

Supply Resources Show-of-Interest (SOI)

*New Generation and Imports Qualification
Forward Capacity Auction (FCA) 2015-2016*

February 16 & 25, 2011

Before We Begin

- Presentation available on the ISO New England (ISO-NE) web site: [Support > Training > Training Materials > Forward Capacity Market](#)
- General WebEx usage
 - Interactivity
 - Questions and answers
- Evaluation

Disclaimer for Market Training

ISO New England provides training to advance participant and stakeholder understanding of the New England Markets.

Since not all issues and requirements are addressed by the training, participants and other stakeholders should not rely solely on this training for information but should consult the effective Markets, Services and Transmission Tariff (“Tariff”), and the relevant Market Manuals, Operating Procedures and Planning Procedures (“Procedures”).

In case of a discrepancy between training provided by ISO and the Tariff or Procedures, the meaning of the Tariff and Procedures shall govern.

Session Details

- Today's presenter:
 - Sarah Xavier, Engineer
Resource Analysis and Qualification
- Today's panelist:
 - Marianne Perben, Supervisor
Resource Analysis and Qualification

Company names and numerical values
are fictitious and not to be associated
with any actual market customer.

Objectives



- After this training you should be able to:
 - Recognize resources eligible to participate in the Forward Capacity Market (FCM).
 - Follow and apply the qualification timeline.
 - Locate and run the Forward Capacity Tracking System (FCTS).
 - Utilize FCTS to submit a Show of Interest (SOI).

