Welcome to the Forward Capacity Market New Resource Qualification Forum

October 15, 2007

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Overview of the Forward Capacity Market ("FCM")

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Today's Agenda

- Objectives of the Forward Capacity Market ("FCM")
- General Qualification Requirements
- FCA Components
  - Capacity Zones
  - Bids & Offers
  - Forward Capacity Auction
  - Performance Incentives
  - Financial Assurance
  - Reconfiguration Auctions
- Timeline

Objectives of the Forward Capacity Market ("FCM")

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Objectives of FCM

- Procure enough Capacity to meet New England's future capacity needs
- Attract New Resources to Constrained Regions
- Enable new entrants to set price
- Target Performance incentives in the Capacity Market to hours of need
- Provide an Energy Price Hedge for Load
- Put Supply and Demand resources on a level playing field
- Buy just enough capacity to meet Reliability Standards

Major Components of the FCM

- Qualification
  - for both Existing and New capacity, Supply and Demand, resource offers
- Forward Capacity Auction (FCA)
  - Annual auction to purchase and set the price paid to capacity resources in future Capacity Commitment Period
  - Descending Clock Auction
- Performance Incentives
  - pay for performance during shortage events
  - Peak Energy Rent (PER) deduction
- Financial Assurance
  - Deterrent to frivolous new capacity offers and pre-Commitment Period defaults
- Reconfiguration Auctions
  - to buy and sell (exchange) capacity obligations before and during the Commitment Period

General Qualification Requirements

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FCM Components – Qualification

- Qualification of all resources is required:
  - Existing Capacity (Including De-lists, Permanent and Static)
  - Self-Supplied Resources
  - Exports
  - Imports
  - New Resources (Including Intermittent and Demand Resources)
- Qualification Criteria are different for each Resource Type
  - New Capacity Resource: must certify by the qualification deadline, that it will be able to produce a specific MW value for a future Commitment Period
  - Existing Capacity Resource: will be assigned a specific MW value for a future Commitment Period based on historical ratings

Market Power Safeguards in the FCA

- Existing Capacity assumed in the FCA unless it De-lists
  - Potential market power
    - Existing capacity dwarfs new
    - Long-run costs small relative to Cost of New Entry (CONE)
      - Already invested
  - FCA rules seek to minimize market power potential
    - Existing capacity treated as zero-bid in FCA
    - Commitment period limited to one year
- MMU reviews Offers and Bids for potential market power abuse
  - Evaluates De-List bids for attempted withholding

Role of Market Monitoring

- Review Offers and Bids for potential Market Power abuse
  - Examine for attempts to lower or raise the price outside target price thresholds
- Evaluate Bids from Existing resources that De-List in the FCA
- Evaluate Offers from New Capacity Resources that intend to Offer at low prices
- Report on the conduct and results of the FCA to the FERC

Forward Capacity Auction ("FCA") Components

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Prior to Conducting the Auction

- Capacity Zones designated before the FCA
  - Based on transfer limits expected to bind in the auction
    - Import constrained zones
      - Local Sourcing Requirements exceed Zonal Capacity
    - Export constrained zones
      - Maximum Capacity Limit < available surplus capacity
- FCA begins with a single system wide price
    - All capacity initially treated as a single Capacity Zone
    - Price separation only occurs if and when a transfer limit binds
- A Capacity Zone for that FCA Commitment Period exists only if price separation occurs
  - Capacity Zones remain the same for the Reconfiguration Auctions
- CONE sets the starting price and thresholds for certain bids and offers

FCA: Offers and Bids

- Existing Resources
  - Price takers
  - De-list bid
    - Price at which an Existing Capacity Resource wishes to remove existing capacity from the FCA
  - Annual Commitment
- New Capacity
  - Offers
    - The quantity it wishes to offer into the market
  - Selects Capacity Commitment Period of 1 to 5 years
    - Whole-year commitment
    - Longer commitment reduces investment risk
    - Locked in at initial auction price
    - Auction price indexed for inflation after first year

FCA: Offers and Bids (cont.)

- Imports
  - Annual Commitment
  - Existing Import Capacity
    - Capacity that has a multi-year contract
  - New Import Capacity
    - Capacity offered into the FCA each year
- Exports
  - Annual Commitment
  - Multi-year Exports
    - Administrative Export De-list
  - Treated as a de-list bid

Existing Capacity: De-List Bids

De-listed Capacity Resources may opt out of FCA for entire Commitment Period (or Forever if its a Permanent De-list)

De-List Bid Category	Category Definition	Market Monitor Approval	Time of Submission
Static	Bids above 0.8 x CONE	Required	At Qualification*
Dynamic	Bids below 0.8 x CONE	Not Required	During Auction Cycle
Permanent	Bids above 1.25 x CONE	Required	At Qualification*
Export	Bids above 0.8 x CONE	Required	At Qualification*

*Submitted no later than the Existing Qualification Deadline. All De-list bids submitted during Qualification are binding for that FCA.

Descending Clock Auction Mechanics

- Price starts at a high price with all capacity in
  - As prices drops, participants remove capacity
- Clock auction is done in discrete rounds
- For each round, Auctioneer announces:
  - Excess supply at the end of prior round
  - Start of round price (higher price)
  - End of round price (lower price)
- Each participant submits the MW capacity it is willing to supply at prices within range – Up to 5 price/quantity pairs
- Auctioneer determines excess supply at end of round price
- If no excess supply, descending clock stops

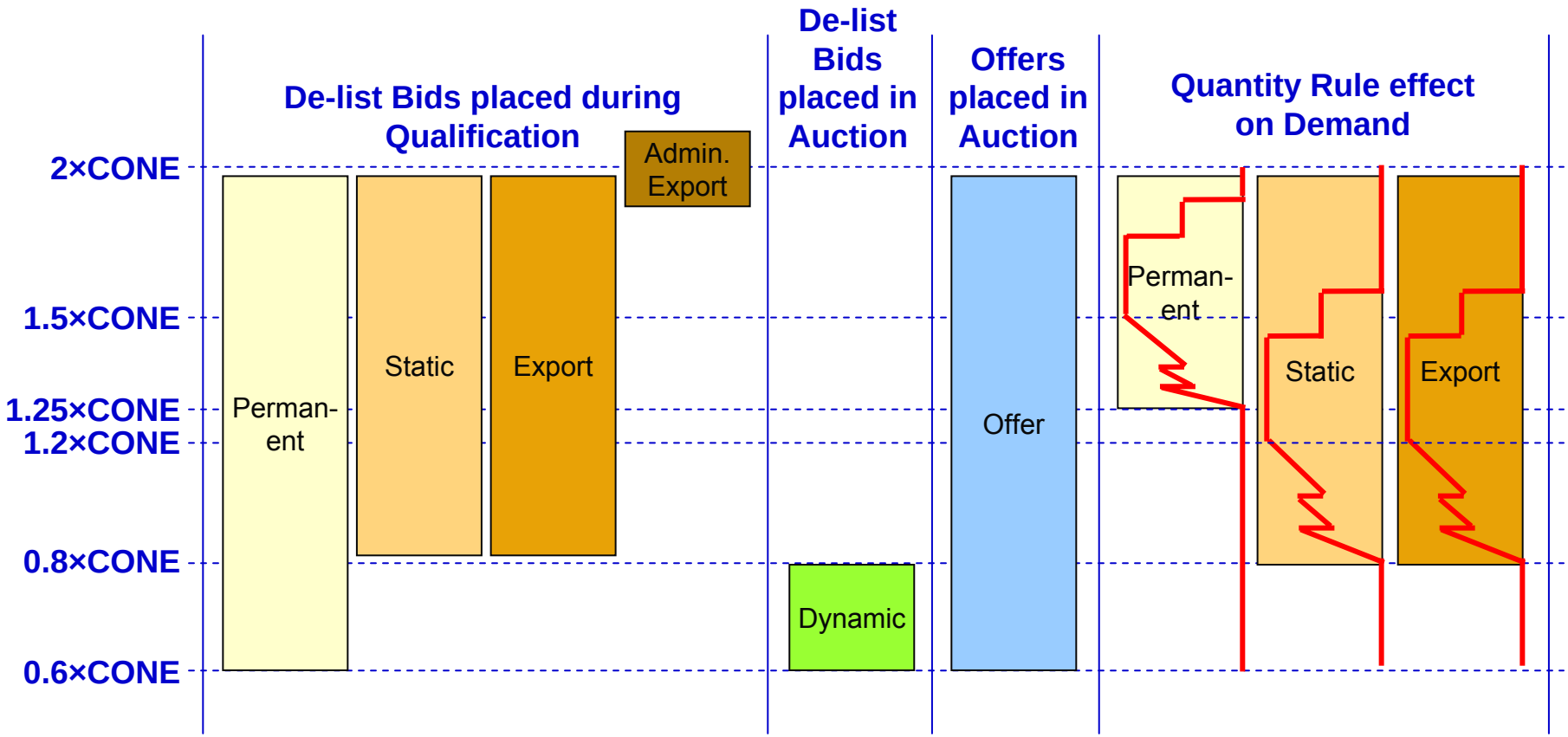
Quantity Rule

- At high prices, the Quality Rule reduces the capacity purchased in the FCA when Existing Capacity Resources are de-listed
- Capacity Clearing Price ≥ 1.5 X CONE
  - Replacement Capacity associated with an accepted Permanent De-list bid shall not be purchased in the FCA.
- Capacity Clearing Price > 1.2 X CONE
  - Replacement Capacity associated with an accepted De-list Bid shall not be purchased in the FCA.
    - Such Capacity Quantity shall be advanced into subsequent reconfiguration auctions.
- 1.25 X CONE < Capacity Clearing Prices < 1.5 X CONE
  - Replacement Capacity associated with Permanent De-lists in the FCA increases pro-rata.
  - If insufficient replacement Capacity is not purchased in the FCA, it shall be purchased in subsequent reconfiguration auctions.

Quantity Rule (cont.)

- Permanent De-List Bids < 1.25 x CONE
  - Eligible to set the price in the FCA
  - If accepted, the capacity requirements shall be replaced in full in the FCA.
- 0.8 x CONE < Clearing Price < 1.2 x CONE
  - Quantity of Replacement capacity for accepted De-list Bids purchased in the FCA increases pro-rata
  - De-list bids below 0.8 x CONE may leave during the auction subject to a reliability review
- The Capacity Quantity associated with De-list Bids that was not replaced in the FCA shall be purchased in a reconfiguration auction.

FCA Auction Methodology – Bids and Offers



Note: The floor price of 0.6 x CONE is only for the first three auctions.

FCA Features

- Protect against inadequate supply
- Protect against insufficient competition
- Alternative Price Rule designed to protect against monosopy power
- Carry-Forward Rule to avoid price suppression in import zones
- Cost of New Entry (CONE)

FCM Components – Performance Incentives

- Performance: Capacity resources unavailable in reserve shortage events get reduced Capacity Payments
  - System Wide Reserve Constraint Penalty Factors “RCPFs” trigger a shortage event
- PER Deduction: LMP > strike price ➔ capacity payments are reduced by PER calculation
  - PER adjustments affect all listed capacity units (except Demand Resources) – on line or off
  - Reduces market power in energy spot market – reduces incentives to withhold

Performance Requirements

- Real Time Availability Performance Measures
  - Resources must be available when operating reserves are short
- Resources unavailable in shortage events get reduced capacity payments
  - Penalty = 5% of annual FCA Payment per event
  - Pro-rated in MW
  - Capped at 10% per day
  - Monthly penalty cannot exceed 2.5 times FCA Payment in that month
  - Annual penalties cannot exceed total FCA Payment less PER adjustments
  - FCA Payment = FCA cleared MW x Clearing Price

Peak Energy Rent ("PER") Adjustment

- Prevents
  - double payment (Generators keep Energy Market Revenue)
  - exercise of market power in the energy market
- Energy price is deducted from the capacity payment when Energy Prices exceed cost of a peaking unit (assumed 22,000 heat rate)
  - At current gas prices, this is approximately $155/MWH

Financial Assurance

- Load Serving Entity Obligation
  - Monthly Capacity Payment = Actual Credit exposure under the existing Financial Assurance Policy (“FAP”)
- Supplier Obligation
  - Existing Capacity: Existing FAP requirements
  - Resource retiring at end of Commitment Period:
    - Additional Financial Assurance = 2.5 times the FCA Monthly Payment
  - New Capacity
    - Qualification Phase: Initial Deposit of $2/kw x Qualified MW Capacity (“Application Fee”)
      - If Selected, Application Fee is applied to 1st Payment below;
      - otherwise it is returned.
    - 1st Payment (Within 5 Business Days) – Monthly CONE x MW awarded
    - 2nd Payment (At Least 15 Days Prior to next FCA) – Monthly CONE x MW awarded
    - 3rd Payment (At Least 15 Days Prior to following FCA) – Monthly CONE x MW awarded.
  - Total Financial Assurance Payments = Three monthly payments

Reconfiguration Auctions

- Capacity Products:
  - Supply Obligation trading among physical resources
  - Additional capacity to cover increased ICR
  - Released capacity to match decreased ICR
  - Deferred capacity requirements from existing capacity resources
    - Permanent De-List
    - Static and Export De-List Bids
- Distinct product for each zone defined in the FCA
- Clearing price:
  - Reconfigured Supply = Reconfigured Demand

Reconfiguration Auctions (cont.)

- Annual Reconfiguration Auctions:
  - Full year commitment
  - After the primary FCA
  - Held approximately 2 years, 1 year and just before the FCA Commitment period
- Monthly and Seasonal Reconfiguration Auctions:
  - Adjust annual commitments during the commitment period
  - Begins the first month of the first commitment period
  - Permits Participants to adjust (buy/sell) positions

Timeline for the second Forward Capacity Auction (FCA_2011_2012)

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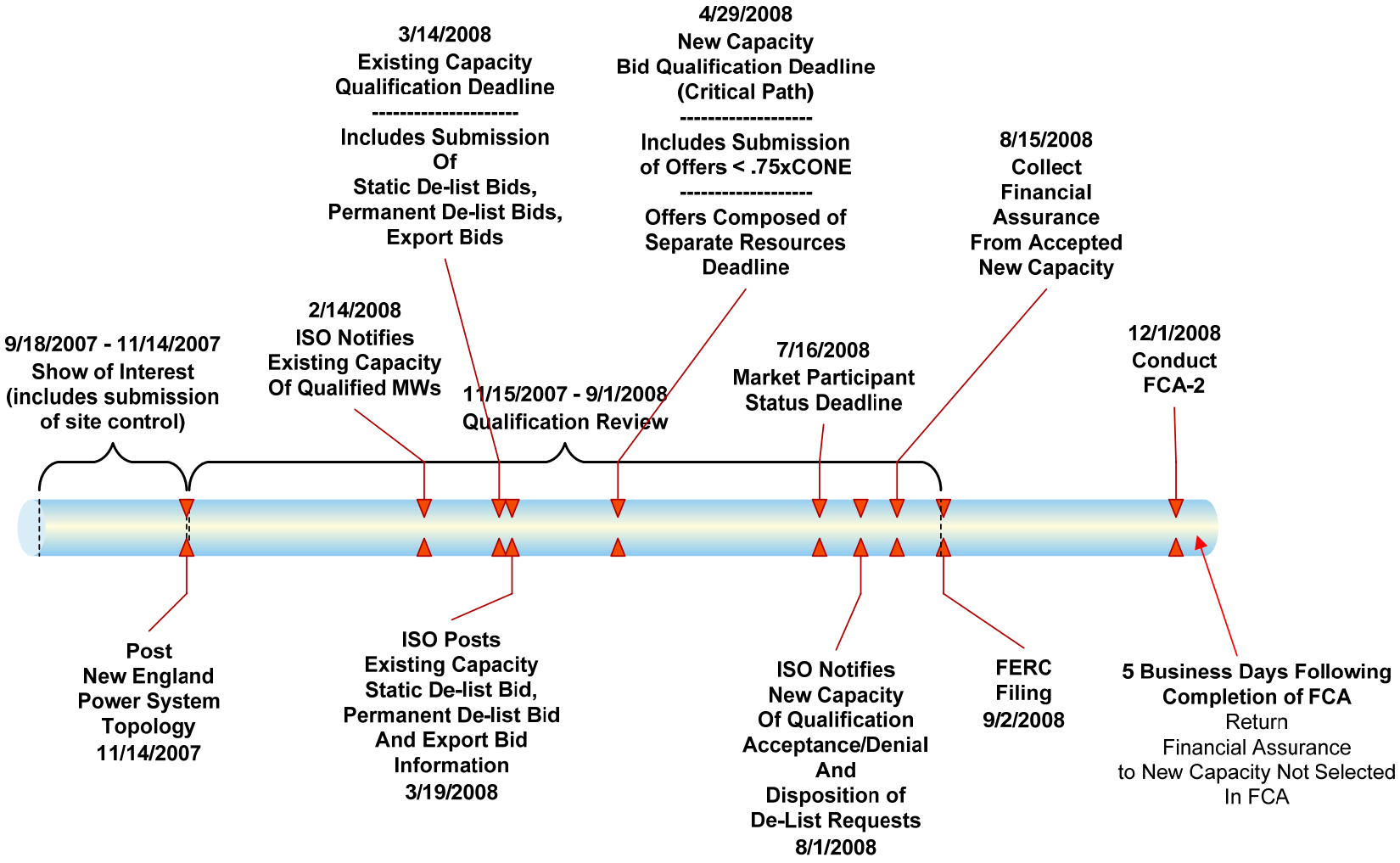
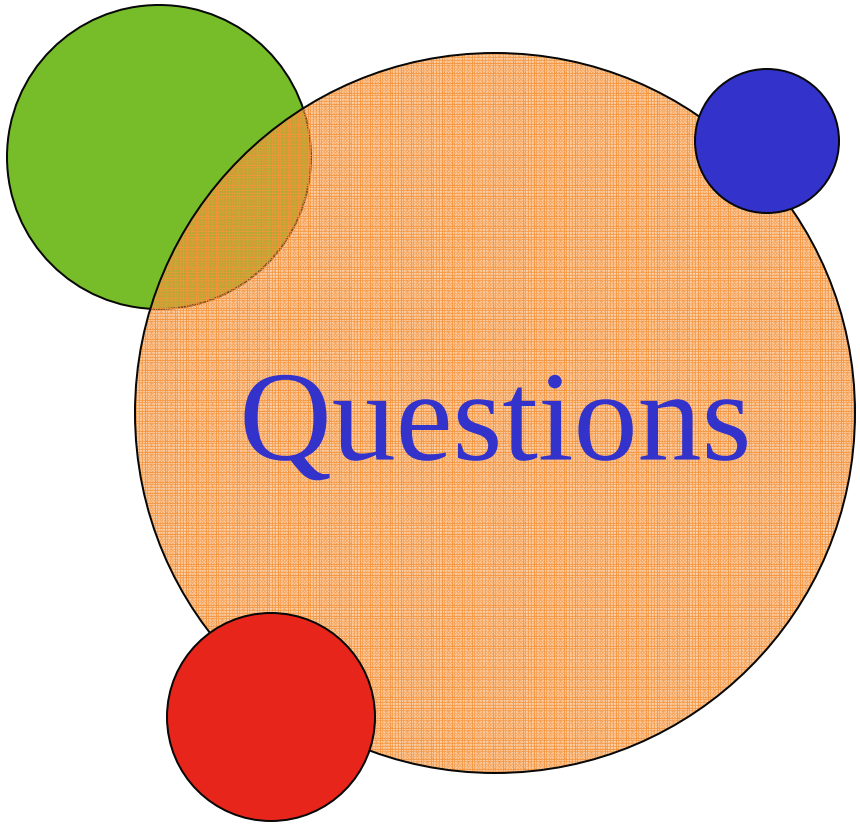
FCM Timeline for FCA_2011_2012





Important: *Differences between workbook and presentation for this section.*

- Page numbering in workbook
  - Section 2 page numbers are from 1-15
  - Section 3 begins at page 41. Pages numbers will remain sequential from that point forward.

- Slide numbering in workbook
  - Slide numbers for section 2 are from 31- 58
  - Slide numbers for section 3 begin at slide 71 and remain sequential from that point forward

Forward Capacity Market Financial Assurance

Cheryl Arnold, Controller

Forward Capacity Market Qualification Forum

October 15, 2007

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Topics Covered

- Collateral Options
- Existing Capacity Financial Assurance
- New Capacity Financial Assurance
  - New Capacity General (i.e. typical generating resources)
  - Timeline
  - Demand Resources
  - Composite Offers
- Load Serving Entity Financial Assurance
- Market Participant Status/Membership Dues
- Miscellaneous Financial Assurance
- Examples

Financial Assurance

- Collateral Options – Full Market Participants
  - Cash Deposit – Short-Term Investments managed by BlackRock as directed by Participants (requires opening a BlackRock Account)
  - Letter of Credit – Bank must have a minimum corporate debt rating of an "A-" by S&P* or better
  - Corporate Guaranty – Affiliate must have a rating of "BBB-" by S&P* or better – must have at least 6 months of good payment history prior to putting in place
  - Credit Limit – Participant must have a rating of "BBB-" by S&P* or better
- Collateral Options – Alternative Market Participants (DRP Only)
  - Cash Deposit – Short-Term Investments managed by BlackRock as directed by Participants (requires opening a BlackRock Account)
  - Letter of Credit – Bank must have a minimum corporate debt rating of an "A-" by S&P* or better

* Comparable ratings from Moody's and Fitch are acceptable

Comparison of Existing Capacity Requirements to New Capacity

- Deposit (Initial FA)
  - No specific requirement
  - Generally subject to the financial assurance requirements contained in the current Financial Assurance Policy (FAP)
- New Capacity FA Amount
  - No specific requirement
  - Exception: Existing Capacity that has been allowed to retire under Section I.3.9. of the Tariff at the end of the relevant Commitment Period
    - Shall be required to provide additional Financial Assurance (FA) in an amount equal to 2.5 times the FCA payment for a month
    - FA obligation shall be due five (5) business days prior to the start of the applicable Commitment Period
- Failure to Provide Financial Assurance
  - Consistent treatment of defaults as in existing FAP

Comparison of Existing Capacity Requirements to New Capacity

- Failure to Meet a Qualification Milestone
  - Not applicable

- Release of Financial Assurance
  - Subject to existing FAP

New Capacity

- Deposit (Initial FA)
  - ISO provides notice of qualification including qualified kWs
  - Deposit = $2/kW x total qualified kWs (kWs to be bid into the Forward Capacity Auction (FCA)
  - Due within 10 business days of date of notice of qualification
  - Formal Withdrawal after receipt of qualification notification
    - Must be received in writing 3 Business Days prior to the due date of the financial assurance – otherwise FA is due
  - Market Rule 1 – Section III 13.1.1.2
  - Financial Assurance Policy – Section V.B.

