Introduction to the Capacity Auction

August 24, 2022

ieso
Connecting Today.
Powering Tomorrow.

Table of Contents

1. Introduction **9**

1.1 Training Objectives 9

2. Capacity Auction Overview **10**

2.1 What resources are acquired in the Capacity Auction? 10

2.2 What are the timelines for the Capacity Auction? 11

Figure 1: Capacity Auction Periods 11

2.2.1 Pre-Auction Period 11

2.2.2 Auction Period 12

2.2.3 Forward Period 12

2.2.4 Obligation Period 12

2.3 What are the major steps of the Capacity Auction? 13

Figure 2: Major Steps of the Capacity Auction 13

2.4 What is a downward sloping demand curve? 14

3. Pre-Auction: Eligibility and Requirements **15**

3.1 What do I need to know before I can submit my offers during the auction period? 15

3.2 Where can I find the pre-auction report? 15

3.3 What steps must I complete before the Capacity Auction? 15

3.4 How will I know if I have completed the CAP authorization process? 16

3.5 Who will receive the Registration Approval Notice (RAN) upon completion of my CAP authorization? 16

3.6 What happens if I don't authorize as a CAP on time? 16

3.7 What are the mandatory contact roles assigned during CAP authorization? 16

3.8 Can a third party organization be the CAP? 17

3.9 Can a third party organization administer the auction activities on behalf of the CAP? 17

3.10 Does a generation or storage facility contributing to a generator-backed capacity import resource need to be registered in Ontario's market? 17

3.11 What is a physical hourly demand response resource? 18

3.12 What is a virtual hourly demand response resource? 18

3.13 What are the electrical zones? 18

3.14 What are the zonal and zonal group limits? 19

3.15 How do I use the IESO Zonal Map Tool and Capacity Auction Zone List? 19

4. Pre-Auction: Enrollment 20

4.1 What does the capacity enrollment process entail? 20

4.2 Can I modify or withdraw my enrollment request after I have submitted it? 21

4.3 What is the attestation? 21

4.4 I am a non-dispatchable load today. Can I participate as a dispatchable load to satisfy my obligation? 21

4.5 Are self-scheduling storage resources eligible to participate? 22

4.6 Can I participate as demand response with the dispatchable load portion of my storage resource? 22

4.7 I'm submitting a capacity enrollment request for a generator-backed capacity import resource. What is the "Facility Name" and "Facility ID"? 22

4.8 Can I aggregate multiple, physical HDRs under a single obligation? 22

4.9 Can a generator-backed import resource participate in other external jurisdictions? 22

4.10 Can I have more than one generator-backed import resource participating from the same external jurisdiction? 22

4.11 What is the demonstration of deliverability document? 23

4.12 What is the capacity auction deposit? 23

4.13 When do I submit my capacity auction deposit to the IESO? 23

4.14 How is the deposit estimate calculated? 23

4.15 Can a third party post the deposit? 24

4.16 Can I send a wire transfer to pay the deposit? 24

4.17 Can I submit one deposit to cover multiple participants' enrollment requests? 24

4.18 We already have a letter of credit with the IESO. Do I still need to provide a deposit or will this letter of credit cover it? 24

5. Auction Process 25

5.1 When does the offer window open? 25

5.2 How do I submit an offer? 25

5.3 Do I have to submit offers for both obligation periods? 26

5.4 Can I modify my offers during the auction window? 26

5.5 How does auction clearing work? 26

5.6 What happens if identical offers are submitted? 26

5.7 What is the difference between the zonal clearing price, zone group clearing price and the Ontario-wide clearing price? 27

5.8 Will I receive the Ontario-clearing price, the clearing price of my individual zone or the clearing price of the group of zones? 27

5.9 Where can I see the results of the auction? 27

5.10 What happens if I don't clear the auction? 28

6. Forward Period Activities 29

6.1 What actions do I take during the forward period? 29

6.2 What is a capacity market participant? 30

6.3 What is the authorization process? 30

6.4 When must I authorize as a CMP? 30

6.5 What happens if I don't authorize as a CMP? 31

6.6 What are the organization roles that apply to a CMP in Online IESO? 31

6.7 What are the mandatory contact roles associated with CMP authorization? 31

6.8 How do I post prudential support? 33

6.9 Can the prudential support be fulfilled by a third party? 33

6.10 Does a generation or storage facility contributing to a generator-backed capacity import resource need to be registered in Ontario's market? 34

6.11 How do I register a new DR resource? 34

6.12 How do I assign my new physical DR resource to my capacity obligation? 34

6.13 Do I need to assign my capacity obligation if I am not a new physical DR resource? 35

6.14 Contributor Management 35

6.14.1 Who submits information through contributor management? 35

6.14.2 When do I register contributor(s) to the IESO? 35

6.14.3 What categories of DR resources are contributors registered for? 35

6.14.4 What information do I submit through contributor management? 36

6.15 How do I transfer my capacity obligation? 36

6.16 Where do I find the information required to enable my transfer? 36
6.17 How are obligation transfers assessed? 36
6.18 Can I transfer an obligation within my own organization? 36
6.19 What clearing price will I receive if I accept a transfer from a different zone? 37
6.20 Can I transfer a capacity obligation from a "future" resource to an existing resource? 37
6.21 How do I know if a zone is congested? 37
6.22 How do I buy-out of my capacity obligation? 37
6.23 What is the purpose of the buy-out charge? 38
6.24 What happens to my deposit and prudential support after I buy-out? 38

7. Commitment Period Activities 39

7.1 What does the energy market participation entail? 39
7.2 What is the availability window? 39
7.3 What are test activations? 39
7.4 When are tests performed? 40
7.5 Are all resources subject to the same testing protocols? 40
7.6 Energy Market Participation for Demand Response Resources 41
7.6.1 What is the Standby Report? 42
Figure 3: Demand Response Standby Report 42
7.6.2 How do HDR resources know when they are activated? 42
Figure 5: Demand Response Activation Report 43
7.6.3 What is the difference between an in-market and emergency activation of HDR resources? 43
7.6.4 Are participants compensated for out-of-market activation of HDR resources? 44
7.6.5 What is the process for updating bids, including the timeline for updating bids? 44
7.6.6 After the initial activation hour, can I still revise my bids for the remaining hours? 44
7.6.7 I have a dispatchable load. How do I take an outage? 45
7.6.8 I have an HDR resource, when and how do I submit a non-performance event? 45
7.6.9 If an HDR resource is activated during an Emergency Operating State is performance voluntary? 45
7.6.10 When should I call Customer Relations versus the Control Room? 45
7.7 Energy Market Participation for Capacity Generation Resources 46

7.7.1 How do I take an outage? 46
7.7.2 How do I submit offers? 46
7.7.3 Will the dispatch process change? 46
7.8 Energy Market Participation for Capacity Storage Resources 46
7.8.1 How do I take an outage? 46
7.8.2 How do I submit offers? 46
7.8.3 Will the dispatch process change? 47
7.9 Energy Market Participation for System-backed and Generator-Backed Capacity Import Resources 47
7.9.1 How do I take an outage? 47
7.9.2 How do I submit import offers? 47
7.9.3 Will the dispatch process change? 47
7.9.4 What is a capacity import call? 48
7.10 Settlements 48
7.10.1 Availability Payment 48
7.10.2 Non-Performance Charges 48
7.10.2.1 What are non-performance charges? 48
7.10.2.2 What is the capacity charge? 49
7.10.2.3 What is the availability charge? 49
7.10.2.4 What is the administration charge? 49
7.10.2.5 What is the dispatch charge? 50
7.10.2.6 What is the deficiency charge? 50
7.10.2.7 What is the import call failure charge? 50
7.10.3 Does performance during an activation impact the assessment of another activation in the month? 50
7.10.4 What is the CA Settlements Data Files Report? 51

8. Additional Information 52
8.1 References 52
8.2 Marketplace Training 52

Appendix A: How to Authorize as a CAP 53

Appendix B: How to Submit a Capacity Auction Enrollment Request **73**

Appendix C: How to Offer Capacity **96**

Appendix D: How to Authorize as a Capacity Market Participant **101**

Appendix E: How to Register a Virtual Demand Response Resource **118**

Appendix F: How to Assign a New Physical DR Resource to an Obligation **126**

Appendix G: How to Manage Contributors for Virtual HDR Resources **132**

Appendix H: How to Submit Demand Response Measurement Data **152**

Appendix I: How to Complete a Capacity Obligation Transfer Request **160**

AN IESO TRAINING PUBLICATION

This guide has been prepared to assist in the IESO training of market participants and has been compiled from extracts from the Market Rules or documents posted on the web site of Ontario's Independent Electricity System Operator. Users of this guide are reminded that they remain responsible for complying with all of their obligations under the Market Rules and associated policies, standards and procedures relating to the subject matter of this guide, even if such obligations are not specifically referred to herein. While the IESO makes reasonable efforts to ensure that the provisions of this guide are accurate and up to date, users must be aware that the specific provisions of the Market Rules and applicable Market Manual govern the rights and obligations of market participants and the IESO.

Table of Changes

Reference	Description of Change	Date of Change

1. Introduction

The Independent Electricity System Operator (IESO) evolved the Demand Response Auction (DRA) into a broader, more competitive Capacity Auction in 2019. A Capacity Auction enables the IESO to acquire capacity in a cost-effective manner and transparently adjust to changing supply-demand dynamics.

The Capacity Auction allows participation of eligible resources, including existing and available demand response resources, storage, dispatchable generators that are off contract, generator-backed imports and system-backed imports. The Capacity Auction acquires capacity for two obligation periods as follows:

- Summer – May 1 to October 31
- Winter – November 1 to April 30

This training guide is applicable to organizations wishing to participate in the Capacity Auction, including the related capacity enrollment, forward period activities and energy market participation.

1.1 Training Objectives

After completing this guide, you will be able to:

- List the authorization and registration requirements for participating in the Capacity Auction.
- Understand the process of submitting offers into the auction.
- Understand the requirements in order to fulfill your capacity obligation.
- Understand energy market participation requirements and settlement impacts

2. Capacity Auction Overview

2.1 What resources are acquired in the Capacity Auction?

There are five classes of resources that can participate:

Table 1 Resource types and their description

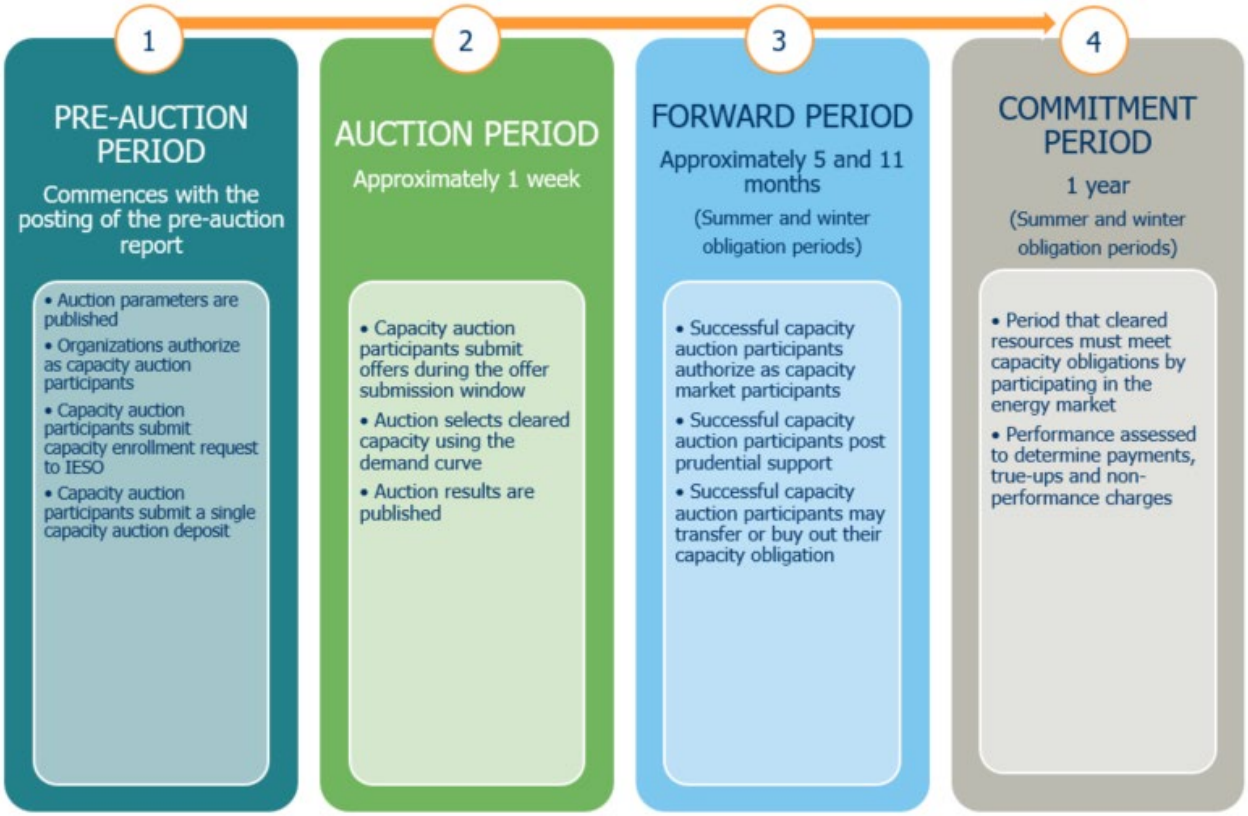
Resource Type	Description
Demand response (DR)	physical hourly demand response (HDR), virtual HDR – residential, virtual HDR – commercial and industrial (C&I) and dispatchable loads (DLs)
Capacity generation	includes generators that are both dispatchable and are not under contract with the IESO or the Ontario Electricity Financial Corporation (OEFC) for any portion of the obligation period
System-backed capacity import	imported capacity that is considered to be supplied entirely from the system of a neighbouring jurisdiction and is not under contract with the IESO or the OEFC for any portion of the obligation period
Generator-backed capacity import	imported capacity from a generation or storage facility from a neighbouring jurisdiction and is not under contract with the IESO or the OEFC for any portion of the obligation period
Capacity storage	storage facilities that are registered in the energy market, licensed with the Ontario Energy Board (OEB) as electricity storage and are both dispatchable and not under contract with the IESO or the OEFC by the start of the obligation period

2.2 What are the timelines for the Capacity Auction?

The Capacity Auction is divided into four major periods (see Figure 1).

The timelines for each of the milestones that need to be completed for participating in the auction are provided in the "Capacity Auction Timelines" document posted on the webpage. The timelines provide duration or dates by when a milestone should either be initiated or completed.

Figure 1: Capacity Auction Periods



2.2.1 Pre-Auction Period

The pre-auction period begins with the posting of the pre-auction report prior to the capacity enrollment process. The pre-auction report gives potential participants relevant information for the upcoming Capacity Auction, including:

- The demand curve and target capacity;
- Key milestones; and
- Zonal and import constraints.
- Participants must also complete the capacity enrollment process and submit the capacity deposit during the pre-auction period.

2.2.2 Auction Period

The auction period is the length of time from when the IESO begins accepting auction offers to the time when the IESO posts auction results. The auction period begins when IESO opens the offer submission window, starting at 09:00 EST. The window remains open for two business days, closing the next business day at 23:59 EST. Capacity auction participants (CAPs) intending to participate in the Capacity Auction must submit their offers to the IESO within this two-day timeframe. Participants are advised of the dates for the auction offer submission window in the pre-auction report.

We[1] process all submitted offers, determine the clearing prices and quantities, and prepare the public post-auction reports within four business days following the Capacity Auction, signalling the end of the auction period. Successful participants will also have private reports made available to them through the IESO Participant Reports website.

2.2.3 Forward Period

The forward period is the time between an auction and the first day of the obligation period. The forward period is approximately 5 months for the summer obligation period and 11 months for the winter obligation period.

2.2.4 Obligation Period

Participants that clear the auction receive availability payments during the applicable obligation period(s) based on their total cleared capacity and the applicable auction clearing price. The amount of capacity that clears in the auction becomes the participant's capacity obligation. A participant must satisfy an obligation by making its capacity available through participation in the energy market.

The Capacity Auction uses two seasonal obligation periods in each auction year:

- Summer – May 1 to October 31
- Winter – November 1 to April 30
- Each seasonal obligation period is made up of an availability window, which are the hours within a business day where a participant must make their capacity available. The availability windows are:
- Summer – 12:00 to 21:00 EST (hour ending 13 to hour ending 21)
- Winter – 16:00 to 21:00 EST (hour ending 17 to hour ending 21)

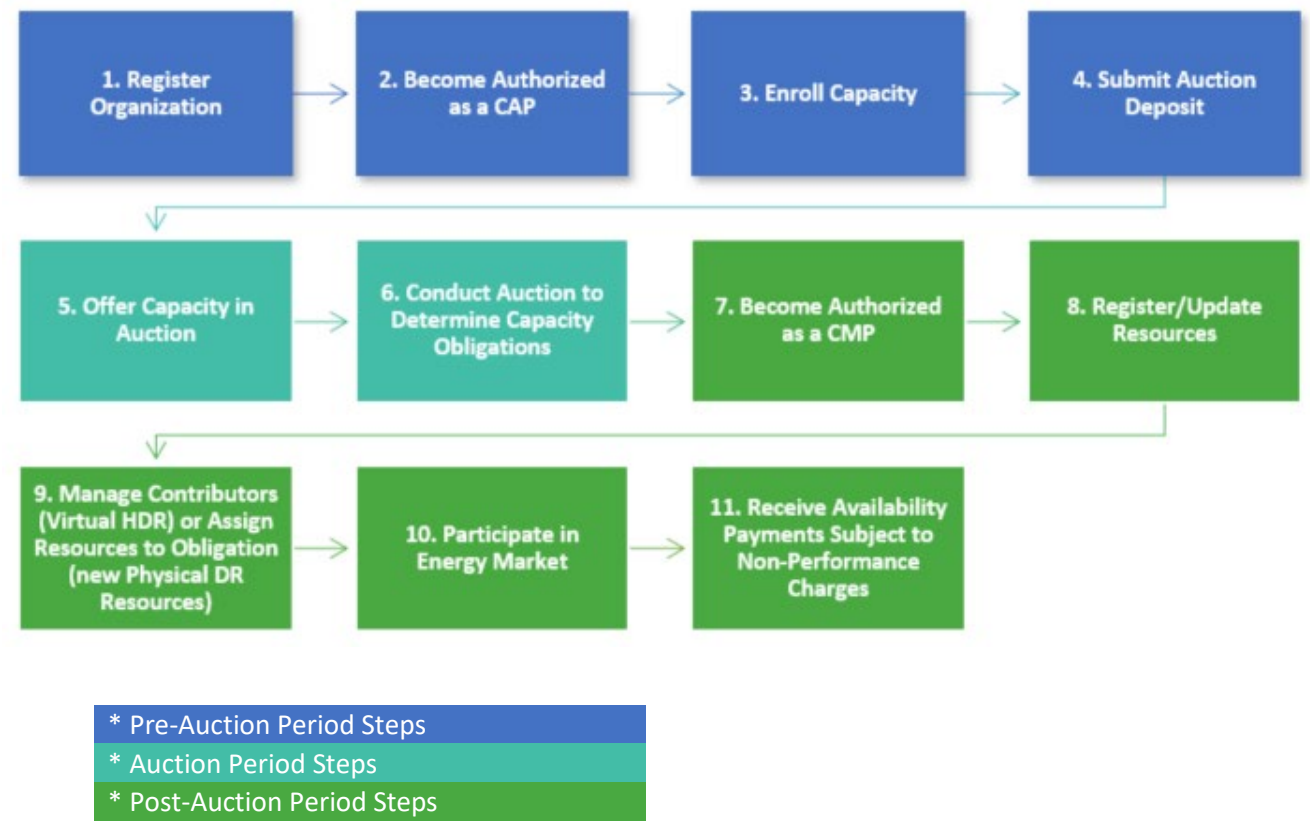
IMPORTANT: IESO markets are on Eastern Standard Time (EST) all year round and do not change for Daylight Savings Time. It is important that participants with contributors communicate the expectation to deliver all year on EST.

[1] 'We', 'us' and 'our' mean the IESO. 'You' means the market participant.

2.3 What are the major steps of the Capacity Auction?

Figure 2 illustrates the sequence of the major steps in the Capacity Auction.

Figure 2: Major Steps of the Capacity Auction



The following steps are completed once per organization, and do not need to be repeated every year:

- Register organization
- Authorize as a capacity auction participant (CAP)
- Authorize as a capacity market participant (CMP)

The following steps must be completed for each auction year:

- Enroll capacity
- Submit auction deposit
- Offer capacity in auction
- Conduct auction to determine capacity obligations

The following steps are completed for each obligation period:

- Register new resources (demand response only) or update existing resources

- Manage contributors (virtual DR resources)
- Assign resources to obligation (only for physical DR resources that were not registered in the IESO-Administered Markets during the capacity enrollment period. All other resources are automatically assigned to the obligation)
- Participate in energy market
- Receive availability payments subject to non-performance charges

2.4 What is a downward sloping demand curve?

The downward sloping demand curve shows the bounds in which submitted offers will be optimized against to produce the resultant capacity obligations. Currently, the demand curve comprises of several key points published under the table "Capacity Auction Parameters" in the pre-auction report. Refer to Market Manual 12 for more details and definitions of each individual data point.

3. Pre-Auction: Eligibility and Requirements

The pre-auction period is the first period in an auction cycle. In order to participate, prospective auction participants must understand the demand curve elements, locational limitations, and the key timelines for the upcoming auction, all of which are found in the pre-auction report. During the pre-auction period, prospective participants must authorize to participate in the auction as a capacity auction participant (CAP) and enroll capacity and submit the deposit in advance of the auction period.

Completion of CAP authorization is a one-time process by any organization, meaning once completed you do not need to complete this authorization again for any subsequent auctions.

3.1 What do I need to know before I can submit my offers during the auction period?

You must know the following before you submit offers into the Capacity Auction:

- Pre-auction authorization requirements;
- Demand curve parameters such as target capacity, reference price, minimum and maximum auction clearing price etc., zonal constraints, group zone of constraints, import constraints, and interface limits;
- The amount of auction deposit you are required to submit; and
- Upcoming timelines such as the capacity enrollment deadline, the submission deadline for posting auction deposit, the auction offer submission window, and the post-auction report publication date.

The IESO will publish a pre-auction report at least two months in advance of the auction. It provides prospective participants all of the above-mentioned information. It also includes a link to an IESO zonal map tool and zone list to help participants determine electrical zones for their facilities.

3.2 Where can I find the pre-auction report?

The pre-auction report can be found on the IESO Public Reports Site.

3.3 What steps must I complete before the Capacity Auction?

If it is your first time participating in the Capacity Auction, you must:

1. Ensure your organization is registered with the IESO if this is your first participation in the IESO-Administered Markets (IAM) or programs. This process should be started well in advance of the auction, and is recommended to be started no later than 4 months in advance. Details on how to register an organization are available on the IESO website on the Register an Organization webpage.

Note: Organization registration is a requirement for all market participants. If you already participate in the IESO-Administered Markets or programs, this step does not need to be repeated.

2. Complete the authorization process in Online IESO to become a CAP. This must be completed at least 40 business days before the start of the offer submission window for an auction. If you've already participated in an auction (including the Demand Response Auction) or already authorized as a CAP, then you do not need to authorize again. See Appendix A: How to Authorize as a CAP for step by step instructions on completing this. This authorization should be completed as per the published auction timelines on the webpage.

Note: For participants with physical resources, except system-backed and generator-backed capacity import resources, the registered owner of the registered facility associated with the resource must be the CAP.

3. Enroll your capacity through Online IESO, including identifying the potential capacity auction resource(s) (CARs) you intend on using to deliver on the potential capacity obligation and submitting your capacity auction deposit. See Appendix B: How to Enroll Capacity for step by step instructions on using Online IESO to enroll your capacity.

3.4 How will I know if I have completed the CAP authorization process?

The IESO will issue a Registration Approval Notice (RAN) upon completion of the CAP authorization process. Additionally, you will get a completion notification from Online IESO.

3.5 Who will receive the Registration Approval Notice (RAN) upon completion of my CAP authorization?

The CAP's applicant representative will receive the Registration Approval Notice upon completion.

3.6 What happens if I don't authorize as a CAP on time?

Organizations that are not authorized as a CAPs by the deadline published in the auction timelines will not be able to participate in the current year's auction.

3.7 What are the mandatory contact roles assigned during CAP authorization?

The following are mandatory contact roles that must be assigned during CAP authorization. They are assigned by the CAP and can be fulfilled by the CAP personnel or by a third party representative.

Table 2 Contact roles assigned during CAP authorization.

Assignor	Contact Role	Responsibility
Capacity Auction Participant	Capacity Auction Contact	Contact responsible for administering all tasks and questions related to Capacity Auction (including completing enrollment and participating in the auction)
Capacity Auction Participant	Invoice and Banking	Contact responsible for submitting, approving and maintaining the organization's banking information

3.8 Can a third party organization be the CAP?

The market participant organization assigned as the capacity market participants (CMP) for physical resources, except system-backed capacity import resources and generator-backed capacity import resources, must be the registered owner of the resource as defined in Section 2.2.3 of Market Manual 1.5: Market Registration Procedures, and Section 5.2 of Market Manual 12: Capacity Auctions.

For participants with a generator-backed capacity import resources, the CMP must be the owner of the generation unit(s) or storage facility(ies) as registered in the neighbouring control area in which the facilities are located. See section 4.3 of Market Manual 12: Capacity Auctions for more information.

CMPs participating with virtual HDR resources may include physical or virtual non-dispatchable loads owned by a third party as demand response contributors.

As CAPs that successfully obtain at least one capacity obligation are required to authorize as CMPs, the above-mentioned ownership requirements apply to CAPs as well.

3.9 Can a third party organization administer the auction activities on behalf of the CAP?

Yes, a third party can be given the permission to administer the auction on behalf of the CAP by having the CAP assign them as the Capacity Auction Contact. This will give them the ability to administer all auction tasks, including enrollment and participating in the auction, but the fulfilling of the obligation, including settlement, will remain between the IESO and the CAP.

3.10 Does a generation or storage facility contributing to a generator-backed capacity import resource need to be registered in Ontario's market?

