

# Forward Capacity Market (FCM) / Generator Interconnection Process Stakeholder Group

*Stakeholder Meeting No. 7*

*February 29, 2008*

*Westborough, MA*

# Agenda

Welcome and Introductions	9:30 – 9:45
Review of the process schedule, meeting dates, Technical Committee engagement, FERC filing targets	9:45 – 10:00
Presentation and discussion of ISO straw proposal concepts	10:00 – 12:00
Lunch	12:00 – 1:00
Optional: Review of current Overlapping Impact test methodology	1:00
Next steps and action items for the next meeting	
Adjourn	2:30 – 3:00

# Schedule

- **Stakeholder Study Group: September 2007 – May 2008**
  - February 29: ISO straw proposals
  - March 14
  - March 25
  - April 10
  - May 2
  - May 16
- **Markets/Reliability/Transmission Committees**
  - Discussion: May - July
  - Reliability Committee/Transmission Committee vote: July 21-22
  - Markets Committee vote: August 11-13 (summer meeting)
- **Participants Committee Vote: September 5**
- **Filing: October**

# Objectives

- Address Connecticut's concern for possible "sub-optimal" auction results
  - Use "Conditional" Resource Qualification to allow more competition within the auction
- Include "Overlapping Impact" deliverability standard in the Open Access Transmission Tariff (OATT) Large/Small Generator Interconnection Procedures (LGIP/SGIP)
  - Apply "study group" approach to link with each primary auction (annual re-configuration auction) set of resources
- Accommodate "Long Lead Time" resources via more rigid milestones and Financial Assurance
  - Provide "deliverability certainty" via tariff mechanisms

# Objectives (cont.)

- Develop solutions that are consistent with principles identified by the study group
  - For example
    - Improve the efficiency and coordination of the FCM and Generator Interconnection Processes
    - Transparency
    - Incorporate intra-zonal deliverability
- Principles are posted in full with today's meeting materials

# FCM/Queue Straw Proposal

Stephen J. Rourke

Vice President, System Planning

# Major Components of Straw Proposal

## 1. Conditional Status Option

- New option for Generating Capacity Supply Resources
- A Lower Queue priority resource at the same location could “conditionally qualify” for the Forward Capacity Auction (FCA) along with the primary resource
- When a higher Queue priority resource withdraws from the FCA, the lower Queue resource would take its place and be allowed to clear

## 2. Include “Overlapping Impact” deliverability standard in the OATT Large/Small Generator Interconnection Procedures (LGIP/SGIP)

- Limit the analysis to the resources being evaluated for each FCA
- Studies would look at the FCA resources collectively and individually
  - These studies provide the necessary support for “conditional qualifications”

## 3. Accommodate deliverability of “Long Lead Time” capacity resources

- Rigid milestones
- Financial Assurance
- Commitment to system improvements

# Straw Proposal Component #1: Conditional Status Option

Stephen J. Rourke  
Vice President, System Planning

# Conditional Status May Address Sub-Optimal Auction Concerns

- Sub-optimal auction concerns
  - Issues raised are related to current resource qualification rules
  - Can occur when competing new resources are attempting to locate at or near the same location
  - Overlapping transmission impact may disqualify one or more resources
  - When “qualified capacity” leaves the auction before it closes (Price, Financial Assurance), competing new resources may have been willing to continue to participate but can not because of overlapping impacts
- Overlapping transmission impacts limit the number of resources at a specific location that can be selected during qualification
  - Qualification based on position in the interconnection queue (“Queue”)
    - Overlapping transmission impacts can prevent resources lower in the Queue from qualifying in the FCA
    - Qualification impacted by the Overlapping Impact test is binary: Yes/No
  - Non-qualified resources cannot presently participate in the FCA

# Conditional Status Option: Benefits of Straw Proposal

- Increases competition within the auction
  - More Resources can qualify for the FCA where overlapping impacts exist
- Queue order still matters
  - Generating Resources are prioritized for the auction based on Queue position
    - Change: More than one resource at the same location may participate
  - A “non-conditional”, or higher queued, resource remaining in the auction through completion will be awarded the capacity obligation
  - If the higher queue resource remains in the auction, it clears “in-merit” and accepts the clearing price
  - A higher Queue order resource that withdraws based on price is then replaced by the conditionally qualified resource(s) next in Queue order if it has not withdrawn earlier based on price
- Similar logic to current market mechanisms
  - Combined de-list and re-powering plans
  - Resources requiring same physical footprint