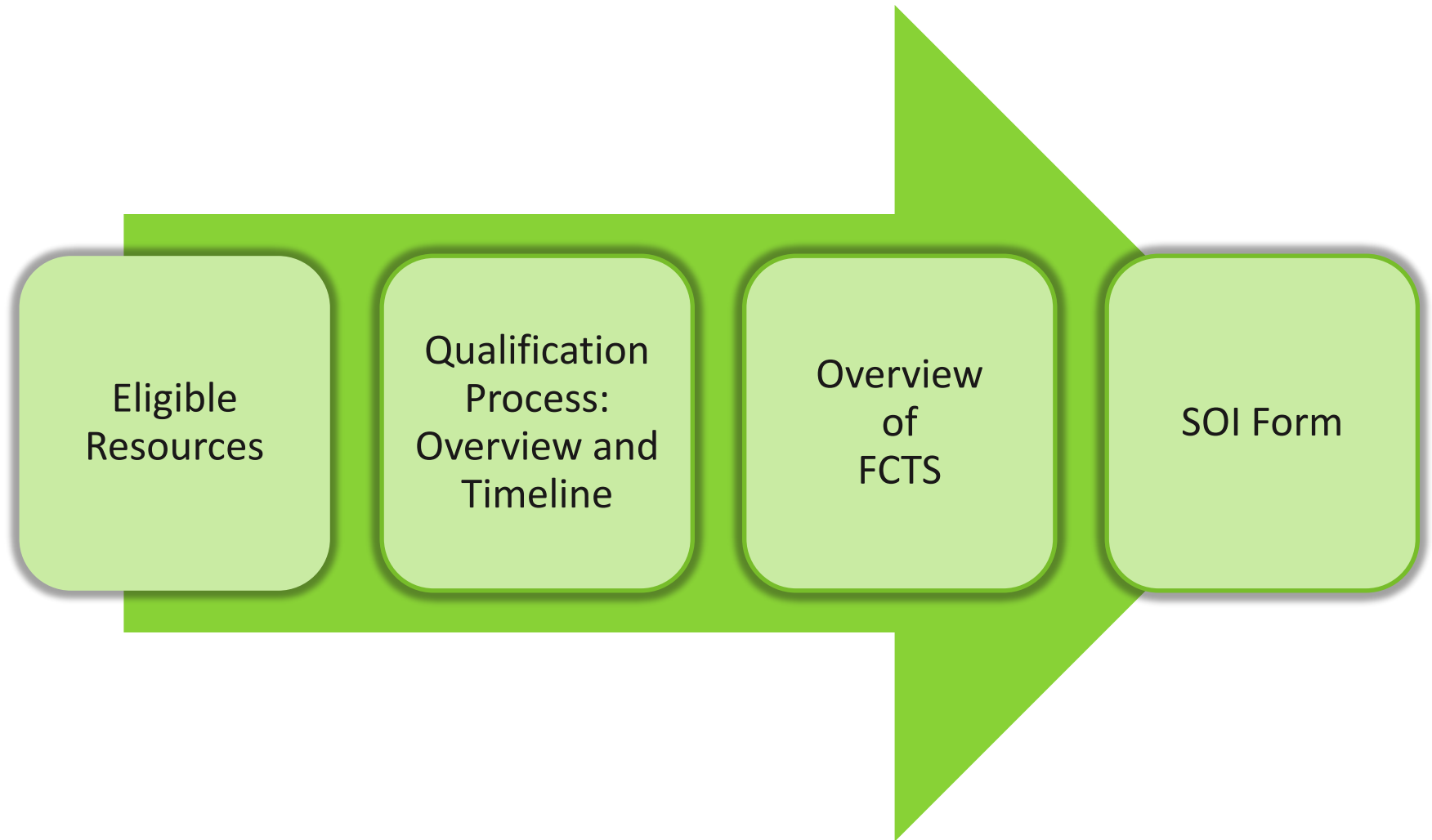
Background

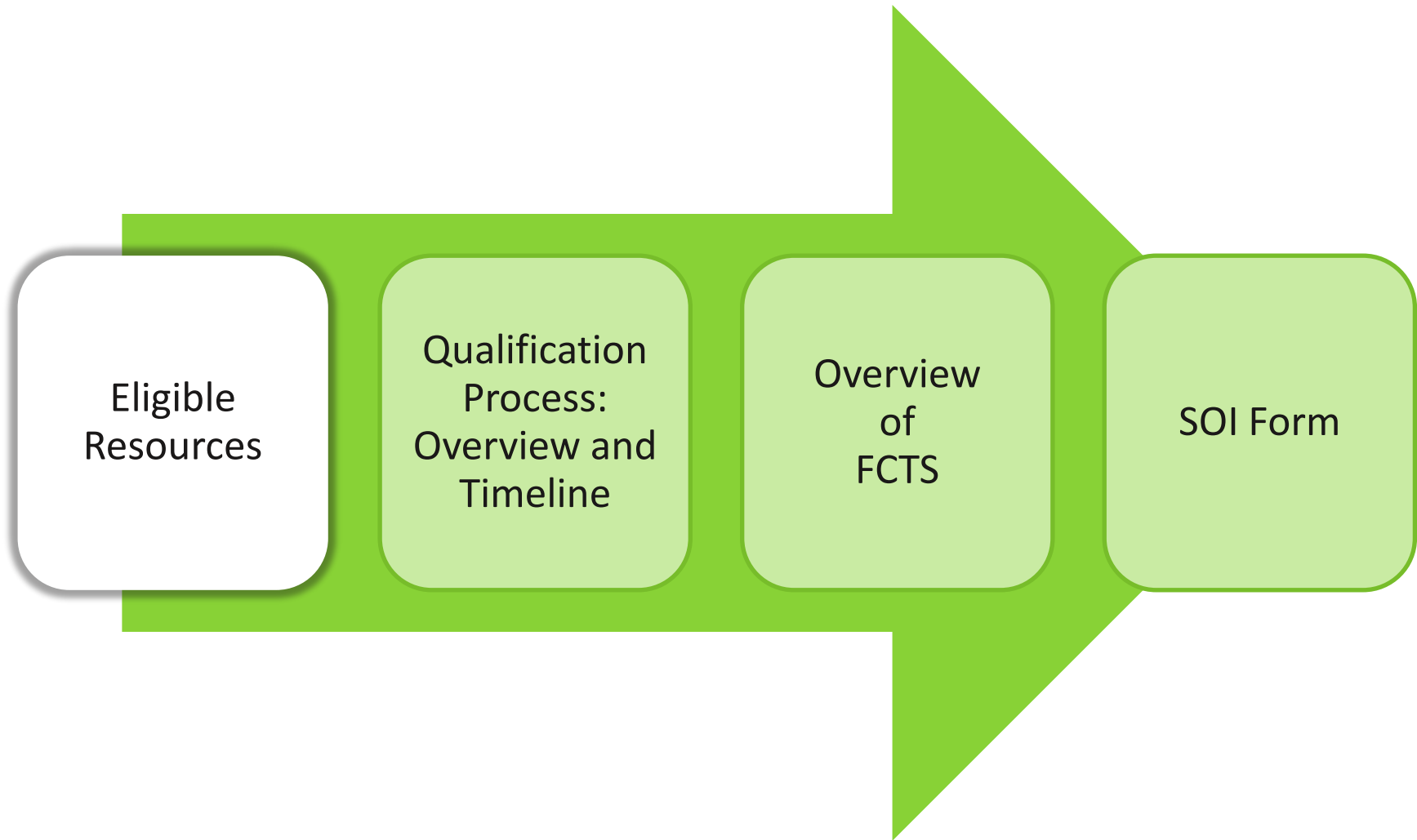
- Market Rule 1 (MR 1) requires qualification of the following resources prior to participation in a Forward Capacity Auction (FCA):
 - New resources
(including intermittent, imports, and demand resources)
 - Existing capacity
(including intermittent, imports, and demand resources)
 - De-list bids
(permanent, static, exports, etc.)

About the Presentation

- MR 1, Section III.13.1, *Forward Capacity Auction Qualification*, defines the qualification process and is the foundation for slides within this presentation.
 - For your convenience, references to this section of the MR will be displayed in the bottom center of slide in the following format – **MR 1. Section III.13.1.1.**
 - The above is referencing MR 1, Section III.13.1.1, *New Generating Capacity Resources*.

Topics Covered





Eligible Resources

- Supply resources
 - Traditional generation (oil, coal, natural gas, etc.)
 - Intermittent generation (wind, solar, etc.)
 - Imports
- Demand resources
 - Energy efficiency
 - Load management
 - Distributed generation



Note: Minimum project size = 100kW

Intermittent Resources

- Intermittent Power Resources and Intermittent Settlement-Only Resources are defined as wind, solar, run-of-river hydro, and other renewable resources that do not have control over their net power output.
 - Not qualified at their nameplate capability
 - Qualified based on the median measured energy production during defined “reliability hours” in the summer and winter seasons

New Intermittent Resources

- Intermittent New Generating Capacity Resources
 - Must submit, in the New Capacity Qualification Package, information regarding expected output of Intermittent Resource.
 - For example, measured wind speeds/solar energy
 - Equipment physical characteristics
 - Forecasted energy output

Import Capacity Resources

- Existing and New Import Capacity Resources are reviewed by ISO-NE using the Market Rule.
 - Existing Import Capacity Resources – *multiyear* commitment
 - New Import Capacity Resources – *single-year* commitment
- Options for backing an Import Resource
 - Single external generating resource (commercial or noncommercial)
 - Multiple external generating resources (commercial or noncommercial)
 - Control Area backed
- Intermittent treatment does not apply to Import Capacity Resources.

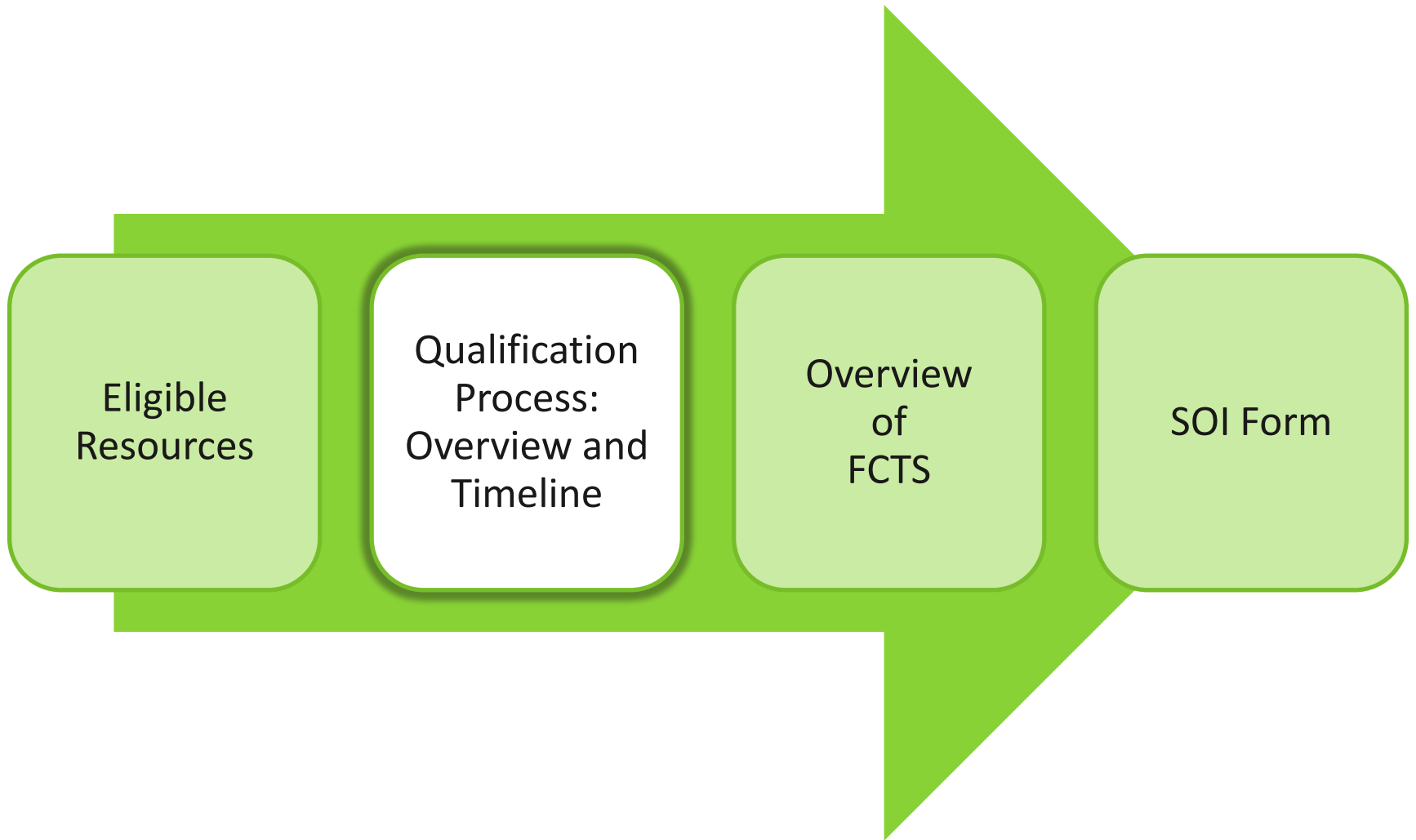
What Qualifies as New Generation Capacity?