No, but the owner of the facility (as defined in the attestation found in Appendix H of Market Manual 12) must be registered to participate in the IESO-administered markets. During the capacity enrollment process, the participant will have to provide a number of details about the facility and attest to meeting a number of eligibility requirements. To satisfy the obligation, the participant must also be authorized as an Energy Trader. The deadlines to complete these activities can be found in the Auction Timelines document on the capacity auction webpage.

3.11 What is a physical hourly demand response resource?

A physical hourly demand response resource is a single transmission connected load facility, or embedded load facility, that is revenue metered by the IESO and registered as a physical hourly demand response. These resources are subject to the maximum zonal limits specified in the pre-auction report, and must have the registered owner of the market resource as the capacity auction participant. A third party may administer the auction activities on behalf of the owner by having the owner designate them as the Capacity Auction Contact.

3.12 What is a virtual hourly demand response resource?

A virtual hourly demand response resource is one or more non-dispatchable load(s), located in the same zone, that are not revenue metered by the IESO. These non-dispatchable loads, known as contributors, may be aggregated together to provide demand response capacity, and may be managed by a third party aggregator (i.e. a third party may be designated as the owner of the virtual resource). Virtual hourly demand response contributors may be residential or commercial and industrial, but may not be a combination of both in under the same resource. These resources are subject to the maximum virtual zonal limits specified in the pre-auction report.

3.13 What are the electrical zones?

There are 10 IESO Electrical Zones in Ontario:

- Bruce
- East
- ESSA
- Niagara
- Northeast
- Northwest
- Ottawa
- Southwest
- Toronto
- West

3.14 What are the zonal and zonal group limits?

Each zone has a set of limits which are as follows:

- Total zonal capacity limit minimum: the minimum amount (MW) of capacity that can be procured in a zone.
- Total zonal capacity limit maximum: The maximum amount (MW) of total capacity that can be procured in a zone.
- Virtual zonal capacity limit maximum: The maximum amount (MW) of virtual DR capacity that can be procured in a zone. This limit applies only to HDR resources not revenue metered by the IESO and NDLs that act as a contributor to a virtual HDR resource. This limit will not set the zonal clearing price in the auction.
- Additionally, zones may be grouped for the purpose of determining the maximum amount (MW) of total capacity that can be procured in that region. The maximum amount of capacity that can be procured in a group may be lower than the sum of the individual zones that are part of that group. The IESO will not procure more capacity in a zone that is part of a group where the maximum capacity for that group has been reached, even if the individual zone's maximum capacity has not been reached.

Each CAP may qualify auction capacity up to the zonal limits. The pre-auction report communicates these zones and limits.

3.15 How do I use the IESO Zonal Map Tool and Capacity Auction Zone List?

The IESO zonal map tool is used to estimate the zone that your capacity is located it. This information is required for both the capacity enrollment and contributor management. The zonal map can be accessed using the instructions below.

The Capacity Auction Zone List is intended to be used by CAPs participating with a distribution embedded physical resource, to assist these participants in determining the zonal location of their facility, and to facilitate the planning of their projects. The zone list can be accessed on the website.

4. Pre-Auction: Enrollment

4.1 What does the capacity enrollment process entail?

Upon authorization as a CAP, you must submit the following information to the IESO through Online IESO as part of the capacity enrollment process:

- The resource(s) you intend on using. The resource(s) will be designated as a potential capacity auction resource (CAR);
- A Demand Response (DR) resource may not be an energy market resource at the time of enrollment ("new" resource). In these cases, the CAP will be prompted to enter information as a placeholder, and registration must be completed during the forward period if an obligation is awarded

Note: though the Registration of a new demand response resource must be completed during the forward period, it can begin prior to the forward period. The IESO recommends starting registration activities at least eight months in advance of the registration deadline for new physical facilities, and at least four months ahead for any modification to existing facilities. See the Market Registration Process Schedule for details on registration timelines.

- The resource type and, for HDR resources, the obligation type (physical or virtual) and contributor type (residential or commercial & industrial).
- The amount of potential capacity you are willing to provide (minimum requirement is 1 MW);
- The obligation period for which you are willing to submit offers. You may choose to submit offers for one or both obligation periods;
- For system-backed capacity import resources and generator-backed capacity import resources, the external interface through which they will import;
- The zonal location of new DR resources and/or contributors for which you are willing to submit offers. You can only submit offers for zones in which you have enrolled capacity;
- If you have a capacity generation resource, capacity storage resource or capacity import resource, a signed attestation. More information on the attestation can be found below; and
- Confirmation of having submitted the auction deposit as calculated by the IESO.
- Additional information according to the resource type as indicated in Market Manual 12: Capacity Auctions can be found here.

Note: Online IESO will calculate and display the estimated pre-auction deposit amount.

The total maximum capacity entered by each participant through this process is referred to as 'enrolled capacity'. The auction allows submission of offers between 1 MW and the enrolled capacity amount, provided that the pre-determined virtual, zonal and import limits are respected.

4.2 Can I modify or withdraw my enrollment request after I have submitted it?

A capacity enrollment request can be modified up until the last day of the enrollment window (see the pre-auction report for due date). When a request is modified, the capacity auction participant must complete the entire capacity enrollment process again, including submitting any additional capacity auction deposit if necessary.

4.3 What is the attestation?

As part of the capacity enrollment process, organizations with capacity generation resources, capacity storage resources, generator-backed capacity import resources, or system-backed capacity import resources must submit an attestation through Online IESO. The attestation will depend on the type of resource but in general it confirms that the resource meets the eligibility requirements per the applicable Market Rules definition.

4.4 I am a non-dispatchable load today. Can I participate as a dispatchable load to satisfy my obligation?

Yes, your non-dispatchable load (NDL) may be eligible to satisfy a capacity obligation if it can become dispatchable at least 45 business days prior to the beginning of the obligation period. Participation in the auction would be completed as follows:

1. When completing the capacity enrollment, select "new" resource. This will prompt you to provide some general information as a placeholder, including indicating that the resource will be a dispatchable load prior to the obligation period.
2. Participate in the auction.
3. If awarded an obligation, you must complete registration of the resource as a dispatchable load during the forward period. The information used in registration must match the information provided in the placeholder during enrollment.
4. Assign the resource to the obligation using the steps shown in Appendix F: How to Assign a Physical DR Resource to an Obligation.

Registration of a new dispatchable load should be started well in advance of the forward period. The IESO recommends starting at least eight months in advance for new physical facilities, and at least four months ahead for any modification to existing facilities. See the Market Registration Process Schedule for details on registration timelines.

4.5 Are self-scheduling storage resources eligible to participate?

A storage resource must be dispatchable in order to satisfy the capacity obligation. Storage resources that are registered as self-scheduling at the time of capacity enrollment must choose to change their bid/offer type in the energy market during the forward period, and must complete this by 45 business days prior to the start of the obligation period, to satisfy their capacity obligation.

4.6 Can I participate as demand response with the dispatchable load portion of my storage resource?

No. For the purposes of the Capacity Auction, only the dispatchable generation resource portion of the storage facility may be used to satisfy the capacity obligation. The dispatchable load resource portion of the storage resource is not eligible to participate as a demand response resource.

4.7 I'm submitting a capacity enrollment request for a generator-backed capacity import resource. What is the "Facility Name" and "Facility ID"?

"Facility Name" refers to the unique name for a generation facility or storage facility associated to the generator-backed capacity import resource as assigned by a neighbouring control area in which it is located. This field cannot be left blank.

"Facility ID" refers to the unique numeric identifier for a generation facility or storage facility associated to the generator-backed capacity import resource as assigned by a neighbouring control area in which it is located. This field cannot be left blank.

4.8 Can I aggregate multiple, physical HDRs under a single obligation?

No. If a CMP wishes to participate with multiple physical HDRs in the same zone, each resource must be enrolled separately and a separate capacity obligation would be awarded for each one.

Multiple physical non-dispatchable loads in the same zone may participate under a single capacity obligation as contributors to a virtual HDR resource. In this case, the participant would enroll as a virtual HDR resource and, following the receipt of an obligation, the physical non-dispatchable loads would be included as contributors to the virtual HDR resource through the contributor management process.

4.9 Can a generator-backed import resource participate in other external jurisdictions?

Yes. However, any capacity cleared by the generator-backed import resource cannot be committed to another jurisdiction during the obligation period.

4.10 Can I have more than one generator-backed import resource participating from the same external jurisdiction?

Participants with a generator-backed capacity import resource will participate in the auction with a single resource per external jurisdiction, and will be awarded a single obligation. If a participant has multiple generation facilities, storage facilities or a combination of both generation and storage facilities, in the same external jurisdiction, these facilities will be grouped under the same obligation. To do this, the participant will submit an enrollment request for a single generator-backed import resource in Online IESO. The single capacity auction resource will then be backed by one or more generation and/or storage facilities, known as contributors, which the participant will be prompted to provide the details for. A demonstration of deliverability of each contributor will be required.

The enrolled capacities for each generation and/or storage facility will be summed together into a single enrolled capacity for the participant. The single enrolled capacity is the amount that can be offered into the auction.

4.11 What is the demonstration of deliverability document?

A demonstration of deliverability is required for each contributor for a generator-backed import resource. This must be submitted during enrollment for IESO review by email to capacity.auction@ieso.ca as part of the enrollment process.

4.12 What is the capacity auction deposit?

Submission of a capacity auction deposit is required to establish the creditworthiness of the participant for auction activities at the outset of an auction process, and to ensure that auction and pre-seasonal obligation period requirements can be fulfilled. Failure to provide a deposit on time will result in disqualification from participating in the auction.

4.13 When do I submit my capacity auction deposit to the IESO?

Once you submit all of your capacity enrollment information you will receive a notification, through Online IESO, to submit the capacity auction deposit along with the payable amount by the deadline published in the pre-auction report. The deposit should not be submitted before this notification is received. More information on deposit submission and Online IESO can be found in Appendix B: How to Enroll Capacity. You are required to submit the capacity auction deposit amount at least five business days prior to the start of the auction offer submission window. Refer to the capacity auction timelines document posted on the website for exact dates and other details.

4.14 How is the deposit estimate calculated?

Online IESO will calculate the capacity auction deposit you are to submit for each obligation period, based on the amount of total enrolled capacity (across all enrolled resources for one participant) and the maximum auction clearing price, as given below:

$$Deposit = 3\% \times (total\ enrolled\ Capacity\ \times Max\ Auction\ Clearing\ Price\ per\ MWday) \times \#\ business\ days\ in\ obligation\ period$$

The IESO may adjust the 3% factor based on your history with the IESO (e.g. credit rating).

4.15 Can a third party post the deposit?

Yes, a third party may post the capacity deposit associated to an enrollment. However, if requested, the IESO will return such deposit to the CAP and not the third party.

4.16 Can I send a wire transfer to pay the deposit?

Yes. While completing the steps to submit a capacity deposit in Online IESO, you will be prompted to select a payment option: letter of credit and/or cash. If cash, please refer to the following cash instructions:

- TD Bank
- Bank Address: 55 King Street West, Toronto, ON, M5K 1A2
- Bank Number: 0004
- Transit: 10202
- Swift: TDOMCATTOR
- Account: 0690-0458762
- Beneficiary: Independent Electricity System Operator (IESO)
- Beneficiary Address: 1600-120 Adelaide Street West, Toronto, ON M5H 1T1
- Payment Details Note: CA-[CAP's short name]-2023. For example, if the CAP is called "Deff Company", the payment note will read CA-DEFCO-2023. The purpose of this note is to tie the payment to the enrollment request

If further information is required by the bank, please contact prudential@ieso.ca.

4.17 Can I submit one deposit to cover multiple participants' enrollment requests?

No. One deposit should be submitted per CAP, per enrollment request.

4.18 We already have a letter of credit with the IESO. Do I still need to provide a deposit or will this letter of credit cover it?

A deposit is still required. The amount of the existing letter of credit can be amended to also cover the deposit obligations.

5. Auction Process

The auction itself is held during the 'auction period'. This is the length of time from when the IESO begins accepting auction offers, to when the IESO posts auction results.

5.1 When does the offer window open?

The auction offer window opens at 09:00 EST and lasts approximately two business days, ending at 23:59 EST on the next day. The exact date that the offer submission window opens is published for each auction in the pre-auction report. During this window, capacity auction participants (CAPs) submit offer(s) on a resource basis. Offers are limited to the type (physical and virtual) and amount of auction capacity that was enrolled during the pre-auction period for each resource and obligation period.

5.2 How do I submit an offer?

Capacity auction offers are submitted to the IESO using Online IESO. The following are requirements of offers and may be validated by Online IESO in order to complete an offer submission:

- Offers are submitted for each of the summer and winter obligation period, and apply for the entire period. Participants may offer for one or both periods.
- Submitted offers are for any quantity between 1 MW and the enrolled capacity, to one decimal place. The offers are further broken down into laminations with individual prices to reflect the cost for that specific incremental quantity.
- A complete offer includes a set of up to 20 monotonically increasing price-quantity pairs, with the total offered quantity across all offers equal to or less than the enrolled capacity for that resource. The auction offer quantity is entered as a cumulative value and, therefore, must increase with every new lamination.
- Each offer must specify for each price-quantity pair, whether the entire capacity represented in the lamination must be cleared in full, or whether it may be partially cleared. A full flag is an indication that the quantity of capacity offered in a given lamination must be fully selected or not selected at all. A partial flag indicates that all, part, or none of the capacity offered in a given lamination may be selected, to a granularity of 0.1 MW.

For example, if you have 5 MW of enrolled capacity and you want to offer in:

- 3 MW, partial at $200
- 1 MW, full at $300
- 0.5 MW twice, full at $325

Your offer submission in Online IESO will look like Figure 3 below.

Figure 3: Online IESO Offer Submission

#	Price ($/MW-Day)	Cumulative Quantity (MW)	Delta Quantity (MW)	Flag
1	200	3	3	Partial
2	300	4	1	Full
3	325	4.5	0.5	Full
4	325.01	5	0.5	Full

5.3 Do I have to submit offers for both obligation periods?

No. You may choose to participate in one or both obligation periods. If you wish to participate in both obligation periods, you must submit separate offers for each obligation period. If you are successful in both obligation periods, you will receive a separate capacity obligation for each period.

5.4 Can I modify my offers during the auction window?

A capacity auction offer may be modified up until the close of the auction window. If an offer is modified, the timestamp associated with that offer will be updated to reflect the submission time of the modified offer.

5.5 How does auction clearing work?

The auction engine incorporates all submitted capacity offers from CAPs and optimizes them against a pre-published downward sloping demand curve. It considers all the different limits and constraints (total zonal limit, virtual zonal limit, etc.) published in the pre-auction report into its calculation. Once the optimal solution has been found, the overall system-wide clearing price will be set along with any zonal clearing price and zone group clearing price in cases where any zonal and groups of zones limits were binding (refer to Market Manual 12 for more information). For each obligation period and zone, the auction engine determines a capacity obligation (i.e. the amount of capacity in MW that the CAP must provide in that zone).

5.6 What happens if identical offers are submitted?

The tie breaker for identical offers is time precedence. In case of identical offers submission, the auction engine will select the first offer submission.

5.7 What is the difference between the zonal clearing price, zone group clearing price and the Ontario-wide clearing price?

The Ontario-wide clearing price is equal to the price associated with the demand curve for the quantity equal to the last-cleared price-quantity pair associated with a capacity auction offer. It is the price given to all zones that do not have binding zonal constraints. The zonal clearing price represents the price for zones that do have binding zonal constraints. If a binding zonal constraint exists, the price of that zone could be lower than the Ontario-wide system clearing price. The zone group clearing price represents the price for groups of zones that have a binding constraint. If a binding zone group constraint exists, the zonal clearing price (i.e., for the zones within the group that haven't reached their individual binding constraints) could be lower than the Ontario-wide system clearing price.

5.8 Will I receive the Ontario-clearing price, the clearing price of my individual zone or the clearing price of the group of zones?

The auction clearing process will determine a clearing price for each zone or group of zones. Resources will receive the price associated with the zone or group they are located in.

If an offer is not selected, either partially or in full, because of zonal constraint for a specific zone then the auction clearing price for that zone will be set at the lesser of:

- The price associated with the next economic quantity from an auction offer in the same zone that would have cleared if not for the total maximum zonal constraint; or
- The Ontario-wide auction clearing price.

Note: If there is an obligation transfer, the clearing price associated with the obligation may be amended. For more information on obligation transfers see Section 5.

5.9 Where can I see the results of the auction?

There are two reports where you can see the results of the auction:

1. Public post-auction reports, which include, for each obligation period:
    a. The quantity of capacity cleared in the auction for each zone;
    b. The auction clearing price for each zone and group of zones;
    c. A list of all of the successful CAPs that received an obligation, and their respective obligations on a zonal basis, and;
    d. To facilitate obligation transfers, the enrolled capacity for each CAP by type and zone or external interface, regardless of whether they received a capacity obligation.

The public post-auction reports can be found on the IESO Public Reports webpage, in the folder titled "CA-PostAuction".

2. Private post-auction reports which are issued to individual CAPs, and will indicate the capacity obligation secured (including the clearing price and obligation period) for each capacity auction resource.

The confidential post-auction participant reports can be found on the IESO Confidential Reports website, which can only be accessed with a User ID and password.

5.10 What happens if I don't clear the auction?

Your deposit will be returned, upon request to prudential@ieso.ca, after the publication of the post-auction report. Once requested and confirmed, the deposit will be returned within 5 business days. You remain a CAP and can participate in future capacity auctions.

6. Forward Period Activities

The forward period is the period of time immediately following an auction, to the commencement of an obligation period. This chapter provides details regarding activities conducted during the forward period.

6.1 What actions do I take during the forward period?

If you were successful in the capacity auction, then the following actions may apply to you during the forward period:

Table 3: Forward Period Activities

Action	Applicable Resource Type	When do I do it?	How do I do it?
Authorize as Capacity Market Participant	All Resource Types	Complete before the beginning of the month preceding the obligation period, or, for new DR resources, prior to completing resource registration	For step by step instructions, refer to Appendix D: How to Authorize as a CMP
Post Prudential Support	All Resource Types	At least 60 days prior to the obligation period, or, for new DR resources, prior to completing resource registration.	For step by step instructions, refer to Appendix D: How to Authorize as a CMP
Register New DR Resource or Change Attributes of Existing Resource	All Resource Types	Complete at least 45 business days prior to the beginning of the obligation period	For step by step instructions for registering a new virtual DR resource, refer to Appendix E: How to Register a Virtual Demand Response Resource

Action	Applicable Resource Type	When do I do it?	How do I do it?
Assign Resource to Obligation	New Demand Response Resources (Physical)	Complete at least 45 business days prior to the beginning of the obligation period	For step by step instructions, refer to Appendix F: How to Assign a New Physical DR Resource to an Obligation
Manage Contributors	Demand Response Resources (Virtual)	Must be completed by the 14th business day before the start of the obligation period. Will then be completed monthly by the 14th business day before the effective month	For step by step instructions, refer to Appendix G: How to Manage Contributors for Virtual HDR Resources

6.2 What is a capacity market participant?

A capacity market participant (CMP) is a CAP that has secured a capacity obligation in a Capacity Auction. Once a CAP is awarded a capacity obligation, it must authorize as a CMP with the IESO, and take on all of the obligations under the Market Rules applicable to CMPs. This authorization allows organizations to receive availability payments upon resource registration and satisfy their capacity obligations. In order to complete authorization and be considered a CMP, the participant is required to meet the prudential requirements.

Completion of authorization is a one-time process by any organization, meaning once completed you do not need to complete this authorization again for any subsequent auctions.

6.3 What is the authorization process?

CMP authorization is completed using Online IESO; the steps to do this can be seen in Appendix D: How to Authorize as a Capacity Market Participant.

As part of the CMP authorization, all participants must submit the capacity prudential support. The IESO will issue an RAN upon completion of the CMP authorization process.

6.4 When must I authorize as a CMP?

CMP authorization must happen during the forward period, and should be completed before the beginning of the month preceding the obligation period, or, for participants with new DR resources, prior to completing resource registration. Refer to auction timelines on the website for exact deadlines.

In Online IESO, authorization as a CMP can be initiated by the participant as soon as a capacity obligation is awarded. The participant will not be prompted by the system to do this, but it is required to be done in order to continue with the forward period activities.

You cannot authorize as a CMP if you do not have a capacity obligation.

6.5 What happens if I don't authorize as a CMP?

Organizations that are not authorized as a CMP will not be eligible to receive availability payments during the obligation period.

6.6 What are the organization roles that apply to a CMP in Online IESO?

There are four organization roles that must be fulfilled in Online IESO for each capacity auction resource prior to the obligation period. If the obligation is being fulfilled by an existing energy market resource, these roles may already be assigned.

- Owner: The CAP organization that clears the auction with a capacity obligation must become the Owner. More information on the definition of Owner can be found in Section 2.2.3 of Market Manual 1.5: Market Registration Procedures.
- Operator: This is the market participant responsible for operations. The Owner is assigned to this role by default.
- Metered Market Participant (MMP) – this is the market participant responsible for receiving the settlement statements.
- Registered Market Participant (RMP) - this is the entity in charge of submitting offers in the energy market.

As the Owner, the CMP is ultimately responsible and accountable for the facility's compliance with the Market Rules and all registration of equipment, but may choose to delegate forward period and commitment period activities to the organization or individuals of their choosing through the assignment of organization roles (RMP, MMP, and Operator) and contact roles (except in the case of CMPs with a system-backed import resource or generator-backed import resource, in those cases all participation contact roles must be assigned to the CMP or an affiliate of the CMP per Section 5.1 of Market Manual 12). If the Owner wishes to assign another organization to the Operator, MMP or RMP roles, that organization must be a market participant. More information on these roles and their relationship to a resource can be found in Section 3.1.5 of Market Manual 1.5: Market Registration Procedures. A list of the mandatory contact roles and the associated organization role that assigns them during CMP authorization is found below.

6.7 What are the mandatory contact roles associated with CMP authorization?

The following are the mandatory contact roles associated with CMP authorization. Online IESO will recognize if any of these contact roles were assigned during CAP authorization and will transfer them over to the CMP.

Table 4 Contact roles for CMP

Organization Role that Assigns	Contact Role	Responsibility
Owner/MMP/RMP	Invoice and Banking	Contact responsible for submitting, approving and maintaining the organization's banking information. This contact will be automatically transferred over from the CAP authorization.
Owner/MMP	Prudential Requirements	Contact responsible for managing information with regards to collateral funds submitted for prudential support obligations
Owner/Operator/MMP/RMP	Emergency Preparedness Plan	Contact responsible for submitting and updating the Emergency Preparedness Plan
RMP	Dispatch Data Submitter	Contact responsible for submitting and/or changing the real-time bids, offers or schedules
Owner	Equipment Registration Specialist	Contact responsible for submitting registration requests and the related facility, resource and equipment information, and modifying third party viewership
MMP	Revenue Metering	Person responsible for viewing the master data for registered meter installations and in-flight data submitted during a meter registration request. The Revenue Metering Contact for a transmitter organization is responsible for approving Site Registration Reports for transmission delivery points

Organization Role that Assigns	Contact Role	Responsibility
MMP	Notice of Disagreement	Contact responsible for managing documentation and information in the Notices of Disagreement process
Operator	Control Room Section	Participant organization section or the control center responsible for 24/7 real-time operational matters related to the control room

6.8 How do I post prudential support?

All CAPs with a capacity obligation must post prudential support as a part of completing its authorization as a CMP, and are encouraged to do so at least 60 days prior to the start of the obligation period. Refer to auction timelines posted online for exact dates and other details.

The prudential support posted by a market participant to satisfy a capacity obligation must be in the form of a guarantee or irrevocable commercial letter of credit, which in both cases must be in a form acceptable to the IESO and provided by a:

- Bank named in a Schedule to the Bank Act, S.C. 1991, c.46 with a minimum Standard and Poor's long-term credit rating of "A" or equivalent from an IESO acceptable major bond rating agency; or
- Credit union licensed by the Financial Services Commission of Ontario with a minimum Standard and Poor's long-term credit rating of "A" or equivalent from an IESO acceptable major bond rating agency.

The steps to post prudential support in Online IESO can be seen in Appendix D: How to Authorize as a Capacity Market Participant.

6.9 Can the prudential support be fulfilled by a third party?

Yes, the prudential support may be provided to the IESO by a third party organization on behalf of a CMP. If this is done, the CMP is still ultimately responsible and accountable for the facility's compliance with the Market Rules and all registration of equipment.

6.10 Does a generation or storage facility contributing to a generator-backed capacity import resource need to be registered in Ontario's market?

No, but the owner of the facility (as defined in the attestation found in Appendix H of Market Manual 12) must be registered to participate in the IESO-administered markets. During the capacity enrollment process, the participant will have to provide a number of details about the facility and attest to meeting a number of eligibility requirements. To satisfy the obligation, the participant must also be authorized as an Energy Trader. The deadlines to complete these activities can be found in the Auction Timelines document on the capacity auction webpage.

6.11 How do I register a new DR resource?

A CMP that receives a capacity obligation for a physical DR resource that did not participate in the energy market at the time of capacity enrollment (a "future" DR resource) must register their facility with the IESO to meet their capacity obligation. This process involves registering the resource, which should be started in advance of the auction, and assigning the resource to a capacity obligation in Online IESO in the forward period. When registering the resource, the attributes provided for registration must be the same as those entered as a placeholder during capacity enrollment.

> Note that this registration process may take several months so it will need to be started well in advance of the auction. The IESO recommends starting at least eight months in advance for new physical facilities, and at least 4 months in advance for any modification to existing facilities. See Market Manual 1.5: Market Registration Procedures and the Market Registration Process Schedule for details on registration timelines.

If the physical DR resource is non-dispatchable, it is registered as an HDR resource, and if it is dispatchable it is remains registered as dispatchable load. If a physical non-dispatchable load is participating as a contributor to a virtual HDR portfolio it is registered through the contributor management process.

New virtual DR resources that are not revenue metered by the IESO are therefore non-dispatchable must be registered as HDR during the forward period. A CMP registering virtual DR resources can only register one resource, per capacity obligation, per contributor type (residential or commercial/industrial/institutional as applicable) in a given zone.