New Capacity

- New Capacity Financial Assurance (FA) Amount
  - If offer does not clear - Deposit will be returned per the terms of the existing Financial Assurance Policy (FAP)
  - If offer is accepted - Deposit will be applied to the New Capacity FA Amount
  - New Capacity FA Amount (NCFA)
    - Additional FA is due within 5 business days of the announcement of winning offers
    - NCFA Amount = CONE (Cost of New Entry) for that FCA x awarded capacity (for FCA _2011_2012, the CONE price will be comprised of 50% x $7.50 plus 50% of the successful FCA capacity clearing price from FCA_2010_2011 per kW)
    - Additional installments equal to the initial NCFA are due 15 days prior to next 2 Annual FCAs
    - Aggregate NCFA will eventually equal 3 times the initial NCFA amount
    - If offer is accepted - Deposit will be applied to the New Capacity FA Amount
  - Market Rule 1 – Section III 13.2.4 (CONE)
  - Financial Assurance Policy – Section V.B.1

New Capacity

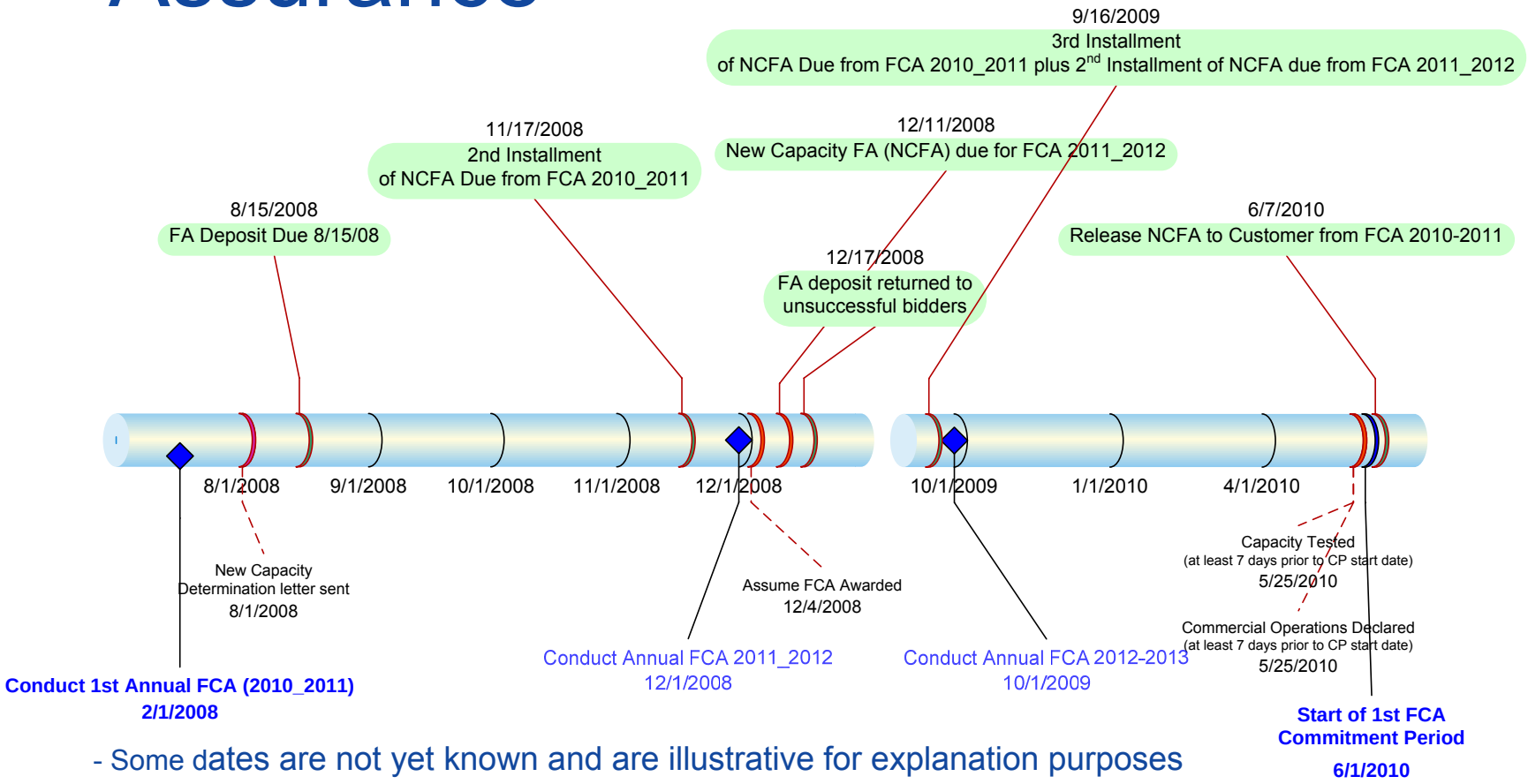
- Failure to Provide Financial Assurance
  - Can happen at anytime before the start of the commitment period
  - Cure period is a day and half
  - If not cured:
    - Results in the loss of all awarded new capacity
    - Forfeit any financial assurance previously provided with respect to those awards
    - Credit Test Defaults treated consistent with existing FAP
  - Market Rule 1 - Section III.13.1.9.2.1
  - Financial Assurance Policy – Section V. C.
- Failure to Meet a Qualification Milestone
  - If not cured:
    - loss of awarded capacity
    - forfeit any financial assurance previously provided with respect to that award
    - Timing – once FERC rules on filing
  - Market Rule 1 - Section III.13.3.4
  - Financial Assurance Policy – Section V. C.

New Capacity

- Release of Financial Assurance
  - Released once:
    - New Capacity has been declared commercial, and
    - New Capacity has been tested for its capacity rating (Manual 20)
  - Follows existing capacity FAP requirements thereafter
  - Financial assurance will be forfeited for any portion of capacity accepted in the FCA that does not demonstrate

  - Market Rule 1 – Section III.13.1.9.2.2
  - Financial Assurance Policy – Section V. C.

Timeline for Posting Financial Assurance



- Some dates are not yet known and are illustrative for explanation purposes
- Applies to the following participant types
  - -New Capacity Resources
  - -New Capacity Demand Resources – "All-at-Once" projects

New Capacity – Demand Resources "All at Once"

- "All at Once" Project defined as:
  - No Capacity prior to the start of the Commitment Period.
  - Examples include:
    - distributed generation
    - some types of energy efficiency or load management
- Deposit (Initial FA)
  - ISO provides notice of qualification including qualified kWs
  - Deposit = $2/kW x total qualified kWs (kWs to be bid into the FCA)
  - Due within 10 business days of date of notice of qualification
  - Formal Withdrawal after receipt of qualification notification
    - Must be received in writing 3 Business Days prior to the due date of the financial assurance – otherwise FA is due
  - Market Rule 1 – Section III 13.1.1.2
  - Financial Assurance Policy for FTR – Only Customers and DRP Only Customers – Section III.A.2.b.i.

New Capacity – Demand Resources "All at Once" Project

- New Capacity FA Amount
  - If offer does not clear - Deposit will be returned per the terms of the existing FAP
  - If offer clears - Deposit will be applied to the New Capacity FA Amount
  - New Capacity FA Amount (NCFA)
    - Additional FA is due within 5 business days of the announcement of winning bidders
    - NCFA Amount = CONE (Cost of New Entry) for that FCA x awarded capacity (for FCA _2011_2012, the CONE price will be comprised of 50% x $7.50 plus 50% of the successful FCA capacity clearing price from FCA_2010_2011 per kW)
    - Additional installments equal to the initial NCFA are due 15 days prior to next 2 Annual FCAs
    - Aggregate NCFA will eventually equal 3 times the initial NCFA amount
  - Market Rule 1 – Section III 13.2.4 (CONE)
  - Financial Assurance Policy for FTR – Only Customers and DRP Only Customers – Section III.A.2.b.ii

New Capacity – Demand Resources "All at Once" Project

- Failure to Provide Financial Assurance
  - Can happen at anytime before the start of the commitment period associated with the awarded new capacity
  - Cure period is a day and half
  - If not cured:
    - Results in the loss of all awarded new capacity
    - Forfeit any financial assurance previously provided with respect to those awards
    - Credit Test Defaults treated consistent with existing FAP
  - Market Rule 1 - Section III.13.1.9.2.1
  - Financial Assurance Policy for FTR – Only Customers and DRP Only Customers – Section III.A.2.b.v.c.

New Capacity – Demand Resources "All at Once" Project

- Failure to Meet a Qualification Milestone (applies to resources requiring critical path schedule monitoring)
  - If not cured:
    - loss of awarded capacity
    - forfeit any financial assurance previously provided with respect to that award
    - Timing – once FERC rules on filing
  - Market Rule 1 - Section III.13.3.4
  - Financial Assurance Policy for FTR – Only Customers and DRP Only Customers – Section III.A.2.b.v.c.

New Capacity – Demand Resources "All at Once" Project (cont)

- Release of Financial Assurance
  - Released once:
    - New Capacity has been declared commercial, and
    - New Capacity has been tested for its capacity rating (Manual 20)
  - Follows existing capacity FAP requirements thereafter
  - Financial assurance will be forfeited for any portion of capacity accepted in the FCA that does not demonstrate
  - Financial Assurance Policy for FTR – Only Customers and DRP Only Customers – Section III.A.2.b.v

New Capacity – Proposed Demand Resources "Ramp-Up" Project

- "Ramp-Up" Project defined as:
  - Capacity is delivered prior to the start of the Commitment Period as installations are completed on individual homes or businesses.
  - Examples include many type of large scale energy efficiency or load management programs.

New Capacity – Proposed Demand Resources "Ramp-Up" Project

- Deposit (Initial FA)
  - ISO provides notice of qualification including qualified kWs
  - Deposit = $2/kW x total qualified kWs (kWs to be bid into the FCA)
  - Due within 10 business days of date of notice of qualification
  - Market Rule 1 – Section III 13.1.1.2
  - Financial Assurance Policy for FTR – Only Customers and DRP Only Customers – Section III.A.2.b.i.

New Capacity – Proposed Demand Resources "Ramp-Up" Project

- New Capacity FA Amount
  - If offer does not clear - Deposit will be returned per the terms of the existing FAP
  - If offer clears - Deposit will be applied to the New Capacity FA Amount
  - New Capacity FA Amount (NCFA)
    - Additional FA is due within 5 business days of the announcement of winning bidders
    - NCFA Amount = CONE (Cost of New Entry) for that FCA x awarded capacity (for FCA _2011_2012, the CONE price will be comprised of 50% x $7.50 plus 50% of the successful FCA capacity clearing price from FCA_2010_2011 per kW))
    - Additional installments equal to the initial NCFA are due 15 days prior to next 2 Annual FCAs
      - Where interim milestones of load reduction have been satisfied prior to the due date of the additional FA requirement, the subsequent NCFA installments will be reduced commensurate with the then effective New Capacity (load reduction) remaining to be met
  - Market Rule 1 – Section III 13.2.4 (CONE)

New Capacity – Proposed Demand Resources "Ramp-Up" Project

- Release of Financial Assurance
  - On the date of pre-defined milestones, provided that the ISO is satisfied through a verification process that at least 75% of the amount of prescribed load reduction (as stated in the qualification package submitted) has been met, financial assurance in an amount equivalent to the kW's of load reduction achieved at the milestone x (times) the CONE amount for that FCA Commitment Period, will be released to the customer, if less than 75% achieved no release of collateral.
  - On the date of the pre-defined milestones, should the verification of load reduction, prove to be less than 75% of the cumulative milestone reduction, planned at that time, but more than a previously achieved individual milestone, no financial assurance will be returned at that time.
  - On the date of the pre-defined milestones, should the verification of load reduction, prove to be less than 75% of the cumulative milestone reduction, planned at that time, and less than 75% of a previously achieved milestone, the customer will be required to reinstate the full amount of financial assurance required for the total amount of Capacity awarded in the FCA for that Commitment Period.

  - Financial Assurance Policy for FTR – Only Customers and DRP Only Customers – Section III.A.2.b.v

New Capacity – Proposed Demand Resources "Ramp-Up" Project

- Release of Financial Assurance
  - Remaining FA released once:
    - New Capacity (load reduction) has been measured and verified (demonstrated) to ISO's satisfaction
  - Follows existing capacity FAP requirements thereafter
  - Financial assurance will be forfeited for any portion of capacity accepted in the FCA that does not demonstrate

New Capacity – Composite Offers

- Composite Offers – generally separate resources seeking to participate as single resource in a FCA in which multiple Market Participants or DRP-Only provide the Capacity
- Two Options for providing financial assurance:
- Market Participant or DRP-Only customer providing capacity for the summer season will be responsible for providing all of the additional financial assurance
-
- Each Market Participant or DRP-Only customer participating in the composite offer transaction will be responsible for providing the additional financial assurance required with respect to its resources
  - Financial Assurance Policy for FTR – Only Customers and DRP Only Customers – Section III.A.2.b.d.
  - Financial Assurance Policy – Section V. D.

New Capacity – Composite Offers

- Financial Assurance will be calculated on the maximum amount of New Capacity represented by all New Generating Capacity Resources and New Demand Resources included in such composite FCM Transaction in any month during the applicable capacity commitment period

- Initial FA and New Capacity FA -calculations are consistent with all other types of New Capacity Resources previously described, except that the MW value will include New Capacity Resources providing supply in the winter period

New Capacity – Composite Offers

- Return of Financial Assurance - Summer Resource is providing entire amount of FA:

- FA will not be returned until All New Generating Resources and New Demand Resources seeking to provide the capacity in this Composite FCM transaction have been declared commercial and successfully tested for their capacity rating and all other requirements under the financial assurance policies have been met

  Note: - no scheduled release of FA in the above case regardless of participation of a “Ramp Up” project in the composite offer

New Capacity – Composite Offers

- Return of Financial Assurance – Each Resource is providing individual FA requirements
- The standard Financial Assurance Policies return of FA would apply to the specific type of resource comprising this Composite FCM Transaction (includes return of FA for “Ramp-Up” projects)

Load Serving Entity Obligation

- Financial Assurance Requirement
  - Equal to the amount due from the LSE on the next invoice to be issued by the ISO, there will not be any multiplier applied to this amount
  - Unless actual amount due is known prior to the applicable month in the Commitment Period for which FA is being collected, the ISO will base the amount of collateral due by averaging the two most recent monthly invoice amounts for capacity payments to arrive at the amount of FA required. This method is consistent with current FAP for determining the basis of non-hourly charges

Market Participant Status

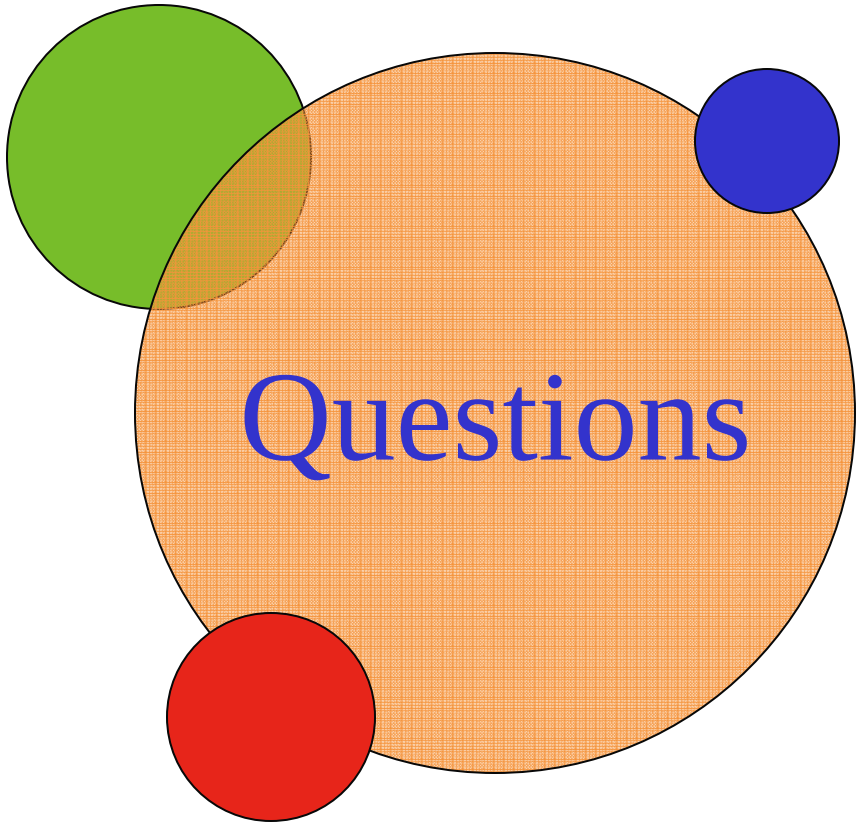
- Requirement to participate in the FCA
- Must complete process 30 days prior to the due date of the Initial FA Deposit
- Requires submission of completed application and other documentation as required
- Requires review and approval by NEPOOL Membership Subcommittee
- FERC Filing
- Process may take up to three months
- Two types of Market Participants
  - Full Market Participant
  - DRP – Only
- Membership Information -
- http://www.iso-ne.com/support/reg_info/index.html
- May be subject to membership dues & annual fees

Miscellaneous – FA for Participation in the FCA

- New Capacity offering into a reconfiguration auction or any other auctions will be subject to the same financial assurance requirements as an annual FCA

- Existing Participants offering into any FCM auction will be checked to verify that they are not suspended. If suspended they will not be allowed to participate in the FCA

- Bilateral Transactions – TBD if there is a need for additional financial assurance requirements (these will be price and MWs in the FCM)



Resource Qualification for the Forward Capacity Market ("FCM")

Second Annual Forward Capacity Market Qualification Forum

Al McBride, Principal Engineer
Mariah Winkler, Assistant Engineer

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Background

- The Forward Capacity Market (FCM) Market Rules requires Qualification of the following Resources prior to participation in a Forward Capacity Auction (FCA) :
  - Existing Capacity (Including Intermittent, Imports and Demand Resources)
  - De-list bids (Permanent, Static, Exports, etc…)
  - New Resources (Including Intermittent, Imports and Demand Resources)

New Generation and Import Capacity Resource Qualification

Second Annual Forward Capacity Market Qualification Forum

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About the Presentation

- Market Rule 1 Section III.13.1. Forward Capacity Auction Qualification defines the qualification process and is the foundation for the slides within the presentation.
  - For your convenience, the references to this section of the Market Rule will be displayed in the upper right corner of the slide in the following format:

  - This is Referencing Market Rule 1 Section 13.1.1. New Generating Capacity Resources.

What is New Resource Qualification?

- Potential New Capacity Resources must submit, no later than the relevant qualification deadlines, documentation indicating it's ability to operate at a specific MW value for the relevant Commitment Period
  - ISO-NE will evaluate this information to confirm that the Resources will be able to provide capacity for the Commitment Period
- Qualification Criteria are different for each Resource Type
- New Resources will be qualified for a specific MW value for a specific Commitment Period

Objectives of the New Resources Qualification Presentation

- Present the Qualification Timeline
- Discuss the elements of the Qualification Process
- Present Particular Qualification Issues for
  - Intermittent Resources
  - Imports
- Milestone Monitoring of Successful Auction Participants

Definition of New Capacity

- A Resource that has never been “listed” as a Capacity Resource (counted as Capacity) in the New England capacity markets
- Imports (other than “Multi-Year” Imports)

Definition of New Capacity (cont.)

- Certain Modifications to Existing Capacity Resources:
  - Up-rate (> 20% or > 40MW)
    - The entire Resource is treated as New
  - Re-power (>$200/kW invested)
    - The entire Resource is treated as New
  - Environmental Compliance (>$100/kW invested)
    - The entire Resource is treated as New and >$200/kW invested
  - Incremental Output (> 2% of Seasonal Claimed Capability)
    - Only the increment is treated as New
  - Re-establishment of Capacity De-rated for > 3 Years
    - The Capacity being Re-established is treated as New

Qualification Process Overview & Timeline

ISO New England Inc.