- Resources that have never been “listed” as a Capacity Resource (counted as capacity) in the New England capacity markets



What Qualifies as New Generation Capacity? (cont.)

- Certain modifications to Existing Generating Capacity Resources
 - Up-rate (> 20% or > 40MW above existing qualified capacity)
 - Entire resource is treated as new.
 - Re-power (>\$200/kW invested)
 - Entire resource is treated as new.
 - Environmental Compliance (>\$100/kW invested)
 - Entire resource is treated as new.
 - Incremental output (> 2% of existing qualified capacity)
 - Only the increment is treated as new.
 - Reestablishment of capacity de-rated for > three years
 - Capacity being reestablished is treated as new.



Qualification for New Capacity Resources

- Potential New Capacity Resources must submit, no later than the relevant qualification deadlines, documentation indicating their ability to operate at a specific megawatt (MW) value for the relevant Capacity Commitment Period (CCP).
 - ISO-NE will evaluate this information to confirm that the resources will be able to provide capacity for the CCP.
- Qualification criteria is different for each resource type.
- New resources will be qualified for a specific MW value for a specific CCP.

New Resource Qualification Process Overview

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

Show-of-Interest (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 (such as site control).

Note: A valid Interconnection Request for Capacity Network Resource (CNR) interconnection service is now required before submitting an SOI form.

New Capacity Qualification Package

- Contains sufficient information to assess the viability of the project.
- Critical path schedule (CPS)
- Will include attachments as necessary.

Key Steps in the Qualification Process for New Resources – Step 1



1. SOI form (March 1 - 14, 2011 – sixth FCA)

- Allow any and all interested Project Sponsors to submit an SOI form.
- Applicable to new generation projects, new intermittent resources, new demand resources, and new imports
- SOI Application is still required, in addition to an Interconnection Request (IR), as defined in Schedules 22 and 23 of the ISO-NE Tariff (LGIP/SGIP - large/small generator interconnection procedures) or other applicable process.

Key Steps in the Qualification Process New Resources – Step 2



2. Project Sponsor submits Qualification Process Cost Reimbursement Deposit.

- For all completed SOI forms, ISO-NE will send invoice for payment of the Qualification Process Cost Reimbursement Deposit.
- Invoices will be issued.
- Payment will be due in accordance with the ISO-NE billing policy.

Key Steps in the Qualification Process New Resources – Step 3



3. ISO-NE performs initial interconnection analysis

(March 14 - November 25, 2011).

- Perform initial interconnection analyses to analyze the effect of the proposal on the New England transmission system.

Key Steps in the Qualification Process New Resources – Step 4



- 4. Project Sponsor submits Qualification Packages
(Due August 15, 2011).**
 - Training will be offered in summer of 2011.

Key Steps in the Qualification Process New Resources – Step 5



5. ISO-NE reviews Qualification Package

(August 15 - November 25, 2011).

- CPS to verify that the resource will be declared available for commercial operation no later than the first day of the CCP
- Other information, if applicable

Key Steps in the Qualification Process New Resources – Step 6



6. Deadline to become an ISO-NE Market Participant (November 23, 2011)

- Project Sponsors are encouraged to become Market Participants as soon as possible.
- Process can take several months.
- ISO-NE Customer Support offers assistance with this process.

Key Steps in the Qualification Process New Resources – Step 7



- 7. ISO-NE issues qualification determination notifications to the Project Sponsor (November 25, 2011).**
- Will be published to each Project Sponsor via the FCTS.
 - Will indicate whether participation in the FCA is accepted or denied.
 - Is based on information in Steps 1-5.

Key Steps in the Qualification Process New Resources – Step 8



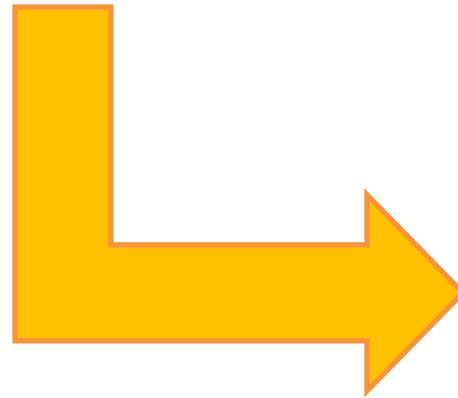
8. Project Sponsor submits financial assurance before participating in the FCA (December 23, 2011).

- \$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 three (3) business days before the deadline to submit financial assurance.



**Qualification Process
Ends**

next stop . . .