6.12 How do I assign my new physical DR resource to my capacity obligation?

The steps to assign a physical DR resource to a capacity obligation are shown in Appendix F: How to Assign a Physical DR Resource to an Obligation. These steps apply to new physical HDRs or dispatchable loads.

6.13 Do I need to assign my capacity obligation if I am not a new physical DR resource?

No. The capacity obligation will automatically be assigned in Online IESO to the CAR identified during capacity enrollment.

6.14 Contributor Management

Contributor Management is a process for virtual HDR resources to submit required information about their contributors to the IESO using Online IESO. This process is completed during the forward period and continues on a monthly basis during the obligation period. For step by step instructions on using contributor management in Online IESO, refer to Appendix G: How to Manage Contributors for Virtual HDR Resources.

6.14.1 Who submits information through contributor management?

CMPs with virtual HDR resources must submit contributor information through the contributor management process. This includes both virtual contributors (those that are LDC revenue metered) and physical contributors (non-dispatchable loads that have an IESO Revenue Meter).

6.14.2 When do I register contributor(s) to the IESO?

CMPs must register contributor(s) within the submission window occurring prior to the start date of the effective month. Find the timelines of this window on the Market Calendars page found on the IESO website.

All contributor management submission(s) can come in within the two specific submission windows, but must come in no later than the 14th business day before the start date of the effective commitment month. The two submission windows are:

- Early Submission - During this window the IESO will provide an early review and comment. Participant will have approximately 2 business days to re-submit with their changes by the deadline.
- Final Submission - Deadline to submit contributor management request. The IESO will provide a final review and comment 2 business days before the start of the effective commitment month.

6.14.3 What categories of DR resources are contributors registered for?

There are two categories of DR contributors that can be registered:

1. Virtual HDR consisting of commercial, industrial, institutional and/or non- dispatchable loads (C&I). These loads (or contributors) can be classified as:
    a. Virtual C&I contributors, and;
    b. Physical C&I contributors;
2. Virtual HDR consisting of residential, smart-metered loads are classified as:
3. Virtual residential contributors

6.14.4 What information do I submit through contributor management?

The submission requirements for all types of contributors can be found in Section 5.2.1 of Market Manual 12.

6.15 How do I transfer my capacity obligation?

An organization can choose to request a full or partial transfer of their capacity obligation to another organization, or to itself (i.e. a different CAR in its own portfolio). The request to transfer is done in Online IESO and must be received by the IESO during the forward period, no later than 14 business days prior to the start of the obligation period. For step-by-step instructions on how to complete a capacity obligation transfer request, see Appendix I: How to Complete a Capacity Auction Transfer Request.

6.16 Where do I find the information required to enable my transfer?

The post-auction report includes the information required to enable transfers.

6.17 How are obligation transfers assessed?

We assess transfers using the following criteria:

- Assessed in the order received;
- When the transfer is occurring between two different organizations, the transferee must confirm that it accepts the new/additional capacity obligation. The transfer will not be considered until the IESO receives this confirmation.
- The transferred amount of capacity is less than or equal to the difference between the transferee's enrolled capacity and the amount of capacity they already have an obligation for in the same obligation period;
- For both transferee and transferor, the resulting obligations cannot be between 0 and 1 MW (but can be 0 MW and can be equal to or greater than 1 MW)
- The transferred capacity is of the same obligation type (either physical or virtual). For clarity, a physical DR resource can transfer to any physical capacity generation resource; virtual DR resources can only transfer to other virtual DR resources;
- The capacity transfer does not result in any zonal, import capacity, or interface limit exceedances;

6.18 Can I transfer an obligation within my own organization?

Yes, as long as the obligation transfer meets all of the eligibility requirements. In these cases, the consent from the transferee is not required.

CAPs that registered multiple virtual HDR resources in a given zone (i.e., that registered a separate resource for C&I and for Residential) during the pre-auction period may transfer capacity obligations across these two resources. The sum of the auction capacity committed to these two resources cannot exceed the sum of the enrolled capacity in pre-auction for these two resources.

6.19 What clearing price will I receive if I accept a transfer from a different zone?

If the capacity being transferred is from a zone with a different clearing price than the zone the recipient resource is located in, the resource will be settled using a blended price based on the clearing prices from both zones.

6.20 Can I transfer a capacity obligation from a "future" resource to an existing resource?

Yes, a CMP may choose to transfer an obligation from the "new" resource" to the existing resource as long as both resources have gone through the capacity enrollment process and the transferred capacity amount is less than or equal to the difference between the transferee's capacity and the amount of capacity they already have an obligation for in the same obligation period.

6.21 How do I know if a zone is congested?

A zone is considered 'congested' if a zonal clearing price in that zone was set below the Ontario-wide clearing price. The public post-auction report shows this information.

6.22 How do I buy-out of my capacity obligation?

If you are a CAP or CMP and were successful in the auction, you can buy-out of your capacity obligation at any time during the forward period or the obligation period. You initiate a buy-out by emailing the IESO's Customer Relations with the following information:

- Capacity obligation ID;
- Buy-out obligation period;
- Electrical zone for which you would like to buy-out;
- Effective date of buy-out; and

Amount of capacity (in MW) that you would like to buy-out ('buy-out capacity').

The *IESO* will review the buy-out request within two business days. At the end of this review period, the IESO either approves or rejects the buy-out request. On approval, the buy-out is valid from the effective date of the buy-out until the end of the associated obligation period. The effective date will be no sooner than the 2 business days following the date the IESO received the request.

The IESO will process the buy-out request within five business days after approval and notify the participant of the buy-out charge

- What is the buy-out charge?

The calculation of buy-out charge for each buy-out request is as follows:

$$50\% \times \sum_{d=1} n\, CBOC_K \times CAPC \times (1 - CNPF_m)$$

Where:

- 'd' is a business day
- 'n' is the range of business days from the buy-out effective date to the end of the obligation period
- 'm' is the month that corresponds to the business day
- 'CBOCk' is the buy-out capacity
- 'CACP' is the capacity auction clearing price
- 'CNPFm' is the non-performance factor for the applicable month

The IESO Charge Types and Equations provides the buy-out charge calculation.

The non-performance factors referenced in the buy-out charge calculation are listed in Section 6.1 of Market Manual 12.

6.23 What is the purpose of the buy-out charge?

The buy-out charge is meant to provide partial compensation to the market when a CAP or CMP vacates their capacity obligation. Availability payments reflecting the reduced capacity obligation amount is made to the CMP from the effective date of the buy-out. The 50% charge helps ensure good-faith participation in the capacity auction while allowing some flexibility/liquidity in lieu of rebalancing auctions. The charge also encourages CMPs to proactively inform the IESO if they are not able to meet their capacity obligations.

6.24 What happens to my deposit and prudential support after I buy-out?

For a full buy-out request, the pre-auction deposit will be refunded, if applicable, and the capacity prudential support will be reduced to zero. The deposit will be refunded following receipt of the buy-out payment.

For a partial buy-out request, the prudential support obligation will be revised to reflect the new obligation, and the difference will be refunded after receipt of the buy-out payment.

7. Commitment Period Activities

The commitment period is the entire length of time over which each auction will commit capacity; the capacity auction has a one-year commitment period made up of two obligation periods. This chapter provides details regarding activities conducted during the commitment period.

All resources must participate in the energy market to satisfy their capacity obligation. For DR resources, there are two ways that you may participate in the energy market; if you can respond to a 5-minute dispatch instruction, you may participate as a dispatchable load. If you cannot, then you may participate as an HDR participant. This section provides additional information for CMPs with a capacity obligation, beyond what is available in other energy market participation workbooks.

7.1 What does the energy market participation entail?

All CMPs are expected to meet their capacity obligations by participating in the energy market. Participation activities include:

- Submitting dispatch data for all hours of the availability window in the DACP and in the real-time market;
- Submitting outage requests if required; and
- Responding to test activations.

For information on participating in Ontario's Energy Market, see the Introduction to Ontario's Physical Markets workbook located on the Training Materials webpage. For information on how to submit, revise or cancel energy offers, see the Energy Market Interface guide: Submitting, Revising and Cancelling Energy Bids, located on the Participant Tool Training webpage.

7.2 What is the availability window?

The availability window is:

- Summer (May to Oct): Business Days, 12:00 to 21:00 EST
- Winter (Nov to Apr): Business Days, 16:00 to 21:00 EST

7.3 What are test activations?

For most capacity auction resources, two test activations may be scheduled during each obligation period. These tests will be scheduled during the applicable availability window. During the test, you are expected to demonstrate a reduction in energy withdrawal or increase in energy production equal to or exceeding your capacity obligation. Failure to perform a successful test activation may result in one or more of the following:

- Non-performance charges;
- A subsequent test activation; and/or
- A compliance investigation.

For generator-backed imports resources, one test needs to be self-scheduled during each obligation period. These tests must be scheduled for four consecutive hours within the applicable availability window. During the test, you are expected to demonstrate the capability to inject at least 95% of the generator-backed import resource's cleared obligation.

7.4 When are tests performed?

The IESO may direct capacity auction resources to perform up to two activation tests per obligation period to verify that the resource is capable of satisfying its capacity obligation. Tests will be scheduled to occur during the availability window of the dispatch day.

Generator-backed capacity import resources perform one test activation per obligation period, self-scheduled by the participant any time in the first 2 months of the obligation period.

More information on testing can be found in section 5.3.3 of Market Manual 12: Capacity Auctions.

7.5 Are all resources subject to the same testing protocols?

No. The duration of the test, notice of upcoming test, and assessment can differ by resource type. A summary of the testing protocols by resource is below.

Table 5: Testing Protocols by Resource

	Duration of Test	**Notice**	**Assessment**
Dispatchable Load	Up to 4 hours	Up to 1 hour	Quantity of energy withdrawn for each interval must equal or exceed capacity obligation
HDR Resource	Up to 4 hours*	1 day	At least 85% of the capacity obligation must be delivered on an hourly basis. Refer to Section 5.3.3 of Market Manual 12 for further details.
Capacity Generation Resource	Up to 4 hours (may be constrained on longer due to Minimum Generation Block Run Time)	Quick start: Up to 1 hour Non-quick start: 1 business day	Quantity of energy injected for each interval must equal or exceed capacity obligation

	Duration of Test	Notice	Assessment
Capacity Storage Resource	Up to 4 hours	Up to 1 hour	Quantity of energy injected for each interval must equal or exceed capacity obligation
System-backed Capacity Resource	Up to 4 hours	A constraint is applied up to 2 hours in advance of test, resulting in schedule in PD-1	Quantity of energy scheduled for each interval must equal or exceed capacity obligation
Generator-backed Import Resource	Up to 4 hours	Self-scheduled	At least 95% of the capacity obligation must be injected on an hourly basis. Refer to Section 5.3.3 of Market Manual 12 for further details.

* If an HDR resource successfully demonstrates performance at full capacity obligation while recognizing dead-bands through a four-hour test or in-market activation, it will be subsequently tested for less than a four-hour duration. Following a successful performance, HDR resources can be tested for a reduced duration until failing a test or in-market activation upon which another re-qualifying four-hour test would be required. The IESO will maintain discretion to increase the test duration for an HDR resource back to four hours to assess the HDR's response at any time. A second test within an obligation period will not be required if an HDR resource successfully delivers its full capacity obligation through a test or in-market activation during that obligation period. More information is available in Section 5.3.3 of Market Manual 12.

7.6 Energy Market Participation for Demand Response Resources

CMPs using either dispatchable loads or HDRs must submit dispatch data for all hours of the availability window for their capacity obligation. To ensure CMPs comply with this energy market must-offer requirement, CMP's using either dispatchable loads or HDRs are subject to an availability assessment. The availability assessment looks at whether energy bids for the hours of availability were submitted and maintained from day-ahead, pre-dispatch and through to real time and compares them against the capacity obligation. An eligible energy bid for the availability assessment performance is a bid greater than, but not equal to, the bid price threshold ($100/MWh) and less than, but not equal to, the Maximum Market Clearing Price (MMCP) of $2,000. CMPs must submit ramp up and ramp down values for each HDR resource that is equal to the capacity of the HDR resource. For example, an HDR resource with a capacity of 10 MW would submit ramp up and ramp down values of 10 MW/minute.

7.6.1 What is the Standby Report?

The Standby Report allows a participant with an HDR resource to receive a notice that you may receive an activation on the dispatch day. HDR participants should monitor the Standby Report for a Standby Notice from 15:00 EST day ahead until 07:00 EST on the dispatch day. There are two ways that a Standby Notice can be triggered. The first way is in-market price-based trigger. You will receive an in-market Standby Notice when the pre-dispatch shadow price for an HDR resource for at least one hour of the availability window is $100 or greater. The second way is an out-of-market, or administrative trigger. You will receive an administrative Standby Notice for a test activation, or as a Control Room action taken to manage system conditions in the lead up to or during an emergency operating state (in the event you have not already received an in-market Standby Notice).

If you receive a Standby Notice, you must monitor for an Activation Notice. Note that you can be sent an in-market Standby Notice, and then be sent an administrative Activation Notice in the lead up to or during an emergency operating state. If you do not receive a Standby Notice for a given dispatch day, remove your bids by 09:00 EST. If you fail to remove your bids:

- You may still be activated; and
- If when activated you fail to deliver your scheduled quantity within the stated dead-bands, you may be subject to charges/sanctions.

You can access the Standby Report by going to the IESO Reports Page and logging in to your confidential Participants Report. Select the Standby Report from your reports. Following is a sample report:

Figure 3: Demand Response Standby Report

Demand Response Standby Report

For MP1
Created at Feb 10, 2016 06:45:00
For Dispatch Day Feb 10, 2016

Resource Name	Standby Notice Issued
RESOURCE_1	Yes
RESOURCE_2	Yes

7.6.2 How do HDR resources know when they are activated?

An Activation Notice will be issued approximately 2 hours and 30 minutes in advance (but no later than 2 hours in advance) of the start of the first dispatch hour to which it relates. You should start monitoring at 09:00 EST and can stop monitoring at 18:00 EST. There is no requirement to remove your bids if you do not receive an Activation Notice.

You can access the Activation Report by going to the IESO Reports Page and logging in to your confidential Participants Report. Select the Activation Report from your reports. A sample report is shown below:

Figure 5: Demand Response Activation Report

ieso
Connecting Today.
Powering Tomorrow.

Demand Response Activation Report

For MP1
Created at Feb 10, 2016 12:30:00
For Feb 10, 2016

Resource Name		Scheduled MW for Hour																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
RESOURCE_2	Energy Bid (MW)													15	15	15	15								
	Energy Schedule (MW)													10	9	8	7								
	DR Curtailment (MW)													5	6	7	8								
RESOURCE_1	Energy Bid (MW)															20	20	20	20						
	Energy Schedule (MW)															10	9	8	7						
	DR Curtailment (MW)															10	11	12	13						

7.6.3 What is the difference between an in-market and emergency activation of HDR resources?

An in-market or economic activation of HDR resources is dependent on two conditions:

4. A price-based trigger for a Standby Notice, issued prior to 07:00 EST on the dispatch day. A Standby Notice is issued when the pre-dispatch shadow price for at least one hour of the availability window is $100 or greater; and
5. An Activation Notice, issued when the pre-dispatch schedule of an HDR resource three hours prior to dispatch (also called PD-3) is lower than the resource's total bid quantity for at least one hour of the availability window.

An out-of-market or emergency activation of HDR resources occurs as a result of actions taken by the Control Room to avoid the declaration of an emergency operating state or to manage it after it has been declared. For clarity, the declaration of an emergency operating state (including Energy Emergency Alert Level 1, or EEA-1) is not a required condition to activate HDR resources. As per MM 7.1, Appendix B, the IESO can activate HDR resources leading up to and during an emergency operating state depending on the specific circumstances and conditions of the IESO-controlled grid.

An emergency activation of HDR resources is dependent on two conditions:

6. HDR resources can be placed on standby administratively by the Control Room if it is they are not already on standby through the in-market price-based trigger. Similar to in-market standby timelines, resources receive a Standby Notice between 15:00 EST of the day-ahead and 07:00 EST of the dispatch day.
7. The IESO may choose to activate HDR resources that were previously put on standby, whether the resource was placed on standby through an administrative control action or the in-market price-based trigger. Similar to in-market activation timelines, the Activation Notice is issued approximately 2 hours and 30 minutes in advance (but no later than 2 hours in advance) of the start of the first dispatch hour to which it relates. The Control Room can activate HDR resources based on where in the province demand reduction is needed, meaning not all HDR resources will necessarily be activated.

The two actions above are based on a prescribed list called the Emergency Operating State Control Action (EOSCA) list, which reflects the hierarchy of control actions available to the IESO leading up to and during an emergency operating state. The list can be found in Market Manual 7.1, Appendix B.

7.6.4 Are participants compensated for out-of-market activation of HDR resources?

HDR resources are compensated for both test activations and emergency activations (i.e. out-of-market activations). While the payment for test activation is $250/MWh, the payment for an emergency activation is based on bid price, the Hourly Ontario Energy Price (HOEP) and the quantity of demand response capacity curtailed). The quantity of demand response capacity curtailed is capped at the lesser of the capacity obligation, the HDR resource's registered capability, the maximum quantity of the demand response energy bid for the resource, and the quantity of auction capacity that the resource was activated for. See Market Manual 5.5, Section 1.6.26.2A, and charge type 1320 in the IESO Charge Types and Equations document for more details.

7.6.5 What is the process for updating bids, including the timeline for updating bids?

Submitted bids can be changed freely until the mandatory window (2 hours before the first dispatch hour). Per Market Manual 7.3, Section 4.2.4, for any quantity, CMPs whose HDR resources received an Activation Report with an Activation Notice on the dispatch day are required to notify the IESO Control Room by telephone as soon as practical if they are unable to provide their activation amount.

HDRs require approval to update dispatch data within the mandatory window and must notify the Control Room if they need to update their bids between the time they are activated (approximately 2 hours and 30 minutes prior to the dispatch hour) and the start of the mandatory window (2 hours before the first dispatch hour), and subsequently must reduce their DR capacity to reflect the updated bid.

7.6.6 After the initial activation hour, can I still revise my bids for the remaining hours?

As per Market Manual 4.2, Section 1.3, CMPs that have HDR resources are responsible for submitting bids in the real-time energy market that are consistent with their resources' actual available capacity in the required timeframe, and make changes to the bid data if their resources' actual capacity availability should change for any reason. If CMPs are unable to provide their capacity obligation, then they must submit appropriate bids that reflect their updated capability. Submitting bid that are inconsistent with actual capacity availability places CMPs in violation of Market Rules and exposed them to enforcement actions.

In the event an HDR resource's available capacity changes after the initial activation hour, CMPs can call the Control Room to request approval to change their bids (solely to the quantity element of their bids) for the rest of the activation hours. For example, if it is a four-hour activation starting from hour 13 and lasting until and including hour 16, the resource can request to change the bid for hour 16 during hour 14. Control Room approval is required for any bid update within the mandatory window.

Note that if HDR resources have reduced their consumption during the dispatch hour and are able to maintain that reduction for the hours they are scheduled, bids are to stay the same and do not need to be updated.

7.6.7 I have a dispatchable load. How do I take an outage?

If you are a dispatchable load, then continue the process of submitting outages as per Market Rules. Details on the Outage Management Process are in Market Manual 7.3: Outage Management, available on the Market Rules and Manuals Library webpage.

7.6.8 I have an HDR resource, when and how do I submit a non-performance event?

A non-performance event occurs when an HDR resource is not able to deliver 5 MW of capacity or greater. Participants with HDR resources are required to maintain records of non-performance events during the obligation period and these records must be maintained for 1 year from the end of the commitment period. The records must contain the following details:

- Subject
- Sentence describing the event
- Resource Name
- Trade Date(s)
- Hours of Reduced DR Capability
- Registered Maximum DR Capability
- Reduction in DR Capability
- DR Capability during Non-Performance Event
- Description of action taken to manage energy bids

For any MW amount, any participant whose HDR resource received an activation notice on the dispatch day and are unable to deliver the full activation amount must call the Control Room. More information on how and when to submit non-performance events is detailed in Market Manual 7.3, Section 4.2.4.

7.6.9 If an HDR resource is activated during an Emergency Operating State is performance voluntary?

Out-of-market activations, like energy market activations, are not optional and non-performance charges (e.g., dispatch/administrative) are also applicable to emergency activations. A compliance investigation can be performed by the IESO in the case of a failure of a demand response resource to delivery their scheduled quantity of demand response capacity when activated to do so.

7.6.10 When should I call Customer Relations versus the Control Room?

During business hours market participants should contact IESO Customer Relations if there are any questions regarding the issued standby/activation notices. Outside of business hours market participants should contact the Markets area of the Control Room.

HDR resources require Control Room approval to update dispatch data within the mandatory window, and must notify the Control Room if they need to update their bids between the time they are activated (approximately 2 hours and 30 minutes prior to the dispatch hour) and the start of the

mandatory window (2 hours before the first dispatch hour), and subsequently must reduce their DR capacity to reflect the updated bid.

General inquiries about demand response participation should be directed to Customer Relations at customer.relations@ieso.ca.

7.7 Energy Market Participation for Capacity Generation Resources

7.7.1 How do I take an outage?

If you are a generator, then continue the process of submitting outages as per Market Rules. Details on the Outage Management Process are in Market Manual 7.3: Outage Management, available on the Market Rules and Manuals Library webpage.

7.7.2 How do I submit offers?

Generation resources continue to participate in the energy market as normal, as set out in Market Manual 9.2: Submitting Operational and Market Data for the DACP, and Market Manual 4.2: Submission of Dispatch Data in the Real-Time Energy and Operating Reserve Markets.

As part of the capacity obligation, generation resources are subject to an availability assessment. The availability assessment looks at the generator's energy offers day ahead for all hours of the availability window and compares them against the capacity obligation. During pre-dispatch, we will check that you've maintained these offers subject to the most restrictive of the following parameters:

1. Generator's Elapsed Time to Dispatch;
2. Minimum Generation Block Down Time; and
3. 2-hour Mandatory Window.

7.7.3 Will the dispatch process change?

No. Capacity Generation Resources are committed, scheduled, and dispatched on a five-minute interval using the existing day-ahead and real-time scheduling process.

7.8 Energy Market Participation for Capacity Storage Resources

7.8.1 How do I take an outage?

Continue the process of submitting outages as per Market Rules. Details on the Outage Management Process are in Market Manual 7.3: Outage Management, available on the Market Rules and Manuals Library webpage.

7.8.2 How do I submit offers?

Storage resources continue the normal process of submitting energy offers, as set out in Market Manual 9.2: Submitting Operational and Market Data for the DACP, and Market Manual 4.2: Submission of Dispatch Data in the Real-Time Energy and Operating Reserve Markets.

As part of the capacity obligation, storage resources are subject to an availability performance assessment. The availability assessment looks at the energy offers submitted for the DACP, through to pre-dispatch and until real time, and compares them to the capacity obligation. If the storage resource receives a dispatch during the availability window, the availability assessment will not be performed on the remaining energy offers for the rest of that day's availability window.

7.8.3 Will the dispatch process change?

No. Capacity storage resources will continue to be scheduled and dispatched per the IESO's Market Manual 4.3 – Real Time Scheduling of the Physical Markets.

7.9 Energy Market Participation for System-backed and Generator-Backed Capacity Import Resources

7.9.1 How do I take an outage?

System-backed capacity import resources are not required to submit outages. Generator-backed capacity import resources must submit outages as described in Market Manual 7.3: Outage Management, available on the Market Rules and Manuals Library webpage.

7.9.2 How do I submit import offers?

Offers should continue to be submitted per the normal process with two process additions. When choosing the boundary entity resource for submitting offers during the availability window, capacity import resources must use the boundary entity resource designated for system-backed capacity imports and associated with the control area that the resource is located in.

In addition, when submitting an e-tag, for system-backed import offers the letters "SCAP" must be included in between the Balancing Authority identification. For generator-backed capacity import offers will be required to include the letters "GCAP" in between the Balancing Authority identification. More information on submitting offers for import resources can be found in Market Manual 9.2: Submitting Operational and Market Data for the DACP, and Market Manual 4.2: Submission of Dispatch Data in the Real-Time Energy and Operating Reserve Markets.

As part of the capacity obligation, import resources are subject to an availability assessment. The availability assessment looks at the energy offers submitted for the DACP, through to pre-dispatch, and compares them to the capacity obligation.

7.9.3 Will the dispatch process change?

No. Capacity import resources will continue to be scheduled and dispatched per the IESO's Market Manual 4.3 – Real Time Scheduling of the Physical Markets.

7.9.4 What is a capacity import call?

If the IESO is forecasting or experiencing an adequacy shortfall, a capacity import call may be issued to generator-backed capacity import resources. As part of the call, the IESO may request a MW quantity, up to the obligation amount, for a specific hour or set of hours. The participant will then be responsible for getting scheduled in the market for that MW amount, during the hours requested. More information can be found in Market Manual 4.3: Real-time Scheduling of the Physical Markets.

7.10 Settlements

Market participants are settled using the physical markets settlement process for both payments and non-performance charges. Non-performance charges resulting from a failure to satisfy capacity obligations are intended to incentivize compliance, ensure integrity of the electricity market and avoid the IESO paying for the capacity that has not been provided. Payment and charges described in this section are assessed and calculated for each resource registered by the market participant to fulfill the capacity obligation.

7.10.1 Availability Payment

The Availability Payment equation for each settlement month of the obligation period is calculated as follows:

$$Availability\ Payment\ = \sum_{h=1}^{n} Capacity\ Obligation \times Availability\ Rate$$

Where:

- "h" represents an hour within the Hours of Availability for the month;
- "n" is equal to the number of Hours of Availability in the business days of the settlement month;
- "Capacity Obligation" is the Capacity Obligation in MW secured through a Capacity Auction; and
- "Availability Rate" is the Hourly Auction Clearing Price ($/MWh), calculated based on the Auction Clearing Price ($/MWh-day)

7.10.2 Non-Performance Charges

7.10.2.1 What are non-performance charges?

Non-performance charges promote compliance with Capacity Obligations. There are four types of charges that may apply:

- Capacity Charge;
- Availability Charge;
- Administration Charge;
- Dispatch Charge;
- Deficiency Charge; and
- Import Call Failure Charge

7.10.2.2 What is the capacity charge?

Capacity charges are settlement charges applied to all capacity auction resources that fail a test activation. In addition, non-performance in a test may be flagged for compliance assessment and may result in IESO Sanctions. The capacity charge is capped at one charge per month and is applied per capacity obligation, rather than the cumulative capacity obligations per CMP.