Qualification Process Overview

- Two major information submittals are required for qualification of New Capacity Resources

- SOI Form
  - Contains sufficient information to perform preliminary analysis of the effect of the proposal on the New England system
  - Will include attachments as necessary
- New Capacity Qualification Package
  - Contains sufficient information to assess the viability of the project
  - Will include attachments as necessary

Key Steps in the Qualification Process New Resources

- SOI Form (9/18/2007 – 11/14/2007: 2nd FCA)
  - Allow any and all interested Project Sponsors to submit a SOI Form
  - Applicable to new generation projects, new intermittent resources, new demand resources and new imports
  - A SOI Application is still required if an Interconnection Request (IR), as defined in Schedules 22 and 23 of the ISO Tariff (LGIP/SGIP - Large/Small Generator Interconnection Procedures), has already been submitted
  - Verification of Site Control must be included in the SOI Application

Key Steps in the Qualification Process New Resources

- Project Sponsor submits Qualification Process Cost Reimbursement Deposit (within 10 business days of Invoice)
  - For all completed SOI forms, the ISO will send invoice for payment of the Qualification Process Cost Reimbursement Deposit
  - The invoices will be sent in early December, 2007
  - The invoices will be due within 10 business days of the date of the invoice
- ISO Performs Initial Interconnection Analysis (12/1/2007 – 8/1/2008)
  - Perform Initial Interconnection Analyses to analyze the effect of the proposal on the New England system

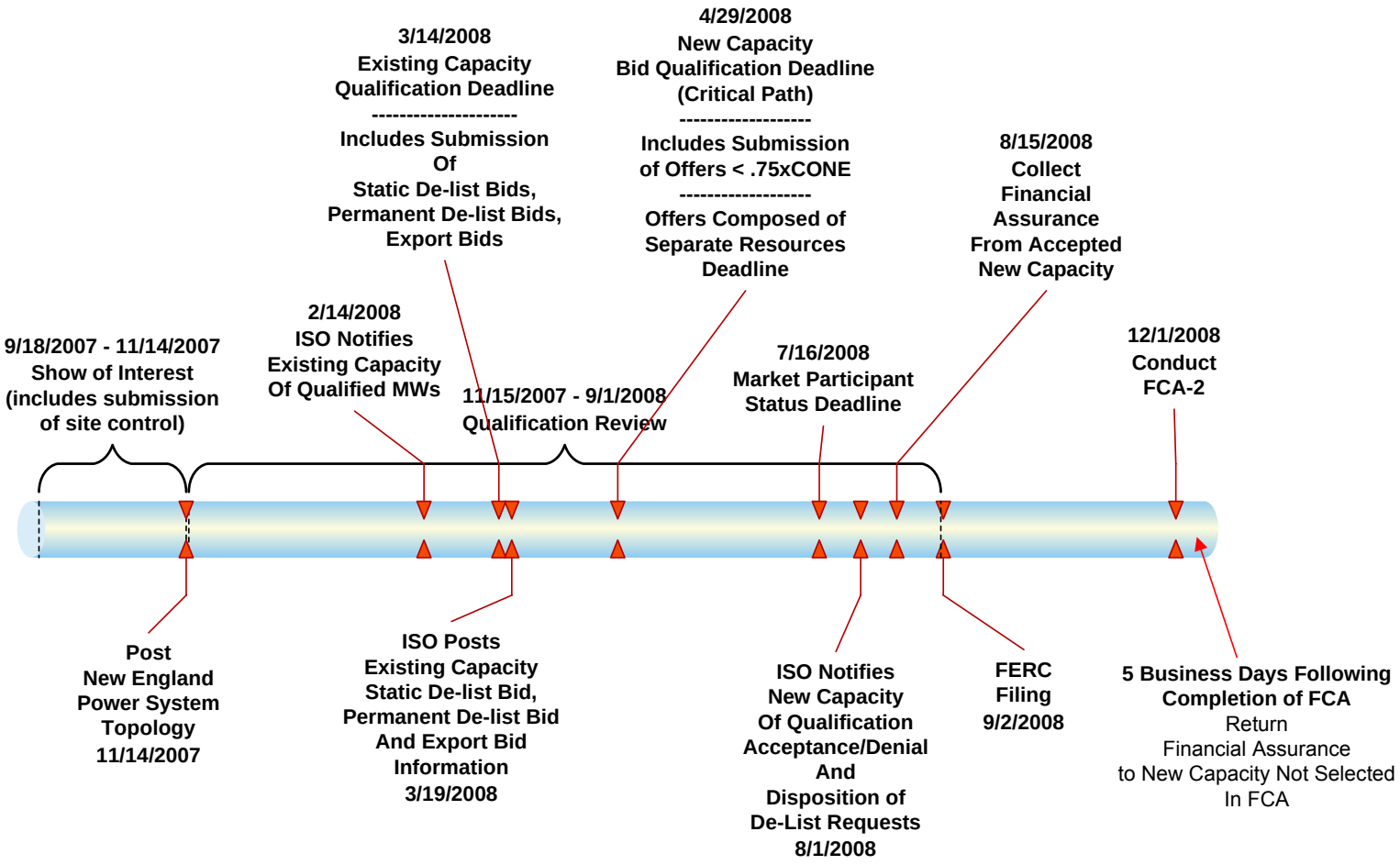
Key Steps in the Qualification Process New Resources

- Project Sponsor submits Qualification Packages (Due 4/29/2008)
- ISO Reviews Qualification Package (4/29/2008 – 8/1/2008)
  - Critical Path Schedule to verify that the resource will be declared available for commercial operation no later than the first day of the Commitment Period
  - Other information if applicable
- Project Sponsor becomes an ISO Market Participant (Due 7/16/2008)
  - Project Sponsors are encouraged to become Market Participants as soon as possible
  - The process can take several months
  - ISO Market Services Dept. offers assistance with this process

Key Steps in the Qualification Process New Resources

- ISO sends Qualification Determination Letter to the Project Sponsor (8/1/2008)
  - Will indicate whether participation in the FCA is accepted or denied
  - Based on information in steps 1-5
- Project Sponsor Submits Financial Assurance (8/15/2008)
  - Due within 10 business days of release of the Qualification Determination Letter described in step 7
  - $2/kW for each Qualified kW
  - Deposit shall be provided in a form acceptable under the terms of the Financial Assurance Policy
  - Project Sponsors that wish to withdraw and not submit Financial Assurance must do so 3 Business Days before the deadline to submit Financial Assurance

Qualification Process Timeline – FCA_2011_2012



Some Key Deadlines - FCA_2011_2012

Deadline Responsibility	FCM Related Deadline Date	FCM Requirement
Project Sponsors	9/18/2007 - 11/14/2007	New Capacity Show of Interest Submission Window
Project Sponsors	Late 12/2007 or early 1/2008	The Qualification Process Cost Reimbursement Deposit must be received by the ISO no later than 10 business days after the ISO issues an invoice for the Qualification Process Cost Reimbursement Deposit
Project Sponsors	4/29/2008	New Capacity Qualification Deadline
Project Sponsors	4/29/2008	Composite Offer Deadline
ISO	7/2/2008	Deadline for ISO New England to review the modeling assumptions and resulting Installed Capacity Requirements and the Local Sourcing Requirements with the Governance Participants, the state utility regulatory agencies in New England and, as appropriate, other state agencies.
Project Sponsors	7/3/2008	Deadline for Project Sponsor to make a reduction in capacity made to a project described in a New Capacity Show of Interest Form or New Capacity Qualification Package
Project Sponsors	7/16/2008	Market Participant Status Deadline

Some Key Deadlines - FCA_2011_2012 (cont.)

Deadline Responsibility	FCM Related Deadline Date	FCM Requirement
ISO	8/1/2008	Qualification Determination Notification for FCA
Project Sponsors	8/12/2008	A Project Sponsor may withdraw from the qualification process at any time prior to three business days before the submission of the financial assurance deposit
Project Sponsors	8/15/2008	Collect Financial Assurance Deposit from Accepted New Capacity Resources
Project Sponsors	8/15/2008	Project Sponsor must allocate its New Generating Capacity Resources, New Import Capacity Resources, and New Demand Resources accepted in the qualification process for participation in the Forward Capacity Auction into one or more bidding groups
Project Sponsors	8/15/2008	Deadline for a Project Sponsor to notify ISO New England in writing the intentions to elect to designate all or a portion a New Generating Capacity Resource or an Existing Generating Capacity Resource as a Self-Supplied FCA Resource. Project Sponsors who are not the associated load serving entity, must provide written confirmation from the load serving entity regarding the Self-Supplied FCA Resource designation.
ISO	9/2/2008	FERC Filing (Installed Capacity Requirement (ICR) included in Filing)

Some Key Deadlines – FCA_2011_2012 (cont.)

Deadline Responsibility	FCM Related Deadline Date	FCM Requirement
ISO	**12/1/2008**	**Conduct FCA**
Project Sponsors	12/2008 By 12 Noon on the day notified by the ISO of their winning bid	Winning bidders must notify the ISO to acknowledge their receipt for the obligation notification
ISO	12/2008 By 12 Noon on the next business day after ISO New England has received the bidders acknowledgments	Auction Manager Certifies the Auction implemented in accordance with Market Rule 1, ISO New England's obligations to FERC and the FCA Auction Manual
ISO	12/2008 4 Business Days After Receiving written Request from Designated FCM Participant	For New Capacity Resources that did not clear the Auction ISO New England may return FCM Deposit to Designated FCM Participant, per the terms of the Financial Assurance Policy
Project Sponsors	12/2008 5 Business Days after the announcement to Designated FMC Participants of their kw of awarded Capacity	Payment Deadline for awarded FCA MW for Financial Assurance, as defined in the Financial Assurance policy.
ISO	12/2008 No later than 7 days after the issuance of the Certificate for the Auction.	ISO New England Posts the Clearing Prices and the Aggregate Supply Curves for each Capacity Zone modeled in the Auction.
Project Sponsors	1/15/2009	Updated Critical Path Schedule Report due to ISO New England for Project Sponsors of New Resources

Show of Interest (SOI) Form

ISO New England Inc.

New Resource Qualification

- For a resource to qualify as a New Generating Capacity or New Import Capacity Resource, the resource's Project Sponsor must make two separate submissions to the ISO:
  - **First, the Project Sponsor must submit a New Capacity SOI Form during the New Capacity SOI Submission Window**
    - The SOI Window closes on 11/14/2007 for the 2nd FCA
  - Second, the Project Sponsor must submit a New Capacity Qualification Package no later than the New Capacity Qualification Deadline

Show of Interest (SOI)

- New Capacity Projects that have not submitted SOI applications during the submittal window will not be qualified
- SOI application is still required even if an Interconnection Request (IR), has been submitted under Schedules 22/23 of the Tariff (L/SGIP - Large/Small Generator Interconnection Procedures)
- An Interconnection Request queue position is not required at the time of submittal of the SOI Form
- The Project Sponsor is not required to be a Market Participant at the time of submittal of the SOI application

SOI Form

- The SOI templates can be found on the ISO Web site:
  - Markets> Other Markets Data > Forward Capacity Market >Qualification
    - http://www.iso-ne.com/markets/othrmkts_data/fcm/qual/index.html
    - Form should be submitted electronically, upon completion, to custserv@iso-ne.com
  - Demonstration of Site Control is required with the SOI Application

Resources Active in FCA_2010_2011

- New Capacity Resources that have qualified for, and intend to participate in, the FCA_2010_2011 must still submit a Show of Interest form by 11/14/2007 if they wish to participate in the second Forward Capacity Market auction FCA_2011_2012 as a New Capacity Resource
  - These resources do not need to submit an additional Qualification Process Cost Reimbursement Deposit
- New Capacity Resources, or portions thereof, that do not clear in the first FCA_2010_2011and that do not submit a Show of Interest form for the second FCA_2011_2012 will not be eligible to participate in FCA_2011_2012

Resources Active in FCA_2010_2011

- New Capacity Resources that withdrew from qualification for the FCA_2010_2011 and New Capacity Resources that did not qualify for FCA_2010_2011 may submit a SOI Form for FCA_2011_2012 by 11/14/2007 if they wish to seek to qualify for that auction

SOI Form - Contents

- Project Sponsor's contact information
- Project Sponsor's Market Participant status if any
- Status of the project under the Large/Small Generator Interconnection Procedures,
- Project Name and Type
- Capacity (Max & EcoMin in MW) of the proposed New Capacity
- Project's expected commercial operation date and desired FCM Commitment Period
- Project address or location, and if relevant, Asset ID number
- General description of the project's equipment type and configuration (Identify if Re-powering, Environmental etc.)
- Simple location plan and simple line diagram of the plant and facilities
- Other specific project data as set forth in the blank New Capacity SOI Form

Blank SOI Form

ISO new england

Rev 0, September, 2007

Forward Capacity Market
Show of Interest Application - New and Modified Generation & Import Capacity Resources
For Capacity Commitment Period Beginning 06/01/2011

Instructions for this form can be found by clicking the Form Instructions worksheet tab below.
Email the completed Show of Interest Form to custserv@iso-ne.com by the Show of Interest sumittal Deadline.

1. ISO New England Customer Information:

Does the Project Sponsor have an ISO-New England Customer ID? Choose Yes or No: No

If yes, enter your Customer ID#:

If no, enter the following:

Project Sponsor Company Name:	
Street Address:	
City/Town:	
State/Province:	
Zip Code:	
First Name of Contact at Project Sponsor Company:	
Last Name of Contact at Project Sponsor Company:	
Phone Number of Contact at Project Sponsor Company:	
E-Mail of Contact at Project Sponsor Company:	

2. Project Name and Status in Another Qualification Process:

Enter the Project Name:

Is this Show of Interest form for a Project that is active in the qualification process for the first Forward Capacity Auction (FCA-1)?
Choose Yes or No: No If yes, enter your FCA-1 Project ID#:

3. Show of Interest Project Type:

Select the Project Type: New Generation > or = 20MW

4. The project has the following status under the Large Generator Interconnection Procedures (LGIP) or Small Generator Interconnection Procedures (SGIP):

The Project has submitted an Interconnection Request	No
The Project has an executed Feasibility Study Agreement	No
The Project has an executed System Impact Study Agreement	No
The Project has an executed Interconnection Agreement	No

Enter the Queue Position #:

5. Qualification Process Cost Reimbursement Deposit calculation:

Based on the information provided above the Qualification Process Cost Reimbursement Deposit for this Project is:

$ 25,000.00

Project Sponsors should enter Their Project ID from FCA_2011_2012 if Applicable

Site Control

- Site Control must be submitted electronically with the SOI Form (attached to the email submittal)
- Site Control requirements are the same as those used in the Large/Small Generation Interconnection Procedures (ISO-NE Tariff Schedule 22 & 23)
- Site Control is not required for resources that have previously been counted as capacity (i.e. Repowering projects, Environmental compliance projects, Incremental upgrade projects)

Site Control

- "Site Control shall mean documentation reasonably demonstrating: (a) that the Interconnection Customer is the owner in fee simple of the real property for which new interconnection is sought; or (b) that it holds a valid written leasehold interest in the real property for which new interconnection is sought; or (c) that the Interconnection Customer holds a valid written option to purchase or leasehold property for which new interconnection is sought; or (d) that the Interconnection Customer holds a duly executed written contract to purchase or leasehold the real property for which new interconnection is sought." Definition from Schedule 22 of the ISO Tariff

Qualification Process Cost Reimbursement

- Mechanism to recover costs of FCM qualification tasks
- Actual costs of ISO review (under-collection invoiced, over-collection refunded) reconciled upon later of first day of Commitment period or date of commercial operation
- Less analyses may be performed (and the fee will be reduced) if applicant has already completed all/most of their LGIP/SGIP studies
- Reimbursements credited to ISO's revenue requirement under Tariff Section IV.A

Qualification Process for Cost Reimbursement

New Generating Resources and New Distributed Generation ≥ 20 MW	New Generating Resources and New Distributed Generation < 20 MW and ≥ 2 MW	Imports	All Demand Resources ≥ 2 MW Other Than Distributed Generation	New Generating Resources and New Demand Resources (including Distributed Generation) < 2 MW
Including Up-rates, Re-powering, Environmental Compliance & Intermittent Power Resources	*Including Up-rates, Re-powering, Environmental Compliance & Intermittent Power Resources*	*Resources outside the New England Control Area*		
$25,000	$7,500	$1,000	$3000	$500
With Executed Feasibility Study Agreement or System Impact Study Agreement	*With Executed Feasibility Study Agreement or System Impact Study Agreement*		*New Demand Resources that expand upon an Existing Demand Resource with no material changes to the resource*	
$15,000	$6500	n/a	$500	n/a

Rules for Modifying SOI Forms

- After submission of a New Capacity SOI Form, material changes (as defined in Section 4.4 of Schedule 22 of Section II of the Transmission, Markets and Services Tariff) may not be made to the information contained therein
- A New Capacity SOI Form to which a material change has been made shall be considered withdrawn

Rules for Modifying SOI Forms (cont.)

- Material Modification (not permitted)
  - Increase in Output
- Potentially Material Modifications
  - The following modifications may be material – The Project Sponsor may request that the ISO evaluate whether such modification is a Material Modification
    - A change in the generating equipment configuration
    - A change in the interconnection configuration
    - A change in Importing Interface (Imports)
    - A change in equipment technical parameters

Rules for Modifying SOI Forms (cont.)

- No change that may result in a reduction in capacity may be made to a project described in a New Capacity SOI form or New Capacity Qualification Package after 7/2/2008 (30 days before the Qualification Determination Notification Date)

Can New Resources Withdraw from Qualification?

- A Project Sponsor may withdraw from the qualification process at any time prior to three Business Days before the submission of the financial assurance deposit by providing written notification of such withdrawal to the ISO (i.e. New Resources may withdraw up until 8/12/2008)
- Any withdrawal shall be irrevocable
- The Project Sponsor of a withdrawn application is subject to reconciliation of its Qualification Process Cost Reimbursement Deposit

FCM Qualification – Initial Interconnection Analysis

ISO New England Inc.

From the Settlement Agreement…

- "While a full and completed System Impact Study (SIS) is not a requirement to participate in the FCA, at a minimum, initial interconnection analysis is required. The ISO and the Reliability Committee shall work out specifics with respect to the performance of such initial interconnection analysis and selection criteria (including auction details) for multiple projects when only a subset of such projects can be selected in the FCA due to overlapping interconnections impacts". SA II.B.3.c

Initial Interconnection Analysis

- ISO shall perform an initial interconnection analysis and shall determine the amount of capacity that the resource could provide
- Include, but not limited to, a power flow analysis and a short circuit analysis
- If the ISO determines that the interconnection facilities and upgrades identified can not be implemented before the start of the Capacity Commitment Period, the New Generating Capacity Resource's summer Qualified Capacity may be adjusted or the Resource may not qualify

ISO-NE Planning Procedure 10

- Approved by the NEPOOL Participants Committee in September 2007
- Contains Procedures for the following:
  - Base Case Development & Network Topology
  - Standard for Direct Connect Review
  - Standard for Initial Interconnection Analysis
  - Standard for Overlapping Impact Analysis
  - Guideline for determining if upgrades can be completed in time for the Commitment Period (Appendix F)

Direct Connect Review

- Ability to connect the resource to the point of common coupling (Interconnection Point)
- Focus is on cases of longer distances
  - Uncertainty of actual Interconnection Point
  - Right-of-way issues
  - Land Ownership Issues
  - Terrain/Obstacles
  - Permittability

Initial Interconnection Analysis

- Assess the ability to interconnect by the start of the Capacity Commitment Period subject to a Minimum Interconnection Standard
  - Thermal Power Flow Analysis
  - Short Circuit Analysis
- Uses Large Generator Interconnection Procedure result whenever available
- For the FCM, if qualification is restricted due to Initial Interconnection Analysis, the threshold is:
  - Where the upgrade(s) cannot be completed in time for the Commitment period
  - Where upgrades can be completed in time, the generator will be qualified and the generator will be responsible for the upgrades

Overlapping Impacts within FCM

- New Qualified Capacity must be incrementally useful – must provide an additional capacity benefit
- New Generation is analyzed for Overlapping Interconnection Impacts during qualification
- For the FCM, if qualification is restricted due to overlapping impacts, the threshold is:
  - Where the upgrade(s) cannot be completed in time for the Commitment period
  - Where upgrades can be completed in time, the generator will be qualified and the generator will be responsible for the upgrades
  - If applicable the resource may be partially qualified to participate in the FCA up to the amount that the resource can operate without fixing the observed violations

Overlapping Impacts within FCM (cont.)

- Where multiple New Generating Resources cannot be selected because they overlap with each other:
  - Interconnection Queue order is used to choose between the overlapping generators
  - For example, if the generator under study was the fifth in the Interconnection Queue, the generators that have a higher Interconnection Queue position that are seeking qualification for the Forward Capacity Auction will be included within the analysis
  - The new unit under study, will be responsible for those overloads within or neighboring the Load Zone to which it is electrically connected but will not be responsible for upgrading interfaces that form the boundaries between existing Load Zones
  - An ongoing, stakeholder process is underway to reevaluate the interaction of the generation Interconnection Queue and FCM Qualification

Initial Interconnection Analysis

- Analysis of New Capacity under FCM differs from the Interconnection Request (IR) process and does not bypass the LGIP/SGIP
- LGIP/SGIP is more time-consuming than Initial Interconnection Analysis and may identify problems/costs not revealed by Initial Interconnection Analysis
- All New Capacity must complete the LGIP/SGIP before becoming interconnected
- An LGIP/SGIP IR may be submitted at anytime before, during or after the FCM Qualification process
  - Submitting an IR earlier in the process will provide more detailed information to the Project Sponsor regarding necessary interconnection and network transmission upgrades and their cost

Initial Interconnection Analysis Compared with LGIP/SGIP Analysis

FCM Market Element	Interconnection Analysis under FCM	Potential System Impact Scope of Analysis Required before the project can Interconnect
New Generating Capacity – Never Previously Listed	• Thermal • Short-Circuit • Overlapping Interconnection Impacts • Identify Violations • Determination whether upgrades can be implemented in time for the Commitment Period	• Thermal • Short-Circuit • Voltage • Stability • Identify Violations • Develop Solutions & Costs
New Generating Capacity - Capacity Addition to Existing Capacity	• Thermal • Short-Circuit • Overlapping Interconnection Impacts • Identify Violations • Determination whether upgrades can be implemented in time for the Commitment Period	• Thermal, • Short-Circuit • Voltage • Stability • Identify Violations • Develop Solutions & Costs
New Generating Capacity - Re-powering Modification to Existing Capacity	• Thermal • Short-Circuit • Overlapping Interconnection Impacts • Identify Violations • Determination whether upgrades can be implemented in time for the Commitment Period	• Thermal (if greater MW) • Short-Circuit • Voltage • Stability • Identify Violations • Develop Solutions & Costs
New Generating Capacity – Modifications to comply with Environmental Regulations	None (provided no change in capacity or major electrical equipment)	None (provided no change in capacity or major electrical equipment)

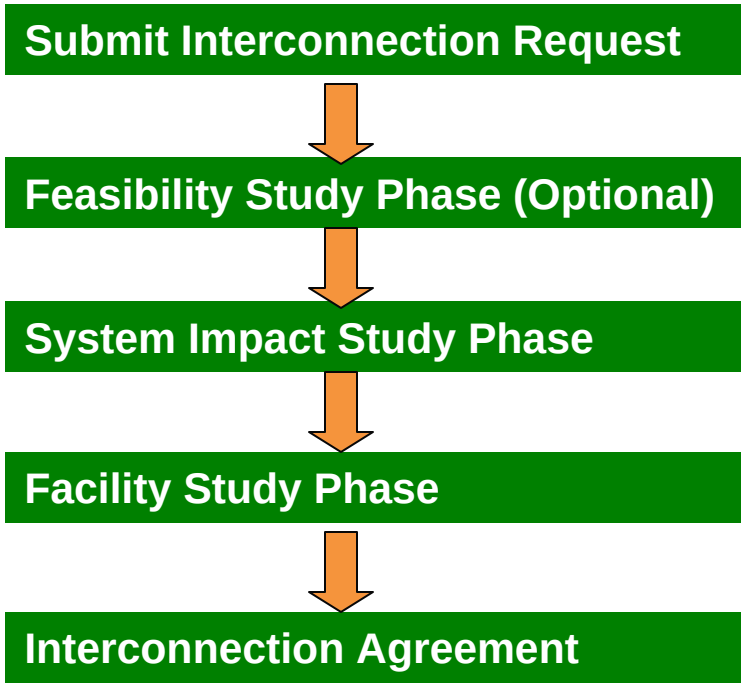
Interconnection Costs & the Interconnection Process In New England

ISO New England Inc.