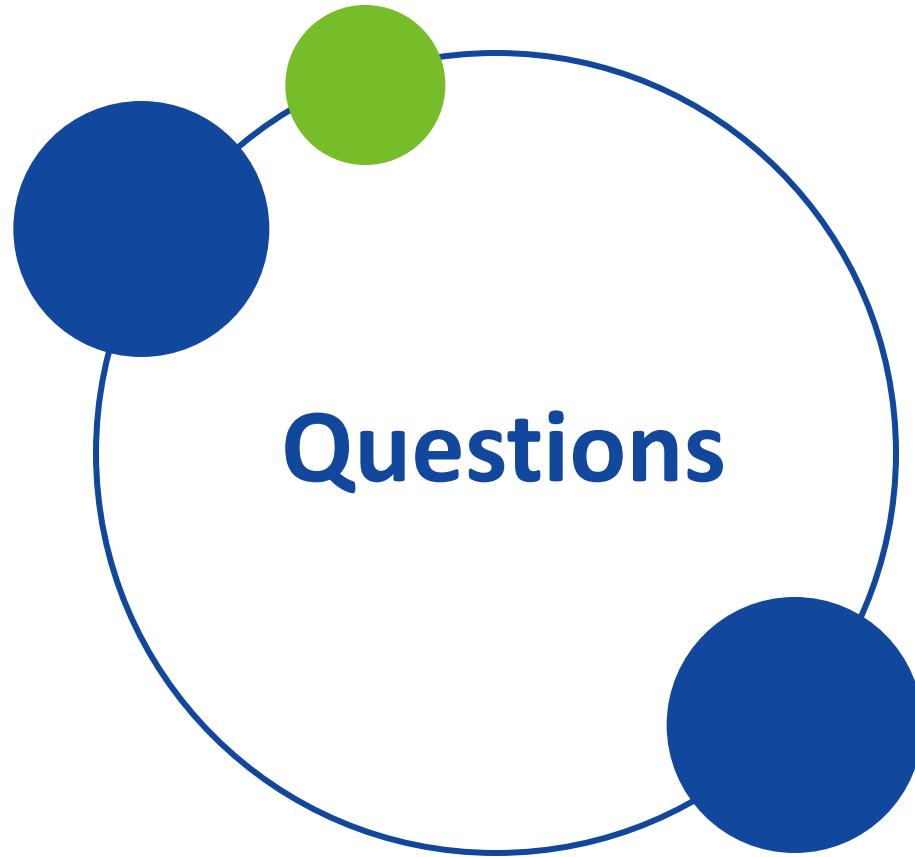


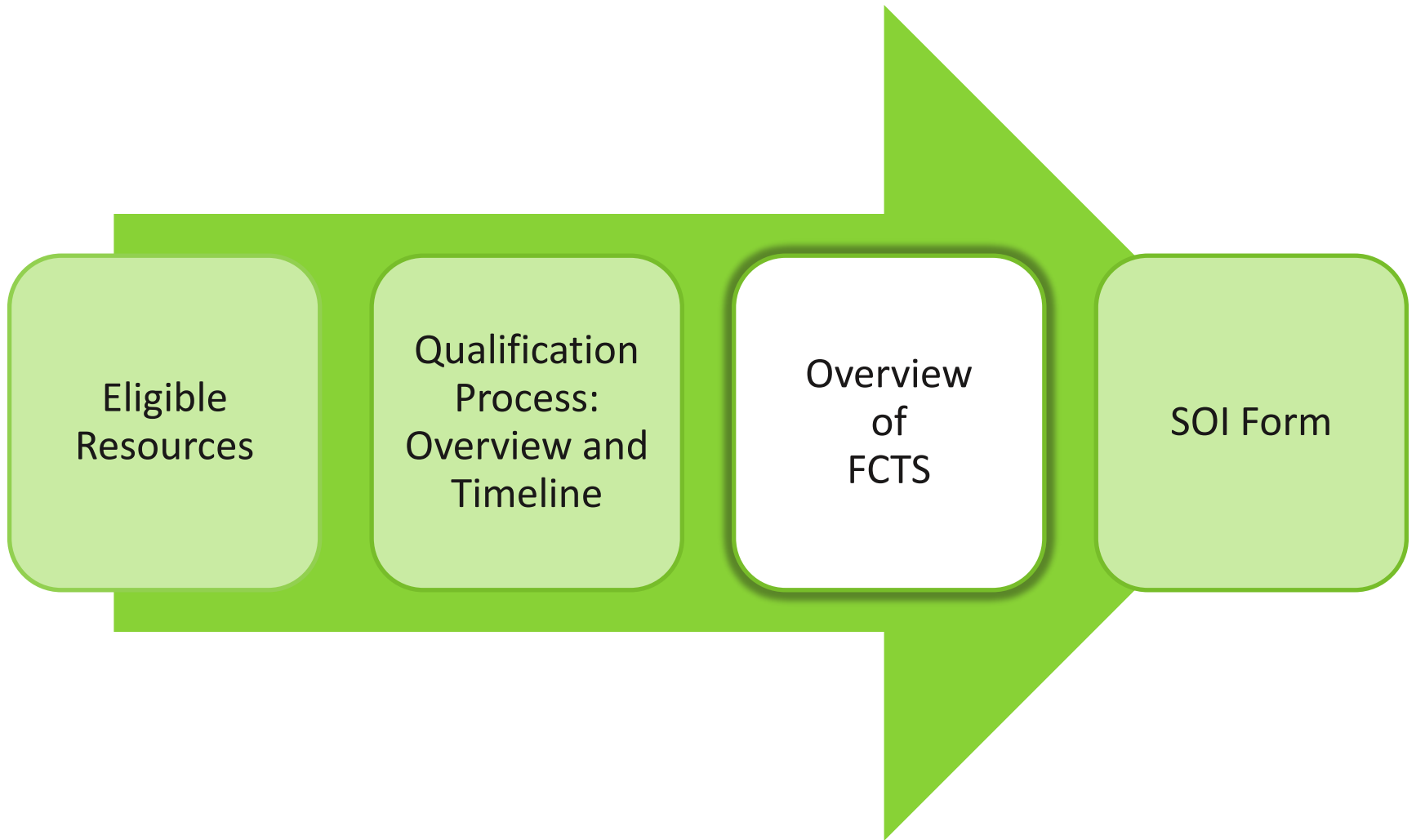
Forward Capacity Auction

Participate in the Forward Capacity Auction



- Qualified resources participate in the FCA.
- New resources that obtain Capacity Supply Obligations (CSO) will pay additional financial assurance.
- ISO-NE will monitor progress against the CPS for the project.
- Resource is expected to achieve commercial operations before the beginning of the CCP.
- Financial assurance is returned to resources upon achievement of Commercial Operations.





Forward Capacity Tracking System (FCTS)

- FCTS is a user interface that manages information for resources participating in the FCM.
- Several training sessions have been provided.
 - Materials can be found at [Home > Support > Training > Course Materials > Forward Capacity Market](#).
- **Do not** send submittals via e-mail.
- Contact Customer Support with any questions.

FCTS Requirements

- Digital certificate is required.
 - Contact your security administrator (SA) to provide you with one of the following appropriate roles under the FCTS application:
 - External Forward Capacity Maintainer
 - External Forward Capacity Viewer
- **NO** additional hardware and/or software requirements are needed to utilize FCTS.

Customer Support

- If you have any questions regarding access to the FCTS (including finding out who your SA is), please contact Customer Support.
 - Phone – 413-540-4220
 - E-mail – custserv@iso-ne.com
- Failure to pursue access to the FCTS will not be an acceptable reason for not submitting application materials by the relevant deadline.