# Conditionally Qualified Resources: Impact on Auction Mechanics

Roger Bacon  
Manager, Annual FCM Auctions

# Conditionally Qualified Resources

- Assume two resources sought to qualify but only one at a time could meet the overlapping impacts test
- Higher queued resources would be qualified, lower queued resource would be “conditionally qualified”
- Both would post Financial Assurance
- Both would participate in the FCA from the start price
- While the conditionally qualified resource would know its conditional status through its Qualification letter, during the auction it wouldn't know if the higher queued resource had withdrawn
- At the close of the auction, if both remain, the higher queued resource would clear and be fully competitive within the framework of a descending clock auction with capacity zones

# Conditionally Qualified Resources (cont.)

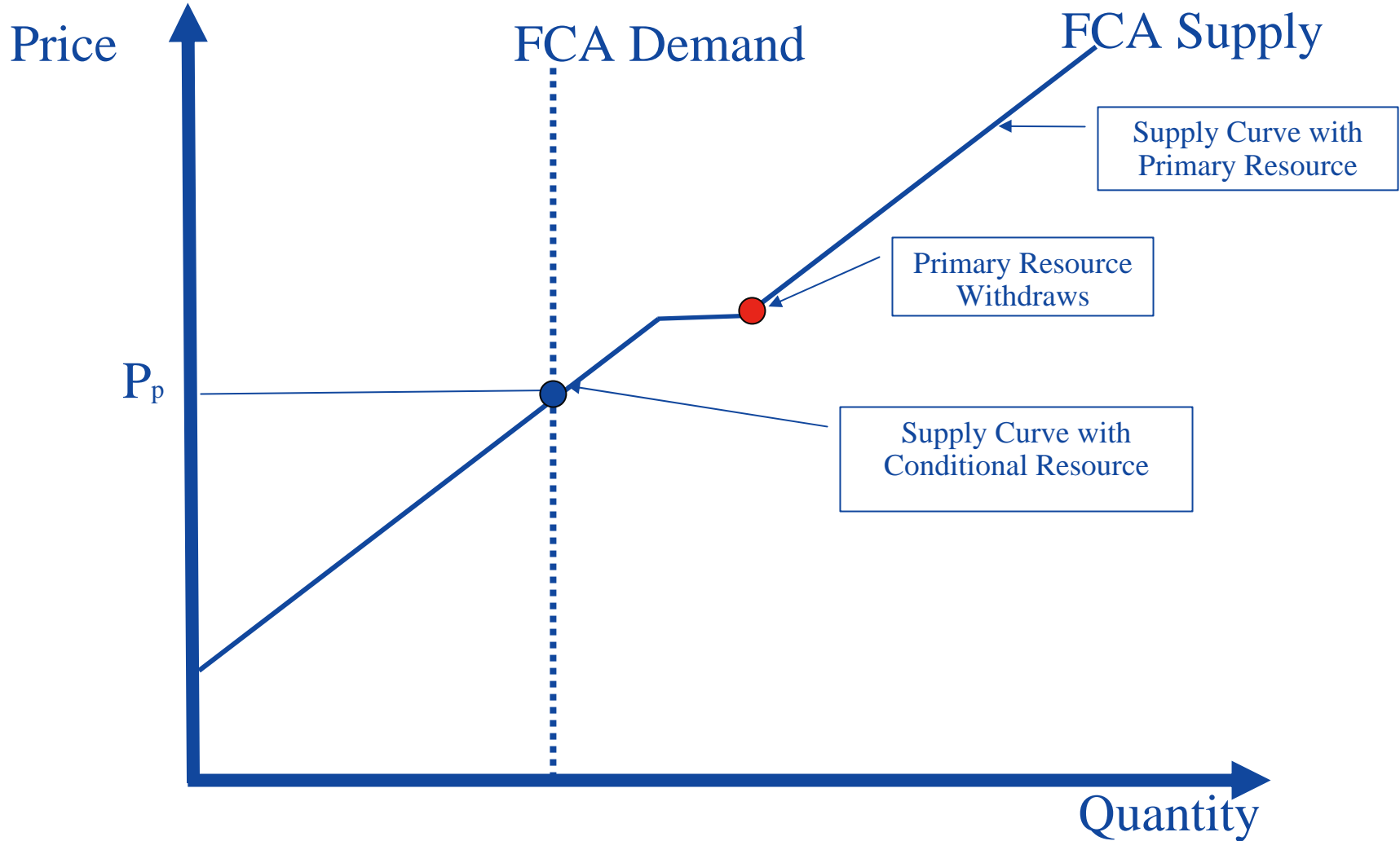
- Conditionally qualified capacity entering the FCA may increase or decrease the total MW of capacity offered
- Descending clock auction expects quantities offered to decrease as price falls
- The descending clock auction works as intended if the primary resource is larger than the conditionally qualified resource
  - e.g., conditional unit qualifies for 100 MW, primary unit qualifies for 125 MW
  - When primary unit leaves the FCA, quantity falls by net of 25 MW
- The descending clock auction requires special rules if a primary unit is smaller than the conditional unit
  - The supply curve is no longer weakly monotonically increasing
    - e.g., conditional unit qualifies 300 MW, primary unit qualifies for 200 MW
    - When primary unit drops out, quantity increases by net of 100 MW