Non-performance, or not delivering capacity in the energy market in a test activation, will result in a capacity charge equal to one month's Availability Payment:

$$-1\ x\ Availability\ Payment_m$$

7.10.2.3 What is the availability charge?

The availability charge is a settlement charge applied to all CMPs that do not make their capacity available in the energy market. The availability charge for the obligation is calculated each business day as follows:

$$= \sum_{h=1}^{n} -1 \times Max(0, (Capacity_d - Bid\ or\ Offer\ Qty_h)) \times Availability\ Rate \times NPF_h$$

Where:

- "d" represents a business day in the month;
- "h" represents an hour within the Hours of Availability for day "d";
- "n" is equal to the number of Hours of Availability for day "d";
- "Capacity" is the Capacity Obligation secured through an auction effective for day "d";
- "Bid or Offer Qty" is the Quantity from the price-quantity pair of the DR energy bid for hour "h" for loads or the Quantity from the price-quantity pair of the energy offer for hour "h" for generators, storage, and imports;
- "Availability Rate" is the Hourly Auction Clearing Price ($/MWh); and
- "NPF" is the Non-Performance Penalty Factor for the hour "h" of the settlement month.

7.10.2.4 What is the administration charge?

This charge applies to HDR resources that are not revenue metered by the IESO, i.e. virtual HDR resources, as well as generator-backed import resources.

Participants with virtual HDR resources must submit measurement data associated with their contributors to the IESO which in turn is used for settlement. Appendix H: How to Submit Demand Response Measurement Data describes how to complete this using Online IESO. Failure to submit measurement data (monthly and historical for the months an activation was received for C&I HDR resource, or only for activation days in a month for residential HDR resource) by the applicable deadline will result in an administration charge for the entire month.

Participants with generator-backed capacity import resources must submit data as part of their test activation by a specific deadline. If data is not provided in a timely, complete or accurate manner, the administration charge applies.

The charge is calculated as follows:

$$-1\ x\ Availability\ Payment_m$$

Where 'm' is the month that is being settled.

7.10.2.5 What is the dispatch charge?

The dispatch charge is a settlement charge applied only to physical HDR and virtual C&I HDR resources. This charge is used to ensure physical HDR and virtual C&I HDR resources are compliant with dispatch instructions. For greater clarity, the dispatch charge does not apply to virtual residential HDR resources.

The hourly charge will be applied when a physical HDR or virtual C&I HDR resource fails to reduce their consumption below the expected level during each 5-minute interval of the hour within an activation window. Compliance is assessed by comparing the resource's consumption during activation against its baseline. The baseline is calculated using the most recent high 15 of 20 measurements and an in-day adjustment factor. Additionally, a 15% upper deadband is used when comparing the reduction in the resource's consumption against the dispatch. The dispatch charge is calculated against the difference between the maximum bid and the constrained schedule even if you partially reduced. If activated, missing measurement data submission also results in capacity and dispatch charges.

The dispatch charge applies to all activations.

7.10.2.6 What is the deficiency charge?

This charge applies only to generator-backed capacity import resources. It applies if the capacity that was secured as part of the capacity obligation is found to be committed to another jurisdiction at any time during the obligation period (over committed capacity). The charge applied is equal to 1.5 times the availability payment for the entire obligation period.

7.10.2.7 What is the import call failure charge?

This charge applies only to generator-backed capacity import resources if they fail to deliver the capacity called upon during a capacity import call. The charge is equal to one month's availability payment.

7.10.3 Does performance during an activation impact the assessment of another activation in the month?

Performance during a given activation does not impact the performance assessment for another activation in the same month. This means that if a resource successfully delivers on their capacity obligation, within its deadband if applicable, for one activation, but does not on another, the non-performance charges will apply, despite other successful activation(s).

7.10.4 What is the CA Settlements Data Files Report?

Because the DR settlement lags behind the normal settlement process by one month, the real-time market does not include all of the data participants need to reconcile their DR settlement. The CA Settlements Data Files Report supplements the other settlement data files to ensure that DR participants have all the information they need. Details on the CA Settlements Data Files

Report can be found in File Format Specification for Demand Response Data Files. The report can be accessed by logging on to the private reports site.

- The CA Settlements Data Files Report contains the following information:
- Header record: settlement month, settlement trade date and settlement type;
- Energy bids;
- Dispatch schedule data; and
- Measurement data for HDR resources not revenue metered by the IESO.

8. Additional Information

8.1 References

The following are available via the Market Rules and Manuals Library:

- Market Rules, Chapter 7, Section 18: Capacity Auctions
- Market Manual 5, Part 5.5: Physical Market Settlements Statements
- IESO Charge Types and Equations
- Market Manual 7, Part 7.3: Outage Management
- Market Manual 12: Capacity Auctions
- Market Manual 1.5: Market Registration Procedures

8.2 Marketplace Training

The following simulations are available via the Participant Training Tool web page:

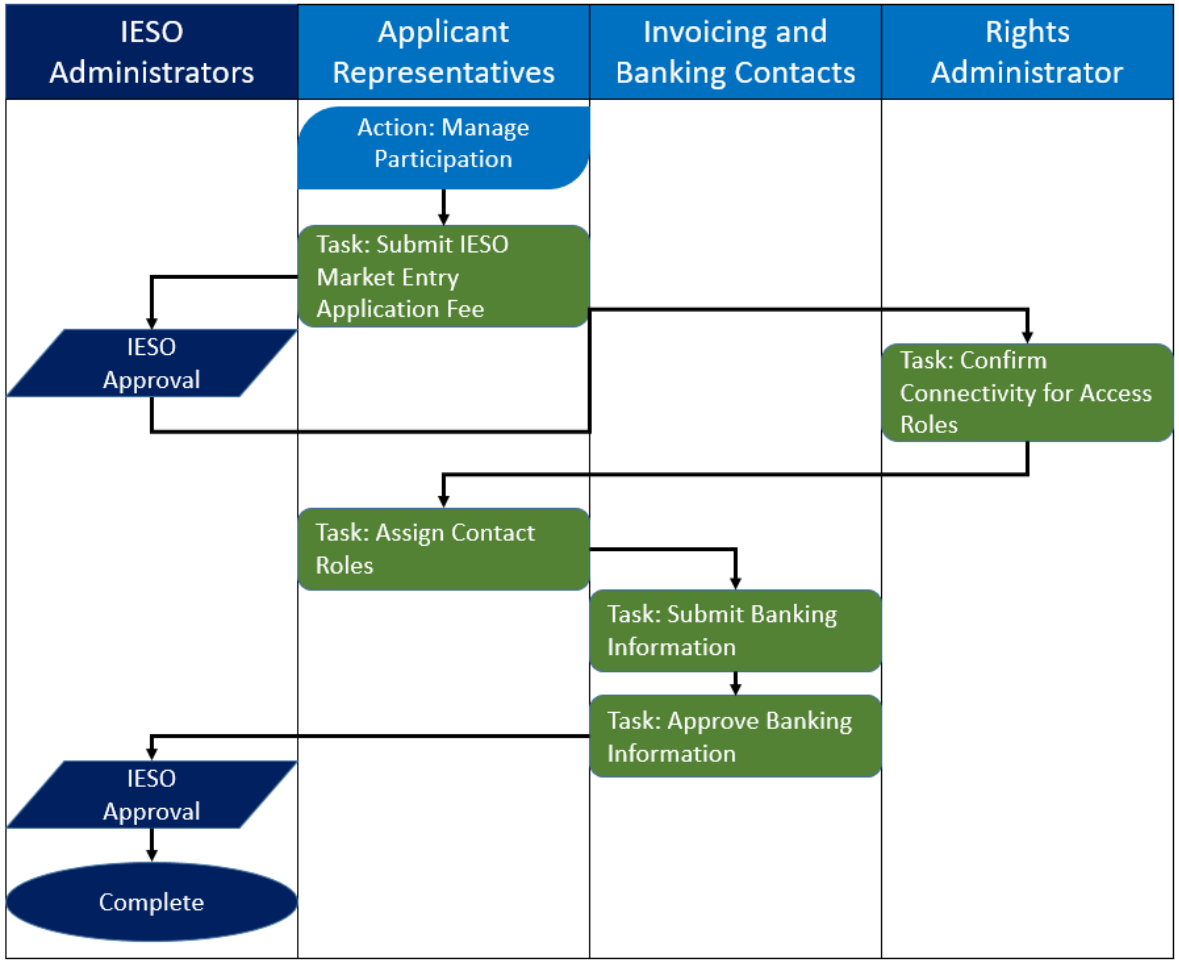
- Guide to the IESO Portal
- Outage Coordination and Scheduling System (OCSS) CROW Web Client User Guide
- Submitting, Revising and Cancelling Energy Bids
- Submitting, Revising and Cancelling Energy Offers
- Submitting, Revising and Cancelling Import Offers and Export Bids
- Submitting, Revising and Cancelling Schedules and Forecasts

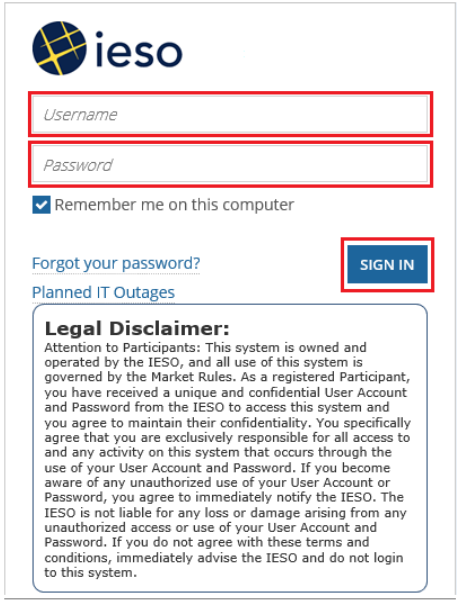
The following guide is available on the Training Materials web page:

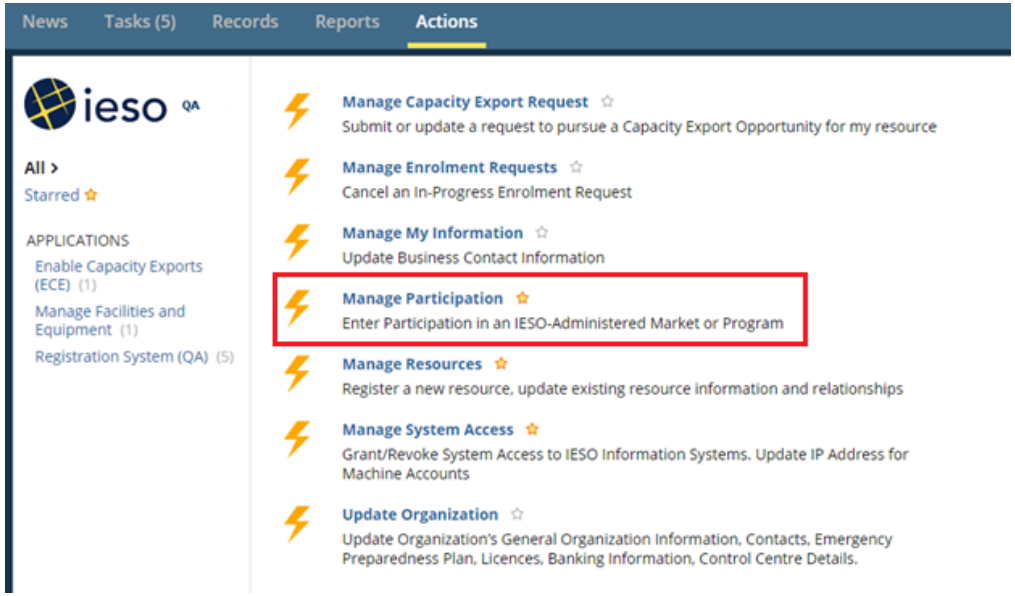
- Communicating with the IESO: Dispatchable Loads
- Communicating with the IESO: Dispatchable Generators

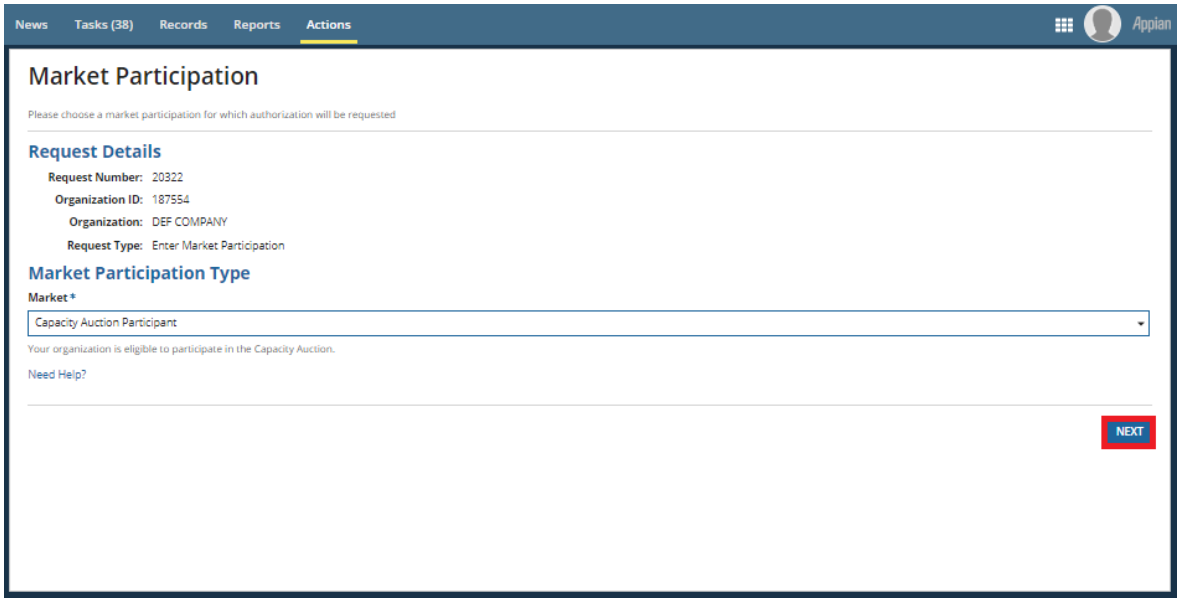
Appendix A: How to Authorize as a CAP

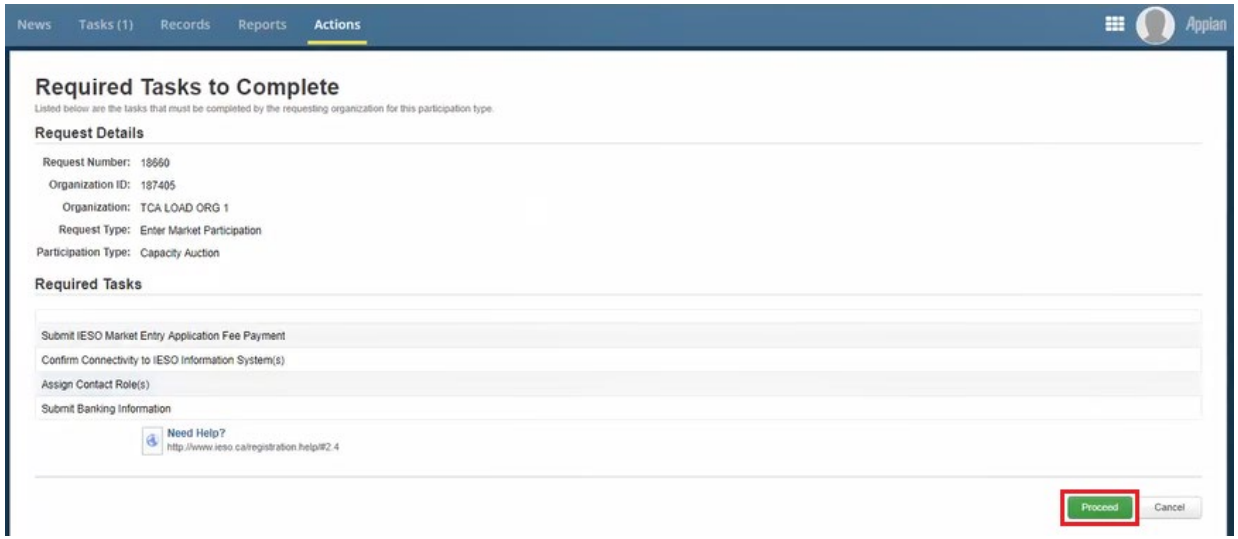
The following chapter provides an overview, followed by step-by-step screen captures, describing how to authorize as a Capacity Auction Participant (CAP) using the Online IESO web-based registration system.

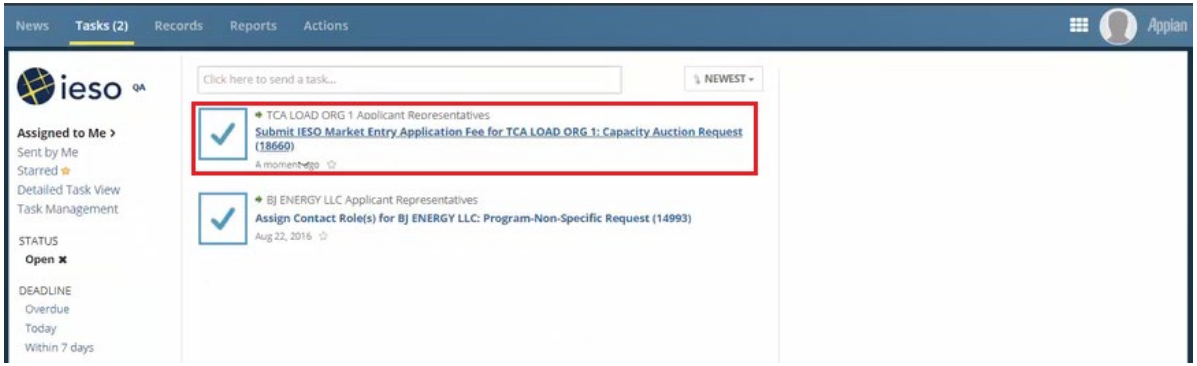


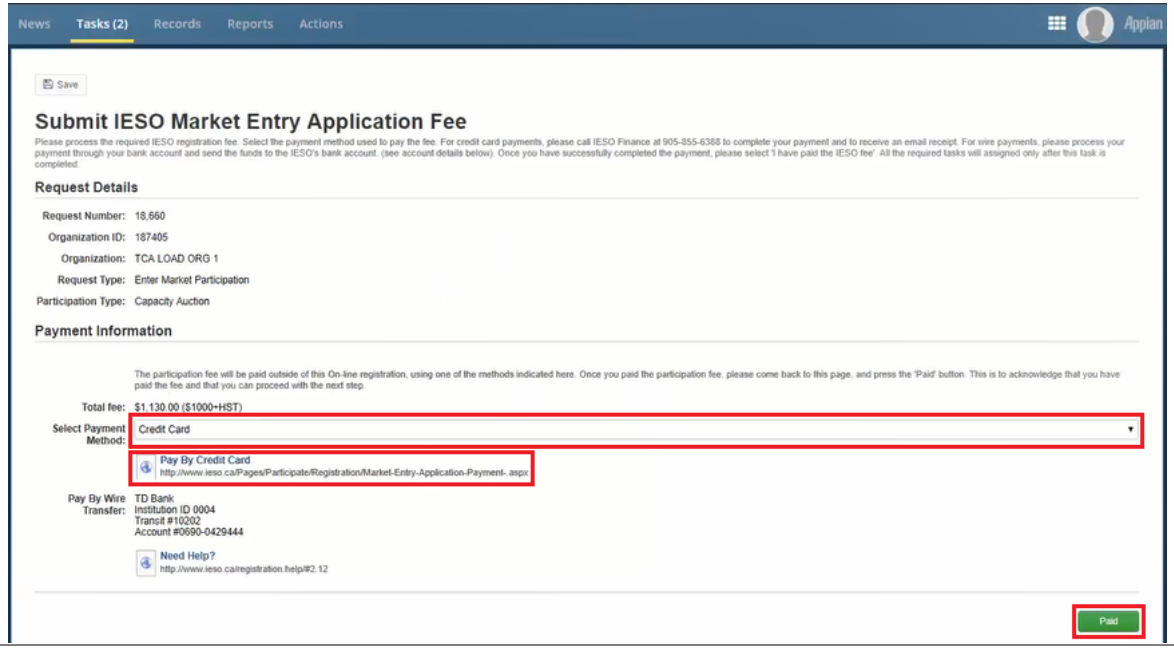
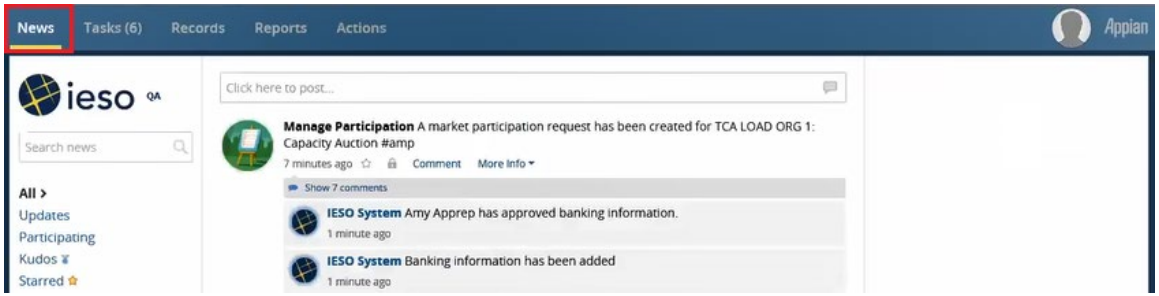
Step	Instruction	Picture
1	Action: Manage Participation Log in to the Online IESO web-based registration system using this link. Enter your Username and Password and click **Sign In**.	

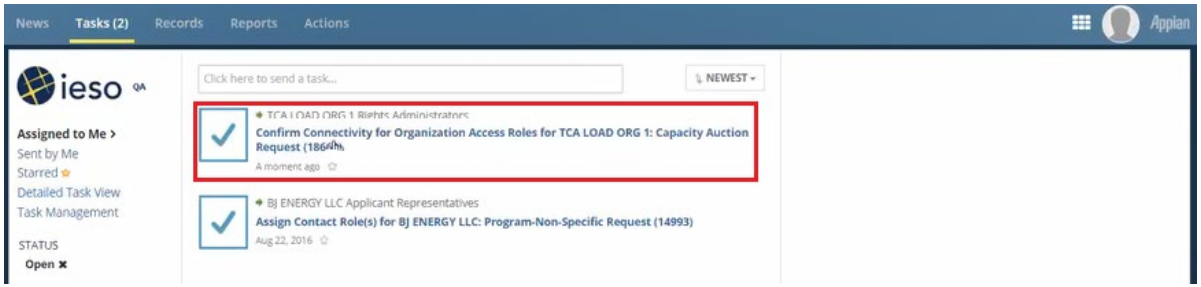
Step	Instruction	Picture
2	Click **Actions** on the menu bar at the top of the screen. Click **Manage Participation** from the list of available action items displayed on the subsequent screen.	
3	The **Choose Organization** screen is displayed. Select the check box corresponding to the organization that you wish to become authorized as a Capacity Auction Participant (CAP), and click **Next**.	

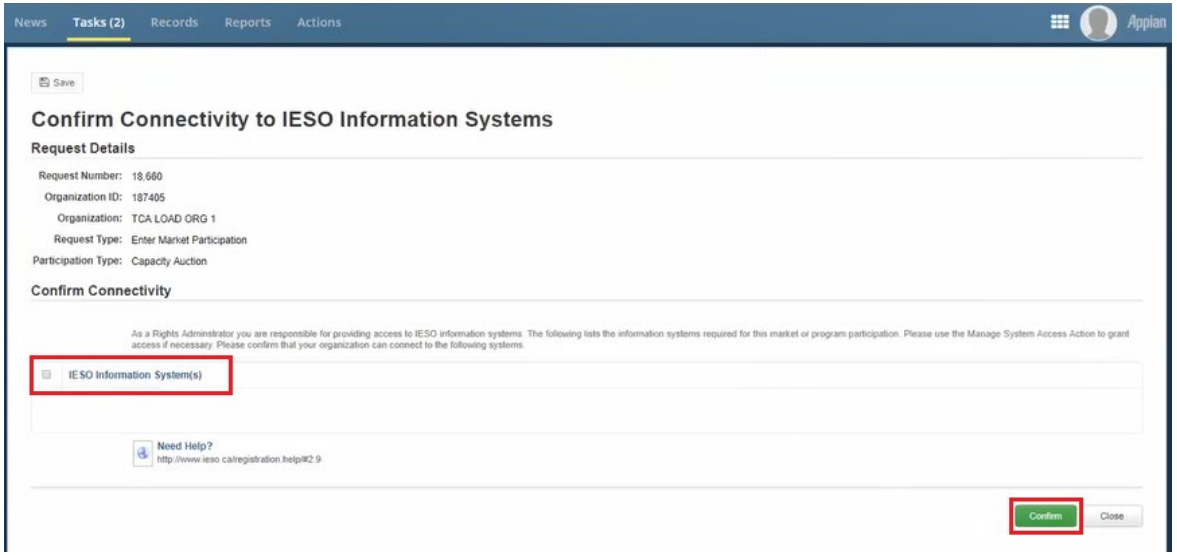
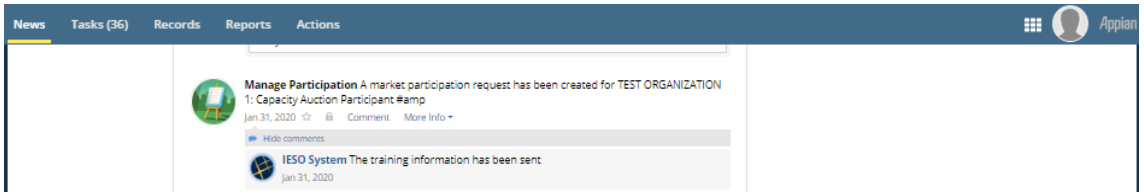
Step	Instruction	Picture
4	The Select Participation Type screen is displayed. In the **Action to Complete** drop-down list, select **Enter Market Participation**, and click **Next**.	
5	The **Market Participation** screen is displayed. In the **Market Participation Type** drop-down list, select **Capacity Auction Participant**, and click Next.	