Interconnection Process in New England

- The Large Generator Interconnection Procedures (LGIP) and Large Generator Interconnection Agreement (LGIA) apply to requests to interconnect Large Generating Facilities or to materially change the capacity of an existing generating unit interconnected to the Administered Transmission System
- LGIA/LGIP - Schedule 22 of the Tariff
- SGIA/SGIP (< 20MW) - Schedule 23 of the Tariff
- These requirements are not bypassed by participation in the FCM market

Major Steps in the LGIP



I.3.9 Proposed Plan Approval

Also Required to Interconnect

Note: Please see Schedule 22 and related documents for precise details on the LGIP

Generator Proposed Plan Application

- Generator Proposed Plan Application requirement is taken from the Section I.3.9 of the Tariff
- I.3.9 Application Forms and Instructions are found on the ISO-NE website under:
  - ISO New England Planning Procedure 5-1
- I.3.9 Application goes before various NEPOOL subcommittees with final approval resting with the NEPOOL Reliability Committee
- Reliability Committee recommends approval or disapproval of the interconnection project to ISO-NE
- If application is approved, generator project will be placed in the Generator Interconnection Queue

Interconnection Costs – 2 Categories

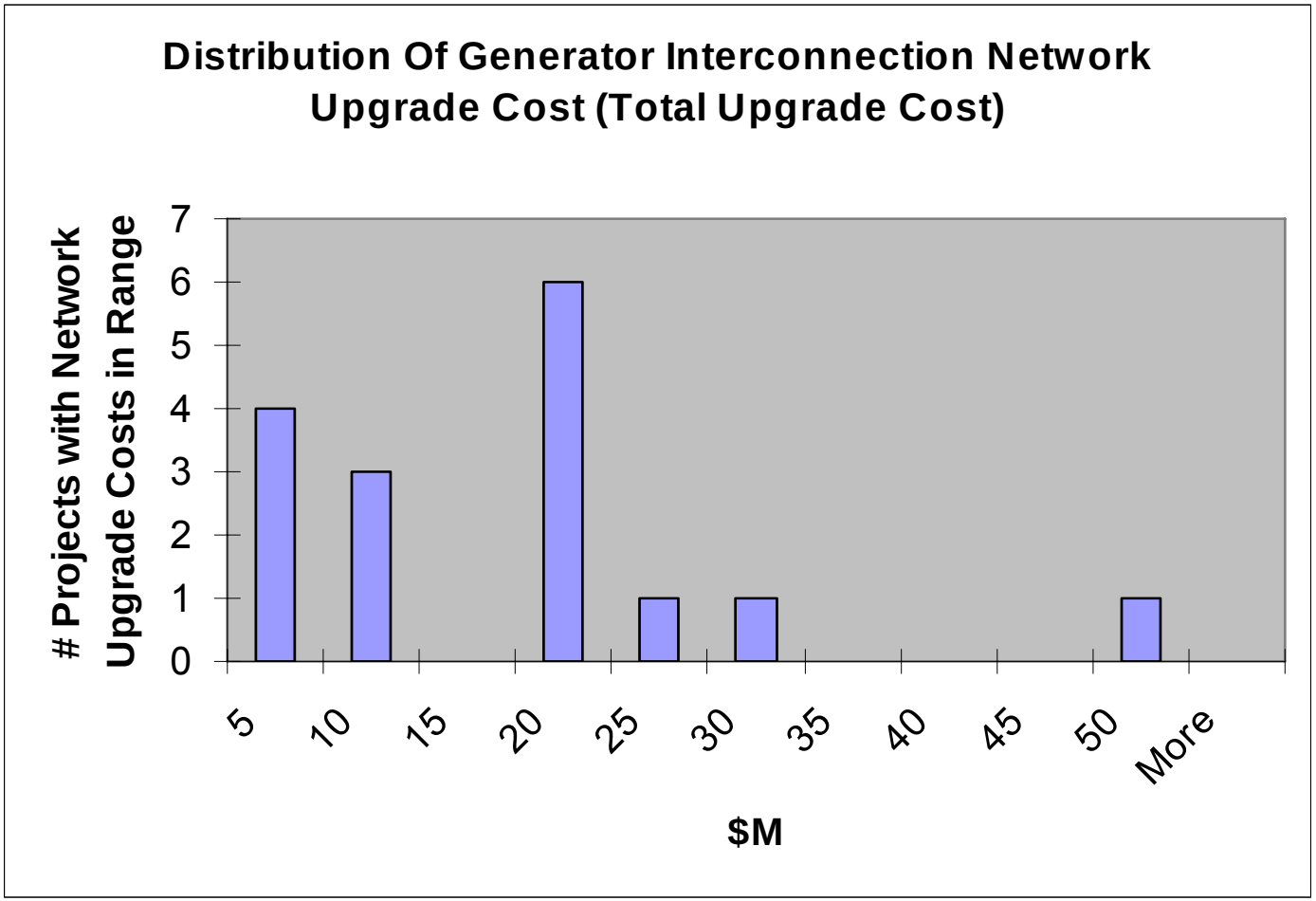
- "Interconnection Facilities shall mean the Interconnecting Transmission Owner's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Administered Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades." Schedule 22 Definition
- "Network Upgrades shall mean the additions, modifications, and upgrades to the New England Transmission System required at or beyond the Point of Interconnection to accommodate the interconnection of the Large Generating Facility to the Administered Transmission System." Schedule 22 Definition

Historical Network Upgrade Costs

Generator Project	*PTF Costs $*	*Non-PTF Costs $*	*Project Costs $*	*Summer Capability MW*	*Project Costs $/kW*
Bucksport	196,585	125,000	321,585	157.3	2
Westbrook	13,163,315	3,932,039	17,095,354	522.7	32.7
Rumford Power	15,811,700	594,061	16,405,761	244.9	67
Maine Independence	21,474,192	-	21,474,192	490.4	43.8
Androscoggin Energy	2,268,155	309,265	2,577,420	127.9	20.2
Newington Energy	1,155,146	-	1,155,146	520.7	2.2
Lake Road	15,982,337	-	15,982,337	726.3	22
Milford Power	9,559,819	-	9,559,819	484.5	19.7
Berkshire Power	7,776,486	-	7,776,486	236.3	32.9
AES Granite Ridge	28,547,269	-	28,547,269	661.5	43.2
ANP Bellingham	6,832,125	-	6,832,125	465.6	14.7
ANP Blackstone	18,278,675	382,980	18,661,655	440.6	42.4
RISE	3,805,000	-	3,805,000	515.5	7.4
Fore River	17,690,131	1,425,000	19,115,131	682.7	28
Mystic 8 & 9	44,980,016	2,559,000	47,539,016	1396.3	34
Kendall	2,324,613	16,919,000	19,243,613	153.5	125.4

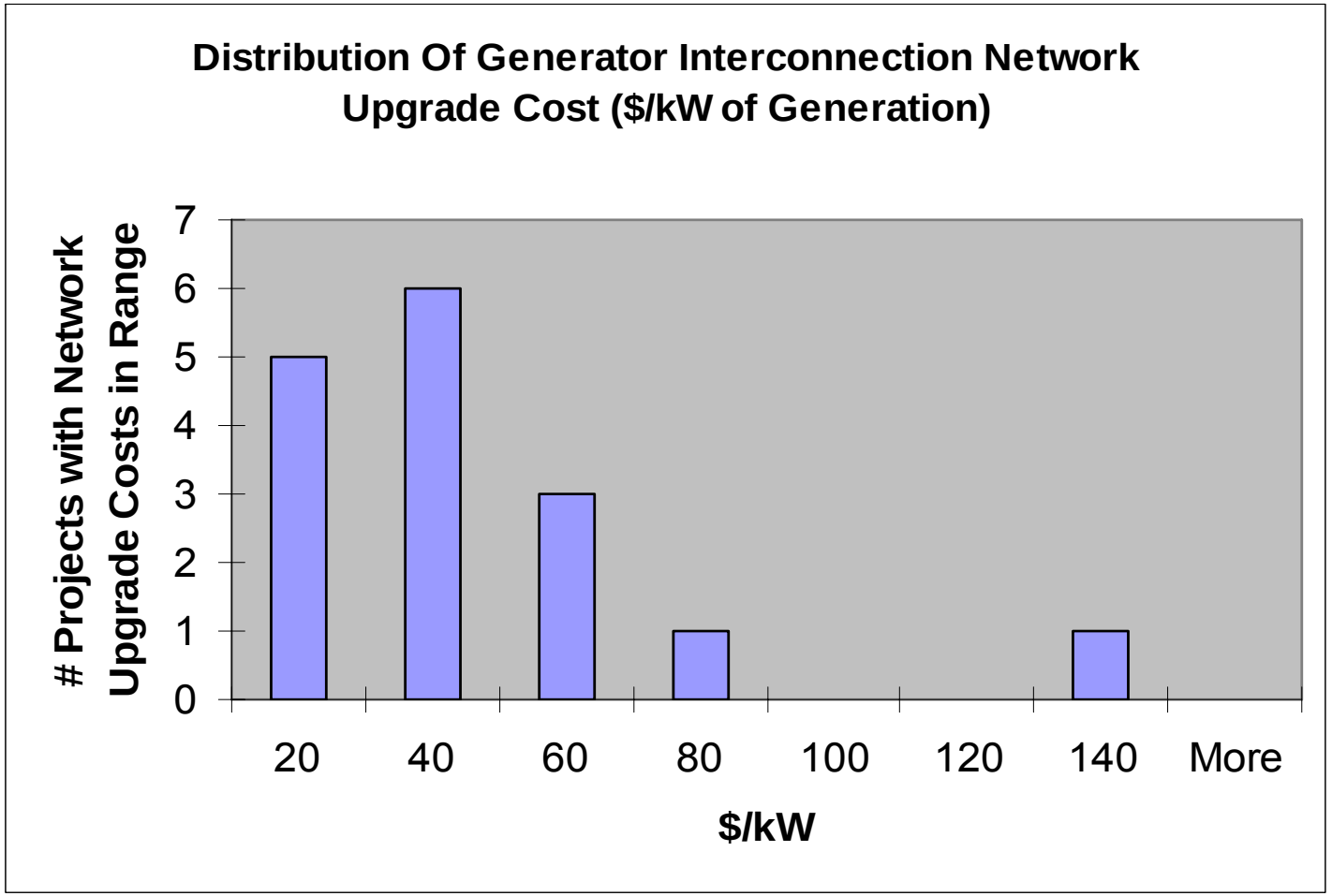
Note: These numbers refer to Network Upgrade costs and do not include Interconnection Facilities costs for the generators

Historical Network Upgrade Costs (cont.)



Note: These numbers refer to Network Upgrade costs and do not include Interconnection Facilities costs for the generators

Historical Network Upgrade Costs (cont.)

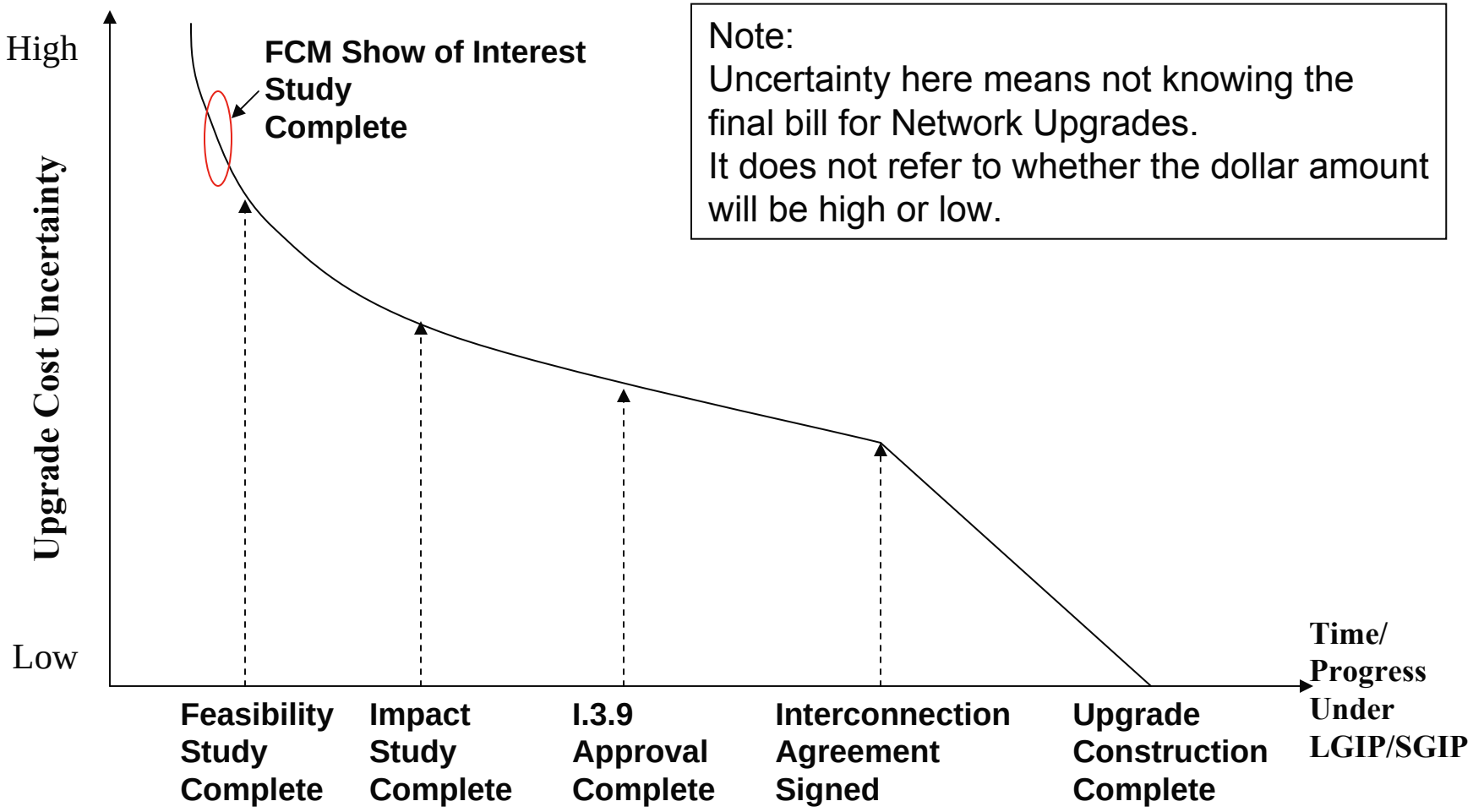


Note: These numbers refer to Network Upgrade costs and do not include Interconnection Facilities costs for the generators

The Rest of the Story

- The statistics on the previous slides did not include another important part of the story – The generation that did NOT get build
- Over 120 projects that obtained a New England Interconnection Queue position between 1997 and 2004 ended up withdrawing from the process
- In some cases upgrade costs or overall infeasibility of the proposed interconnection were part of the decision to withdraw from the queue

Upgrade Cost Uncertainty & Interconnection Progress – Typical Conceptual Illustration



FCM New Capacity Qualification Package

ISO New England Inc.

New Resource Qualification

- For a resource to qualify as a New Generating Capacity or New Import Capacity Resource, the resource's Project Sponsor must make two separate submissions to the ISO:
  - First, the Project Sponsor must submit a New Capacity SOI form during the New Capacity SOI Submission Window
  - **Second, the Project Sponsor must submit a New Capacity Qualification Package no later than the New Capacity Qualification Deadline**
    - The New Capacity Qualification Deadline is 4/29/2008 for FCA_2011_2012

New Capacity Qualification Package – Contents

- The New Capacity Qualification Package has the following primary contents:
  - Offer Information
  - Critical Path Schedule (CPS)
- Certain Resources will submit additional items:
  - Modifications to Existing Resources will submit cost information
  - Intermittent Resources will submit Intermittent Resource information
  - Import Resources will submit Import Resource Information

New Capacity Qualification Package - Logistics

- For the first FCA, New Capacity Qualification Packages were submitted as MS EXCEL files using email
- For the second FCA, New Capacity Qualification Packages will probably be submitted using web-based User Interfaces

New Capacity Qualification Package – Logistics (cont.)

- New Capacity Qualification Package contains several elements:
  - Offer Information (Offers below 0.75 * CONE)
  - Offer Information (Rationing and 1-5year Commitment Period election)
  - CPS (Critical Path Schedule)
  - Modifications to Existing Resources
  - Intermittent Information
  - Import Information
- Most Project Sponsors will have to complete more than one of the above elements
- Completed submittals will include attachments if applicable

* CONE = the Cost of New Entry and is set at $7.50 for the first Forward Capacity Auction

Offer Information

Offers Below 0.75 CONE (MR1 Section III.13.1.1.2.2.3(a))

This price entry is fixed

This price entry corresponds to "one tick" of the descending clock below 0.75 * CONE

Price ($/kW-month)	Quantity (MW)
$ 5.624	

Supporting Information
Enter Filename (word, pdf or Excel)

Project Sponsors - Please include the above referenced files in the same email used to submit this New Capacity Qualification Package workbook

- Resources wishing to offer MWs below 0.75 * CONE must provide their Maximum MW price curve in the New Capacity Qualification Package
- Supporting Information must be provided

Offer Information – Examples of an Offer Below 0.75 * CONE

- An Offer below 0.75 * CONE is called a Maximum Offer Supply Curve Segment:
  - Example A
  - Price ($/kw-month) Quantity (MW)
  - $ 5.624 100
  - $ 5.000 100 (100 MW (or less) between $5.00 - $5.624)
  - $ 4.800 80 (80 MW (or less) between $4.80 - $4.999)
  - $ 4.600 60 (60 MW (or less) between $4.60 - $4.799)

  - Example B
  - $ 5.624 100
  - $ 4.600 100 (100 MW (or less) between $4.60 - $5.624)

- If the Clock Price falls below $4.60 then 0 MW are being offered

- Note: A Supply Offer below 0.75 * CONE is not an actual “Offer” in the FCA. Lesser quantities may be offered during the FCA

Offers Below 0.75 Times CONE

- New Generating Offers (III.13.1.1.2.6)
  - Reviewed to ensure they are consistent with long-run average costs, net of expected net revenues other than capacity revenues
  - Shall consider contract revenues provided they reasonably represent market prices

- New Import Capacity Resources (III.13.1.3.5.6)
  - If External Resource is new, requirements are similar to those for an internal New Generating Capacity Resource
  - If not, substantiate low price relative to applicable external market indices

Offer Information - Offers Below 0.75 Times CONE

- In all cases, the IMMU (Internal Market Monitoring Unit) must understand the derivation of the low offer, therefore, sufficient documentation and information must be included in the qualification package

- Supporting Information to accompany Offer Below 0.75 Times CONE
  - Relevant financial estimates
  - Project cost projections
  - Project pro forma financing support data

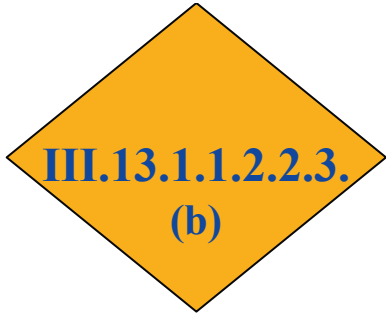
Offer Information - Offers Below 0.75 Times CONE (cont.)

- If the intent to offer below 0.75 * CONE is not articulated in New Capacity Qualification Package, due 6/15/07 for the 1st FCA – the capacity will be removed from the auction if/when the price falls below 0.75 * CONE

- If the low offer is accepted, the corresponding capacity may remain in the auction at prices less than 0.75 * CONE, but would be removed if the price falls below the corresponding price stated in the qualification package

- If the low offer is not accepted, the corresponding capacity may remain in the auction at prices less than 0.75 * CONE, but will be considered out-of-market capacity and the Alternate Price Rule applied, and would be removed if the price falls below the corresponding price stated in the qualification package

Other Offer Information



- Rationing Election
  - The Project Sponsor for a New Generating Capacity Resource must indicate in the New Capacity Qualification Package if an offer from the New Generating Capacity Resource may be rationed
  - A Project Sponsor may specify a single MW quantity at or above the Economic Minimum Limit to which offers may be rationed. Without such indication, offers will only be accepted or rejected in whole
  - An election to be rationed means that any MW quantity at or above the specified MW quantity (Rationing Minimum Limit) may be selected when clearing the Auction.

Offer Information – Bidding Groups

- A Project Sponsor may aggregate Offers from new projects in the same Capacity Zone into a single Bidding Group for the FCA
- All new projects in a Bidding Group will be of the same resource type (Generating, Re-Powering, Demand or Import)
- Only resources that elect to be rationed may be in the same Bidding Group. The Group will have a single Rationing Minimum Limit
- A single new project will be automatically designated as its own Bidding Group

Other Offer Information

- Capacity Commitment Period Election
  - For New Resources, Project Sponsors may chose that the Capacity Supply Obligation and the Capacity Clearing Price (indexed for inflation) continue to apply for up to four addition consecutive Capacity Commitment Periods

Critical Path Schedule

(a) Major Permits Permit Name (*e.g. Air Permit*)	Permit Agency Name (*e.g. XYZ State Agency*)	Schedule Date Permit Applied for	Schedule Date Permit Approved

- Enter line item names and dates for the requested items

Critical Path Schedule (cont.)

(b) Project Financing Closing		
Financing Source Name (*e.g. ABC Bank*)	Amount ($)	Schedule Date Financing Scured
Total	$ -	

(c) Interconnection Request	Schedule Date Interconnection Request Submitted

- Enter line item names and dates for the requested items

Critical Path Schedule (cont.)

(d) (f) & (g) Major Equipment Major Equipment/System Name (*e.g. ABC type Turbine*)	Schedule Date Equipment Ordered	Schedule Date Equipment Delivered	Schedule Date Equipment Tested

- Enter line item names and dates for the requested items

Critical Path Schedule (cont.)

(e) Substantial Site Construction	Schedule Date Substantial Site Construction
(h) Commissioning	Schedule Date Commisioning Completed
(i) Commercial Operation	Schedule Date Commercial Operation Achieved

- Enter line item names and dates for the requested items

Modifications to Existing Resources

- In addition to the Critical Path Schedule information, Resources previously listed as capacity seeking to qualify as “New” Capacity must also provide cost information for the major equipment items identified as part of the modification project in the CPS worksheet, as well as other project costs
- In addition, Resources seeking to qualify as “New” Capacity by virtue of an Environmental Compliance project must identify the environmental regulation that are causing the need for the compliance upgrade

ISO Review of the New Capacity Qualification Package

- In making its determinations, the ISO may consider, but is not limited to considering, the following:
  - whether the New Capacity Qualification Package contains all of the elements required and is sufficiently developed
  - whether the milestones in the Critical Path Schedule are reasonable and likely to be met
  - whether, in the case of a resource previously listed as a capacity resource, the requirements for treatment as a New Generating Capacity Resource are satisfied
  - whether, in the case of an Intermittent Power Resource, sufficient data is provided, and whether the data provided reasonably supports the claimed summer and winter Qualified Capacity

FCM Qualification – Intermittent Resources

ISO New England Inc.

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New Intermittent Resources Qualification

- A New Intermittent Resource may specify its Qualified Capacity Value during qualification, up to its name-plate capacity, provided:
  - It must demonstrate it has measured and recorded applicable site specific data (e.g. wind/hydro site data)
  - The data, in conjunction with the Intermittent Resource's physical design characteristics, must support its claimed Qualified Capacity Value
  - The claimed Value will be adjusted based on a projection of its expected annual availability factor
  - A New Intermittent Resource must satisfy the same milestone requirements as any other new capacity resource, plus the following criteria:

Intermittent Resources

- Intermittent Resources will provide, in the New Capacity Qualification Package, additional information to support a claimed summer Qualified and a claimed winter Qualified Capacity
- New Capacity Qualification Package submittal should contain
  - Site Specific resource data (e.g. wind speeds)
  - Calculations deriving claimed Capacity using resource data, equipment energy conversion efficiencies etc.

How do Intermittent Resources Transition from Forecast Data to Actual Data?

- The Methodology for calculating the Qualified Capacity Value for Intermittent Resources is discussed in the Existing Capacity Qualification section of this Forum
- Actual Data must replace modeled data as it becomes available
  - After the first year of the Capacity Supply Obligation, its summer and winter Qualified Capacity shall be weighted by 2/3 of the Qualification data and 1/3 of the actual performance
  - After the second year of its Capacity Supply Obligation, its summer and winter Qualified Capacity shall be weighted by 1/3 of the Qualification data and 2/3 of the actual performance
  - After the third year of its Capacity Supply Obligation, its summer and winter Qualified Capacity based entirely on the actual performance

FCM Qualification – Imports

ISO New England Inc.