# Conditional Resources: The Problem of Decreases in Capacity

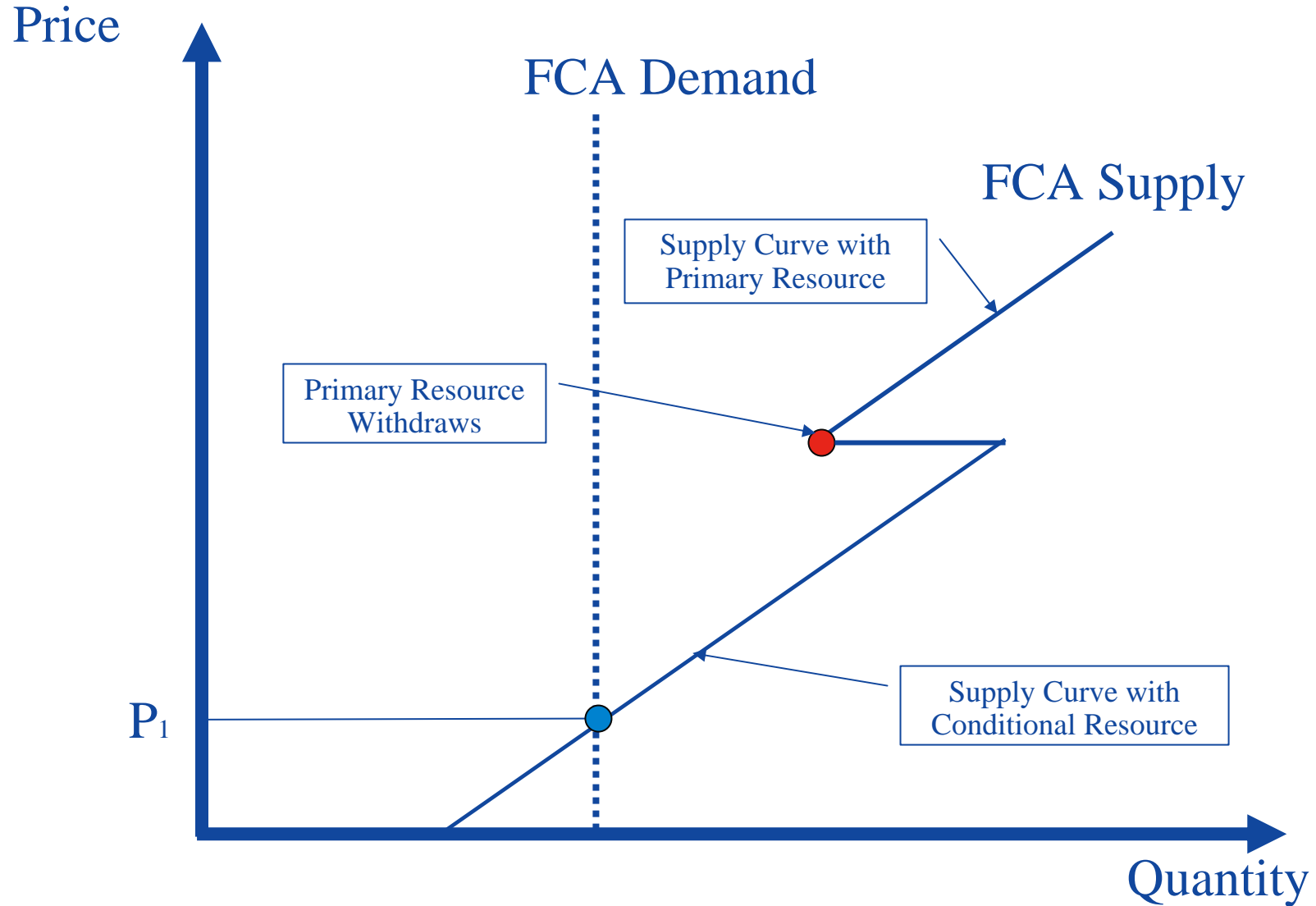
- Special clock rules required to meet “minimize total cost” language in the Settlement Agreement
- Clock must descend far enough to reveal increased quantity at lower price
  - Below minimum MW needed to meet the Installed Capacity Requirement
- Rule is triggered when a primary unit offers fewer MW than the conditional resource and withdraws from the auction
- Examples follow

