		N
September	<input type="text"/> 600		N
October	<input type="text"/> 600		N

Reset Submit

ISO Response

Editing Contract... User: VIU1

Contract ID 47854 Reference Flex 1
Contract Type ICAP FLEX RESERVATION Location 409
Start Date 06/01/2009 01:00:00 MW Amount 600.000
End Date 10/31/2009 24:00:00 Confirm Contract and Schedule
Buyer (Originator) VIU1 Extend Until [] [24:00] ...
Seller HQPP Terminate [] [] []
Asset ID (CONTRACT AREA) Status Pending
Reset Submit

Contracts

ID	Market	Buyer	Seller	Effective Period	Status	Schedules
47843	ICAP Flex	VIU1	HQPP	05/01/2009 - 04/30/2010	New	
47844	ICAP Flex	VIU1	HQPP	05/01/2009 - 10/31/2009	New	
47845	ICAP Flex	VIU1	HQPP	06/01/2009 - 01/31/2010	New	
47848	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	Cncl	
47849	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	Cncl	
47850	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	New	
47851	ICAP Flex	VIU1	HQPP	06/01/2009 - 04/30/2010	New	
47852	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	New	
47853	ICAP Flex	VIU1	HQPP	06/01/2009 - 12/31/2009	New	
47854	ICAP Flex	VIU1	HQPP	06/01/2009 - 10/31/2009	New	June

Viewing Schedules... Contract: 47854

Month	Flex MW Requested	Flex MW Granted	Confirm
June	100	100	<input type="checkbox"/>
July	200	100	<input type="checkbox"/>
August	600		N
September	600		
October	600		

Reset Submit

Participant Action Required

- ISO has two options:
 - Granting the full amount
 - Prorating the granted amount (based on the total MW requested vs. 600 MW available)
- Participant then can:
 - Accept the ISO Offer
 - Reject the ISO Offer
 - Accept amount **less** than the ISO offer
- Participant first “Confirms” and then “Submits” its final MW

Initial Request for Flexible Transmission Reservations

- User interface will be available to Participants as of June 16, 2009
- July 2009 is the first month with flexible transmission reservations available

Submitting Transactions Using Transmission Reservation Flexibility in EES

Submitting Flexible Transactions

- General submittal process is essentially unchanged
 - User must submit energy transaction to DAM and RTM by noon the day before operating day
 - User must link Special Exception = Import Associated with ICAP
 - User must reference the ICAP Contract ID obtained from IBT UI
- One major difference, one-hour long transactions
 - If user intends to utilize the flex feature and link the OASIS reservation only the hour before the start of the transaction, transactions should be created for only one-hour long increments
 - Once OASIS reservation is linked to the transaction, that reservation is applied to ALL hours on that transaction

Submitting Flexible Transactions (cont.)

- Additional validations are performed to determine if the transaction is a *flex* transaction
 - The Market Participant associated with the ICAP Import Contract must be the same as the submitter of the External Transaction
 - The ICAP Import Contract referenced MUST have been granted flexible reservation MW
 - The MW amount of the transaction must be no more than the flexible reservation MW granted on the ICAP Import Contract

Submitting Flexible Transactions (cont.)

- When initially submitting a *flex* transaction, DO NOT link an OASIS reservation
 - Once the OASIS reservation is linked to the transaction, it is treated as any other External Transaction
- *Flex* transactions will remain in status of Pending Action, until user decides to link OASIS reservation

Real-Time Scheduling of Flexible Transactions

- If user links the OASIS reservation and eTag, with as little as 60 minutes notice prior to the start of the operating hour, the transaction will be validated as any other External Transaction
- If user does not link the OASIS reservation, it remains in Pending Action
 - During the next-hour scheduling of External Transactions, the *flex* transactions will be evaluated as if the OASIS was linked to determine if ISO would have scheduled them
 - Results of this evaluation will determine if transaction is subject to ICAP penalty