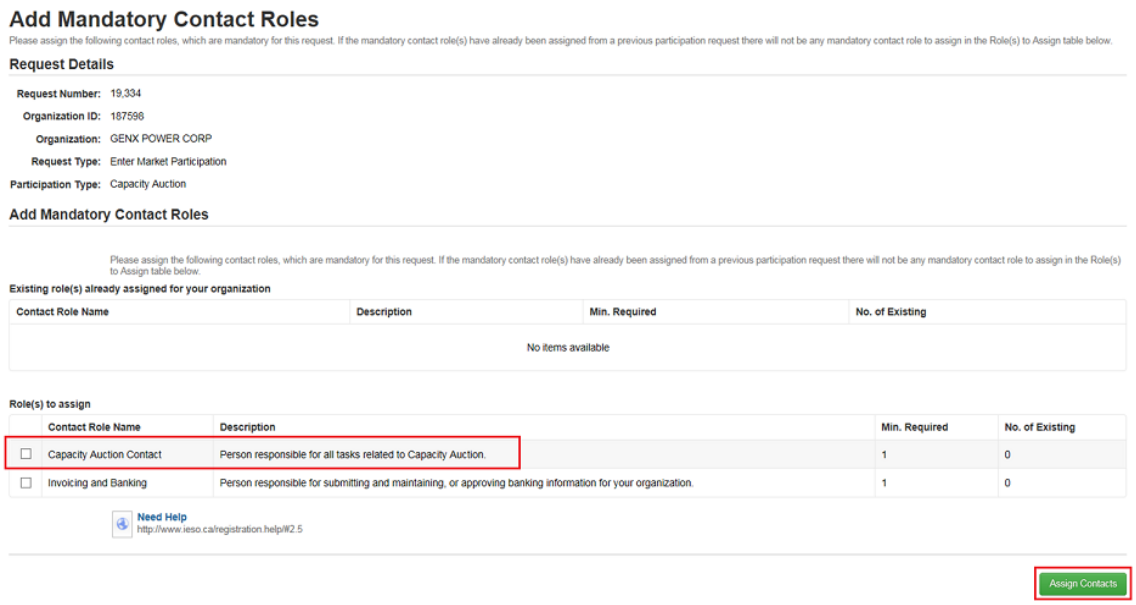
Step	Instruction	Picture
6	The **Required Tasks to Complete** screen is displayed for your review – click **Proceed**. Note: The following required tasks are applicable only to organizations with Demand Response Resources: Submit IESO Market Entry Application Fee Payment Confirm Connectivity to IESO Information System(s) Assign Contact Role(s) Submit Banking Information	

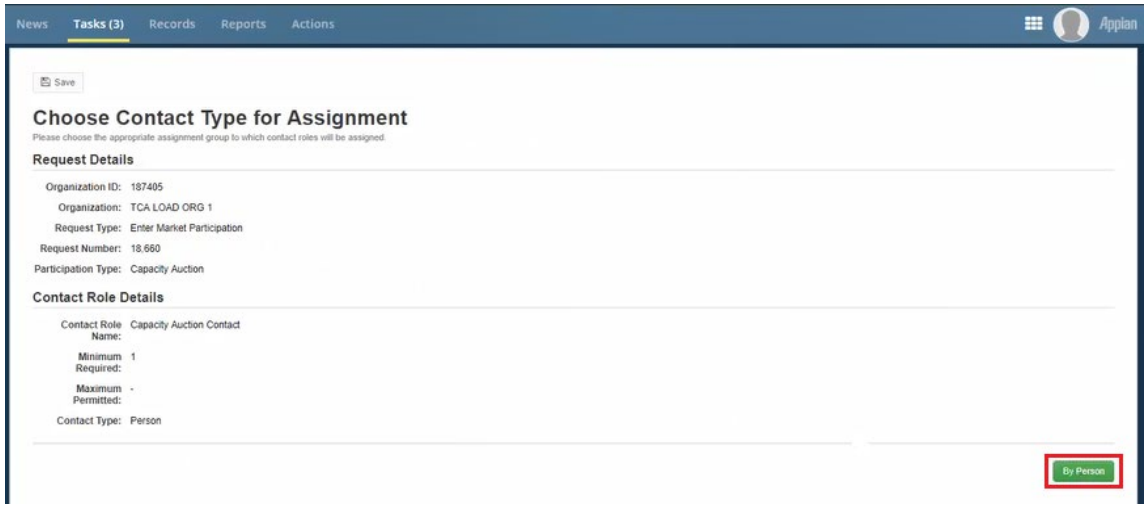
Step	Instruction	Picture
	For organizations with Capacity Generation Resources, some tasks are not required because they would have already been completed when the organization was first registered with the IESO.	
7	Task: Submit IESO Market Entry Application Fee Click **Tasks** on the menu bar at the top of the screen. Click **Submit IESO Market Entry Application Fee for <your organization>** from the list of available tasks displayed on the subsequent screen. Click **Yes** to confirm that you accept the task.	

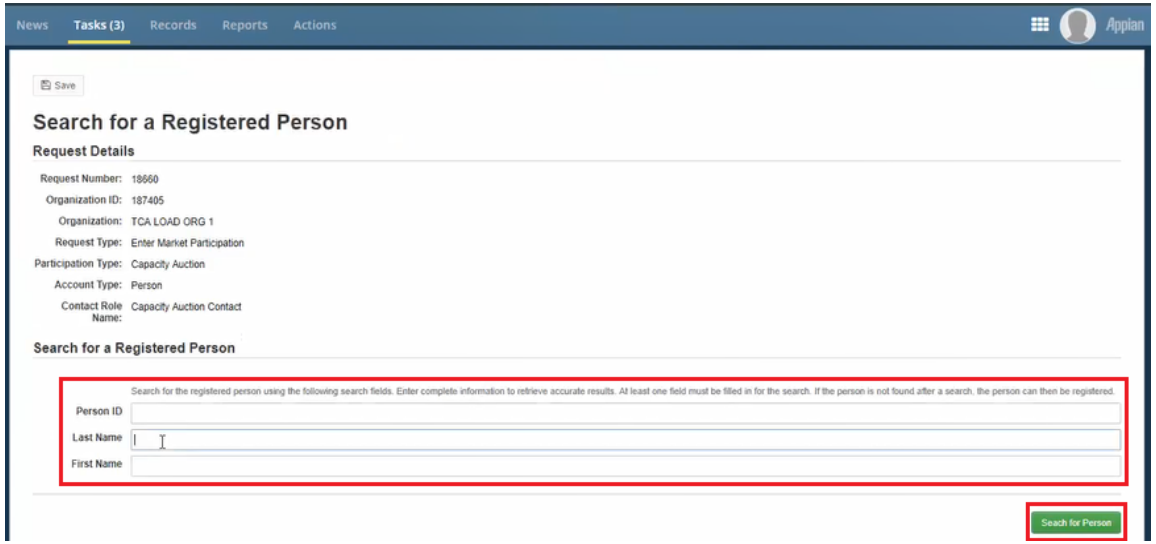
Step	Instruction	Picture
8	The **Submit IESO Market Entry Application Fee** screen is displayed. Click **Pay By Credit Card** to link to the external website where you can make the payment. Select the payment method that you used, and click **Paid**.	
9	Click **News** on the menu bar at the top of the screen to view the Payment Received notification.	

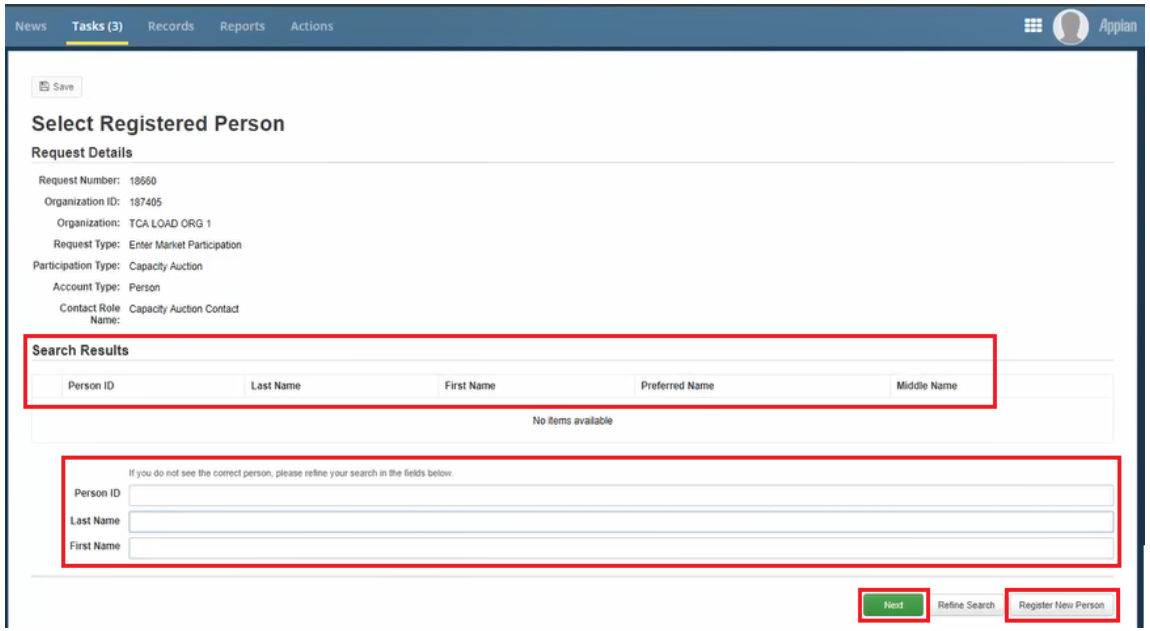
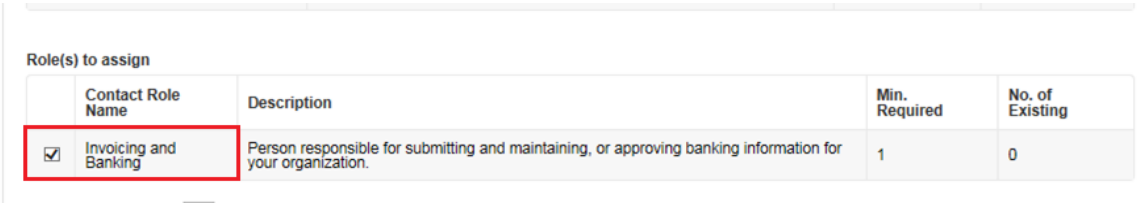
Step	Instruction	Picture
10	You will also receive an email with the subject line **Training Info for <your organization>: Capacity Auction Participant Request**. This email provides you with valuable links to training documents and contact information at the IESO.	N/A
11	Task: Confirm Connectivity for Access Roles Click **Tasks** on the menu bar at the top of the screen. Click **Confirm Connectivity for Organization Access Roles for <your organization>: Capacity Auction Request** from the list of available tasks displayed on the subsequent screen. Click **Yes** to confirm that you accept the task.	

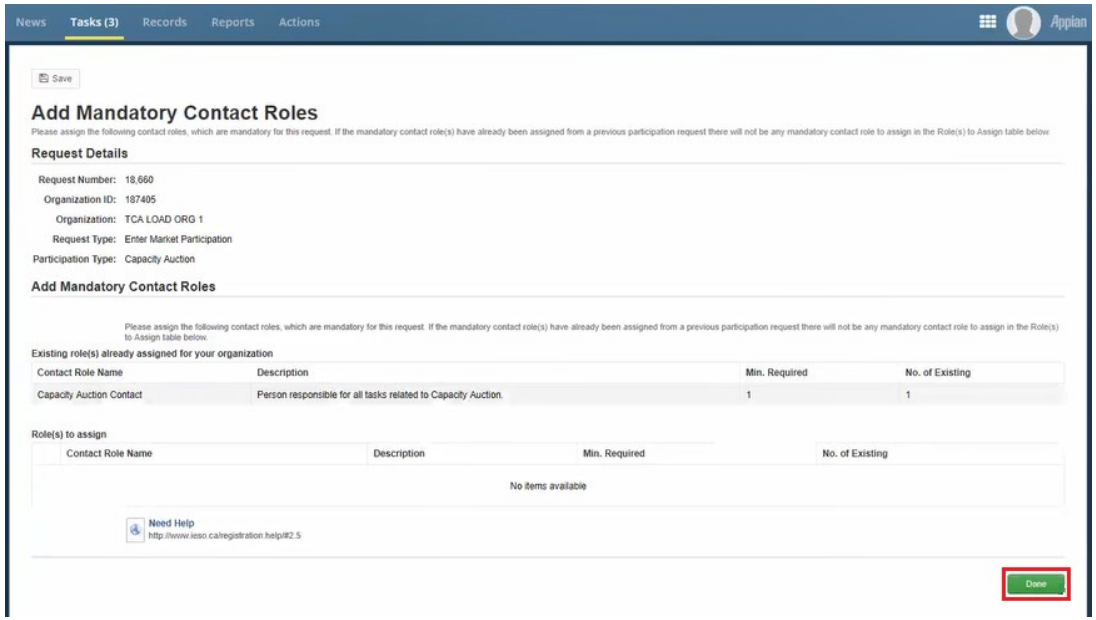
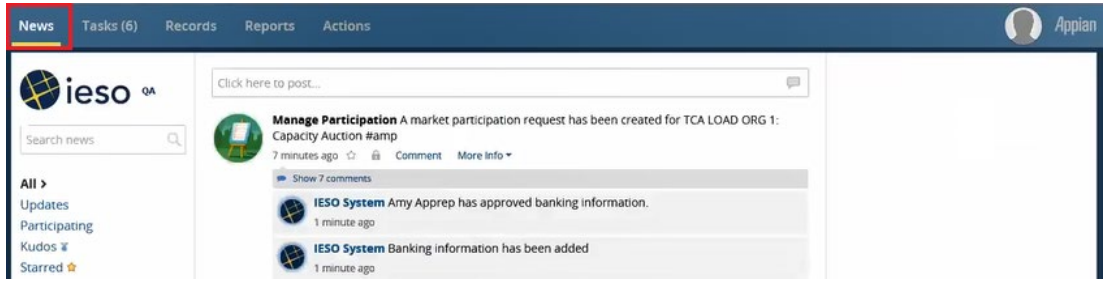
Step	Instruction	Picture
12	After you confirm that you are able to access your participant reports (at the this link) by logging in with your credentials, select the appropriate check box via the **Confirm Connectivity to IESO Information Systems** screen, and click **Confirm**.	
13	Click **News** on the menu bar at the top of the screen to view the confirmation notification that the task has been completed.	
14	Task: Assign Contact Roles Click **Tasks** on the menu bar at the top of the screen.	

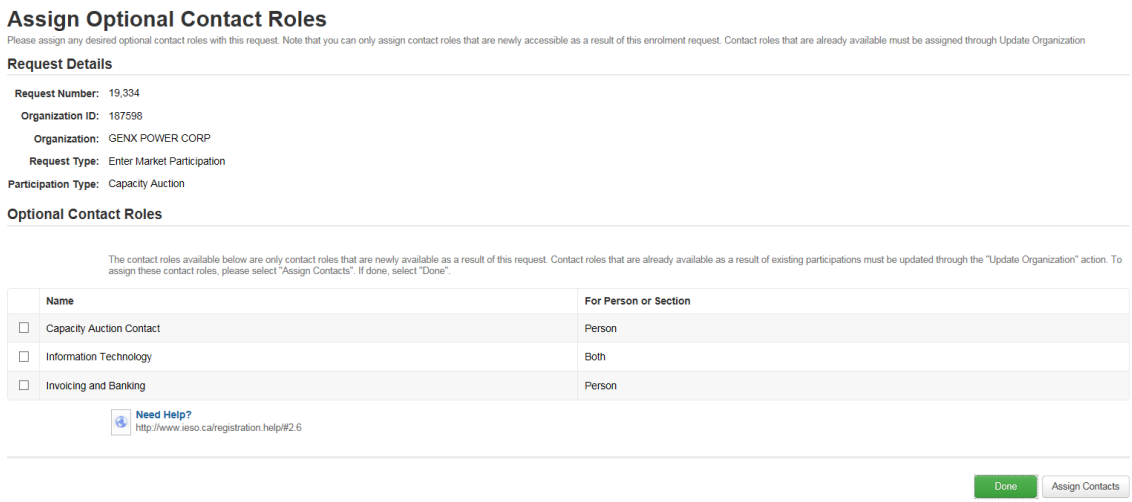
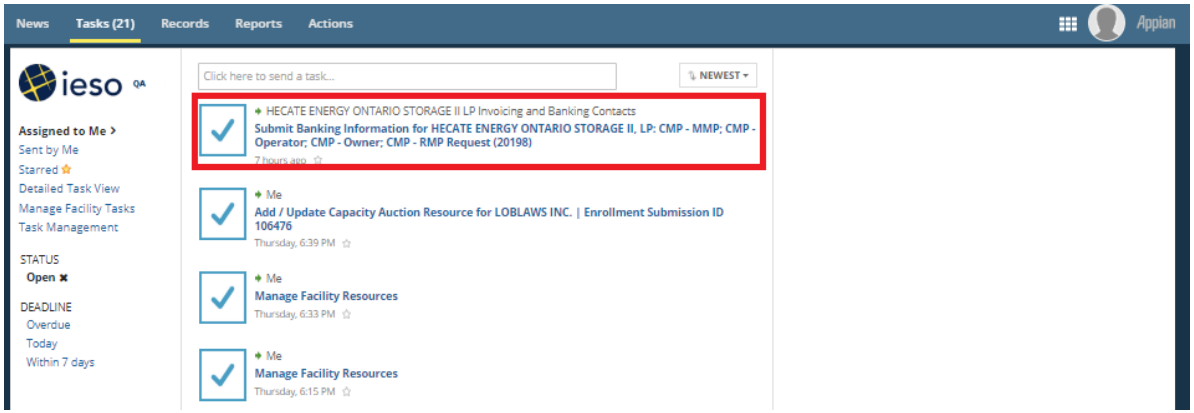
Step	Instruction	Picture
	Click **Assign Contact Roles for <your organization>** from the list of available tasks displayed on the subsequent screen. Click **Yes** to confirm that you accept the task.	
15	The **Add Mandatory Contact Roles** screen is displayed. Select the check box corresponding to Capacity Auction Contact (listed under Contact Role Name), and click **Assign Contacts**. Note: During CAP authorization, the following contacts are mandatory: 1) Capacity Auction Contact 2) Invoicing and Banking	

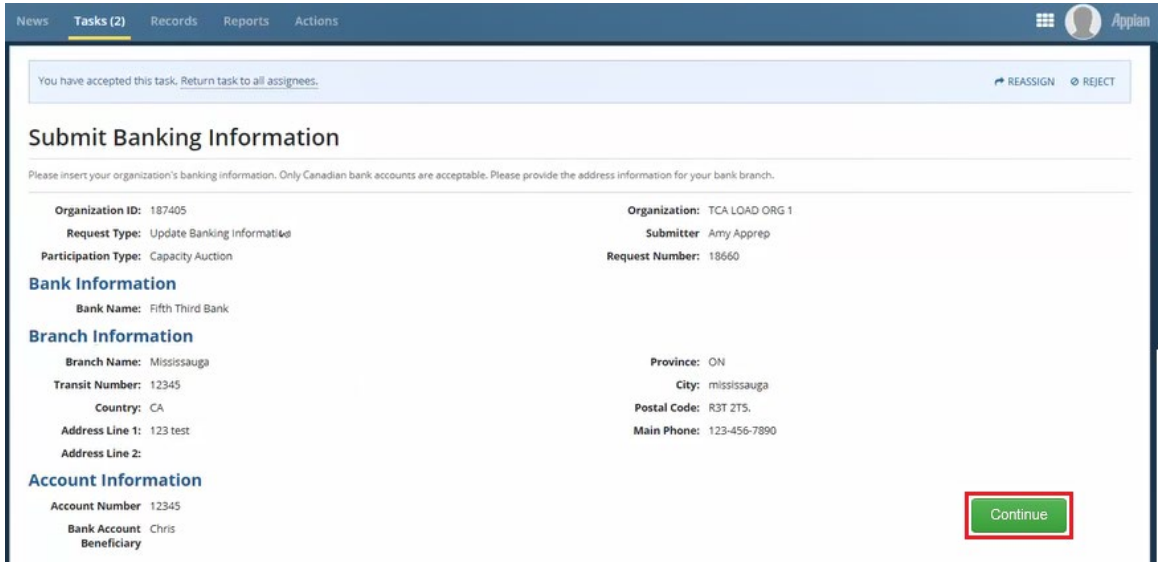
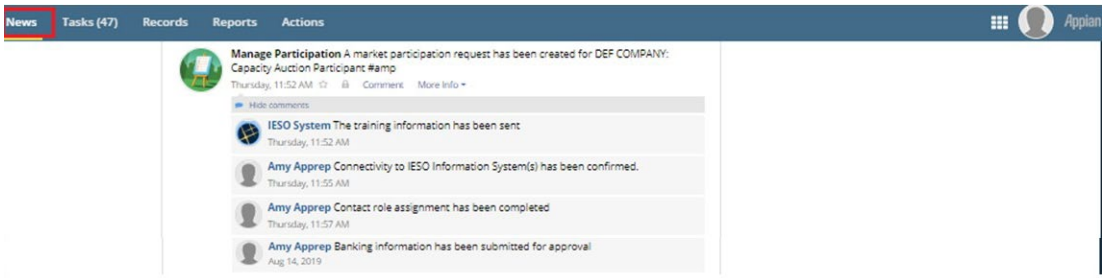
Step	Instruction	Picture
	These contacts are applicable to all organizations regardless of resource type. At a minimum, one contact is required per Contact Role.	
16	The **Choose Contact Type for Assignment** screen is displayed for your review – click **By Person** to proceed.	

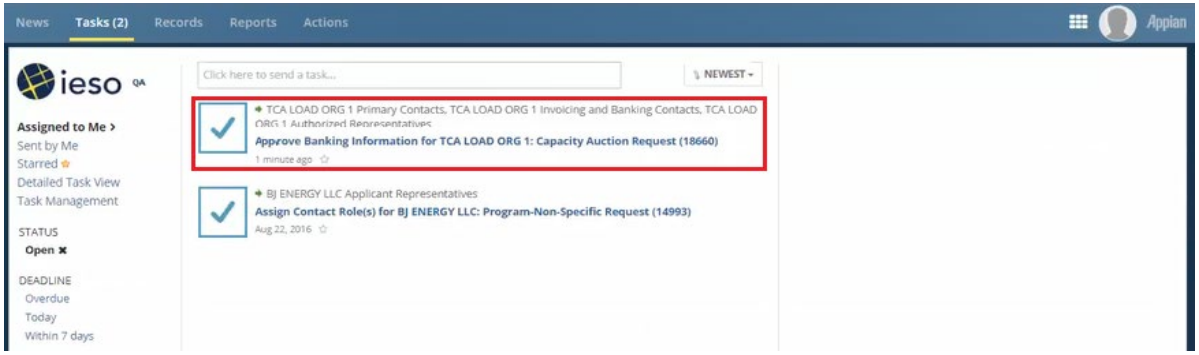
Step	Instruction	Picture
17	The **Search for a Registered Person** screen is displayed. To search for a registered person, enter the name of the registered person in the search fields, and click **Search for Person**.	

Step	Instruction	Picture
18	If a person is registered in the IESO database, that name appears in the **Search Results** via the **Select Registered Person** screen – select the corresponding check box, and click **Next**. Note: If a person is not already in the IESO database, you must register that individual by clicking **Register New Person.**	
19	Repeat Steps 18 – 21 after selecting the check box corresponding to **Invoicing and Banking** listed under **Contact Role Name**.	

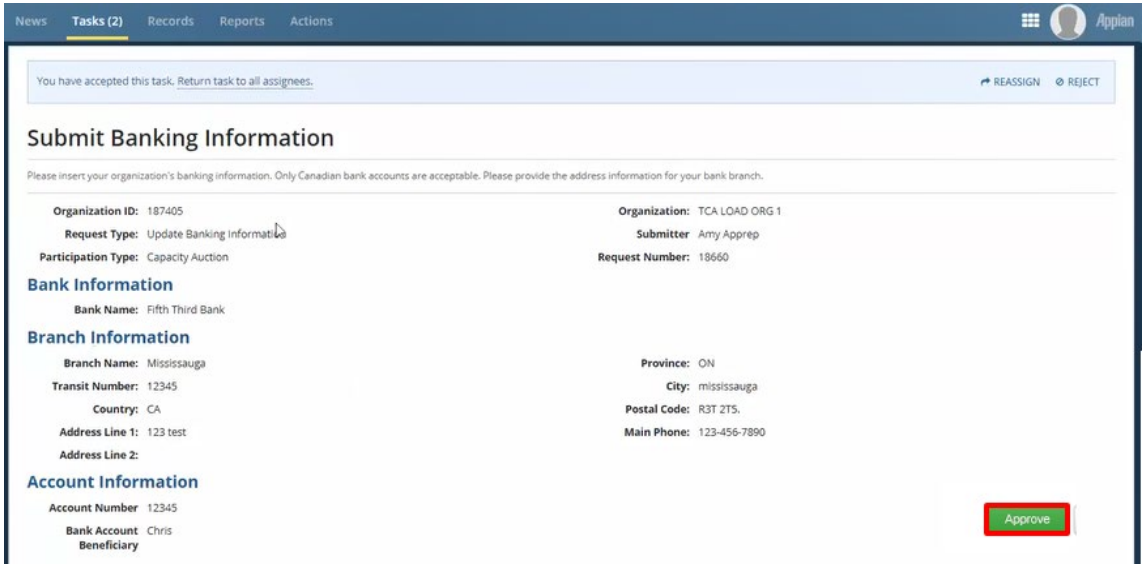
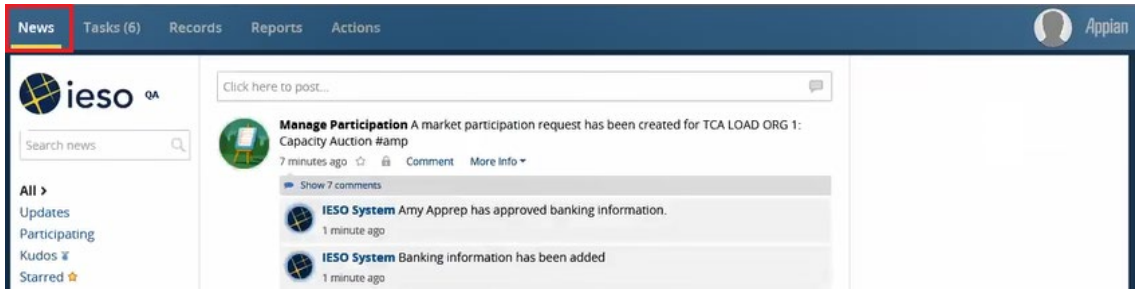
Step	Instruction	Picture
20	After all mandatary contact roles have been added, click **Done**.	
21	Click **News** on the menu bar at the top of the screen to view the notification confirming that this step has been completed. You will also receive an email confirmation notification with the subject line **IESO Notice – Contact Update**. This email confirms that the roles have been assigned.	