FCTS General Functionality



- Existing Resource
 - Search for your Existing Capacity Resources.
 - Manage the Existing Capacity Qualification challenge process.
 - Manage the de-list process.
- New Capacity Resources
 - Submit and view SOI and New Capacity Qualification Package information.
 - CPS monitoring election
- Composite offers

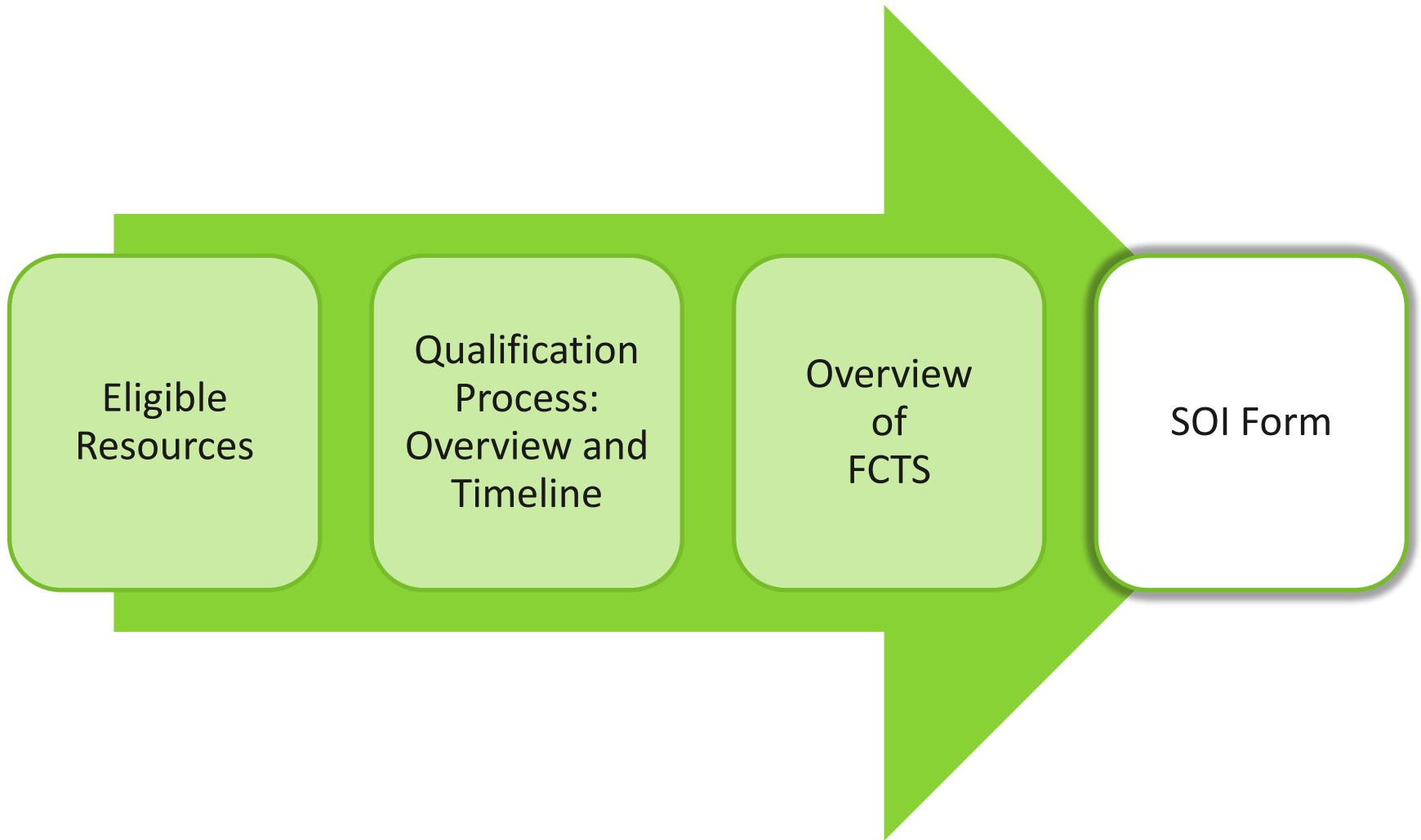
FCTS General Functionality (cont.)



- Annual Reconfiguration Auction and annual bilateral transaction qualification
- CSO listing

Notes:

- Available functionality driven by qualification deadlines
- System will not accept certain submittals unless all required documentation is provided.



What's on SOI Form?

Project Sponsor's contact information	Project address or location, and if relevant, asset ID number
Status of the project under the L/SGIP procedures	General description of the project's equipment type and configuration (identify if re-powering, environmental, etc.)
Project name and type	Simple location plan and simple line diagram of the plant and facilities
Capacity (max and ecomin in MW) of the proposed New Capacity	Other specific project data as set forth in the New Capacity SOI form
Project's expected commercial operation date	

To Access the SMD Applications Home Page . . .

<https://smd.iso-ne.com/>

SMD Applications Home Page

Forward Capacity Tracking System (FCTS) Access

The screenshot shows the SMD Applications Home Page. On the left is a navigation sidebar with the ISO New England logo and links for Transmission System Information, Satellite Information, and LCC CMS. The main content area is a grid of application buttons. A yellow callout box with the text "Click here to access Forward Capacity Tracking System." has a red arrow pointing to the "Forward Capacity Tracking System" button, which is also highlighted with a red border.

SMD Applications Home Page	
Market System → SMD Applications Home Page	
Internal Transactions	External Transactions
Bids & Offers (Registered Users)	Customer and Asset Management System
Financial Transmission Rights (Registered Users)	Forward Reserve Market Auction
Submit Meter Reading	CRDW Outage Scheduler
Submit Peak Contribution	Forward Reserve Assignment
Submit Network Load	Forward Capacity Tracking System
Financial Assurance Management	Forward Capacity Market Reconfiguration Auction
Forward Capacity Market CSO Bilateral Contracts	

Forward Capacity Tracking System (FCTS)

How to Use the FCTS to Submit a SOI

1. Make sure CP 2015-16 is highlighted.

The screenshot shows the FCTS interface. On the left is a navigation menu under 'Commitment Period' with options: CP 2010-11, CP 2011-12, CP 2012-13, CP 2013-14, CP 2014-15, CP 2015-16 (highlighted), Resource Summary, Resource Position Summary, Proposal Summary (highlighted), Self-Supply, FCA, New Qualification, and Existing Qualification. The main area is titled 'Proposal Summary' and contains a table with columns: Resource ID, Resource Name, Lead Participant, Proposal ID, Project Name, Project Type, Claimed Summer MW, Claimed Winter MW, Offer < 0.75 * CONE Rationing Election, Composite Offer Entered, and Actions. The table is currently empty, displaying 'Nothing found to display.' A 'Submit SOI' button is visible in the top right corner of the main area.