Import Information

- Identify one of three Types
  - External Control Area
  - New Generating Resource
  - Existing External Generating Resource
- Documentation of control over the resource must be provided in the New Capacity Qualification Package
  - Existing External Generating Capacity Resources Proof of ownership or contract
  - New External Generating Capacity Resources should complete the Site Control & CPS sections of the Workbook

Import Information (cont.)

- A control area backed import must provide system load and capacity projections for the relevant Commitment Period
- An Import crossing an intervening Control Area must submit information relating to the curtailment priority procedures in the intervening Control Area
- New Import Capacity intending to offer below 0.75 times CONE must be submitted to the Market Monitor during qualification
- New Import Capacity must satisfy all of the Financial Assurance requirements for New Capacity Resources

Final Steps in Qualification:

- Consultation
- Reductions and Withdrawals
- Qualification Determination Notification
- Financial Assurance

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What is the Consultation Process?

- The ISO will share its Initial Interconnection Analysis findings with affected Transmission Owners (TO), offering the TO(s) an opportunity to comment on the findings
- If ISO-NE determines that there are any negative findings, either in Initial Interconnection Analysis or in Critical Path Schedule review, then
  - ISO-NE will provide written documentation of its determination to the Project Sponsor a number of weeks before the end of the qualification review period
  - The Project Sponsor will have an opportunity to respond to ISO-NE's determination and attempt to cure the evaluation failure.

Deadline to Reduce MW Size

- No change that may result in a reduction in capacity may be made to a project described in a New Capacity SOI Form or New Capacity Qualification Package after 7/2/2008 (30 days before the Qualification Determination Notification Date)

Requirements of New Capacity Resources with Summer > Winter

- Resources having a higher Summer Qualified Capacity than Winter Qualified Capacity must do one of the following:
  - Offer its summer Qualified Capacity as part of an offer composed of separate resources (“Composite Offer”)
  - The lower of the summer and winter Qualified Capacity value will be eligible to participate in the FCA

Qualification Determination

- On approximately 8/1/2008, the ISO will send notification of qualification to Project Sponsors
- Positive Determinations will contain:
  - Summer & Winter Qualified MWs
  - Financial Assurance Requirements
  - Determination of Market Monitoring for Offers below 0.75 * CONE, if appropriate
  - A description of how the Resource must address Overlapping Interconnection Impacts
  - Preliminary, non-binding list of transmission upgrades, if applicable

Qualification Determination

- Negative Qualification Determinations will contain:
  - Description(s) of why the Resource was not accepted

Withdraw or Submit Financial Assurance

- Projects Sponsors that receive Positive Qualification Determinations must withdraw in writing no later that 3 Business Days before the deadline to submit Financial Assurance
- Resources that do not withdraw must submit Financial Assurance for their full Qualified MW amount
- After posting the Financial Assurance, the resource must offer its full summer Qualified Capacity at the Forward Capacity Auction Starting Price in the first round of the auction
- Resources are not obligated for the commitment Period until they clear in the FCA

After the Auction:

Financial Assurance – Post Auction
Resources that Partially Clear
Critical Path Schedule Monitoring

ISO New England Inc.

Financial Assurance – Post Auction

- New Resources that do not clear in the FCA will have their $2/kW Financial Assurance deposit returned
- Within 5 business days Resources that clear in the FCA must submit additional Financial Assurance for a total of $7.50/kW for each obligated kW

Resources That Partially Clear

- In the case that less than the full Qualified Capacity of the Resource clears in the FCA, then the un-cleared Capacity will be treated as New Capacity if it is offered into subsequent Primary or Reconfiguration Auctions

Critical Path Schedule Monitoring

- For Projects that do clear in the auction, monitoring of the Critical Path Schedule will continue until the Commitment Period
- For Projects that do not clear in the auction, the Project Sponsor may elect to continue the Qualification Process for future reconfiguration auctions associated with the primary auction in which qualification was initially requested
  - Election to be made within 45 days of the completion of the relevant Forward Capacity Auction

Critical Path Schedule Monitoring
(cont.)

- Project Sponsors must communicate Project Progress
  - Submit proof of milestone attainment and updated CPS – as each milestone is attained
  - Submit quarterly CPS updates – irrespective of whether any new milestones have been attained or not

- Demonstration of Completion of Milestones
  - Submit supporting documentation to ISO-NE
  - Example – Provide copy of (or cover letter for) permit(s) from Permitting Agency to demonstrate completion of “Major Permits Obtained” milestone

Critical Path Schedule Monitoring
(cont.)

- If ISO-NE determines that an exception to a project's CPS has occurred, then ISO-NE will adjust its monitoring process as follows:
- Project Sponsor will be required to report:
  - what caused an exception to a CPS milestone
  - what effect the exception will have on the overall schedule
  - how that exception will be eliminated or effectively mitigated
- ISO-NE will review the material supplied by the project sponsor
  - ISO-NE will place the project on a monthly CPS reporting schedule

Critical Path Schedule Monitoring

(cont.)

- If as a result of milestone date revisions, the Commercial Operation milestone date is after the start of any Capacity Commitment Period in which the resource has a Capacity Supply Obligation, then the project will either:
  - lose its awarded capacity and associated Financial Assurance, or,
  - must enter into an arrangement to cover its obligation:
    - If the New Capacity is not commercial as of the Commitment Period, it shall have the right to cover the default for a period of up to two years - by means of a bi-lateral contract or a Reconfiguration Auction

Timing of Interconnection Upgrades

- If a generator has been built but is not able to become commercial due to a planned transmission facility not being in service (e.g.. Radial interconnection)
  - Generator will not be paid
  - Generator will be exempt from the requirement to cure in order to avoid default
- If a generator has become commercial but is not able to reliably run at full output due to transmission not being complete
  - Generator will be paid
  - Generator will be exempt from Availability Penalty

Bringing New Generation to Commercial Operation in ISO New England

ISO New England

New Generation Process - Overview

- Large/Small Interconnection Procedure pursuant to Schedule 22/23 of the ISO Tariff
- Generator Proposed Plan Application pursuant to ISO Tariff Section I.3.9
- Preparing for Commercial Operations
  - Commercial Operations Kick-Off Meeting
  - Conference Calls
  - RIG & ARD
  - Asset Registration, Modeling, & Test Power
  - Commercial Activation

Commercial Operations Kick-Off Meeting

- Typical agenda for the Kick Off Meeting
  - Plant Status
    - Type of Generator
    - Review of Station One Line Diagrams
  - ISO Operations
    - Intended Market Activity of Generator
    - Communication Lines to ISO & Satellite
    - Information for Energy Management System
    - Operations Issues
    - Generator Maintenance – Review of Operating Procedures
    - Market Power Monitoring & Mitigation
- Regular Conference Calls will be conducted in the months leading up to Commercial Operations

Remote Interface Gateway (RIG) & Auto Ring Down Circuit (ARD)

- Approximately 120 days from scheduled commercial activation date, the participant will need to begin the process for ordering their Remote Interface Gateway (RIG), RIG circuits, and Auto Ring Down (ARD) circuit

- RIG
  - RIG unit allows generator to receive electronic dispatch instructions from ISO-NE tasking the unit to generate at a specified MW output
  - A single RIG unit can handle dispatch instructions for up to 5 different generators
  - As part of the RIG installation process, the Participant enters into a Maintenance Agreement with Qualtrol for software and hardware support

Remote Interface Gateway (RIG) & Auto Ring Down Circuit (ARD)

- ARD
  - The ARD is a direct phone line communication between the ISO-NE Control Room and the plant Designated Entity. This is usually located within the plant itself
  - An ARD is required for all generators with a MW output > 50 MWs

Asset Registration, Modeling, & Test Power

- Asset Registration
  - Customer submits an Generator Asset Registration form to ISO roughly one year from anticipated commercial activation date
  - CS&T processes form in Settlement Modeling System and assigns Asset ID Number
- Modeling
  - Generating units in excess of 5 MWs are assigned a unique PNode for LMP pricing.
  - Both the generators and PNodes are entered into the ISO Energy Management System (EMS)
  - EMS releases occur approximately 3 to 4 times per year. No generator can become active in the ISO markets until modeled in the EMS system

Asset Registration, Modeling, & Test Power

- NX-12
  - NX-12 Rev 0 allows the unit to be compensated for the test power that the unit places to the grid
  - Notification must be made to ISO 5 business days prior to placing power to the grid to allow for PNode and asset activation in all appropriate databases
  - The unit is NOT eligible to offer in the energy to the markets. They must Self Schedule the unit for the hours that the asset is in a testing phase of operation.
  - The company must submit a estimated test schedule to the Forecasting Office and perform a verbal check out confirmation each time the unit is performing in a Test Power mode.
  - For the duration of the construction test phase, the unit is NOT eligible to receive Capacity consideration or compensation

Commercial Activation

- Upon successful completion of the Test Power phase of operation, unit is eligible to become commercially active in all applicable ISO markets
- Customer must submit revised Asset Registration, NX-12 and Market Monitoring and Mitigation forms a minimum of 5 business days prior to activation
- The day prior to commercial activation, the Lead Participant will enter all appropriate Daily and Periodic Resource Characteristics and enter valid Offers prior to the Day Ahead deadline for the date the unit is scheduled to come on line
- Claimed Capability Audit – Establish (CCA Establish) is performed on the unit to test the unit Capacity Rating

FCM New Resource Qualification

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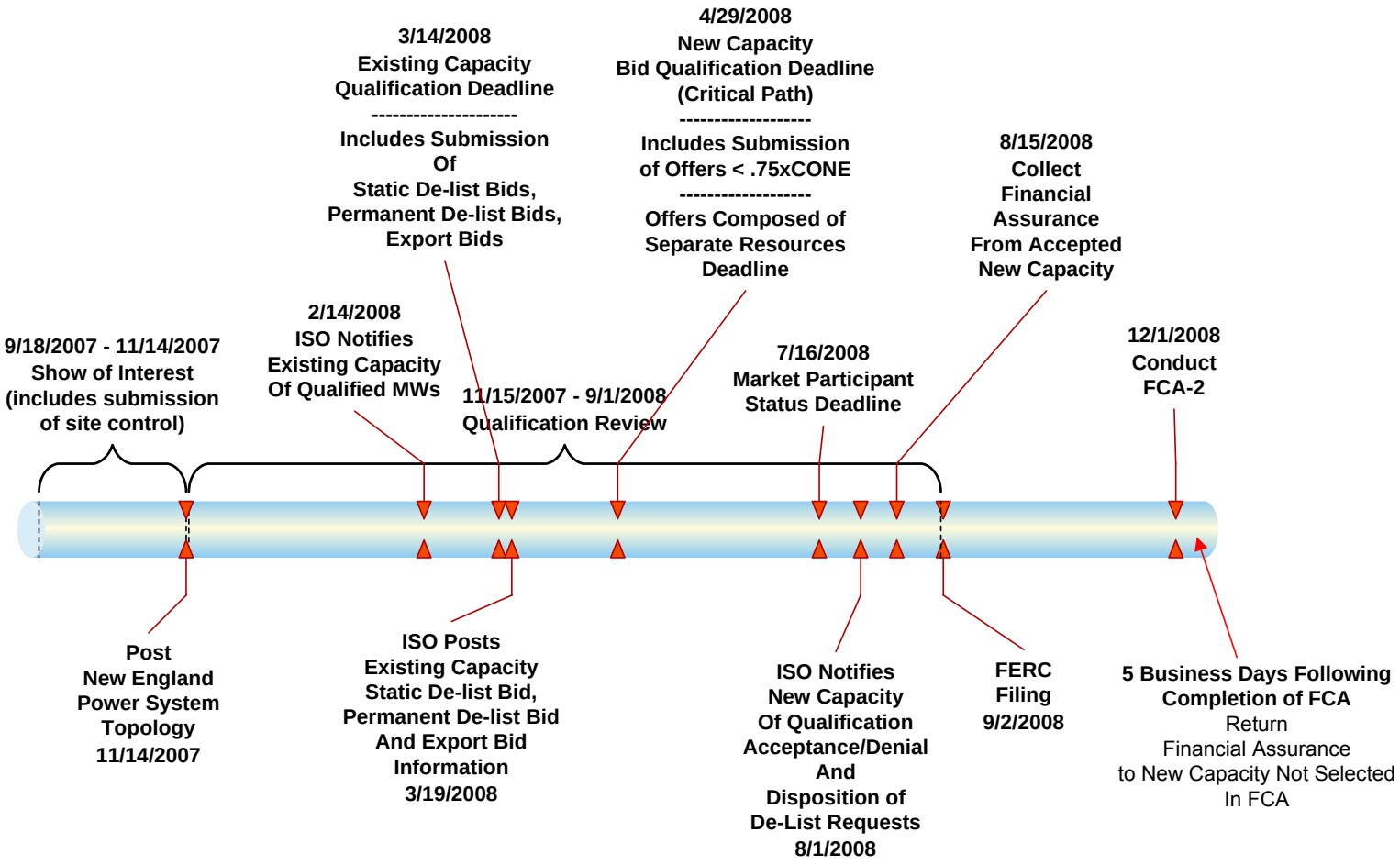
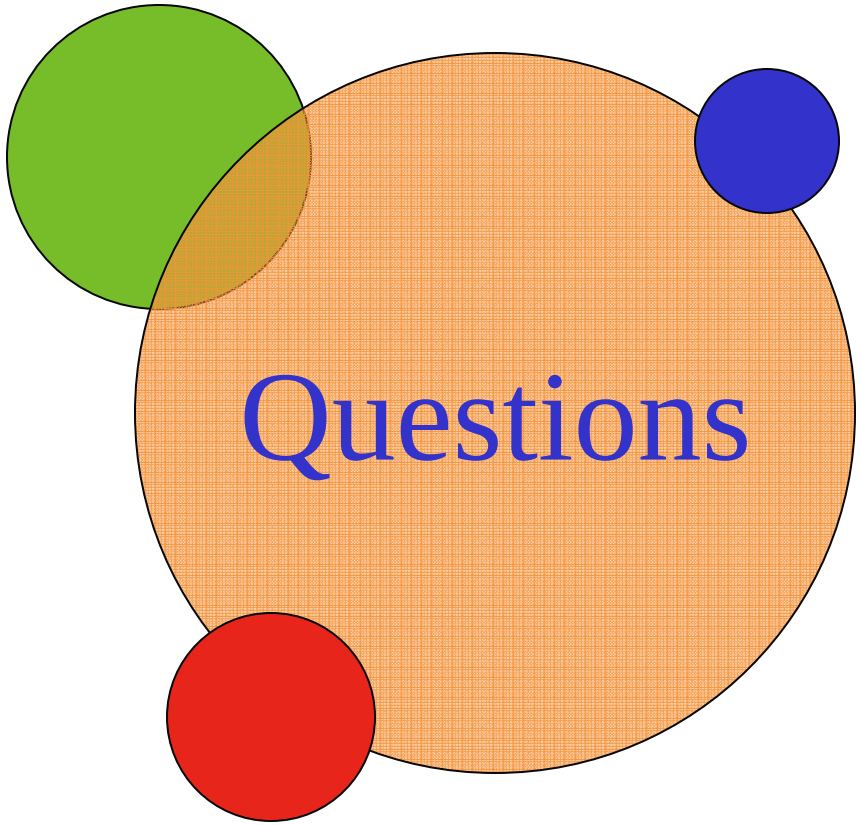
Qualification Process Timeline – FCA_2011_2012





Existing Resources

Scott Hodgdon, Senior Engineer
October 15, 2007

ISO new england

Objective

- The objective of this portion of the presentation is to define a Forward Capacity Market ("FCM") Existing Capacity Resource and the requirements they must meet in order to obtain the desired Capacity Obligation in the Forward Capacity Auction ("FCA")

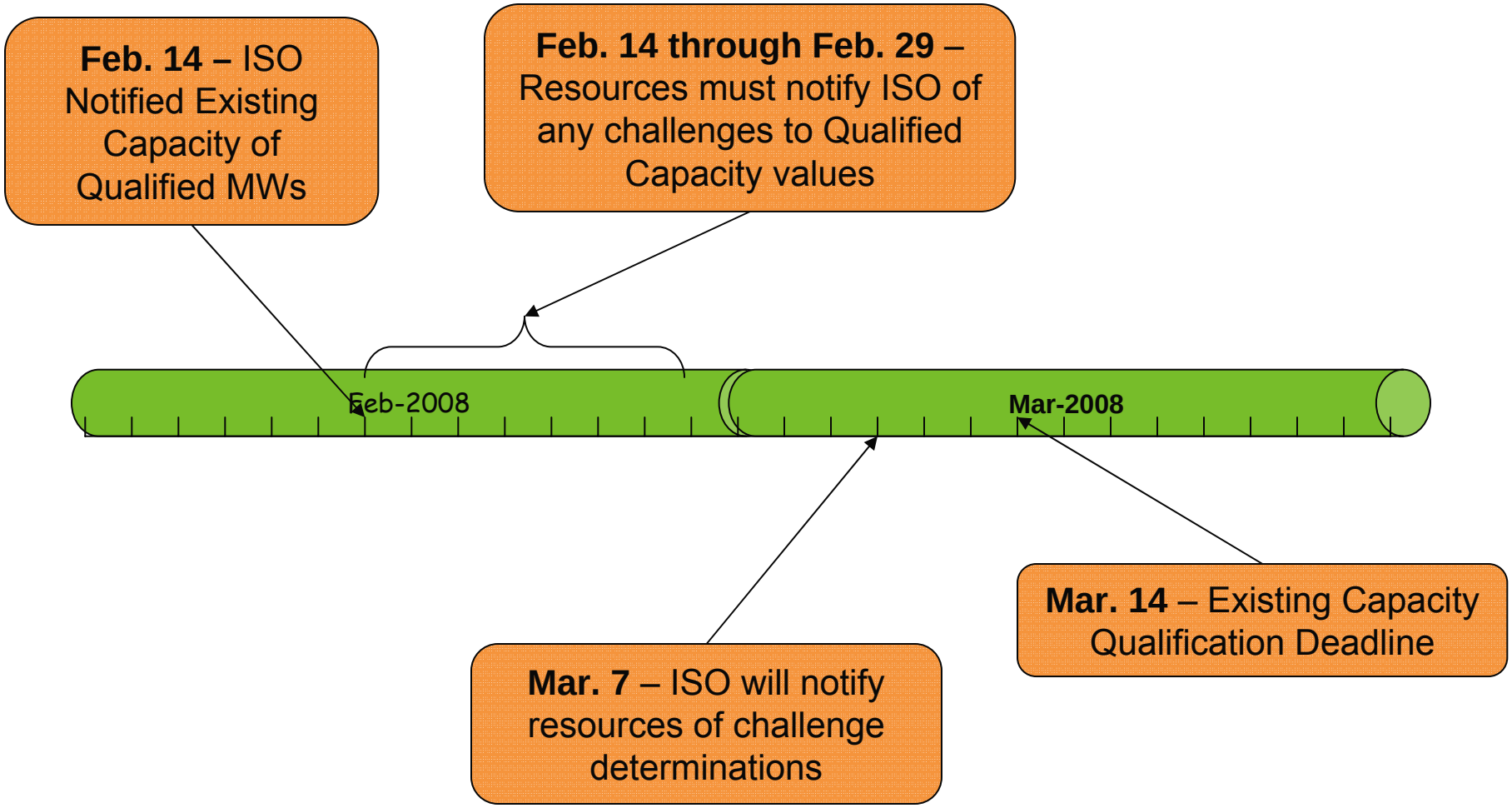
What is an Existing Resource?

- Any resource that has “listed” capacity in the New England Capacity Markets
  - Includes all resources, that have achieved commercial operation by 1/14/2008
    - 60 days prior to the Existing Capacity Qualification date for FCA_2011_2012
  - Resources achieving commercial operation after 3/1/2007 but prior to 2/1/2008, may be considered an Existing Capacity Resource but are required to submit a SOI Form during the allocated window
- Any resource that has not achieved commercial operation as of 1/14/2008 but has received a Capacity Obligation (in full or part) for the 2010-2011 Capacity Commitment Period

Existing Resource Qualification

- The summer and winter Qualified Capacity value for a resource is calculated in advance of each FCA and is applicable for that FCA and all Reconfiguration Auctions for the relevant Capacity Commitment Period
  - For example, a summer Qualified Capacity rating of 120 MW established for participation in FCA for the 2011-2012 Capacity Commitment Period would be used for the Annual Reconfiguration Auctions in 2010 and 2011 for the same 2011-2012 Capacity Commitment Period

Existing Resource Qualification Timeline for FCA_2011_2012



Types of Existing Resources

- Generating Capacity Resources
- Intermittent Resources
- Import Capacity Resources
- Demand Resources

Generating Capacity Resources

- Generating Capacity Resources are all resources that are NOT Intermittent Resources, Import Capacity Resource, or Demand Resources

Qualified MW of Existing Resources Generating Capacity Resources

- Summer and winter Qualified Capacity will be calculated as the median of the most recent five summer and winter claimed capability ratings, with only positive, non-zero ratings included in the calculation
- If a Resource has not been commercial for five rating periods, the Qualified Capacity is calculated based on available data
  - Example:
    A Resource becomes commercial on 12/1/2007, the Qualified Capacity will be based on the most recent Claimed Capability Audit ("CCA") and adjusted, if appropriate, for summer based on submitted NX-12 information

Qualified MW of Existing Resources Generating Capacity Resources

- Summer Qualified Capacity based on capacity rating as of the 5th business day in October
- Winter Qualified Capacity based on capacity rating as of the 5th business day in June
- Example:

Year	2003	2004	2005	2006	2007	Qualified MW
Summer MW	98	101	97	100	101	**100**
Winter MW	103	106	108	105	105	**105**

Intermittent Resources

- Intermittent Resources are resources classified as Intermittent Resources in the ISO-NE Markets that are wind, solar, run of river hydro, an other renewable resources that do not have control over their net power output

Qualified MW of Existing Resources Intermittent Resources

- Summer Qualified Capacity will be calculated as the average of the median of the net output during the Summer Reliability Hours of the most recent five summer periods
  - Summer Reliability Hours:
    - Hours ending 1400 through 1800
    - June through September
    - After June 1, 2010, Summer Reliability Hours will also include hours in which the ISO has declared a system-wide Shortage Event (if a Resource was in an import-constrained Capacity Zone, Summer Reliability Hours will also include all Shortage Events in that Capacity Zone)

Qualified MW of Existing Resources Intermittent Resources

- Winter Qualified Capacity will be calculated as the average of the median of the net output during the Winter Reliability Hours of the most recent five winter periods
  - Winter Reliability Hours:
    - Hours ending 1800 through 1900
    - October through May
    - After June 1, 2010, Winter Reliability Hours will also include hours in which the ISO has declared a system-wide Shortage Event (if a resource was in an import-constrained Capacity Zone, Winter Reliability Hours will also include all shortage events in that Capacity Zone)
- For the second FCA, the winter Qualified Capacity value will be based on the average of a four year median

Qualified MW of Existing Resources Intermittent Resources (cont.)