# Conditional MW $\leq$ Primary MW

## Illustration of Principle



# Conditional MW > Primary MW



# Straw Proposal Component #2: Include “Overlapping Impact” Deliverability Standard in the OATT LGIP/SGIP

Rich Kowalski, Manager, Transmission Planning

Al McBride, Project Manager, New Resource Qualification

# Proposal: Overlapping Impact Review would be part of LGIP/SGIP

- The Overlapping Interconnection Impact review, as described in Planning Procedure No. 10 Section 5.7, that is currently required under FCM qualification, would become a part of the LGIP/SGIP
  - i.e., part of ISO New England Tariff Schedules 22 and 23

# Proposal: Overlapping Impact Review would be part of LGIP/SGIP (cont.)

- The adoption of the Overlapping Impact Standard would serve to meet the requirement to adopt an Intra-Zonal Deliverability Standard in the SGIP/LGIP
- Via this stakeholder process, need to affirm that the Overlapping Impact Standard meets the needs of an Intra-Zonal Deliverability Standard
- Only resources intending to participate in the FCA for the specific commitment period would be able and required to participate in a group capacity interconnection study for that commitment period

# Two Interconnection Products

- The LGIP/SGIP would offer two Interconnection products
  - A “Capacity” Interconnection product (also known as Network Interconnection) offered and secured through participation in the FCA
  - An “Energy” Interconnection product
  - This construct is consistent with the FERC Proforma LGIP/SGIP and approved Tariffs in many (most) control areas
- New Resources would identify the requested Interconnection product upon making an Interconnection Request application

# Commercial Operation Date and FCM Participation

- New Resources making a Capacity Interconnection request will provide an expected Commercial Operation Date (COD)
- These New Resources would be (automatically?) entered into the FCM New Capacity Qualification process for the FCA that is appropriate for that COD
- Under current LGIP/SGIP rules, Resources can delay their COD by up to three years
- Therefore, New Resources would be able to participate in three FCAs at their original Interconnection queue position before being required to exit the queue and secure a new queue position

# Resources Not Yet in the Interconnection Queue

- Under current rules, New Resources submitting a Show of Interest (SOI) to qualify for an FCA are not required to be in the Interconnection queue
- Under this proposal, an Interconnection Request (IR) would be required by the time of Show of Interest
- Therefore, need to decide if the IR should be submitted
  - automatically by the ISO?
  - simultaneously by the Project Sponsor?
- The same three-year-rule regarding Commercial Operation Date would apply

# FCA Qualification “Study Groups”

- The LGIP/SGIP study of Overlapping Impacts would take place during the New Resource qualification period for the relevant FCA
- Example
  - Resource A makes an Interconnection Request Application in April 2009
  - Resource A specifies a COD of May 1, 2014
  - The Show of Interest Window for the Commitment Period beginning June 1, 2014 closes on May 14, 2010
  - Resource A would be studied for Overlapping Impacts, along with the other applicant resources – the “study group”, in the qualification period May 14, 2010 – February 6, 2011
  - If qualified, Resource A would participate in the FCA scheduled to take place on June 6, 2011
  - Resource A could participate in two subsequent FCAs before being required to secure a new queue position

# Overlapping Impacts and Qualification

- For the FCM, if qualification is restricted due to overlapping impacts, the threshold is
  - Whether the upgrade(s) cannot be completed in time for the Commitment Period
  - Where upgrades can be completed in time, the generator will be qualified
  - If applicable, the resource may be partially qualified to participate in the FCA up to the amount that the resource can provide capacity without fixing the observed violations

# Straw Proposal Component #3: Accommodate Deliverability of “Long Lead Time” Capacity Resources

Rich Kowalski  
Manager, Transmission Planning

# “Long Lead-Time” Capacity Resources: Issues

- FCA timeframe is relatively “short term” (three years)
- Processes that “meld” FCA and Queue are out of synch with resources that take longer development and implementation time
  - Plant siting timeframe
  - Transmission facility study/siting/construction timeframes, especially for larger or “remote” plants
- Transmission needs to be designed/in place to support FCM participation
- Transmission commitments need to be established before FCA for respective Commitment Period

# “Long Lead-Time” Capacity Resources: Proposal Concepts

- Allow advance opportunity to study and “secure” transmission plans/obligations sufficient for FCM participation via LGIP process
- Allow participation in “near-term” FCA Overlapping Impact analysis
- Rigorous requirements to maintain status
  - Rigid milestones for project progress
    - Fuel contracts
    - Permits
    - Equipment contracts
    - FCM milestones
  - Financial commitment in advance of “normal” FCA participation
  - Commitment to system improvement
    - Begin immediate transmission construction (minimize uncertainty for other projects)
    - Substantial deposits (non-refundable?) for transmission construction
    - Time/milestone-based deposits for transmission construction
- Can this approach be optional for those who accept risk?