2. Go to **Proposal Summary** in the Commitment Period 2015-16 to submit a Show-of-Interest Application.

3. Click **Submit SOI**.

Forward Capacity Tracking System (FCTS)

Submit Show-of-Interest – Step 1

Forward Capacity Tracking System (FCTS)

Commitment Period	Project	FCM Calendar
-------------------	---------	--------------

Submit Show Of Interest - Step 1 Cancel

Lead Participant Testing Customer #1 (1) Commitment Period 2015-16

Project Type *

- Generating Resource
- Demand Resource
- Import Resource
- Carry over a previously submitted SOI

From Project Type, select *Resource Type*.

Use the **Carry over** function to submit an application for a proposal that is active in FCA 2014-2015.

Forward Capacity Tracking System (FCTS)

Submit Show-of-Interest – Step 1 (cont.)

Forward Capacity Tracking System (FCTS)

Commitment Period	Project	FCM Calendar
-------------------	---------	--------------

Submit Show Of Interest - Step 1

Lead Participant Testing Customer #1 (1) Commitment Period 2015-16 Cancel

Project Type *

- Generating Resource
- Demand Resource
- Import Resource
- Carry over a previously submitted SOI

Project Name * A1 Generator

Resource Name * A1 Generator

Expected Commercial Operation Date * 05/31/2015

Address Information

Address 1 * 1 Main Street

City * Big City **State *** Massachusetts **Postal *** 00001

County * Big County

Next

1. From **Project Type**, select your *Resource Type*.

2. Enter **Project Name**, **Resource Name**, **Expected Commercial Operation Date**, and **Address Information**.

Forward Capacity Tracking System (FCTS)

Capacity Information – Step 2

Forward Capacity Tracking System (FCTS)

Commitment Period	Project	FCM Calendar
-------------------	---------	--------------

Capacity Information - Step 2 Cancel

Lead Participant Testing Customer #1 (1)
Project Name A1 Generator
Resource Name A1 Generator

Commitment Period 2015-16
Project Type New Generation >= 20 MW

Generator Type * Non Intermittent

Net MW @ 90 F* 100

Net MW @ 50 F* 110

Net MW @ 20 F* 120

Minimum Net MW @ 90 F* 50

Back Next

For Non Intermittent resources,
Net MW @ 90 F
corresponds to requested
Summer Qualified Capacity.

For Non Intermittent resources,
Net MW @ 20 F
corresponds to requested
Winter Qualified Capacity.

Note: Intermittent resources enter nameplate capacity

Forward Capacity Tracking System (FCTS)

Additional Project Information – Step 3

Forward Capacity Tracking System (FCTS)

Commitment Period	Project	FCM Calendar
-------------------	---------	--------------

Additional Project Information - Step 3

Lead Participant Testing Customer #1 (1)
Project Name A1 Generator
Resource Name A1 Generator

Commitment Period
Project Type

Enter Generator Interconnection Status, Interconnection Point, and Project Configuration.

Generator Interconnection Status

Interconnection Request Submitted* Yes ▾
Queue Position* 888
Feasibility Study Agreement Executed* Yes ▾
System Impact Study Agreement Executed* Yes ▾
Interconnection Agreement Executed* No ▾

Interconnection Point

Substation or Transmission Line* Big Substation
Voltage(kV)* 345
New Transmission Line Required* Yes ▾ Length (miles)* 1.0

Project Configuration

Total Number of Units* 2
Prime Mover* Combustion (Gas) Turbine ▾
Primary Energy Source* Natural Gas ▾
Alternate Energy Source Distillate Fuel Oil, Including Diesel, No. 2 ▾
New Pipeline Required* Yes ▾ Length (miles)* 2.0

Back Next

Forward Capacity Tracking System (FCTS)

Project Contact Information – Step 4

Forward Capacity Tracking System (FCTS)

Commitment Period Project FCM Calendar

Project Contact Information - Step 4 Cancel

Lead Participant Testing Customer #1 (1) Commitment Period 2015-16
Project Name A1 Generator Project Type New Generation >= 20 MW
Resource Name A1 Generator

Project Sponsor - Project/Technical Contact*

Project Sponsor - Finance/Credit Contact*

Other Contacts

First Name*	Last Name*	Job Title	Work Phone*/Ext	Fax	Email*	Address 1	City/State/Postal
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>

From the **Project Sponsor** drop-down, select your **Project/Technical Contact** and **Finance/Credit Contact**.

Note: These fields are required and contacts **must** be in Customer Asset Management System (CAMS).

Forward Capacity Tracking System (FCTS)

Project Attachments – Step 5

Forward Capacity Tracking System (FCTS)

Commitment Period	Project	FCM Calendar
-------------------	---------	--------------

Project Attachments - Step 5 Cancel

Lead Participant Testing Customer #1 (1) **Commitment Period** 2015-16
Project Name A1 Generator **Project Type** New Generation >= 20 MW
Resource Name A1 Generator

Site Control* C:\Documents and Settings\amcbride\Desktop\Upload File.docx
Plot Plan* C:\Documents and Settings\amcbride\Desktop\Upload File.docx
One Line Diagram* C:\Documents and Settings\amcbride\Desktop\Upload File.docx

Upload files for **Site Control**, **Plot Plan**,
and **One Line Diagram**.

Forward Capacity Tracking System (FCTS) Show-of-Interest – Summary

Forward Capacity Tracking System (FCTS)

Commitment Period	Project	FCM Calendar
-------------------	---------	--------------

Show Of Interest - Summary Cancel

Lead Participant Testing Customer #1 (1) **Commitment Period** 2015-16
Project Name A1 Generator **Project Type** New Generation >= 20 MW
Resource Name A1 Generator **QPCRD Amount** 15000.0

Expected Commercial Operation Date 05/31/2015

Address Information

Address 1 1 Main Street	City Big City	State MA	Postal 00001
County Big County			

Capacity Information

Generator Type Non-Intermittent
Net MW @ 90 F 100.000
Net MW @ 50 F 110.000
Net MW @ 20 F 120.000
Minimum Net MW @ 90 F 50.000

Generator Interconnection Status

Interconnection Request Submitted Yes	Queue Position 888
Feasibility Study Agreement Completed Yes	
System Impact Study Agreement Completed Yes	
Interconnection Agreement Executed No	

Interconnection Point

Substation or Transmission Line Big Substation	Voltage 345.0
New Transmission Line Required Yes	Length (miles) 1.0

Project Configuration

Total Number of Units 2	Prime Mover Combustion (Gas) Turbine
Primary Energy Source Natural Gas	Alternate Energy Source
New Pipeline	

Project Contacts

FCTS will provide a **Summary** of the submitted SOI.