- If a Resource has not been commercial for the full period, Qualified Capacity will be calculated based on available data

Qualified MW of Existing Resources Intermittent Resources (cont.)

- Example:

Summer Period	Median Hourly Output (MW)
2003	46.00
2004	24.00
2005	10.00
2006	15.00
2007	30.00
Summer Qualified MW	**25.00**

Winter Period	Median Hourly Output (MW)
2003-2004	25.00
2004-2005	20.00
2005-2006	12.00
2006-2007	8.00
n/a	n/a
Winter Qualified MW	**16.25**

Import Capacity Resources

- Capacity associated with a multi-year contract entered into before the Existing Capacity Qualification Deadline to provide capacity in the New England Control Area from outside of the New England Control Area for a period including the whole Capacity Commitment Period
- Capacity must have cleared in a previous FCA

Qualified MW of Existing Resources Import Capacity Resources

- Summer Qualified Capacity and winter Qualified Capacity of an Existing Import Capacity Resource shall be based on the data provided to the ISO by the Existing Capacity Qualification deadline, subject to ISO review and verification

Existing Demand Resources

- Existing Demand Resources are explained in the Demand Resource Section of this presentation package

Qualified MW of Resources Not in Commercial Operation

- Resources that are considered New in the February 2008 FCA for the 2010-2011 Capacity Commitment Period (FCA_2010_2011) and has cleared that auction (in full or in part), will be considered as Existing Capacity Resources in the December 2008 FCA for the 2011-2012 Capacity Commitment Period (FCA_2011_2012)
- Existing Resource Qualified Capacity will be based on capacity that cleared the previous auction
  - Note: Any portion of a resource that does not clear will be considered New provided that a SOI Form has been submitted and all the requirements for New Resource Qualification are being met/have been met

Qualified MW of Resources Not in Commercial Operation (cont.)

- Example:
- Resource XYZ is a New Capacity Resource in FCA_2010_2011 with a Qualified Capacity value of 200 MW
- Resource XYZ clears the auction at 150 MW
- For FCA_2011_2012, this resource will be qualified as Existing Capacity with a 150 MW summer and winter qualified capacity value
  - This Resource may pursue treatment as new for the 50 MW that did not clear in FCA-1
    - If this amount clears in FCA_2011_2012, resource will be qualified as Existing for 200 MW in FCA_2012_2013

Requirements of Existing Capacity Resources - Notification

- Twenty (20) business days prior to the Existing Capacity Qualification deadline, the Lead Market Participant for each existing resource will be able to review its calculated Qualified Capacity value via a secure User Interface on ISO New England's (the "ISO") website
  - MIS Report will also be posted for Lead Market Participants to view
  - User Interface currently under development
- Lead Market Participant will have ten (10) business days to enter challenges to the calculated summer and winter Qualified Capacity values with the ISO
  - Challenges will be entered via the User Interface
  - The ISO will evaluate and finalize all Existing Qualified Capacity values 5 business days prior to the Existing Capacity Qualification deadline

Requirements of Existing Capacity Resources – Import Capacity Resources

- Import Capacity Resources must submit to the ISO
  - Documentation of a multi-year contract entered into before the Existing Capacity Qualification Deadline (3/14/2008) to provide capacity in the New England Control Area from outside the New England Control Area for the period including the whole Capacity Commitment Period or:
  - Proof of ownership or direct control over one or more External Resources that will be used to back the Existing Import Capacity Resources during the Capacity Commitment Period, together with information to establish the summer and winter ratings of those resources

Requirements of Existing Capacity Resources with Summer > Winter

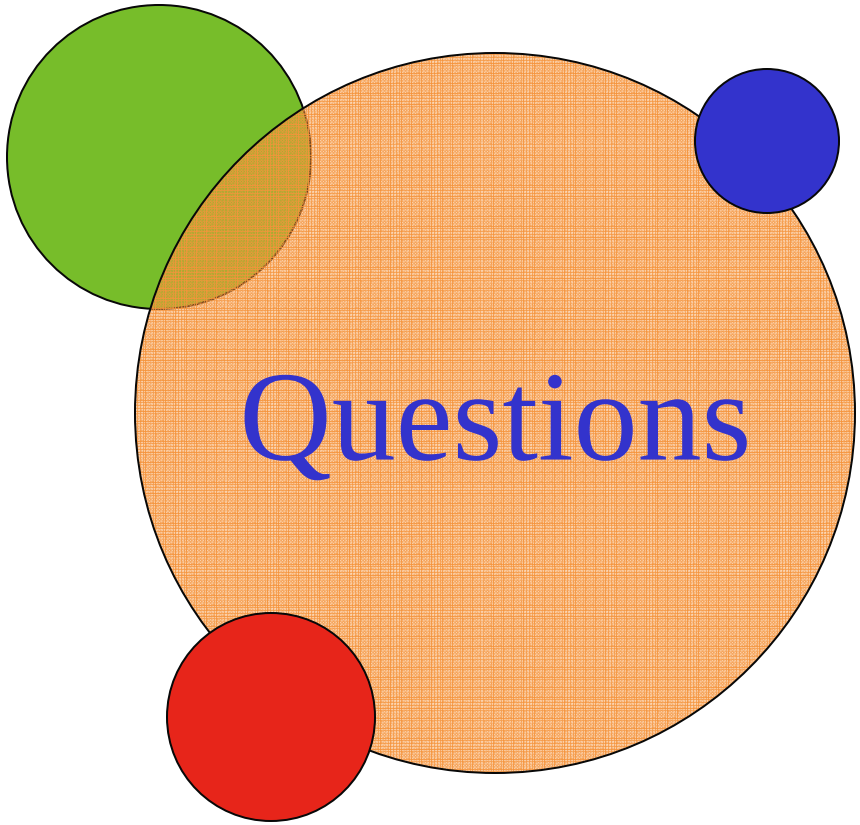
- A Resource is only considered to have a higher Summer Qualified Capacity than Winter Qualified Capacity if
  - It is NOT an Intermittent Resource and
  - The Winter Qualified Capacity < 0.98 times the Summer Qualified Capacity
    or
  - Winter Qualified Capacity < Summer Qualified Capacity minus 2 MW

Requirements of Existing Capacity Resources with Summer > Winter (cont.)

- Resources having a higher Summer Qualified Capacity than Winter Qualified Capacity must do one of the following:
  - Offer its summer Qualified Capacity as part of an offer composed of separate resources ("Composite Offer")
  - Submit a Static De-List Bid or a Permanent De-List bid for at least the difference between the summer and winter Qualified Capacity value
- Notification can be accomplished via Existing Resource User Interface

Requirements of Existing Capacity Resources with Summer > Winter (cont.)

- If no action is taken by the Existing Capacity Qualification Deadline, the ISO will submit a Static De-List bid on behalf of the resource for the difference between the resource's summer and winter Qualified Capacity value at 2.0 times the Cost of New Entry ("CONE")



Introduction to Demand Resource Participation in New England's Forward Capacity Market

Robert Laurita, Supervisor Demand Response &
Eric Winkler, Senior Analyst Demand Response

ISO new england

Today's Objective

- Provide you with enough information about how Demand Resources can participate in the Forward Capacity Market so you can make an informed decision on whether or not to participate in FCA_2011_2012.
- If you elect to submit a SOI Form, we want you to fill it out correctly.

Disclaimer

- The information in this presentation is based on the Market Rules as of 10/15/2007.
- The Market Rules are the governing document for the Forward Capacity Market (FCM), not this presentation.
- All assumptions and examples in this presentation (i.e., FCA clearing prices, reserve margins, load forecasts, performance hours, etc.) are for illustrative purposes only.
- Market Rules are subject to change.

Audience Diversity

- Many different types of Demand Resources can participate in the Forward Capacity Market
  - Ranging from Distributed Generation installed at a single facility to large scale Energy Efficiency programs serving hundreds or thousands of retail customers.
- We recognize the audience consists of people with a wide range of interests.
- The presentation will provide examples that cover a variety of different project types.

Topics we will discuss….

- Overview and background of the Forward Capacity Market
- Schedule for FCA_2011_2012
- Demand Resource Types
- Monthly Capacity Values
- Qualified Capacity for FCA_2011_2012
- SOI Form
- Qualification Package and Measurement & Verification Requirements

Demand Resources in the Forward Capacity Market Background

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Eligible Resources

- Supply Resources
  - Traditional Generation (Oil, Coa[illegible]c)
  - Intermittent Generation (Wind, [illegible]
  - Renewable Generation
- Demand Resources
  - Energy Efficiency
  - Load Management
  - Distributed Generation

Forward Capacity Auction – 3 Phases

- Qualification Period: Determine which Resource projects can be submitted into the auction.
- Planning/Construction Period: Gives Project Sponsors sufficient time to install/construct new Resources to fulfill capacity obligations.
- Commitment Period: The period that Project Sponsors are obligated to deliver capacity
  - Existing Capacity: 1 year
  - New Capacity: 1-5 years

Qualification Process Overview

- Two major information submittals are required for approval of New Demand Resources.
- SOI Form
  - Contains sufficient information to perform preliminary analysis of the effect of the proposal on the New England system, and to schedule ISO resources to review Qualification Packages.
  - Due on or before 11/14/2007 for FCA #2.
- Qualification Package
  - Contains sufficient information to assess the viability of the project.
  - Due for 4/29/2008 FCA #2.

FCA_2011_2012 Schedule

Dates	Actions
11/14/2007	Project Sponsor submits SOI Form for Demand Resources
3/14/2008	Existing Capacity Qualification Deadline
4/29/2008	Project Sponsor submits Qualification Package
4/30/2008 to 7/31/2008	ISO-NE Reviews Qualification Packages
8/1/2008	Qualification Letter sent to Project Sponsor

FCA_2011_2012 Schedule (cont.)

Dates	Actions
8/15/2008	Financial Assurance Deposit Due Date
12/1/2008	2st Forward Capacity Auction (Exact Auction Date to be determined).
12/1/2008 to 5/31/2011	Project Sponsor constructs Demand Resource Project (Projects achieving Commercial Operation before 5/31/2010 may qualify for Transition Payments as an ODR or through the Real-Time Demand Response Program.
6/1/2011	Commitment Period for FCA_2010_2011 Begins.

Demand Resource Types and Monthly Capacity Values

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Demand Resource Types

- The Market Rules define Demand Resources by the way in which they reduce load, not by technology.
  - Different technologies (Energy Efficiency, Load Management, and Distributed Generation) can reduce load in different ways.

Demand Resource Types

- On-Peak
- Seasonal Peak
- Critical Peak
- Real-Time Demand Response
- Real-Time Emergency Generation

On-Peak Demand Resources

- On-Peak Demand Resources measure their load reduction during the following hours:
  - Summer On-Peak Hours: 1 p.m. to 5 p.m. Non-Holiday Week Days in June, July and August
  - Winter On-Peak Hours: 5 p.m. to 7 p.m. Non-Holiday Week Days in December and January
- Designed for non-dispatchable measures that are not weather sensitive and reduce load across pre-defined hours (e.g., lighting, motors, etc.).

Defined Terms

- Average Hourly Load Reduction and Average Hourly Output (MW)
  - Sum of the Demand Resource's electrical energy reduction or output (MWh) divided by the number of performance hours in the month.
  - Performance hours vary by Demand Resource Type.
- Demand Reduction Value (MW)
  - A Demand Resource's monthly demand reduction (MW) calculated pursuant to the Market Rules.
  - Calculations vary by Demand Resource Type.
- Capacity Value (MW)
  - Monthly Capacity Value = Monthly Demand Reduction Value x Avoided T&D Factor x Reserve Margin Factor.

On-Peak Demand Resources
Monthly Demand Reduction Value

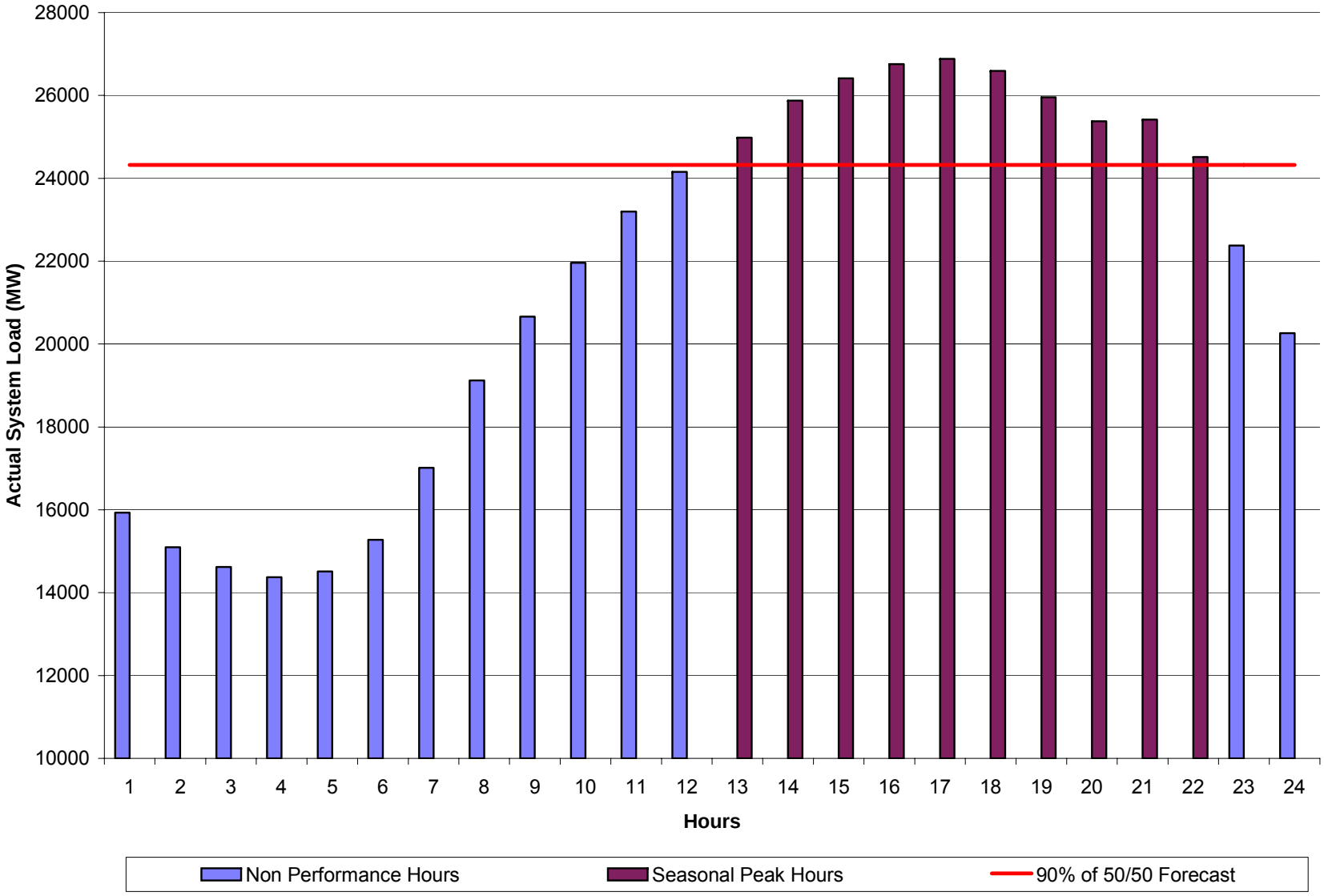
- June, July, August, December and January
  - Average Hourly Load Reduction or Output over the On-Peak Hours in the month
- September, October, November, April and May
  - Simple average of the Average Hourly Load Reduction or Output in the months of June, July and August
- February and March
  - Simple Average of the Average Hourly Load Reduction or Output in the months of December and January

	June	July	August	September	October	November
Electrical Energy Reduction (kWh)	**50,000**	**52,000**	**58,000**			
On-Peak Hours	84	84	92			
Average Hourly Reduction (MW)	0.595	0.619	0.630			
Demand Reduction Value (MW)	**0.595**	**0.619**	**0.630**	**0.615**	**0.615**	**0.615**

Seasonal Peak Demand Resources

- Seasonal Peak Demand Resources must reduce load during Non-Holiday Week Days when the ***Real-Time System Hourly Load*** is equal to or greater than **90%** of the most recent "50/50" System Peak Load Forecast for the applicable Summer or Winter Season.
- Designed for non-dispatchable, weather-sensitive measures such as energy efficient HVAC measures.

Seasonal Peak (Weekday during Peak Load Conditions)



Seasonal Peak Demand Resources Monthly Demand Reduction Value

- June, July, August, December and January
  - Average Hourly Load Reduction or Output over the Seasonal Hours in the month
  - If there are no Seasonal Peak Hours in a month, values from a previous month, audit or engineering estimates can be used
- September, October, November, April and May
  - Simple average of the Average Hourly Load Reduction or Output in the months of June, July and August
- February and March
  - Simple Average of the Average Hourly Load Reduction or Output in the months of December and January

Seasonal Peak Demand Resources
Monthly Demand Reduction Value

	June	July	August	September	October	November
Electrical Energy Reduction (kWh)		**7,800**				
Seasonal Peak Hours	0	8	0			
Average Hourly Reduction (MW)		0.975				
Demand Reduction Value (MW)	**1.006**	**0.975**	**0.975**	**0.985**	**0.985**	**0.985**

If there are no Seasonal Peak Hours in a Month, then the following will occur:

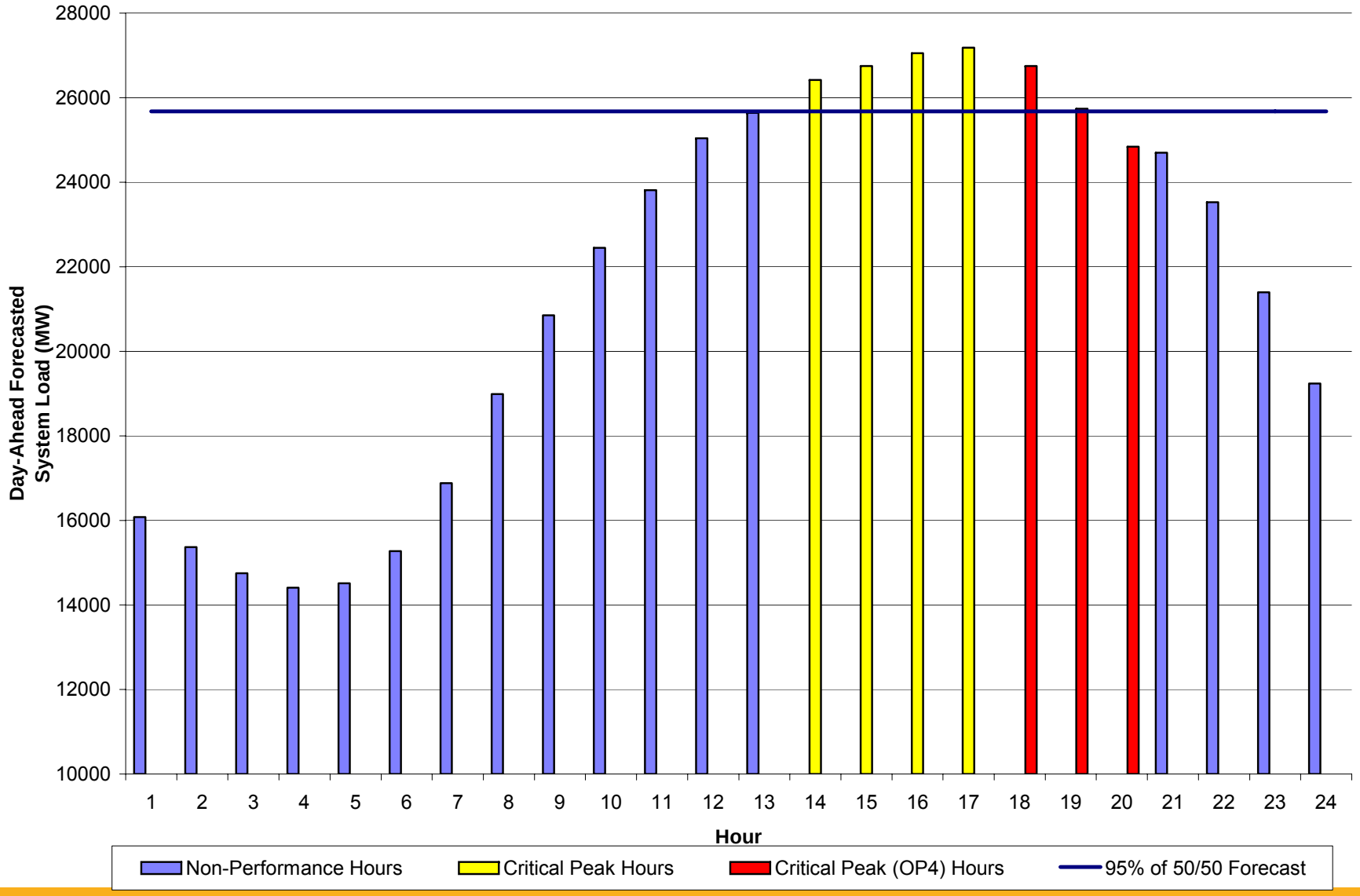
June based on Engineering Estimates from the Project Sponsor' Demand Reduction Value (DRV) Supporting Documentation that was reviewed and approved by the ISO during qualification.

August set equal to the DRV from the Previous Month (July)

Critical Peak Demand Resources

- Critical Peak Demand Resources must reduce load across Forecasted Peak Hours and Shortage Hours.
  - Forecast Peak Hours are hours when the ISO's Hourly Day-Ahead Forecasted Load (for non-holiday weekdays days) is equal to or greater than 95% of the most recent 50/50 System Peak Load Forecast for the applicable summer or winter season.
  - Shortage Hours are hours when the ISO implements OP-4 Action 6 or higher (See Definitions). OP4 Actions are called in real-time.
- Designed for measures that can be dispatched by the project owner based on system conditions.

Critical Peak (Weekday during Peak Load Conditions)



Critical Peak Demand Resources Monthly Demand Reduction Value

- June, July, August, December and January
  - Weighted Average Hourly Load Reduction or Output over the Critical Peak Hours in the month
  - If there are no Critical Peak Hours in a month, values from a previous month, audit or engineering estimates can be used.
- September, October, November, April and May
  - If there are no Critical Peak Hours in the month, simple average of the Weighted Average Hourly Load Reduction or Output in the months of June, July and August.
  - If there are Critical Peak Hours in the month, simple average of (i) Weighted Average Hourly Load Reduction or Output over the Critical Peak Hours in the month and (ii) simple average of the Weighted Average Hourly Load Reduction or Output in the months of June, July and August.

Critical Peak Demand Resources
Monthly Demand Reduction Value (cont.)

- February and March
  - If there are no Critical Peak Hours in the month, simple average of the Weighted Average Hourly Load Reduction or Output in the months of December and January.
  - If there are Critical Peak Hours in the month, simple average of (i) Weighted Average Hourly Load Reduction or Output over Critical Peak Hours in the month and (ii) simple average of the Weighted Average Hourly Load Reduction or Output in the months of December and January.