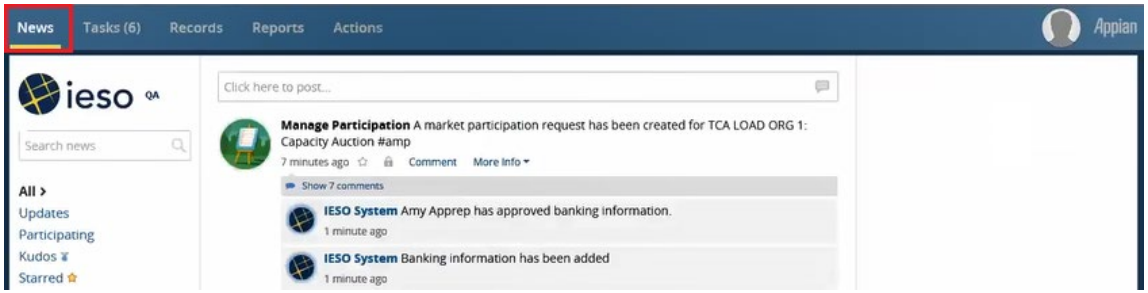
Step	Instruction	Picture
22	Assign optional contact roles (if applicable) in a similar manner to mandatory contact roles. Note: You can also add more than one person per contact role at this point.	
23	Task: Submit Banking Information Click **Tasks** on the menu bar at the top of the screen. Click **Submit Banking Information for <your organization>: Capacity Auction Request** from the list of available tasks displayed on the subsequent screen.	

Step	Instruction	Picture
	Click **Yes** to confirm that you accept the task.	
24	The **Submit Banking Information** screen is displayed. All fields marked with a red star are mandatory – complete the form and click **Continue**.	
25	Click **News** on the menu bar at the top of the screen to view the confirmation notification that the form has been completed.	

Step	Instruction	Picture
26	A second user (Primary Contact, Authorized Representative or other Invoicing and Banking Contact role) must log in to the Online IESO web-based registration system in order to approve the banking information. Note: If the original user tries to complete this task, an error message is displayed.	You are unable to approve the banking information in this task since the approver cannot be the same person who submitted the information. If you have accepted the task, please click the button below to return the task to the assignee group and request for another user at your organization to approve the banking information.
27	Task: Approve Banking Information	

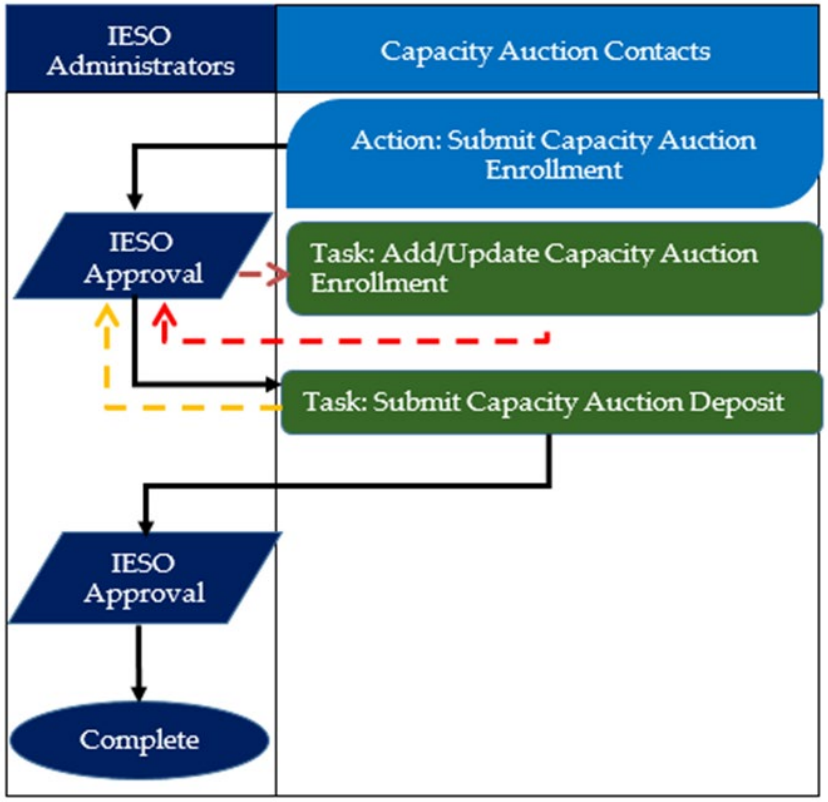
Step	Instruction	Picture
	The second user (separate sign-in required) must accept the task by clicking **Tasks** on the menu bar at the top of the screen, and then clicking **Approve Banking Information for <your organization>: Capacity Auction Request** from the list of available tasks displayed on the subsequent screen.	
28	Click **Yes** to confirm that you accept the task.	N/A

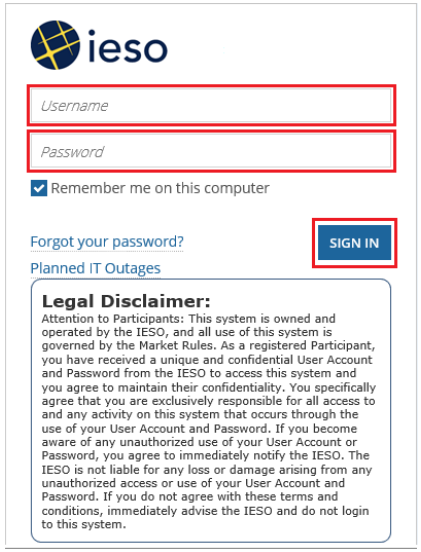
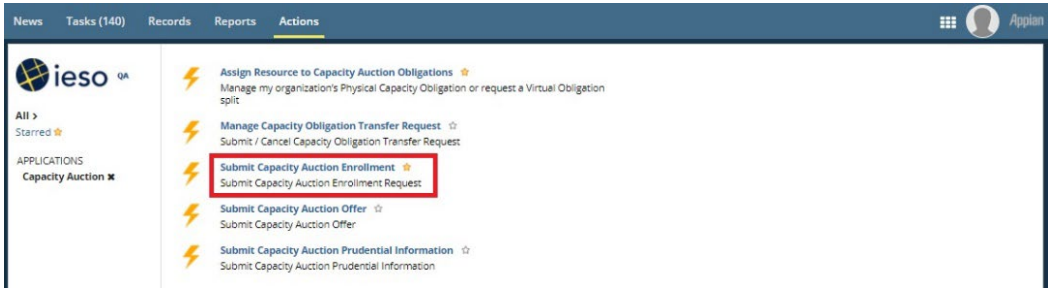
Step	Instruction	Picture
29	Review the information in the form, confirm or edit as required, and click **Approve.**	
30	The original user can view a confirmation notification that the form has been completed by clicking **News** on the menu bar at the top of the screen.	

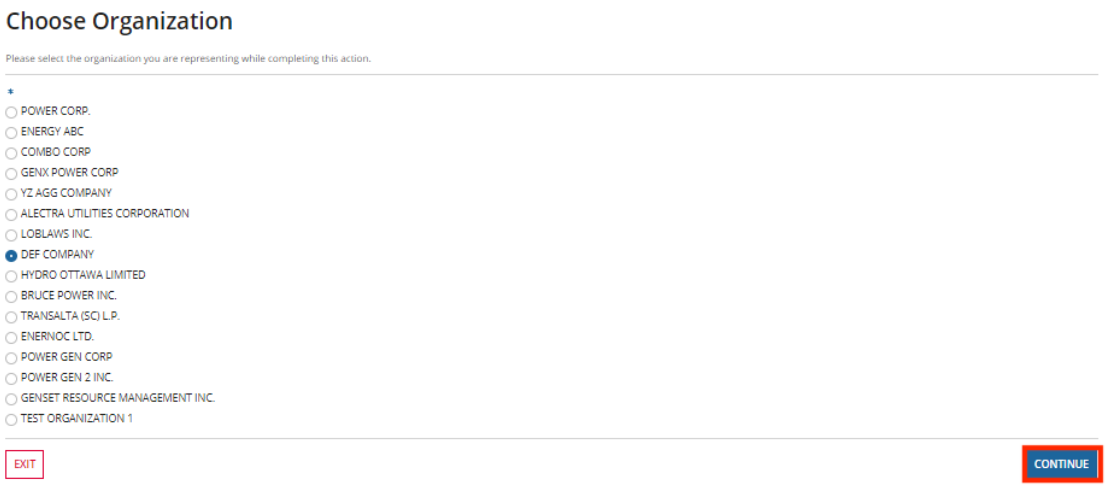
Step	Instruction	Picture
31	After all tasks have been completed, click **News** on the menu bar at the top of the screen to view a confirmation notification. You will also receive a Registration Approval Notification (RAN) in your email inbox after the IESO has completed the authorization process.	

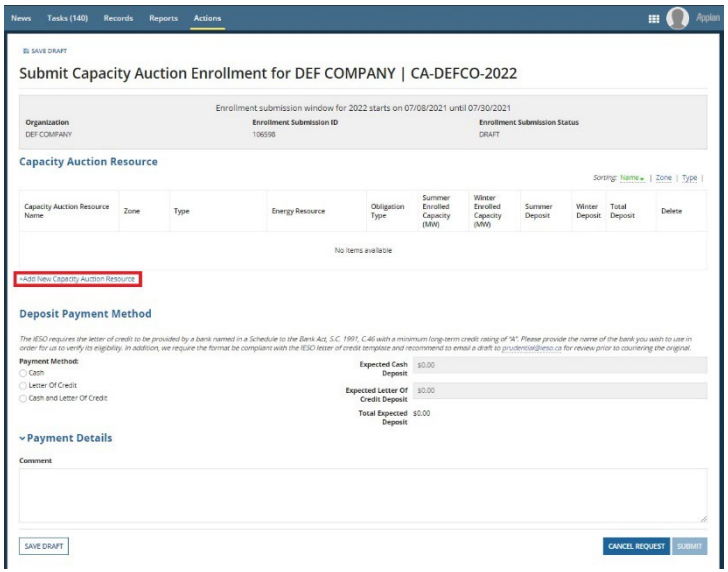
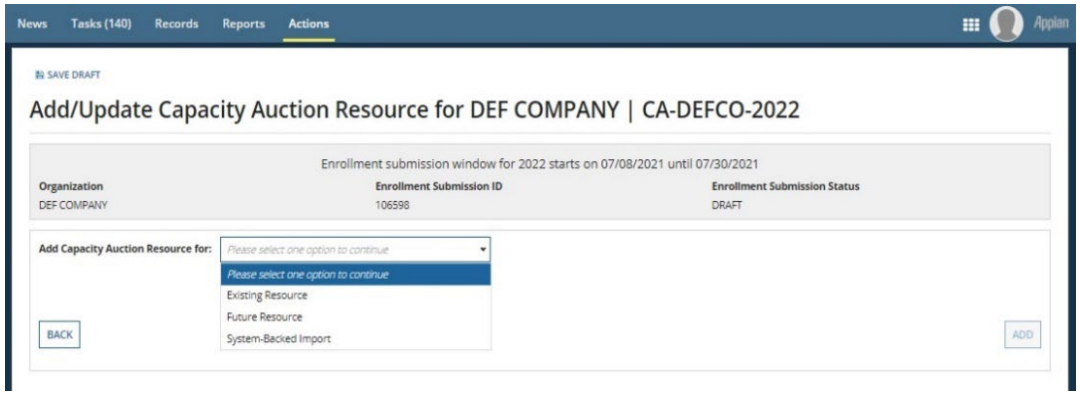
Appendix B: How to Submit a Capacity Auction Enrollment Request

The following flowchart and table provides step-by-step instructions, with accompanying screen captures, describing how to submit a capacity auction enrollment request using the Online IESO web-based registration system. You must receive a Registration Approval Notification (RAN) email authorizing you as a CAP before you can enroll capacity using Online IESO.



Step	Instruction	Picture
1	Action: Submit Capacity Auction Enrollment Log in to the Online IESO web-based registration system using this link. Enter your Username and Password, and click **Sign In**.	
2	Click **Actions** on the menu bar at the top of the screen. Select **Submit Capacity Auction Enrollment** from the list of available action items displayed on the subsequent screen.	
3	On the **Choose Organization** screen, select	

Step	Instruction	Picture
	the organization for which you intend to complete a capacity enrollment request, and click **Continue**.	

Step	Instruction	Picture
4	You are navigated to the **Submit Capacity Auction Enrollment** screen. As you prepare your capacity auction enrollment request, your draft submission will be displayed here. Click **Add New Capacity Auction Resource** and the **Add/Update Capacity Auction Resource** screen opens.	
5	On the **Add/Update Capacity Auction Resource** screen: A. If you plan to participate with a resource that is registered in the IESO-Administered Market, select **Existing Resource** from the drop down box and proceed to Step 6A.	

Step	Instruction	Picture
	B. If you plan to participate with a resource that is not currently registered in the IESO-Administered Market (demand response only), select **Future Resource** from the drop down box and proceed to Step 6B. This option is available for demand response resources only. C. If you plan to participate with a **System-Backed Import** of **Generator-Backed Import**, select **Import Resource** from the drop down box and proceed to Step 6C. Note. The drop-down option for System-Backed Import will only be displayed for those participants with eligible capacity	

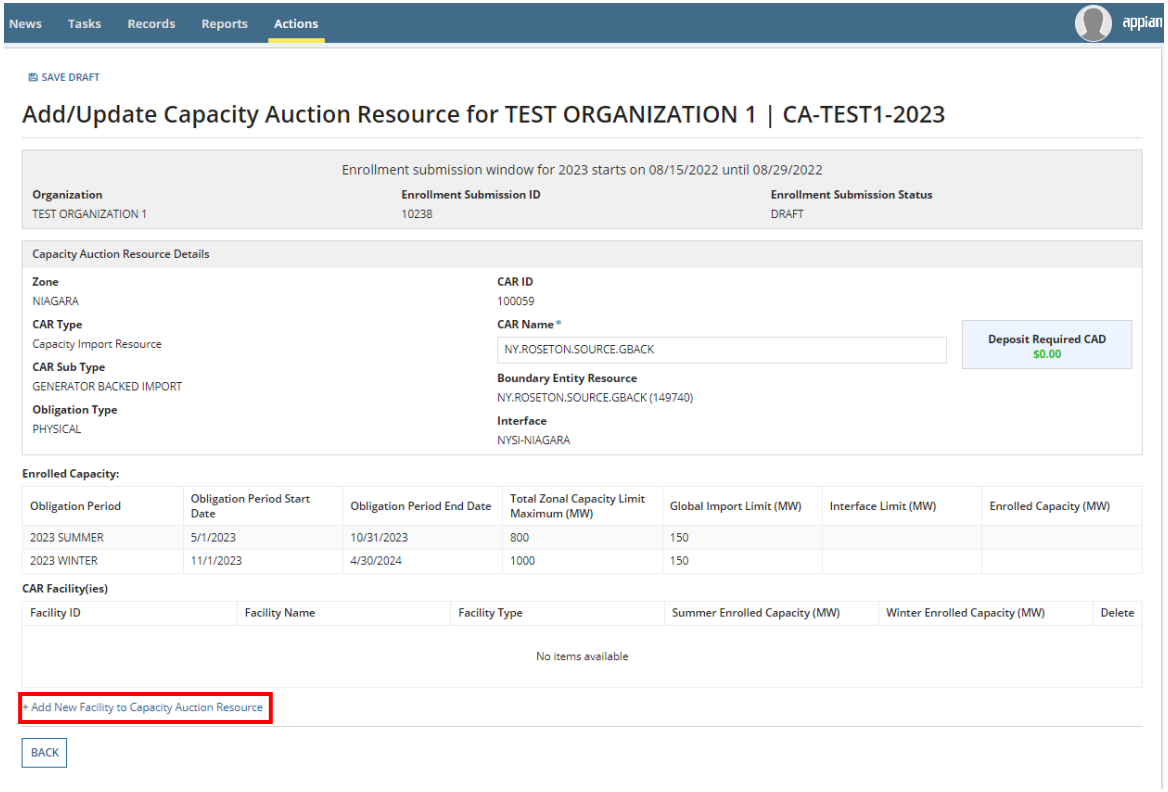
Step	Instruction	Picture
	import resources registered with the IESO.	
6A	This step applies only if you selected **Existing Resource** from the drop down box in step 5. Use the drop down boxes for **Car Type** and **Zone** to filter your list of available resources. Once you have selected a Resource, click **Add**. Proceed to Step 7A.	

Step	Instruction	Picture
6B	This step applies only if you selected **Future Resource** from the drop down box in step 5. Use the drop down boxes to choose a **Car Type** and **Zone** that would apply to the future resource. These parameters act as a placeholder and will apply to the potential **Capacity Auction Resource**, therefore affecting your capacity enrollment and offer submission. Once you have selected the Type and Zone, click **Add**. Proceed to Step 7A.	 Reminder: if you are enrolling a future resource, the registered owner of that resource must be the Capacity Auction Participant.

Step	Instruction	Picture
6C	This step applies only if you selected **System-Backed Import** or **Generator-Backed Import** from the drop down box in step 5. Use the drop down boxes to choose a **Car Type**, and an **Interface** that would apply to the import. Once you have selected the Resource, click **Add**. If you a **Generator-Backed Import**, go to step 7B. Note: A Sub Type and Zone are pre-populated based on your selections.	

Step	Instruction	Picture
7A	For Generator-Backed Imports, go to Step 7B. On the following screen, you will enter the name of your capacity auction resource and the **Enrolled Capacity** (MW) for the applicable obligation periods. If you selected an existing resource, that resource name will be pre-populated as a default.	

Step	Instruction	Picture
	If you are only enrolling for one obligation period, you will be required to enter a 0 value for the other obligation period. Note: The maximum value available to be inputted as enrolled capacity for summer or winter is the minimum value between the maximum physical capability of that resource (located below **Associated Energy Resource**) and the zonal limits shown in the column(s) before the **Enrolled Capacity (MW)** column. Once you have filled out this information, click **Update**. Proceed to Step 11.	

Step	Instruction	Picture
7B	This step only applies to **Generator-Backed Imports**. On the following screen, you will enter the name of your capacity auction resource. Click **Add New Facility to Capacity Auction Resource**.	

News Tasks Records Reports Actions appian

SAVE DRAFT

Add/Update Capacity Auction Resource for TEST ORGANIZATION 1 | CA-TEST1-2023

Enrollment submission window for 2023 starts on 08/15/2022 until 08/29/2022

Organization	Enrollment Submission ID	Enrollment Submission Status
TEST ORGANIZATION 1	10238	DRAFT

Capacity Auction Resource Details

Zone
NIAGARA

CAR Type
Capacity Import Resource

CAR Sub Type
GENERATOR BACKED IMPORT

Obligation Type
PHYSICAL

CAR ID
100059

CAR Name*
NY.ROSETON.SOURCE.GBACK

Boundary Entity Resource
NY.ROSETON.SOURCE.GBACK (149740)

Interface
NYSI-NIAGARA

Deposit Required CAD
$0.00

Enrolled Capacity:

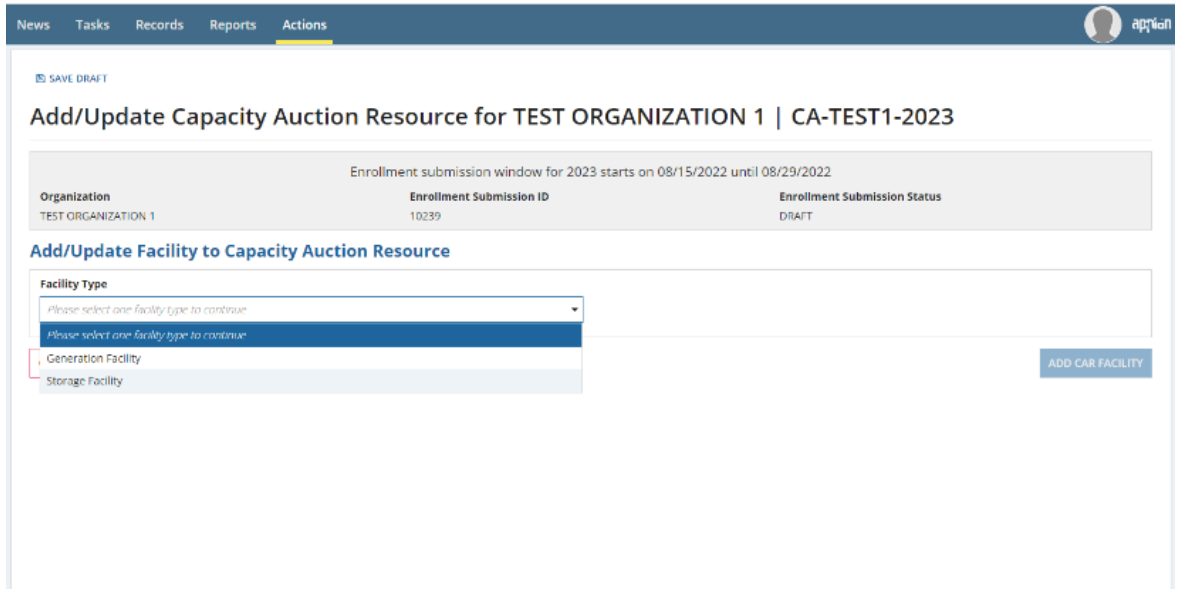
Obligation Period	Obligation Period Start Date	Obligation Period End Date	Total Zonal Capacity Limit Maximum (MW)	Global Import Limit (MW)	Interface Limit (MW)	Enrolled Capacity (MW)
2023 SUMMER	5/1/2023	10/31/2023	800	150		
2023 WINTER	11/1/2023	4/30/2024	1000	150		

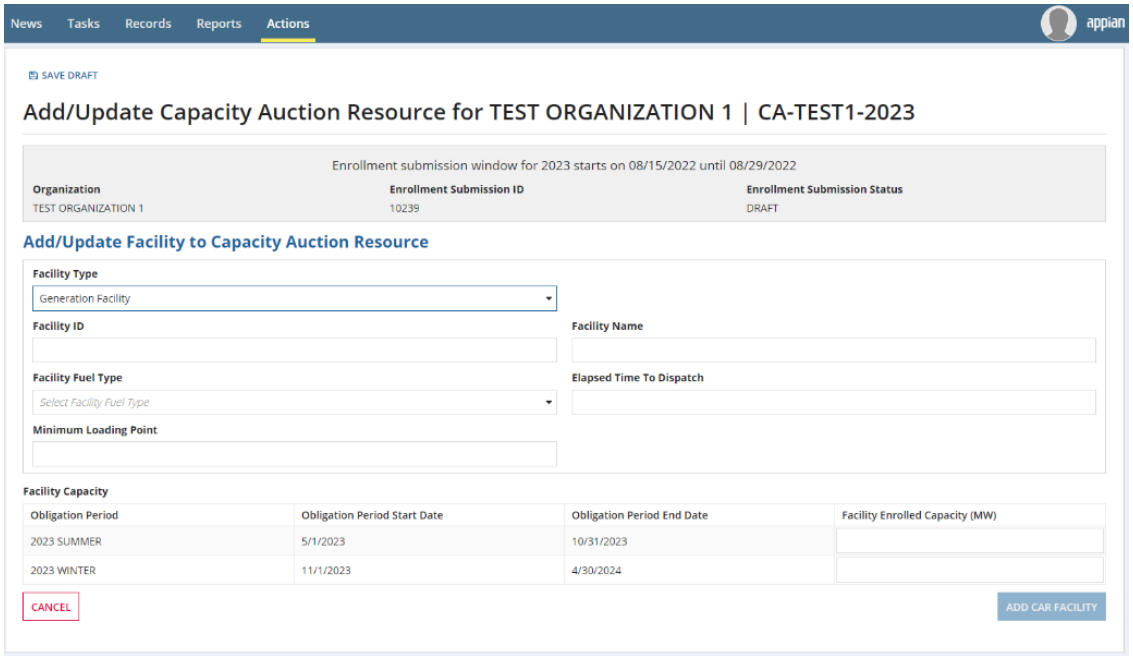
CAR Facility(ies)