Click the **Submit** button.

Forward Capacity Tracking System (FCTS)

Resource Information

Forward Capacity Tracking System (FCTS)

Commitment Period | Project | FCM Calendar

Resource Information Search Search Results

Name A1 Generator Resource ID 37040
Load Zone Resource Type Generator Lead Participant (ID) Testing Customer #1 (1)

Basic Info Existing Qualification New Qualification Self-Supply MW Proration RA/Bilateral Qualification Position

Project Navigation
A1 Generator
CP 2015-16-FCA

Summary **SOI** Gen Technical Data CPS Elections Offer < 0.75 * CONE

Project Type New Generation >= 20 MW
Expected Commercial Operation Date 05/31/2015
Intermittent No Download SOI Update SOI Withdraw

Carryover Election No

Capacity (MW)
Net MW @ 90 F 100.00

Resource Address
Address 1 1 M
City Big City
County Big County

Interconnection Point
Substation or Transmission Line Big Substation
Voltage 345.0
New Transmission Line Required Yes Length (miles) 1.00

Project Configuration
Total Number of Units 2
Prime Mover Combustion (Gas) Turbine
Primary Energy Source Natural Gas
Alternate Energy Source Distillate Fuel Oil. Including Diesel, No. 2

SOI file can be downloaded for saving and printing through the SOI tab.

Site Control

- Must be submitted electronically with the SOI form (attached to the FCTS submittal).
- Requirements are the same as those used in Schedules 22 and 23 of the Tariff (L/SGIP procedures).
- Is not required for resources that have previously been counted as capacity (i.e., repowering projects, environmental compliance projects, incremental upgrade projects).

Qualification Process Cost Reimbursement Deposit

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

Qualification Process Cost Reimbursement Deposit – Deposit Schedule

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
<i>Including Up-rates, Repowering, Environmental Compliance, and Intermittent Power Resources</i>	<i>Including Up-rates, Repowering, Environmental Compliance, and Intermittent Power Resources</i>	<i>Resources outside the New England Control Area</i>		
\$25,000	\$7,500	\$1,000	\$3,000	\$500
<i>With Executed Feasibility Study Agreement or System Impact Study Agreement</i>	<i>With Executed Feasibility Study Agreement or System Impact Study Agreement</i>		<i>New Demand Resources that expand upon an Existing Demand Resource with no material changes to the resource</i>	
\$15,000	\$6,500	n/a	\$500	n/a

How Do I Modify My SOI Forms?

- After the New Capacity SOI submittal deadline, material changes (as defined in Section 4.4, Schedule 22, Section II of ISO New England's *Transmission, Markets and Services Tariff*) may not be made to the information contained therein.
- New capacity SOI form to which a material change has been made shall be considered withdrawn.



Rules for Modifying SOI Forms

- Material modification (not permitted)
 - Increase in output
- Potential material modifications
 - Following modifications may be material – Project Sponsor may request ISO-NE to evaluate whether such modification is a material modification:
 - Change in the generating equipment configuration
 - Change in the interconnection configuration
 - Change in importing interface (imports)
 - Change in equipment technical parameters



Rules for Modifying SOI Forms (cont.)

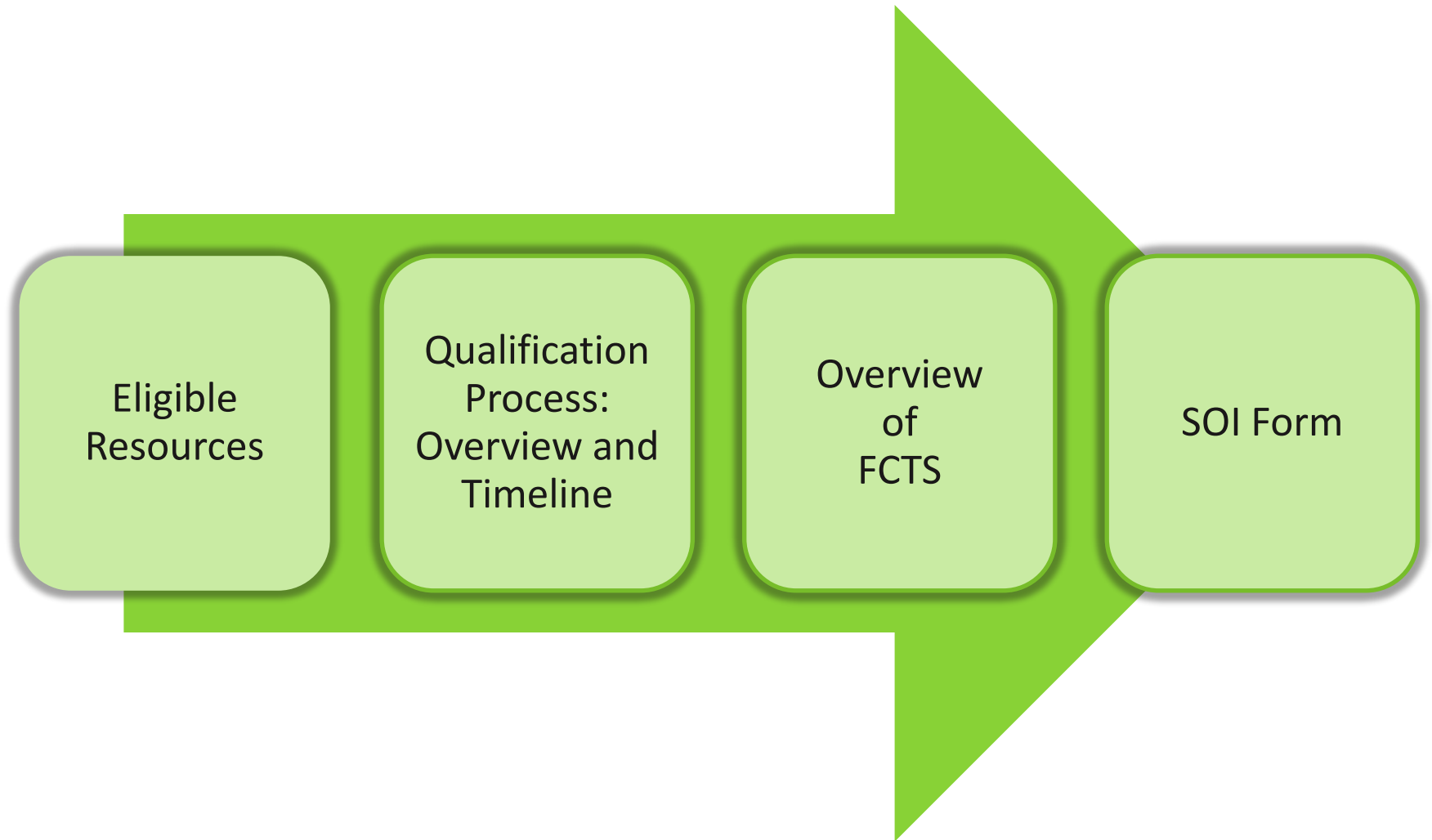
- No change that may result in a reduction in capacity may be made to a project described in a New Capacity SOI form or New Capacity Qualification Package after November 4, 2011 (150 days before the start of the FCA).