Defined Term

- **Weighted Average Hourly Load Reduction or Weighted Average Hourly Output**
  - Sum of the Demand Resource's electrical energy reduction or output (MWh) during **Forecast Peak Hours** plus
  - Sum of the Demand Resource's electrical energy reduction or output (MWh) during **Shortage Hours** multiplied by two (2)
  - Divided by the number of Forecast Hours in the month plus the number of Shortage Hours in the month multiplied by two (2)

	Weighting Factor	Reduction (MWh)	Hours
Forecast Peak Hours	1	1.500	8
Shortage Hours	2	0.500	4
Weighted Total		**2.500**	**16**
Weighted Average Hourly Reduction (MW)			**0.156**

Critical Peak Demand Resources
Monthly Demand Reduction Value

	June	July	August	September	October	November
Electrical Energy Reduction during Forecast Peak Hours (kWh)		**8,300**	**7,200**			
Forecast Peak Hours	0	8	8			
Electrical Energy Reduction during Shortage Hours (kWh)		**-**	**3,400**			**1,100**
Shortage Hours	0	0	4			2
Weighted Average Hourly Reduction (MW)		1.038	0.875			0.550
Demand Reduction Value (MW)	**1.006**	**1.038**	**0.875**	**0.973**	**0.973**	**0.761**

If there are no Critical Peak Hours in a Month, then the following will occur:

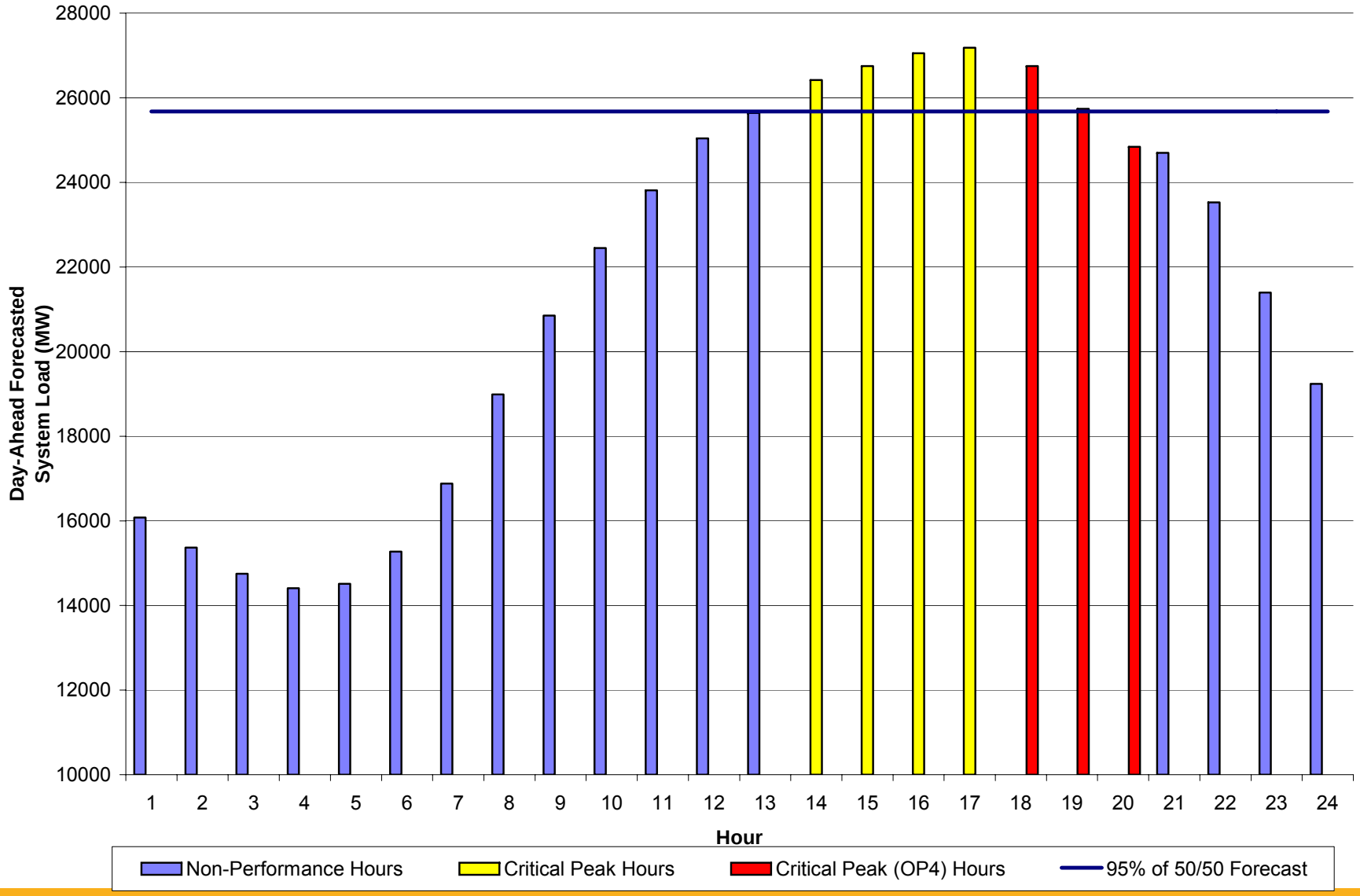
June based on Engineering Estimates from the Project Sponsor' Demand Reduction Value (DRV) Supporting Documentation that was reviewed and approved by the ISO during qualification.

November based on the Average of Summer Average and November Weighted Average Hourly Reduction

Real-Time Demand Response Resources

- The ISO will send Dispatch Instructions to Real-Time Demand Response Resources:
  - They must curtail electrical usage within 30 minutes of receiving a Dispatch Instruction; and
  - Continue curtailing usage until receiving a Dispatch Instruction to restore electrical usage.
- Designed for dispatchable measures with no binding air quality permitting restrictions on their use *during Critical Peak Hours*.

Real-Time Demand Response



Real-Time Demand Response Resources
Monthly Demand Reduction Value

- June, July, August, December and January
  - *Weighted* Average Hourly Load Reduction or Output over the Critical Peak Hours in the month
  - If there are no Critical Peak Hours in a month, values from a previous month, audit or engineering estimates can be used.
- September, October, November, April and May
  - If there are no Critical Peak Hours in the month, simple average of the Weighted Average Hourly Load Reduction or Output in the months of June, July and August.
  - If there are Critical Peak Hours in the month, simple average of (i) Weighted Average Hourly Load Reduction or Output over the Critical Peak Hours in the month and (ii) simple average of the Weighted Average Hourly Load Reduction or Output in the months of June, July and August.

Real-Time Demand Response Resources
Monthly Demand Reduction Value (cont.)

- February and March
  - If there are no Critical Peak Hours in the month, simple average of the Weighted Average Hourly Load Reduction or Output in the months of December and January.
  - If there are Critical Peak Hours in the month, simple average of (i) Weighted Average Hourly Load Reduction or Output over the Critical Peak Hours in the month and (ii) simple average of the Weighted Average Hourly Load Reduction or Output in the months of December and January.

Real-Time Demand Response Resources
Monthly Demand Reduction Value

	June	July	August	September	October	November
Electrical Energy Reduction during Forecast Peak Hours (kWh)		**8,300**	**7,200**			
Forecast Peak Hours	0	8	8			
Electrical Energy Reduction during Shortage Hours (kWh)		**-**	**3,400**			**1,100**
Shortage Hours	0	0	4			2
Weighted Average Hourly Reduction (MW)		1.038	0.875			0.550
Demand Reduction Value (MW)	**1.006**	**1.038**	**0.875**	**0.973**	**0.973**	**0.761**

If there are no Critical Peak Hours in a Month, then the following will occur:

June based on Engineering Estimates from the Project Sponsor' Demand Reduction Value (DRV) Supporting Documentation that was reviewed and approved by the ISO during qualification.

November based on the Average of Summer Average and November Weighted Average Hourly Reduction

Real-Time Emergency Generation Resources

- The ISO will send Dispatch Instructions to Real-Time Emergency Generation Resources:
  - They must curtail electrical usage within 30 minutes of receiving a Dispatch Instruction; and
  - Continue curtailing usage until receiving a Dispatch Instruction to restore electrical usage.
- ***Emergency Generators with Permit Restrictions Only.***
  - Distributed Generation whose Federal, State and/or Local air quality permit(s) limit the operation of these generators to OP-4, Action 12 between 7 a.m. to 7 p.m. non-holiday weekdays – the action in which voltage reductions of five percent (5%) of normal operating voltage that require more than 10 minutes to implement.
- The amount of Emergency Generators used to meet the Installed Capacity Requirement (ICR) is limited to **600 MW.**

Real-Time Emergency Generation Resource

Monthly Demand Reduction Value

	June	July	August	September	October	November
Electrical Energy Output (kWh)		**7,800**	**4,200**			**3,000**
RTEG Event Hours	0	4	2			2
Average Hourly Output (MW)		1.950	2.100			1.500
Demand Reduction Value (MW)	**2.013**	**1.950**	**2.100**	**2.021**	**2.021**	**1.500**

If there are no Event Hours in a Month, then the following will occur:

June based on Engineering Estimates from the Project Sponsor' Demand Reduction Value (DRV) Supporting Documentation that was reviewed and approved by the ISO during qualification.
August set equal to the Demand Reduction Value from the Previous Month (July)

November based on the November Average Hourly Output.

Monthly Capacity Values

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Defined Terms

- **Capacity Value (MW)**
  - Monthly Capacity Value = Monthly Demand Reduction Value x Avoided T&D Factor x Reserve Margin Factor.
    - Avoided T&D Factor and Reserve Margin Factors based on assumptions and forecasts from the previous commitment period's Installed Capacity Requirement calculations.
    - Slightly different rule for Distributed Generation which will be discussed later.
- **Demand Resource Performance Incentives**
  - Additional monthly capacity payment a Demand Resource may earn for producing greater MW than their Capacity Supply Obligation.
- **Demand Resource Performance Penalties**
  - Reduction in the capacity payment a Demand Resource for producing fewer MW than their Capacity Supply Obligation.

Performance Incentives and Penalties

- If the monthly Capacity Value is less than the Capacity Supply Obligation, the Project Sponsor will receive a lower payment for the month and the difference times the FCA clearing price will be paid into a “Performance Incentive Pool”.

- Project Sponsors that exceeded their Capacity Supply Obligation for the month could receive additional Incentive Payments. However, the total amount of incentives paid out cannot exceed the total amount of penalties collected.

Performance Incentive - Example

	DR #1	DR #2	All other DR Resources	Total
Capacity Payment Rate ($/kW-Month)	**$ 5.00**	**$ 5.00**	**$ 5.00**	
Capacity Offer (MW)	**1.00**	**1.00**	**98.00**	100.00
Capacity Payment at Capacity Offer	**$ 5,000**	**$ 5,000**	**$ 490,000**	**$ 500,000**
Capacity Value Delivered in the Month (MW)	**2.00**	**0.50**	**98.00**	**100.50**
Variance (Delivered - Offer) (MW)	1.00	(0.50)	-	0.50
Over Performance (MW)	1.00	-	-	0.50
Under Performance (MW)	-	0.50	-	0.50
Paid into DR Incentive Pool	$ -	$ 2,500	$ -	$ 2,500
Maximum Additional Payment for Over Performance	$ 5,000	$ -	$ -	$ 5,000
% of Total Over DR Performance	100.00%	0.00%	0.00%	100.00%
Performance Incentive (Paid from Pool)	**$ 2,500**	**$ -**	**$ -**	**$ 2,500**
Net Payment for the Month	**$ 7,500**	**$ 2,500**	**$ 490,000**	**$ 500,000**

Total Paid into the DR Performance Incentive Pool	$ 2,500
Total Paid from the DR Performance Incentive Pool	$ 2,500
Change is Capacity Charges to Load from Demand Resource Under Performance	**$ -**

Capacity Value and Payment Examples

- **Assumptions:**
  - FCA Clearing Price = $5.00/kW per Month
  - Reserve Margin = 15%
  - Sufficient funds are in the monthly Performance Incentive Pool to provide non-pro rated Performance Incentive Payments
- **Examples:**
  1. On-Peak Non-Distributed Generation Demand Resource
  2. Seasonal Peak Non-Distributed Generation Demand Resource
  3. Critical Peak and Real-Time Demand Response Resource
  4. Real-Time Emergency Generation Resource

On-Peak Demand Resource

Capacity Obligation:	0.750	MW				
	June	July	August	September	October	November
Electrical Energy Reduction (kWh)	**50,000**	**52,000**	**58,000**			
On-Peak Hours	84	84	92			
Average Hourly Reduction (MW)	0.595	0.619	0.630			
Demand Reduction Value (MW)	**0.595**	**0.619**	**0.630**	**0.615**	**0.615**	**0.615**
Reserve Margin Factor	1.15	1.15	1.15	1.15	1.15	1.15
T&D Factor	1.08	1.08	1.08	1.08	1.08	1.08
Capacity Value (MW)	**0.739**	**0.769**	**0.782**	**0.763**	**0.763**	**0.763**
Performance Penalty (MW)	0.011	0.000	0.000	0.000	0.000	0.000
Performance Incentive (MW)	0.000	0.019	0.032	0.013	0.013	0.013
Clearing Price ($/kW-Month)	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00
Capacity Payment	**$ 3,695**	**$ 3,750**	**$ 3,750**	**$ 3,750**	**$ 3,750**	**$ 3,750**
Performance Incentive Payment*	$ -	$ 94	$ 162	$ 67	$ 67	$ 67
Total Payment	**$ 3,695**	**$ 3,844**	**$ 3,912**	**$ 3,817**	**$ 3,817**	**$ 3,817**

* Assumes sufficient funds existing in the Performance Penalty Pool to make non-pro-rated Performance Incentive Payments

Real-Time Emergency Generation

Capacity Obligation:	2.500	MW				
	June	July	August	September	October	November
Electrical Energy Output (kWh)		**7,800**	**4,200**			**3,000**
RTEG Event Hours	0	4	2			2
Average Hourly Output (MW)		1.950	2.100			1.500
Demand Reduction Value (MW)	**2.013**	**1.950**	**2.100**	**2.021**	**2.021**	**1.500**
Reserve Margin Factor	1.15	1.15	1.15	1.15	1.15	1.15
T&D Factor	1.08	1.08	1.08	1.08	1.08	1.08
Capacity Value (MW)	**2.500**	**2.422**	**2.608**	**2.510**	**2.510**	**1.863**
Performance Penalty (MW)	0.000	0.078	0.000	0.000	0.000	0.637
Performance Incentive (MW)	0.000	0.000	0.108	0.010	0.010	0.000
Clearing Price ($/kW-Month)	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00
Capacity Payment	**$ 12,500**	**$ 12,110**	**$ 12,500**	**$ 12,500**	**$ 12,500**	**$ 9,315**
Performance Incentive Payment*	$ -	$ -	$ 541	$ 50	$ 50	$ -
Total Payment	**$ 12,500**	**$ 12,110**	**$ 13,041**	**$ 12,550**	**$ 12,550**	**$ 9,315**

Notes on Demand Reduction Values:
June based on Engineering Estimate from Supplier's approved M&V Plan
August set equal to the Demand Reduction Value from the Previous Month (July)
November based on the November Average Hourly Output

Qualified Capacity for FCA_2011_2012

ISO new england

FCA Requires 12-Month Capacity

- **Project Sponsors must be offer and deliver capacity in all 12 months of the year.**
- Project Sponsors with Demand Resources with seasonal capability (i.e., higher in the summer than winter) can either:
  - Offer a fixed 12-month Capacity Value based on their minimum capability, or
  - Make a Composite Offer consisting of multiple Demand and/or Supply resources. A Composite Offer can be made with another Project Sponsor, or
  - Participate in the monthly and seasonal Re-Configuration Auctions, but not the FCA or annual Re-Configuration Auctions, or
  - Participate in a Bi-Lateral Agreement with another Project Sponsor

Composite Offers

- Two or more Project Sponsors can partner to submit a Composite Offer.
- The Composite Offer must deliver a fixed Capacity Value in all 12 months of the year.
- Composite Offers must be submitted by **4/29/2008 *.**
- **Project Sponsors that intend to submit a Composite Offer, but have not yet found a Composite Offer partner, can submit a SOI Form for their individual Demand Resource.**

* Composite Offer submittal date is currently under review and subject to change

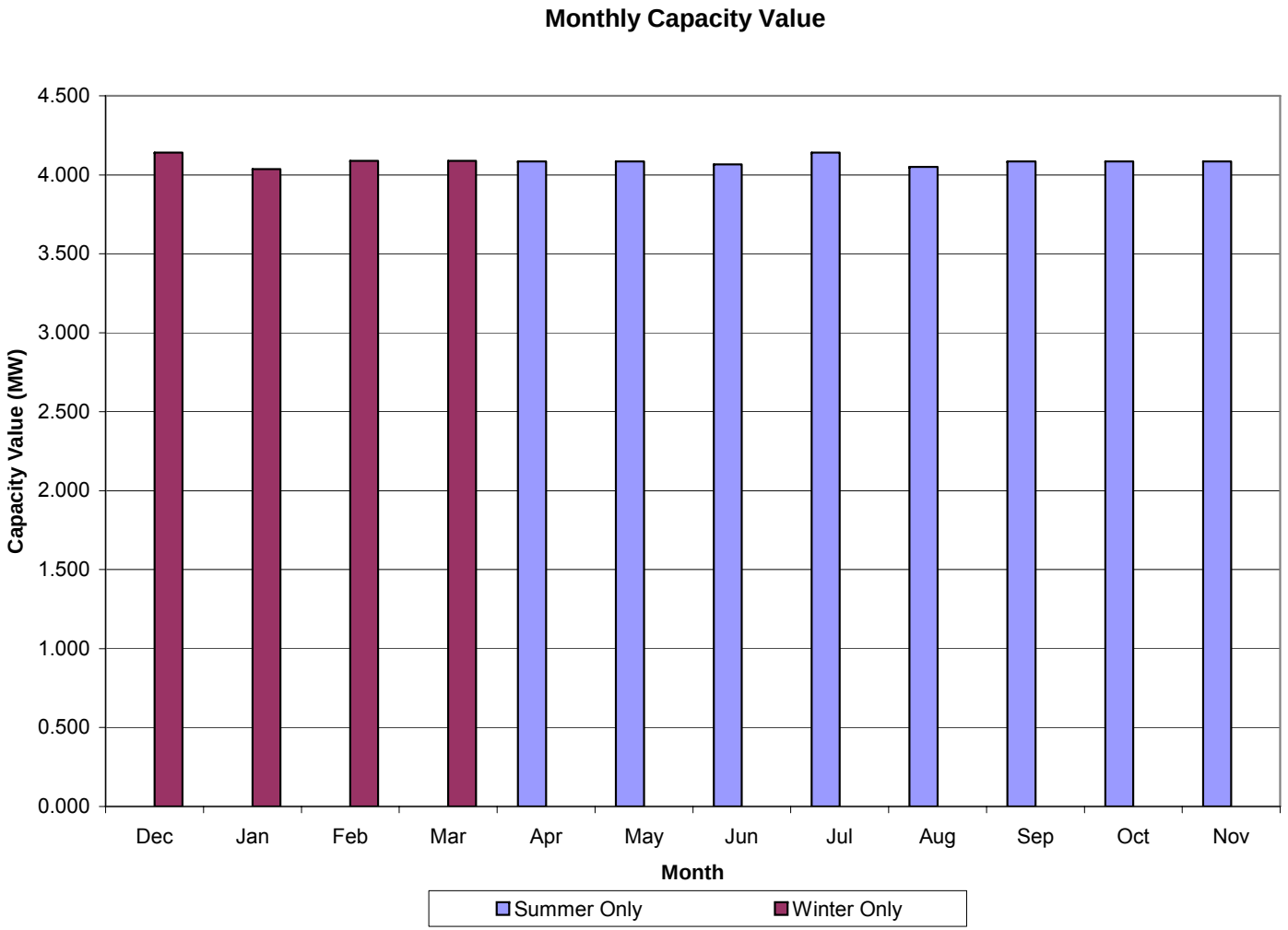
Composite Offer Example – Part 1

	Demand Resource - Summer Only						
Month	**Electrical Energy Reduction (kWh)**	On-Peak Hours	Average Hourly Reduction (MW)	**Demand Reduction Value (MW)**	Reserve Margin Factor	T&D Factor	**Capacity Value (MW)**
Dec	0	42	0.000	0.000	1.15	1.08	**0.000**
Jan	0	40	0.000	0.000	1.15	1.08	**0.000**
Feb				0.000	1.15	1.08	**0.000**
Mar				0.000	1.15	1.08	**0.000**
Apr				3.289	1.15	1.08	**4.085**
May				3.289	1.15	1.08	**4.085**
Jun	275,000	84	3.274	3.274	1.15	1.08	**4.066**
Jul	280,000	84	3.333	3.333	1.15	1.08	**4.140**
Aug	300,000	92	3.261	3.261	1.15	1.08	**4.050**
Sep				3.289	1.15	1.08	**4.085**
Oct				3.289	1.15	1.08	**4.085**
Nov				3.289	1.15	1.08	**4.085**

Composite Offer Example – Part 2

	Demand Resource - Winter Only						
Month	**Electrical Energy Reduction (kWh)**	On-Peak Hours	Average Hourly Reduction (MW)	**Demand Reduction Value (MW)**	Reserve Margin Factor	T&D Factor	**Capacity Value (MW)**
Dec	140,000	42	3.333	3.333	1.15	1.08	**4.140**
Jan	130,000	40	3.250	3.250	1.15	1.08	**4.037**
Feb				3.292	1.15	1.08	**4.088**
Mar				3.292	1.15	1.08	**4.088**
Apr				0.000	1.15	1.08	**0.000**
May				0.000	1.15	1.08	**0.000**
Jun	0	84	0.000	0.000	1.15	1.08	**0.000**
Jul	0	84	0.000	0.000	1.15	1.08	**0.000**
Aug	0	92	0.000	0.000	1.15	1.08	**0.000**
Sep				0.000	1.15	1.08	**0.000**
Oct				0.000	1.15	1.08	**0.000**
Nov				0.000	1.15	1.08	**0.000**

Composite Offer Example – Part 3



Capacity Types

- **New Demand Resource**
  - Can actively participate in setting the FCA Clearing Price
  - Can elect from 1 to 5 Year Commitment Period
- **Existing Demand Resource**
  - *"Price Taker" d*oes not actively participate in setting the FCA Clearing Price
  - 1 Year Commitment Period

Type 1: Existing Capacity - FCA_2011_2012

- Resources classified as Existing Capacity for FCA_2010_2011 will have a Summer and Winter Qualified Capacity (MW) for FCA_2011_2012 equal to the values established for FCA_2010_2011.
- Project Sponsors will be given the opportunity to "challenge" the Summer and Winter values, increase or decrease, by providing supporting documentation to justify different values.
- Project Sponsors must submit certification that the projects comply with their ISO approved M&V Plan by 2/29/2008.