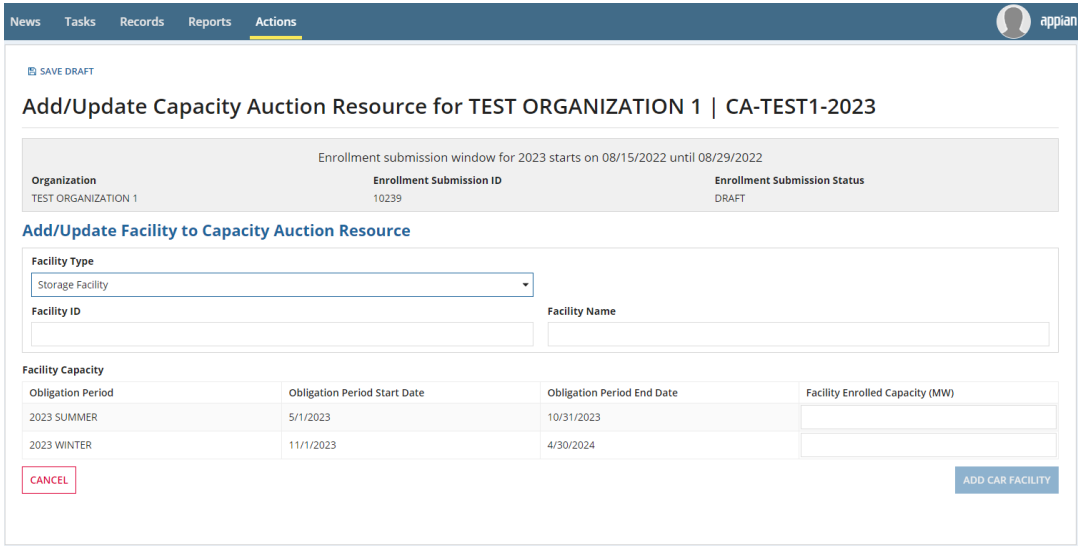
Facility ID	Facility Name	Facility Type	Summer Enrolled Capacity (MW)	Winter Enrolled Capacity (MW)	Delete
No items available					

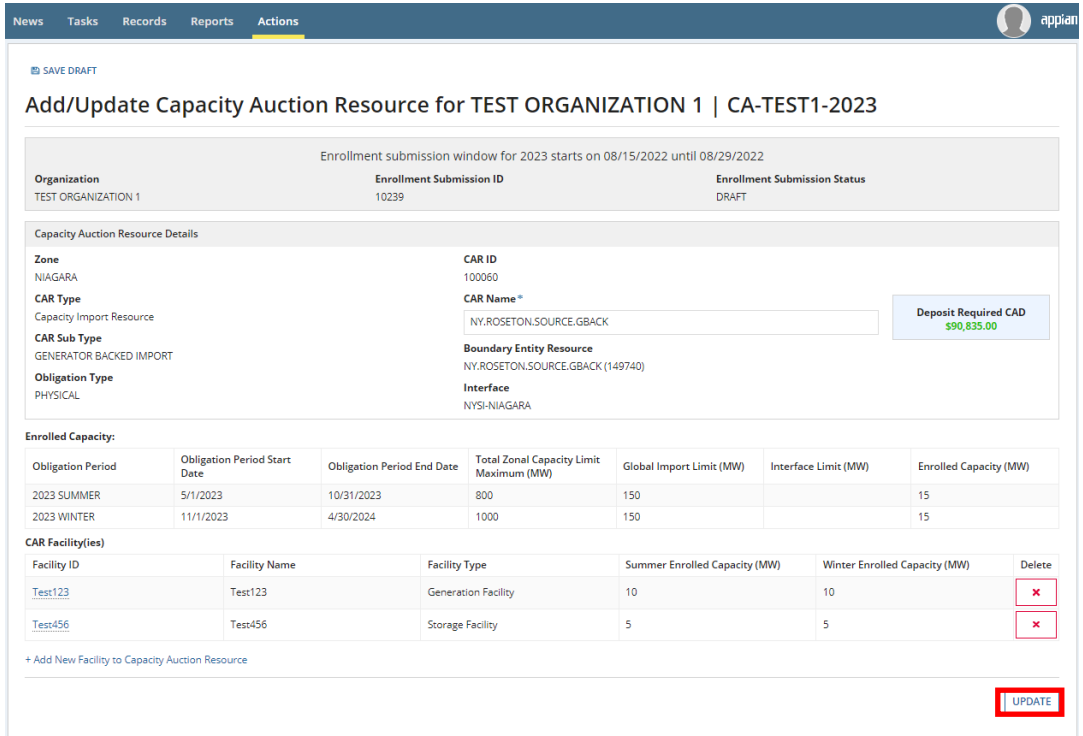
+ Add New Facility to Capacity Auction Resource

BACK

Step	Instruction	Picture
8	This step only applies to **Generator-Backed Import Resources.** Use the drop down boxes to choose a **Facility Type** and click **Add CAR Facility**: A. If you select **Generation Facility**, go to Step 9A. B. If you select **Storage Facility**, go to Step 9B.	

Step	Instruction	Picture
9A	This step only applies to **Generation Facilities** for **Generator-Backed Import Resources.** On the following screen, you will enter the **Facility ID, Facility Name, Facility Fuel Type, Elapsed Time to Dispatch, Minimum Loading Point** and the **Facility Enrolled Capacity** (MW) for the applicable obligation periods. Once you have filled out this information, click **Add Car Facility**. Proceed to Step 10.	

Step	Instruction	Picture
9B	This step only applies to **Storage Facilities** for **Generator-Backed Import Resources.** On the following screen, you will enter the **Facility ID, Facility Name** and the **Facility Enrolled Capacity** (MW) for the applicable obligation periods. Once you have filled out this information, click **Add Car Facility**. Proceed to Step 10.	

Step	Instruction	Picture
10	This step only applies to **Generator-Backed Import Resources.** On the following screen, the facility(ies) you created will show up under CAR Facility(ies). Repeat steps 7B to 9 to add more facilities. Once complete, click **Update**.	

News Tasks Records Reports Actions

SAVE DRAFT

Add/Update Capacity Auction Resource for TEST ORGANIZATION 1 | CA-TEST1-2023

Enrollment submission window for 2023 starts on 08/15/2022 until 08/29/2022

Organization	Enrollment Submission ID	Enrollment Submission Status
TEST ORGANIZATION 1	10239	DRAFT

Capacity Auction Resource Details

Zone: NIAGARA
CAR ID: 100060
CAR Type: Capacity Import Resource
CAR Name*: NY.ROSETON.SOURCE.GBACK
Deposit Required CAD: $90,835.00
CAR Sub Type: GENERATOR BACKED IMPORT
Boundary Entity Resource: NY.ROSETON.SOURCE.GBACK (149740)
Obligation Type: PHYSICAL
Interface: NYSI-NIAGARA

Enrolled Capacity:

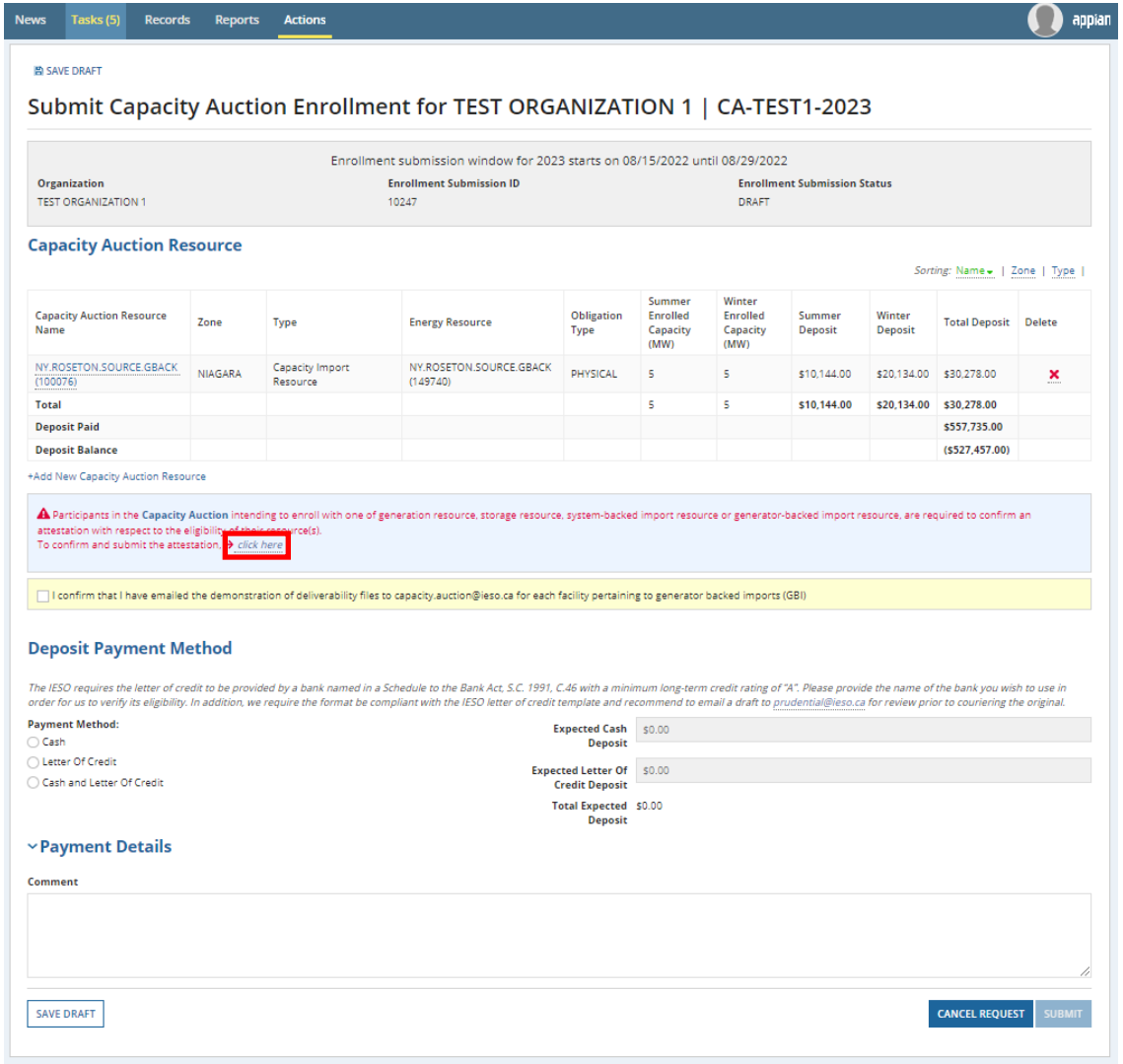
Obligation Period	Obligation Period Start Date	Obligation Period End Date	Total Zonal Capacity Limit Maximum (MW)	Global Import Limit (MW)	Interface Limit (MW)	Enrolled Capacity (MW)
2023 SUMMER	5/1/2023	10/31/2023	800	150		15
2023 WINTER	11/1/2023	4/30/2024	1000	150		15

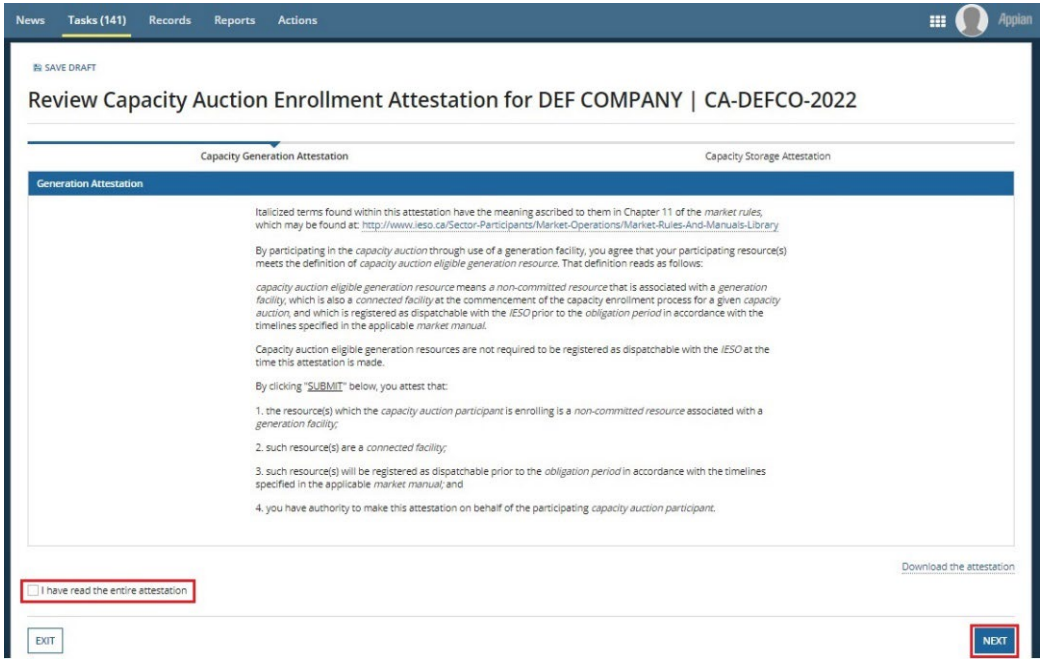
CAR Facility(ies)

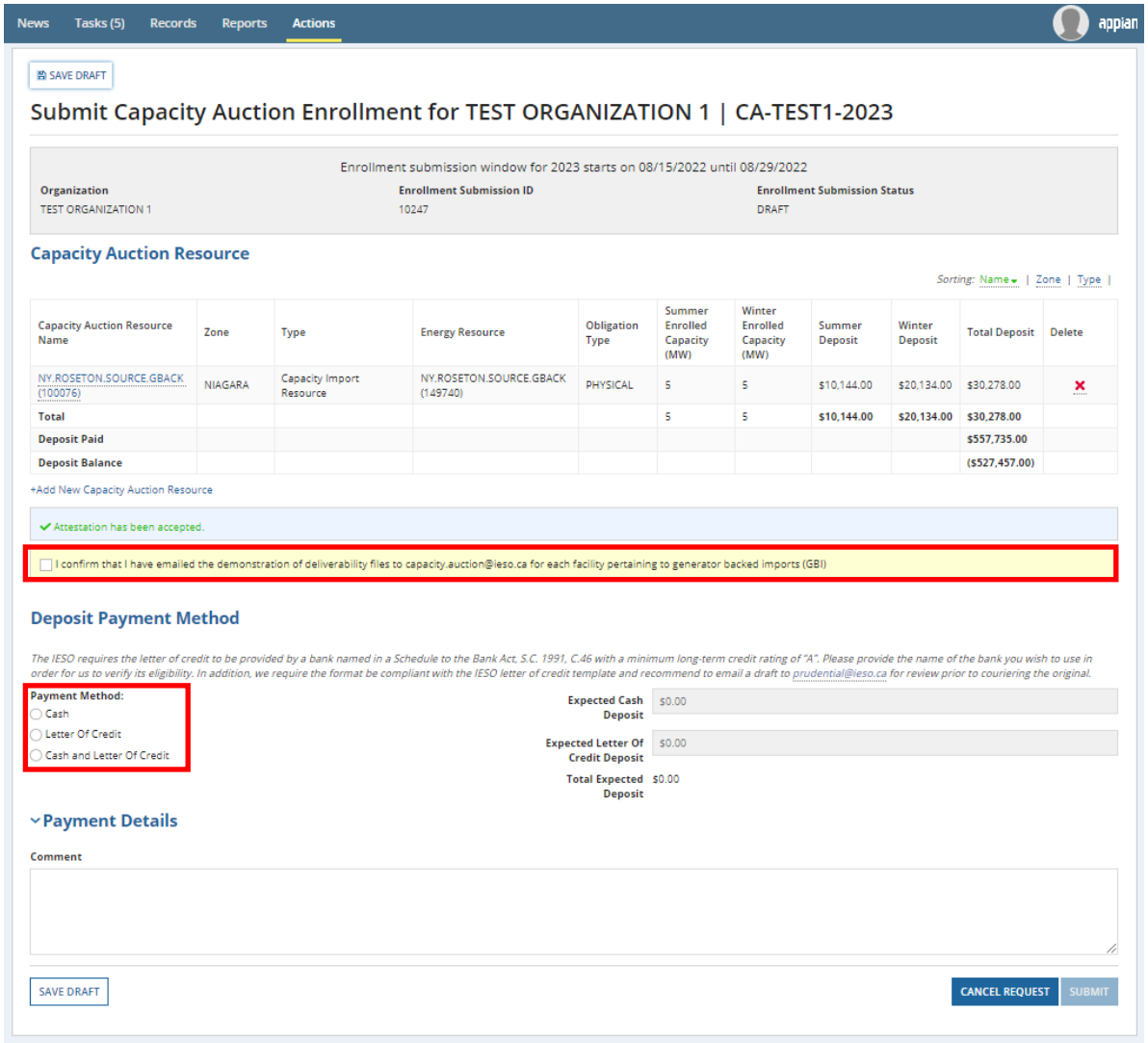
Facility ID	Facility Name	Facility Type	Summer Enrolled Capacity (MW)	Winter Enrolled Capacity (MW)	Delete
Test123	Test123	Generation Facility	10	10	×
Test456	Test456	Storage Facility	5	5	×

+ Add New Facility to Capacity Auction Resource

UPDATE

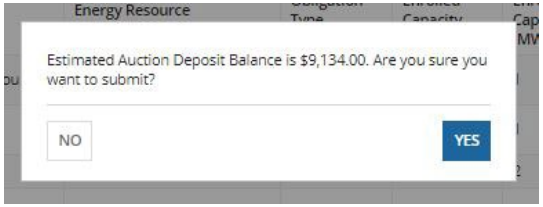
Step	Instruction	Picture
11	If you are enrolling any of the following Capacity Auction Resources, you will be prompted to submit an Attestation for each one: • Capacity Generation Resource • Capacity Import Resource • Capacity Storage Resource • Generator-Backed Import Resource Press **Click Here** within the blue box to navigate to the attestation page.	

Step	Instruction	Picture
12	The **Review Capacity Auction Enrollment Attestation** screen is displayed. You may download a copy of the attestation by clicking the **Download the attestation** option found towards the bottom right of the screen. After completing your review, select the **I have read the entire attestation** checkbox. If your capacity auction enrollment request includes multiple capacity auction resource types, you will be required to submit multiple attestations. Click **Next** to view and accept each attestation. Once all attestations have been accepted, click **Submit**.	

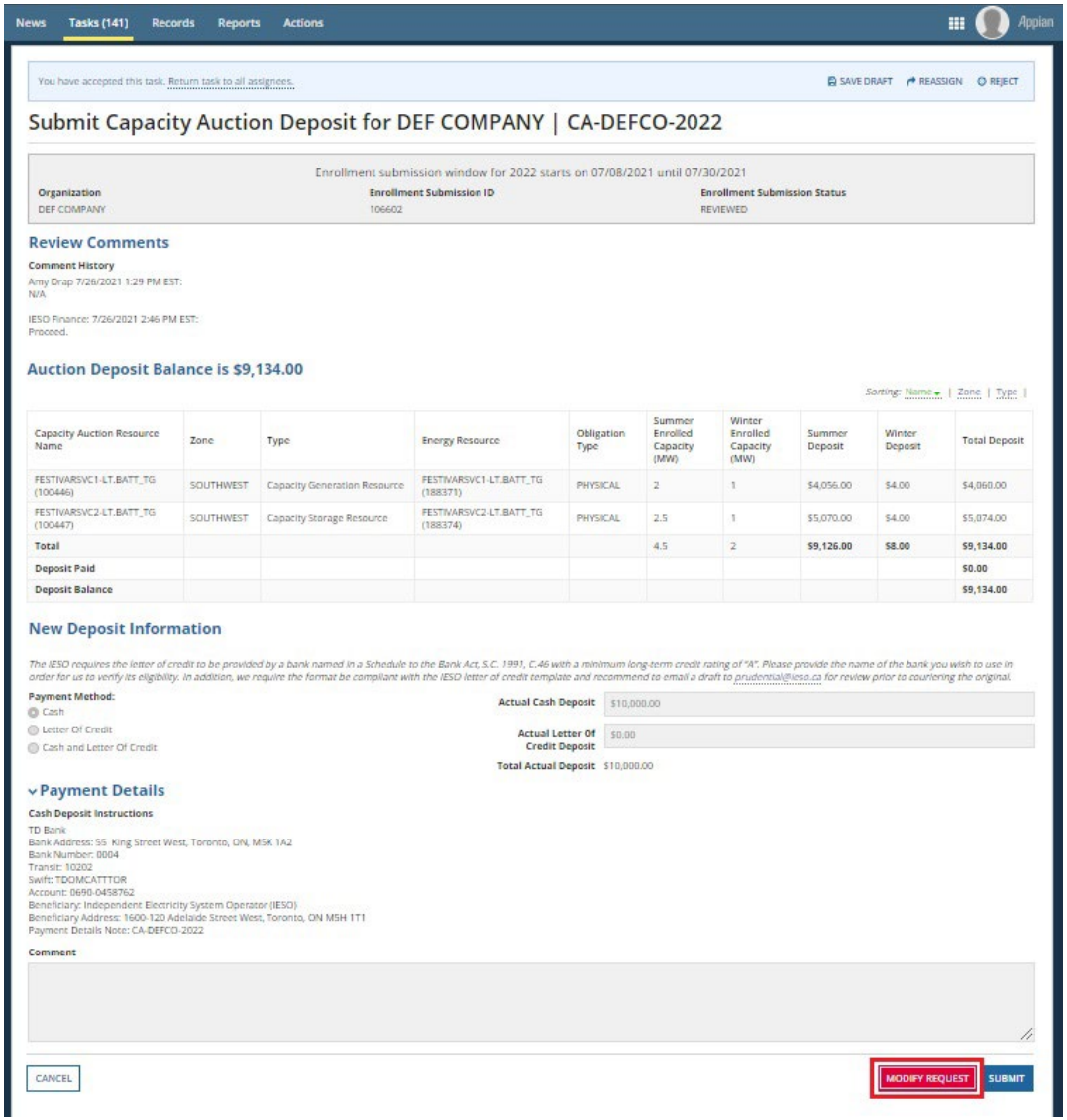
Step	Instruction	Picture
13	You are returned to the **Submit Capacity Auction Enrollment** screen which now displays the identified capacity auction resource information, including expected deposit balance. If you wish to enroll additional resources, click the Add New Capacity Auction Resource button again and repeat steps 4-11. Note: If you are submitting a **Generator-Backed Import Resource**, a checkbox will show for you to confirm that the demonstration of deliverability files has been submitted to capacity.auction@ieso.ca Before submitting the capacity auction enrollment request, you are required to provide deposit payment information.	

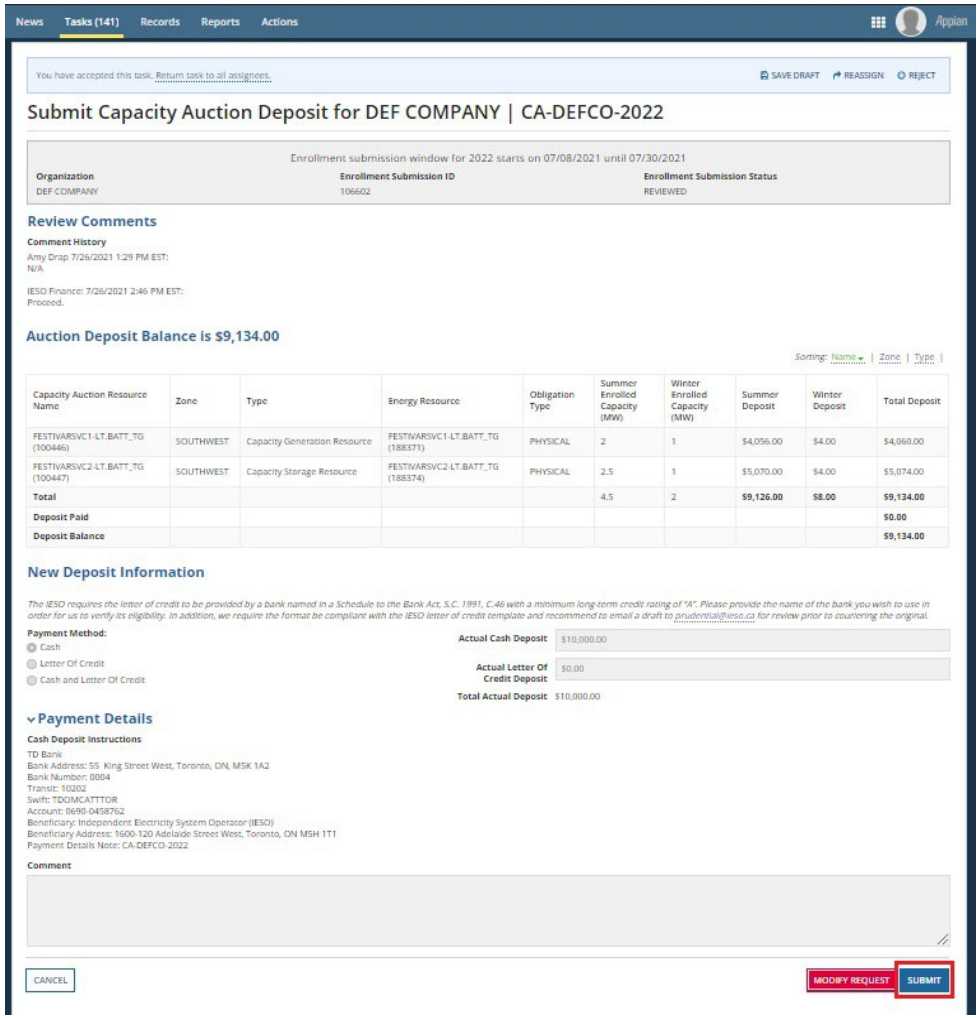
Step	Instruction	Picture
	Note: You are not required to provide a deposit to the IESO at this stage, that is done when you receive the task titled: "Submit Capacity Auction Deposit".	
	Click the option button corresponding to either **Cash, Letter of Credit** or **Cash and Letter of Credit** to indicate the expected payment method for your deposit – additional instructions are displayed for the chosen payment method.	
	Note: If you choose **Letter of Credit**, you must also provide the name of the bank that you wish to use.	

Step	Instruction	Picture
	If you choose **Cash**, you must use the details provided under the cash deposit instructions when completing the payment. A new item has been added under the list of instructions – Payment Details Note. This unique identifier ties the payment to the enrollment submission and should be added within the Payment Details field generally found in banking institutions payment forms. If you choose **Cash and Letter of Credit**, you will be required to submit the identified amount for each.	
	The **Comments** field is available if you choose to enter additional information	

Step	Instruction	Picture
	concerning the deposit payment. Click **Submit**.	
14	A dialog box is displayed showing your **Estimated Auction Deposit Balance** – click **Yes** to confirm your submission.	
15	Once the IESO has verified the submission, you will receive a task titled **Submit Capacity Auction Deposit**. Note: The deposit should not be submitted until you receive this task.	

16 Optional: You are given the option to modify your capacity auction enrollment request at this point (i.e. change enrolled Capacity values and CAR name) by selecting **Modify Request** at the bottom of the screen and repeating steps 4-14.