Downloading Data

Modified File Download for Actual Data

- The existing file download function for actual data in EES has been modified to include the reason assigned to the transaction during the scheduling process
 - If the scheduled value is equal to the submitted value, there is no reason noted
 - If the scheduled value is not equal to the submitted value, the reason will indicate why the transaction was not scheduled fully
- *Flex* transactions will be included in this file download process
 - A reason will be included indicating whether or not the ISO would have selected the transaction if the OASIS reservation had been linked

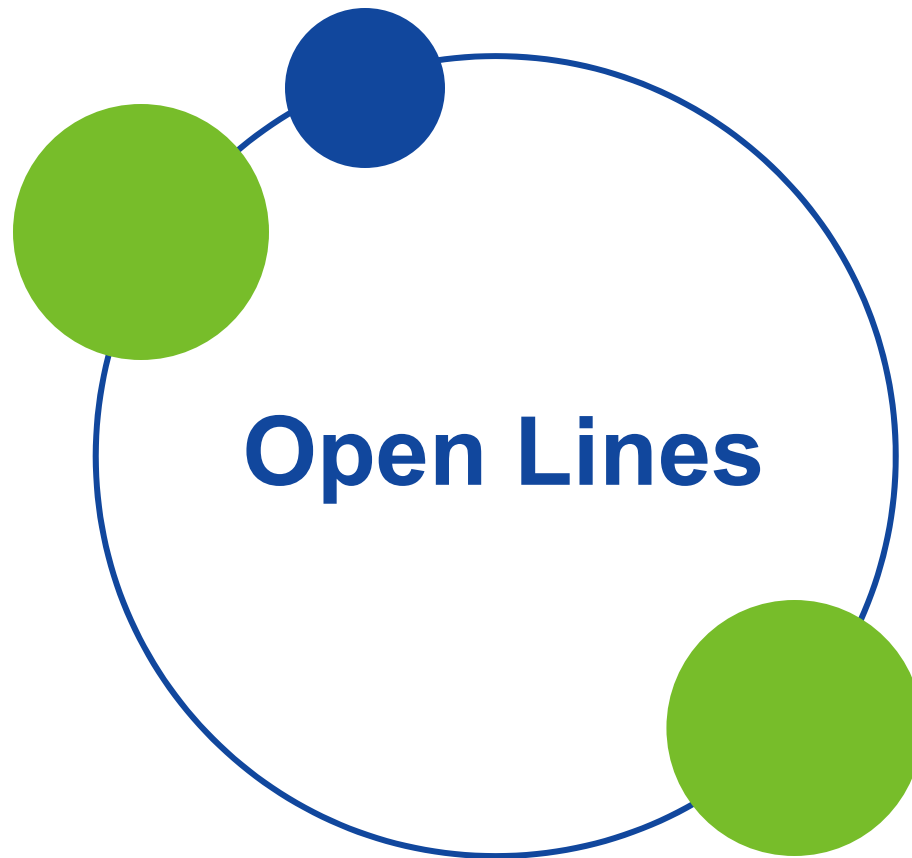
New File Download for Submitted Data

- A new file download format has been added to allow the Market Participant to obtain External Transaction data submitted into the EES application
 - User may select DA and/or RT transactions
 - User may select the status of the transactions to be included in the download
 - If the file download of the DA data is requested after the DAM had cleared, DAM results will be included in the output

Section Summary

- Transmission Reservation Flexibility for Capacity-backed Priced Import Transactions
 - Application of transmission reservation flexibility
 - Requesting transmission reservation flexibility
 - Submitting daily energy transactions
 - Downloading of energy transactions





Reminder: Q&A's are being recorded

Quick References

- Competitive Offers – Filing [ER09-873-000](#)
- Treatment of External Transactions in the Capacity and Energy Markets – Order [ER08-697-000](#)
- Training Materials
 - [Support > Training > Course Materials > External Transactions](#)
- Customer Service
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