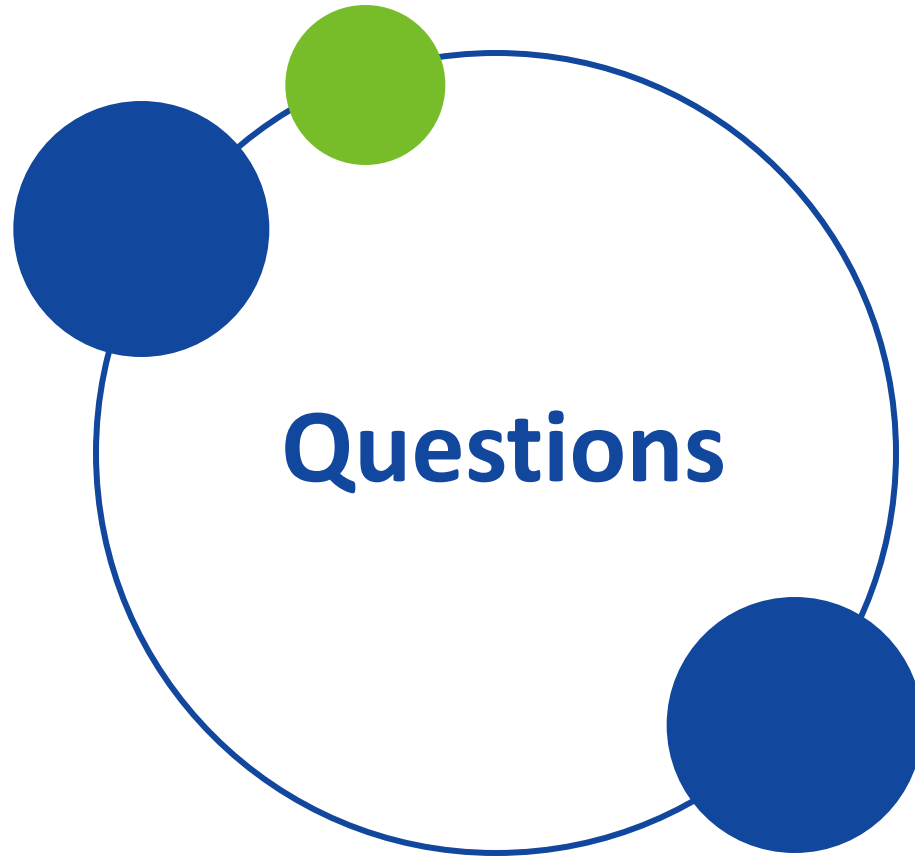


Can New Resources Withdraw from Qualification?

- Project Sponsor may withdraw from the qualification process at any time prior to three (3) business days before the submission of the financial assurance deposit by providing written notification of such withdrawal to ISO-NE (i.e., New Resources may withdraw up until December 20, 2011).
- Any withdrawal shall be irrevocable.
- Project Sponsor of a withdrawn application is subject to reconciliation of its Qualification Process Cost Reimbursement Deposit.

Topics Covered





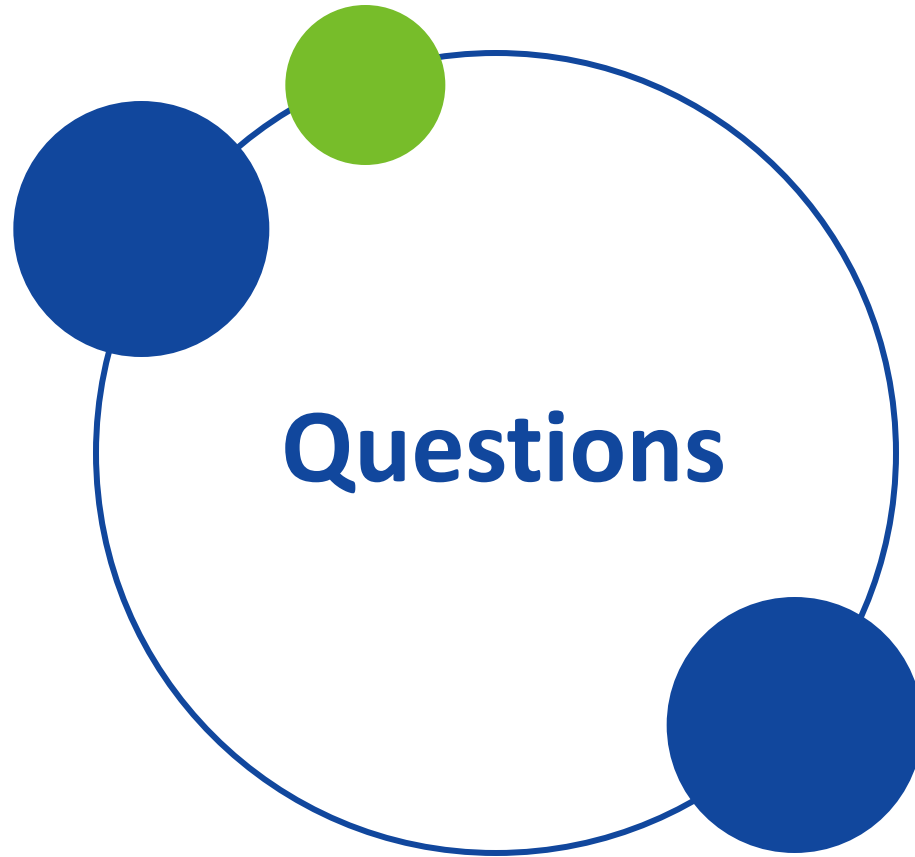
Broadcast has been paused for 4 minutes to allow evaluation submissions

Please raise your hand  to indicate we can proceed with final Q&As



References

- ISO web site: www.iso-ne.com
- Transmission, Markets & Services Tariff:
<http://www.iso-ne.com/regulatory/tariff/index.html>
- Market Rule 1:
http://www.iso-ne.com/regulatory/tariff/sect_3/index.html
- Access to the Forward Capacity Tracking System:
<https://smd.iso-ne.com/>
- Customer Support
 - Phone – 413-540-4220
 - E-mail – custserv@iso-ne.com



Please submit your evaluation of today's WebEx



Broadcast has ended.

We plan to make the WebEx recording available within five business days on the ISO-NE web site

www.iso-ne.com > Support > Training > Training Materials > Forward Capacity Market