Type 2: Not Existing Capacity - FCA_2010_2011

- Resources registered as either a Real-Time Demand Response or Other Demand Resource (ODR) after 4/30/2007 and Ready-to-Respond/Active as of 2/1/2008 will have Summer and Winter Qualified Capacity set equal to zero.
- Project Sponsors will be given the opportunity to "challenge" the zero Summer and Winter values by providing supporting documentation to justify different values.
- Project Sponsors must submit a M&V Plan complying with M-MVDR on or before 2/29/2008.

Existing Capacity – Timeline - FCA_2011_2012

Date	Action
2/1/2008	ISO-NE compiles a list of Demand Resources registered in the Real-Time Demand Response Program or as an Other Demand Resource (ODR)
2/14/2008	ISO-NE makes available to Project Sponsors a report of their Demand Resources including estimates of Summer and Winter Demand Reduction Value (MW). Report is available through secure user interface on the ISO's website, not e-mail.
2/29/2008	Last day for Project Sponsors to enter "disputed" values (i.e., Resource Type, MW, etc.) through a secure user interface on the ISO's website, as well as verify and/or update M&V plans.
3/7/2008	ISO-NE makes available to Project Sponsors a final report of their Demand Resources, including the outcome of any disputed values. The report is not e-mailed.
3/14/2008	Existing Capacity Qualification Deadline and deadline for submitted "Delist Bids"

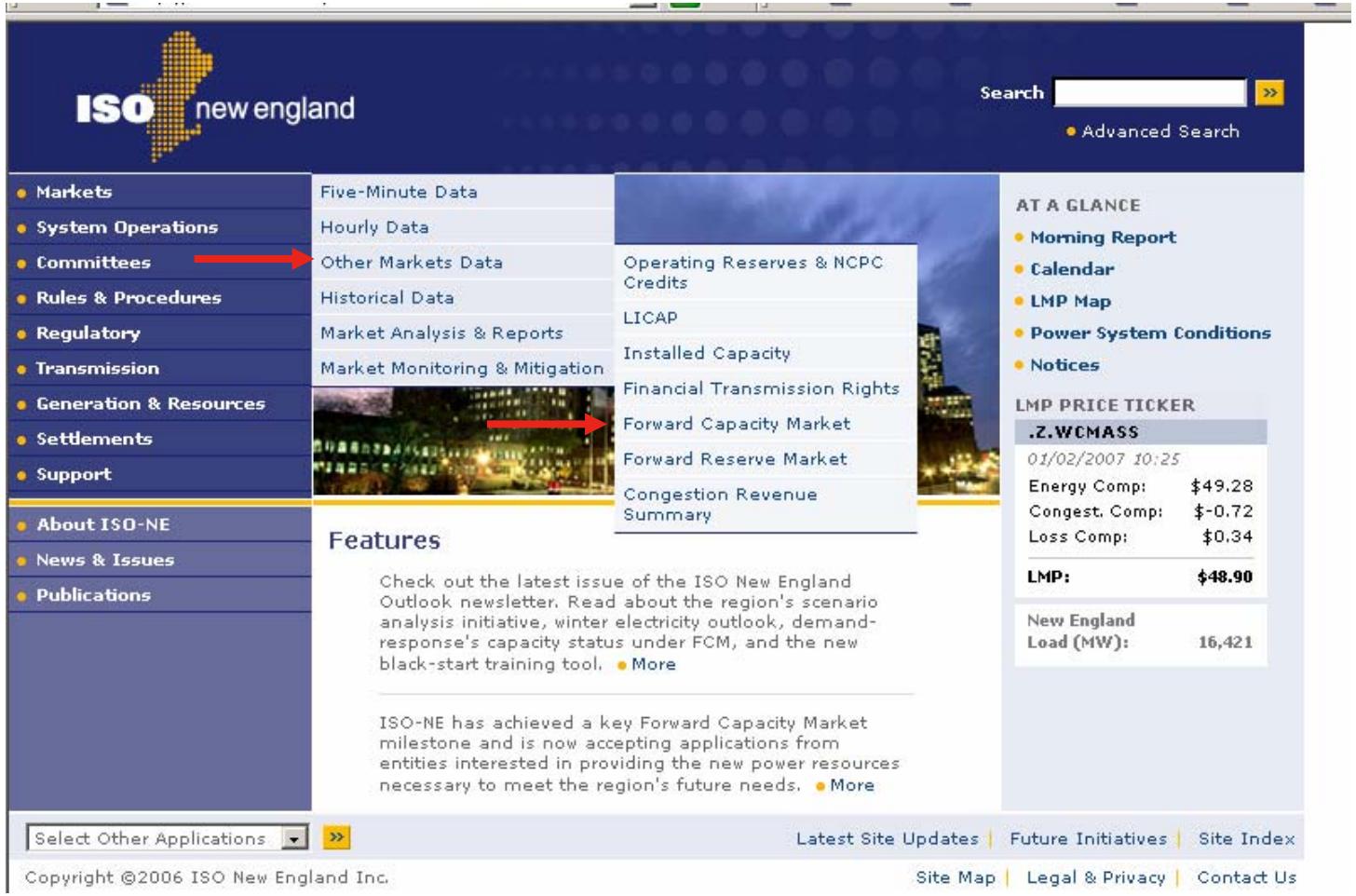
Show of Interest (SOI) Form

ISO new england

Questions:

- Where can I find the SOI Form?
- When is it due?
- Who needs to complete a SOI Form?
- What information is required?
- Who do I send the form to?
- Do I have to be a Market Participant to submit a SOI Form?

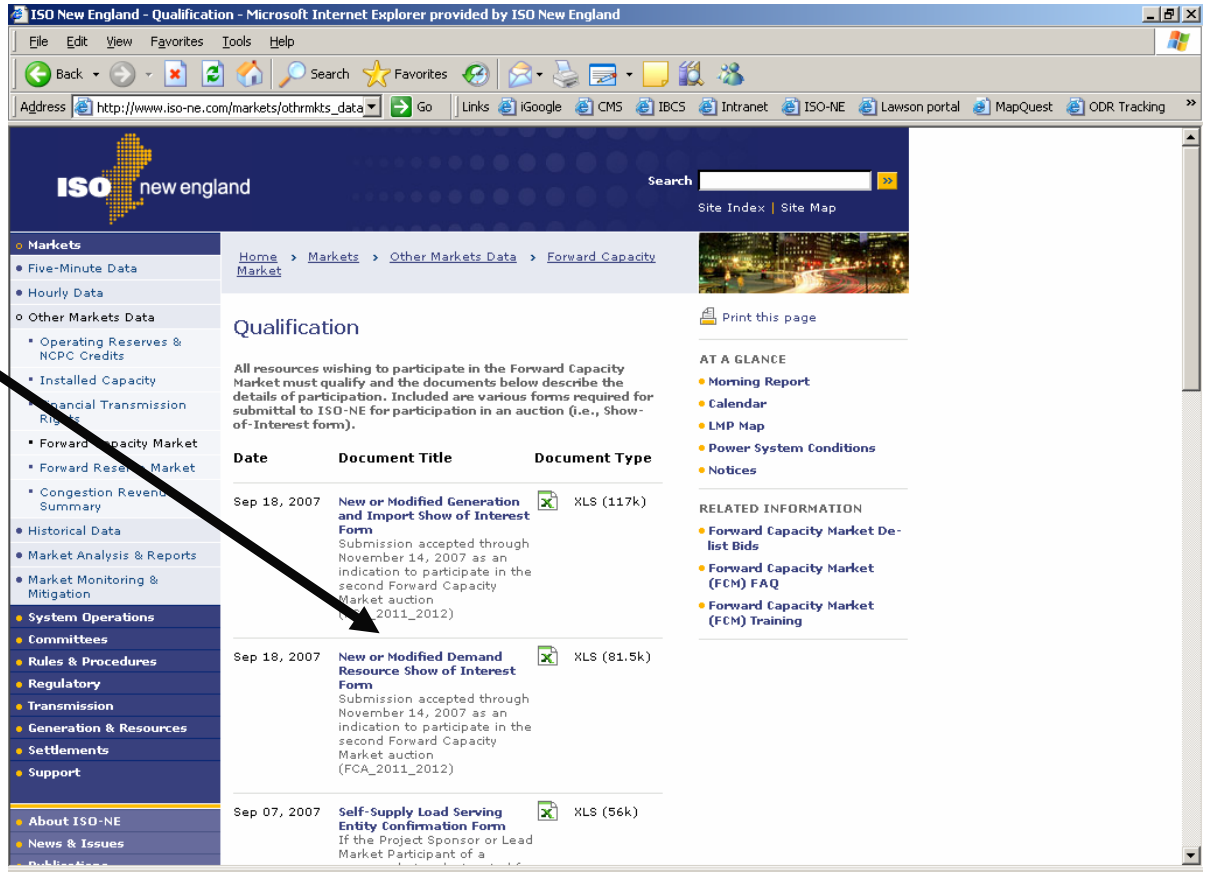
Where can I find the SOI Form?



- Look on www.iso-ne.com under Markets > Other Markets Data > Forward Capacity Market > Qualification

Where can I find the SOI Form?

- Click on link dated **9/18/2007** New or Modified Demand Resource SOI Form
- http://www.iso-ne.com/markets/othrmkts_data/fcm/qual/index.html



SOI Form

- When is it due?
  - For Demand Resources, SOI Forms for FCA #2 must be returned to ISO-NE on or before 11/14/2007
- Who needs to complete a SOI Form?
  - New Demand Resources wanting to participate in FCA_2011_2012.
  - Existing Demand Resources are NOT required to submit a SOI Form.

SOI Form

- Who do I send the form to?
  - Completed forms should be e-mailed to custserv@iso-ne.com
  - ISO New England will only accept forms submitted electronically via e-mail.

Sample Show of Interest (SOI) Form

Forward Capacity Market
Show of Interest Application - Demand Resource
For Commitment Period Beginning 06/01/2011

		If Yes, provide ID number below:	
Are you an ISO New England Customer?	YES	Customer ID	12345
Did you already submit Qualification Package, that was accepted, for this same project (carryover project) for FCA #1?	NO	Project ID	
Is this project an expansion of an existing Asset or accepted Qualification Package for FCA #1 (project addition)?	NO	Asset ID	

Project Sponsor Information	
Project Sponsor Company Name	Acme Energy Services Company
Address	123 Main Street
City/Town	Somers
State	CT
ZipCode	06071
First Name	John
Last Name	Smith
Phone	860-555-1212
Email	jsmith@acme.com

Project Information		
Resource Type	Seasonal Peak Demand Resource	
Project Name	Small Commercial HVAC Efficiency Project	
Load Zone	Connecticut	
Estimated Demand Reduction Value (MW) Implemented by Date		
Date	***Summer***	***Winter***
Five weeks prior to the first annual FCA after the FCA in which the Demand Resource supplier's capacity award would be made, if applicable.	0.000	0.000
Five weeks prior to the second annual FCAs after the FCA in which the Demand Resource supplier's capacity award would be made, if applicable.	0.500	0.250
On the Commercial Operation Date (note: the Commercial Operation Date must be on or before the beginning of the Commitment Period 6/1/2011)	1.000	0.500
Project Description (250 Character Maximum)	Install high efficiency HVAC systems in small commercial facilities throughout Connecticut	
Commercial Operation Date	6/1/2011	

Does this Project involve 5 MW or more at a single facility?	NO
Is this a Distributed Generation Project?	NO
If Distributed Generation Project, what is the aggregate nameplate rating of the generation in MW?	
If Distributed Generation Project, what is non-coincident peak load of the facility in MW during the last 12 months?	
Initial Deposit	**$ 500.00**

Large or Small Generator Interconnection Procedures (LGIP and SGIP) Distributed Generation Projects ONLY		***Queue Position #***
The project has submitted an interconnection Request to ISO-NE	NO	
The Project has an executed Feasibility Study from ISO-NE	NO	
The Project has an executed System Impact Study from ISO-NE	NO	
The Project has an executed Interconnection Agreement	NO	

Project Technical Contact Information	
First Name	John
Last Name	Smith
Address	123 Main Street
City	Somers
State	CT
Zip Code	06071
E-Mail	jsmith@acme.com
Phone	860-555-1212
Project Financial Contact Information	
First Name	Bob
Last Name	Moneyguy
Address	123 Main Street
City	Somers
State	CT
Zip Code	06071
E-Mail	bmoneyguy@acme.com
Phone	860-555-1313

Validation Checks in SOI Form

This Demand Resource Show of Interest application should be submitted electronically as an Excel workbook to (custserv@iso-ne.com).

This application WILL NOT be considered complete until all the requested information is provided no later than the final day of the applicable Demand Resource
Show of Interest application submittal window.

Number of input errors:	**0**

Please correct any input errors before submitting the form to custserv@iso-ne.com

Forms submitted with input errors will not be processed and returned to the Project Sponsor.

Validation Checks in SOI Form

Forward Capacity Market
Show of Interest Application - Demand Resource
For Commitment Period Beginning 06/01/2011

		If Yes, provide ID number below:		**Data Validation**
Are you an ISO New England Customer?	YES	Customer ID		**ERROR: Please input Customer ID**
Did you already submit Qualification Package, that was accepted, for this same project (carryover project) for FCA #1?	NO	Project ID		OK
Is this project an expansion of an existing Asset or accepted Qualification Package for FCA #1 (project addition)?	NO	Asset ID		OK
Project Sponsor Information				
Project Sponsor Company Name	Acme Energy Services Company			OK
Address	123 Main Street			OK
City/Town	Somers			OK
State	CT			OK
ZipCode	06071			OK
First Name	John			OK
Last Name	Smith			OK
Phone				**ERROR: Please provide the requested information**
Email	jsmith@acme.com			OK

FAQ: SOI Form

- Do I have to be a Market Participant to submit a SOI Form?
  - No. However, Project Sponsors that are not currently Market Participants must also submit a Non-Participant Contact Form.
  - The Non-Participant Contact Form is located on the same webpage as the SOI Form.

FAQ: SOI Form (cont.)

- What is a Carry Over project?
  - Must be a Qualified Project for FCA_2010_2011
    - Project Sponsor received an acceptance QDN letter on 10/2/2007.
  - Project Sponsor wants to submit an identical project to FCA_2011_2012 in case project does not clear in FCA_2010_2011
  - After FCA_2010_2011, any MW cleared in FCA_2010_2011 will reduce the proposed capacity of the project for FCA_2011_2012

FAQ: SOI Form (cont.)

- What qualifies as an expansion of an Existing Project?
  - New Demand Resource that will expand upon an Existing Demand Resource with no material changes to the resource (Market Rule Section III.13.1.9.3.1)
  - A material change includes:
    - a change in the designation of the Demand Resource type;
    - a change in the Project Sponsor, subject to review by the ISO of the capability and experience of the new Project Sponsor;
    - a change in the Load Zone within which the project is located;
    - a change in the type of measures being implemented; or
    - a change to its most recently approved Measurement and Verification Plan.
  - Initial Deposit Fee = $500

FAQ: SOI Form (cont.)

- What is not considered a Material Change?
  - Additional measure installs of lighting retrofits, motors, HVAC, (etc.).
  - Additional installs of measures to commercial/industrial custom program.
  - Adding facilities to Real Time Demand Response aggregation project.
  - Adding new qualifying DG facilities to aggregation project in same load zone with same resource type
- What are examples of Material Changes?
  - New EE program not already underway in existing project.
  - Additional EE or LR projects in different load zone.
  - New Distributed Generation Project attaching to existing EE project.
  - Project Sponsor changing from X to Y where Y has no prior experience.
  - Project Resource type is different from existing, e.g. On-Peak, Seasonal Peak, Critical Peak, RTDR or RTEG.

Demand Resources Fee Schedule

New Distributed Generation > or = 20 MW	New Distributed Generation < 20 MW and > or = 2 MW	All Demand Resources > or = 2 MW Other Than Distributed Generation	New Demand Resources < 2 MW
$25,000	$7,500	$3,000	$500
With Executed Feasibility Study Agreement or System Impact Study Agreement	*With Executed Feasibility Study Agreement or System Impact Study Agreement*	*New Demand Resources that expand upon an Existing Demand Resource with no material changes to the resource*	
$15,000	$6,500	$500	n/a

Initial Deposit Receipt

Tab 2 of the SOI Form

Forward Capacty Market
Initial Deposit Summary Report

Project Sponsor	Acme Energy Services Company	
Project Name:	Small Commercial HVAC Efficiency Project	
Initial Deposit Amount	**$**	**500.00**

Make Checks Payable to:

ISO New England
One Sullivan Road
Holyoke, MA 01040
Attn: Controller's Office

Wire Transfer Funds to:

Key Bank
ABA #021300077
Account #329681014844

Initial Deposit due upon submission of Show of Interest Form to ISO New England

Initial Deposit

- Initial Deposit invoices will be issued 12/4/2007
  - Sent via email and certified mail
  - Due 10 business days from Date of Invoice (12/15/2007)
- Initial Deposit is calculated on SOI Form
- Separate tab on SOI Form provides a receipt
- Project Sponsors are STRONGLY ENCOURAGED to pay their Initial Deposits early to avoid the risk of payment not being received by December 15th.

Distributed Generation Definition

- "Distributed Generation" shall mean generation resources directly connected to end-use customer load and located behind the end-use customer's billing meter, which reduce the amount of energy that would otherwise have been produced by other Capacity Resources on the electricity network in the New England Control Area during Demand Resource On-Peak Hours, Demand Resource Seasonal Peak Hours, Demand Resource Critical Peak Hours, Real-Time Demand Response Event Hours, or Real-Time Emergency Generation Event Hours, provided that the aggregate nameplate capacity of the generation resource does not exceed 5 MW, or does not exceed the most recent annual non-coincident peak demand of the end-use metered customer at the location where the generation resource is directly connected, whichever is greater. Distributed Generation resources are not eligible for energy payments from ISO-administered energy markets. Generation resources cannot participate in the Forward Capacity Market as Demand Resources, unless they meet the definition of Distributed Generation.

Qualification Package

ISO new england

Questions:

- Who needs to complete a Qualification Package?
- What information is required?
- When is the Qualification Package due?
- Can the project information in the Qualification Package differ from the project information in the SOI Form?

Qualification Package

- Project Description
  - Minimum Project Size = 100 kW
  - Must be located in a single Load Zone
- Source of Funding
- Customer Acquisition Plan and Critical Path Schedule
- Measurement & Verification Plan
- Capacity Commitment Period Election
  - Maximum 5 Years for New Capacity

Schedule

- Qualification Packages for FCA_2011_2012 must be submitted to ISO New England on or before 4/29/2008.

Project Description

- Location and Load Zone
- Source of Funding (e.g., private financing, public benefits funds)
- Types of measures that will be implemented
- Types of facilities at which the measures will be implemented
- Estimated Summer and Winter Demand Reduction (MW) per measure
  - With supporting documentation (e.g. engineering estimates or documentation of verified savings from comparable projects) so that ISO-NE can assess whether estimated measure savings are reasonable.
- Estimated total Demand Reduction Value
- Capability/Experience of Project Team

Customer Acquisition Plan

- Somewhat analogous to the requirement that Generators document site control
- Required contents:
  - Description of proposed Customer Market
  - Estimated size of Target Market
  - Marketing Plan
    - Explain how savings goals will be achieved and customers will be recruited (i.e., marketing and outreach strategy, incentive offerings) and any progress-to-date (e.g., leads, customer commitment letters)
  - Viability of Marketing Plan
    - Supporting documentation showing that the targeted level of market penetration is achievable (based on market potential studies and/or prior program experience)
  - Critical Path Schedule

Critical Path Schedule (CPS)

- Proposed milestones for most DR projects:
  - Delivery schedule of the share of total bid capacity installed as of Target Dates during the Planning Period
  - Target dates will be linked to dates when financial assurance will be released for DR capacity that has come on-line during the Planning Period (e.g., construction period).
  - Note: as resource is delivered and FA is released, the DR resource can be offered in a reconfiguration auction.

Measurement & Verification Plan

- Measurement & Verification Plan will describe the methods, assumptions and measurements that will be used to determine actual demand reductions during the Commitment Period.
- Measurement & Verification Plan must comply with the requirements in ISO New England's Manual for Measurement and Verification of Demand Reduction Value from Demand Resources (M-MVDR).

Overview of M-MVDR

- The M-MVDR consists of the following sections:
  - Project Description Requirements
  - M&V Methodologies
  - Statistical Methods
  - Measurement of Demand Resource Project Savings
  - Data Collection, Validation and Management
  - Reporting, Independence, Supplemental Information, Project Organization
  - Real-Time Demand Response and Real-Time Emergency Generation

Capacity Commitment Period Election

- New Demand Resources can elect a Capacity Commitment Period from a minimum of 1 year to a maximum of 5 years, in one-year increments.

Consistency with SOI

- The Project Sponsor's New Resource Capacity Qualification Package must be consistent with the SOI Form.
- No material changes are allowed. Including, but not limited to, the following changes:
  - Demand Resource Type
  - Project Sponsor [Note: we allow a change in the Project Sponsor if the ISO finds that the new Project Sponsor has similar or better qualifications and experience]
  - Load Zone
  - Demand Reduction Value by more than ± 30%
  - Measure Type
  - Interconnection Status of a DG project

Financial Assurance

- For the 1st Forward Capacity Auction the Financial Assurance Requirement will be $22.50 per kW.
- For a 500 kW project, a total of $11,250 will be required payable in three installments.
- Provisions to return some of the Financial Assurance for projects that deliver all or a portion of their Capacity Offer prior to the Commitment Period.
- Acceptable forms of Financial Assurance include Cash, Letter of Credit or Corporate Guarantee.

Financial Assurance Rates and Schedule

When Financial Assurance Required	Amount
5-Days after Project Sponsor receives FCA Qualification Letter	$2.00 per KW times Amount Bid
5-Days after announcement of Winning Offers	Additional $5.00 per kW times Amount Cleared
15-Days prior to the next FCA. First FCA after the Project Sponsor's offer clears.	Additional $7.50 per kW times Amount Cleared
15-Days prior to the next FCA. Second FCA after the Project Sponsor's offer clears	Additional $7.50 per kW times Amount Cleared
	Total: $22.50 per kW times Amount Cleared

Note: There are provisions in the Market Rules to credit a project's FA for capacity delivered prior to the start of the Commitment Period

Questions and Discussion

New, Carry Over, and Expansion Project Scenarios

	New	New	Carryover	Expansion
Did you submit an SOI for this project in FCA#1	Yes	Yes	Yes	Yes
Did you submit a Qualification Package for this project in FCA#1?	No	Yes	Yes	Yes
Was this project's Qualification Package accepted by the ISO in FCA#1?	No	No	Yes	Yes
Has the Demand Reduction Value (MW) for this project increased from what you submitted in FCA#1?	No	No	No	Yes
Should you input your Project ID on the SOI for FCA#2	Yes	Yes	Yes	Yes
Is this a "carry over" project for FCA#2?	No	No	Yes	No
Is this an addition to an existing Asset or accepted Qualification Package?	No	No	No	Yes
Should you complete a new SOI for this project for FCA#2?	**Yes**	**Yes**	**Yes***	**Yes**

* Update contact information if appropriate