Step	Instruction	Picture
17	Within the **Submit Capacity Auction Deposit** task, confirm the information that was previously submitted. If there are no changes to the information, click **Submit**, then pay the deposit in the manner identified, and using the instructions provided in Online IESO. After the IESO has approved your deposit submission, you will receive an email denoting your enrollment completion in addition to summarizing your submission.	

News | Tasks (141) | Records | Reports | Actions

You have accepted this task. Return task to all assignees.

SAVE DRAFT | REASSIGN | REJECT

Submit Capacity Auction Deposit for DEF COMPANY | CA-DEFCO-2022

Enrollment submission window for 2022 starts on 07/08/2021 until 07/30/2021

Organization	Enrollment Submission ID	Enrollment Submission Status
DEF COMPANY	106602	REVIEWED

Review Comments

Comment History

Amy Drap 7/26/2021 1:29 PM EST:
N/A

IESO Finance: 7/26/2021 2:46 PM EST:
Proceed.

Auction Deposit Balance is $9,134.00

Sorting: Name | Zone | Type

Capacity Auction Resource Name	Zone	Type	Energy Resource	Obligation Type	Summer Enrolled Capacity (MW)	Winter Enrolled Capacity (MW)	Summer Deposit	Winter Deposit	Total Deposit
FESTIVARSVC1-LT.BATT_TG (100446)	SOUTHWEST	Capacity Generation Resource	FESTIVARSVC1-LT.BATT_TG (188371)	PHYSICAL	2	1	$4,056.00	$4.00	$4,060.00
FESTIVARSVC2-LT.BATT_TG (100447)	SOUTHWEST	Capacity Storage Resource	FESTIVARSVC2-LT.BATT_TG (188374)	PHYSICAL	2.5	1	$5,070.00	$4.00	$5,074.00
Total					4.5	2	**$9,126.00**	**$8.00**	**$9,134.00**
Deposit Paid									**$0.00**
Deposit Balance									**$9,134.00**

New Deposit Information

The IESO requires the letter of credit to be provided by a bank named in a Schedule to the Bank Act, S.C. 1991, C.46 with a minimum long-term credit rating of "A". Please provide the name of the bank you wish to use in order for us to verify its eligibility. In addition, we require the format be compliant with the IESO letter of credit template and recommend to email a draft to prudential@ieso.ca for review prior to courtering the original.

Payment Method:
- Cash
- Letter Of Credit
- Cash and Letter Of Credit

Actual Cash Deposit: $10,000.00

Actual Letter Of Credit Deposit: $0.00

Total Actual Deposit: $10,000.00

Payment Details

Cash Deposit Instructions

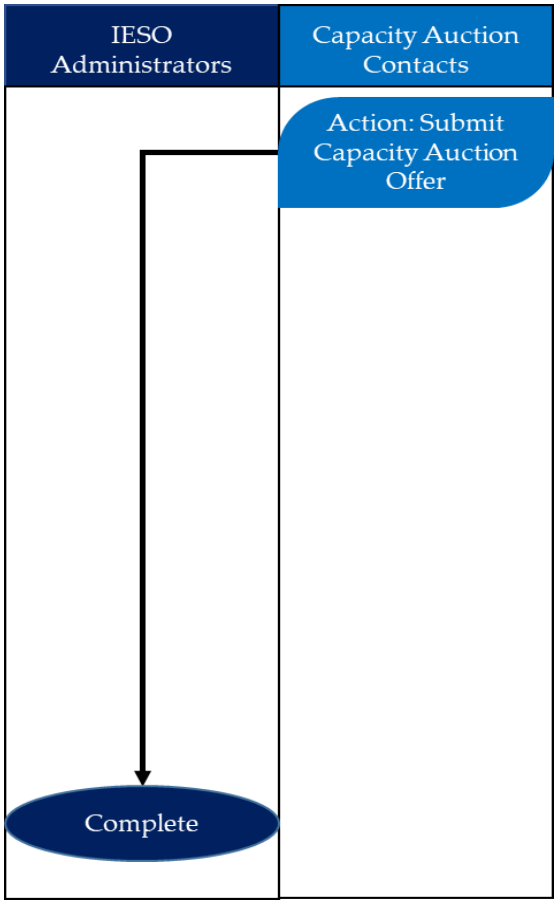
TD Bank
Bank Address: 55 King Street West, Toronto, ON, M5K 1A2
Bank Number: 0004
Transit: 10202
Swift: TDOMCATTTOR
Account: 0690-0458762
Beneficiary: Independent Electricity System Operator (IESO)
Beneficiary Address: 1600-120 Adelaide Street West, Toronto, ON M5H 1T1
Payment Details Note: CA-DEFCO-2022

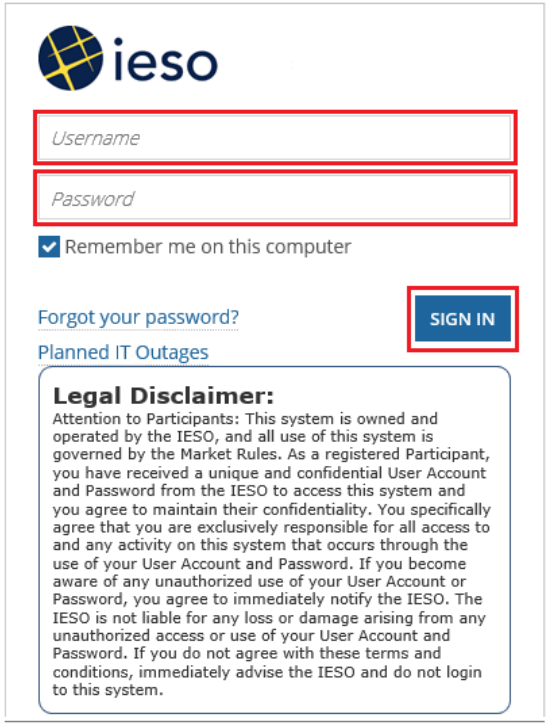
Comment

CANCEL | MODIFY REQUEST | SUBMIT

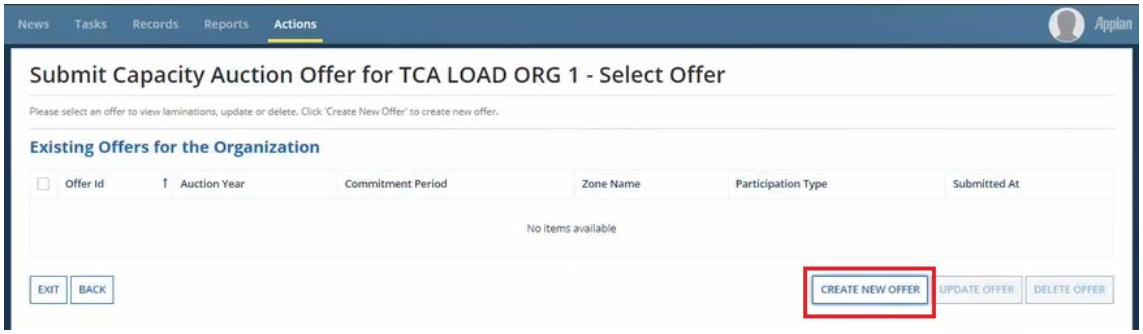
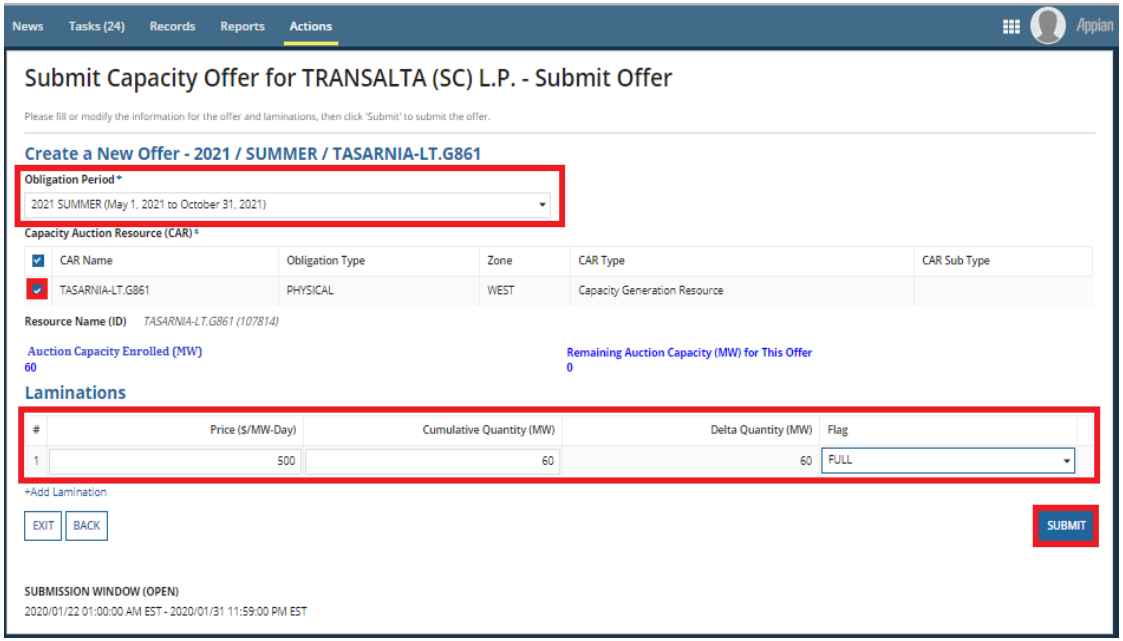
Appendix C: How to Offer Capacity

The following table provides step-by-step instructions, with accompanying screen captures, describing how to offer capacity into the auction using the Online IESO web-based registration system.



Step	Instruction	Picture
1	Action: Submit Capacity Auction Offer Log in to the Online IESO web-based registration system using this link. Enter your Username and Password, and click **Sign In**.	

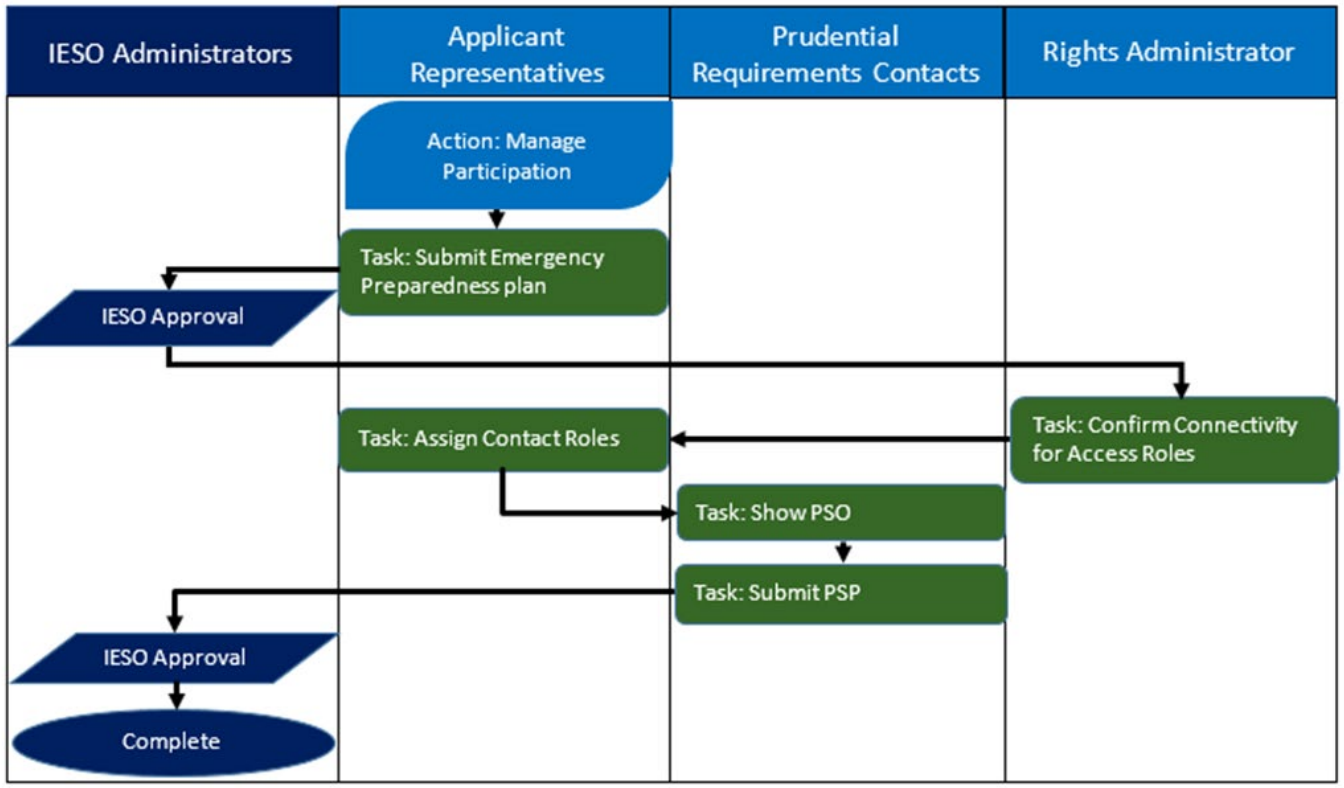
Step	Instruction	Picture
2	Click **Actions** on the menu bar at the top of the screen. Click **Submit Capacity Auction Offer** from the list of available action items displayed on the subsequent screen.	
3	The **Submit Capacity Auction Offer – Select Organization** screen is displayed. Select the option button corresponding to the desired organization, and click **Continue**.	

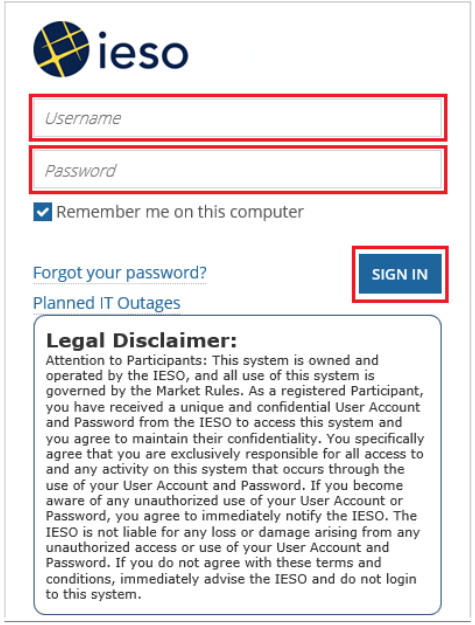
Step	Instruction	Picture
4	A list of existing offers for your organization, if any, is displayed. You have the option to either update any of these existing offers, or create a new offer. To create a new offer, click **Create New Offer**.	
5	Select the desired Obligation Period (i.e., Summer or Winter), from the **Obligation Period** drop down list. Only **Obligation Periods** that a resource was enrolled for will appear in the drop down list. Select the **Capacity Auction Resource** for which you wish to submit an offer.	

Step	Instruction	Picture
	Submit your offer by first entering the price and quantity for each lamination. Note: Your offer can include up to 20 laminations – you must select a flag to indicate if any given quantity is to be provided in full or as partial for each lamination. Click **Submit** to complete the offer.	

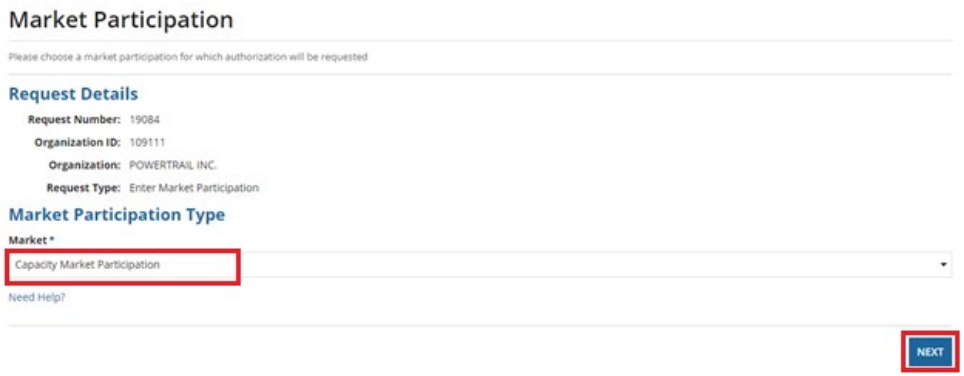
Appendix D: How to Authorize as a Capacity Market Participant

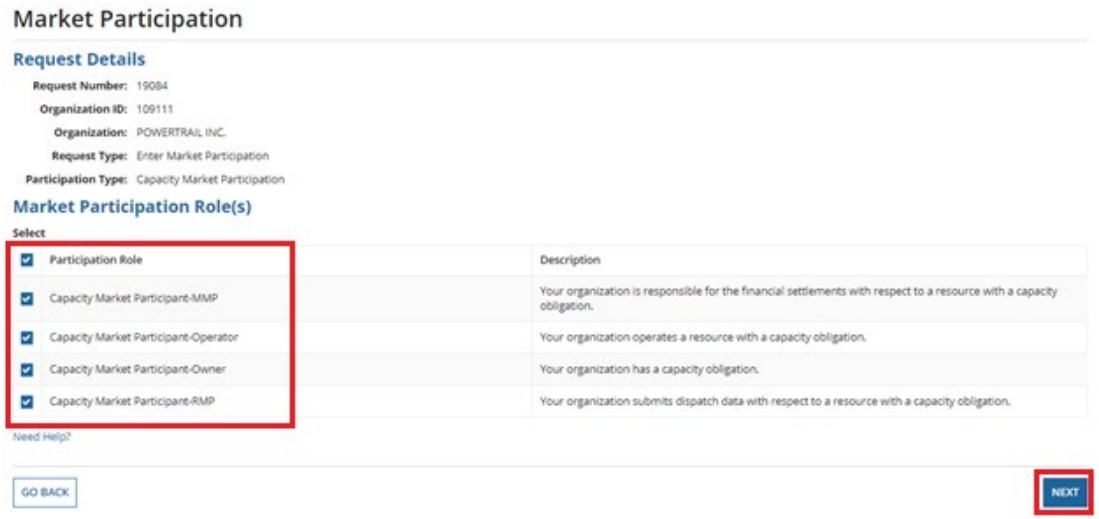
The following flow chart and table provides step-by-step instructions, with accompanying screen captures, describing how to become authorized as a Capacity Market Participant (CMP) using the Online IESO web-based registration system.

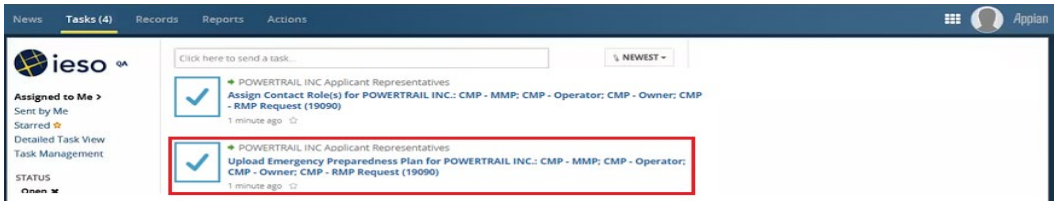


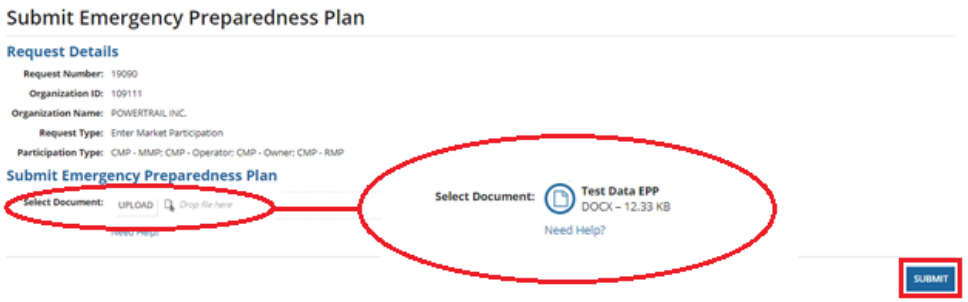
Step	Instruction	Picture
1	Action: Manage Participation Log in to the Online IESO web-based registration system using this link. Enter your Username and Password, and click **Sign In**.	

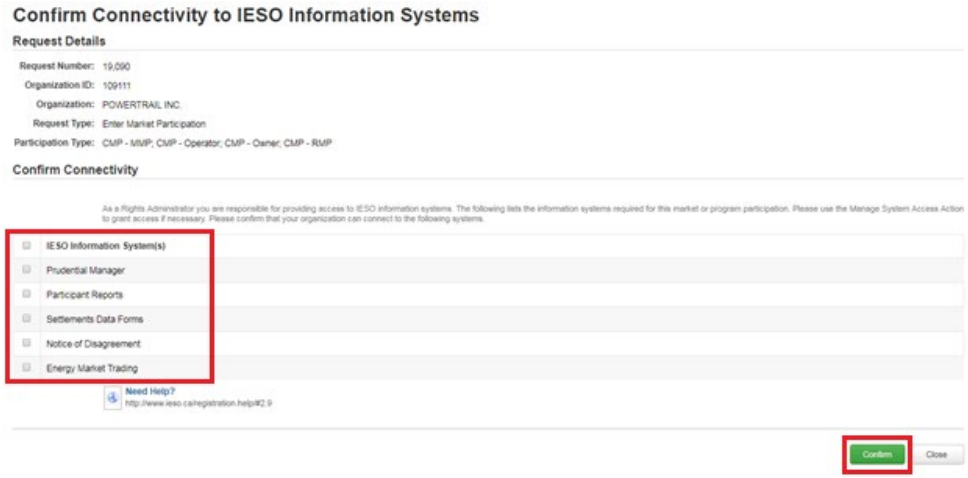
Step	Instruction	Picture
2	Click **Actions** on the menu bar at the top of the screen. Click **Manage Participation** from the list of available action items displayed on the subsequent screen.	
3	The **Choose Organization** screen is displayed. Select the check box corresponding to the organization that you wish to become authorized as a Capacity Market Participant (CMP), and click **Next**.	

Step	Instruction	Picture
4	The Select **Participation Type** screen is displayed. In the **Action to Complete** drop-down list, select **Enter Market Participation**, and click **Next**.	
5	The **Market Participation** screen is displayed. In the **Market Participation Type** drop-down list, select **Capacity Market Participation**, and click **Next**. Note: An organization will only be able to complete the Capacity Market Participant authorization if they've received a capacity obligation in the capacity auction.	

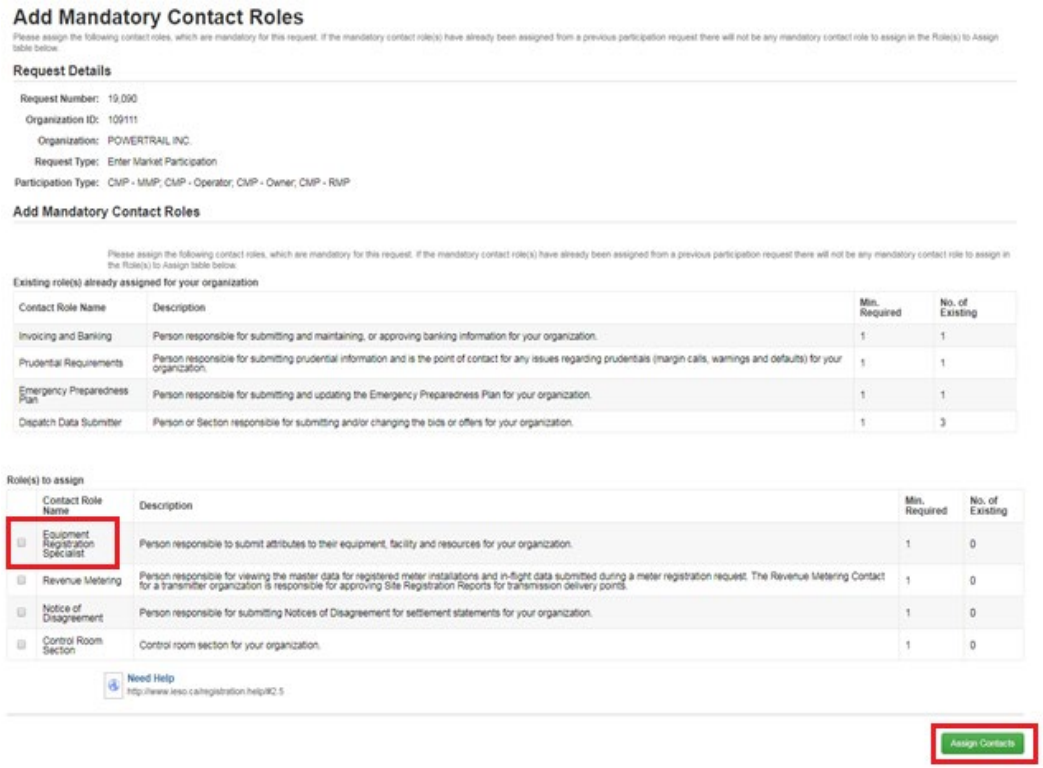
Step	Instruction	Picture
6	Select the appropriate check boxes to select the Market Participant Role(s) for your organization. Note: You can select multiple roles. If multiple organizations will take on roles, select only the role that applies to you. The CAP organization must become the CMP - Owner. The following steps assume that you are taking on all four roles. Click **Next** to proceed.	

Step	Instruction	Picture
7	Online IESO automatically determines the next steps and displays these steps on the **Required Tasks to Complete** screen (depending on the roles selected). Make note of these tasks, and click **Proceed**. These tasks will also be shown on the **News** screen. Note: If you are new organization to IESO you will be required to submit the entire next set of required tasks.	
8	Task: Submit Emergency Preparedness Plan Click **Tasks** on the menu bar at the top of the screen.	

Step	Instruction	Picture
	Click **Upload Emergency Preparedness Plan for <your organization>** from the list of available tasks displayed on the subsequent screen. Click **Yes** to confirm that you accept the task.	
9	Click **Accept** at the top of the **Submit Emergency Preparedness Plan** screen, click **Upload** to attach the Emergency Preparedness Plan PDF file, and click **Submit**. If your organization has previously submitted the Emergency Preparedness Plan, then it will be available for selection or you can choose to upload a new plan. Further instructions on how to complete an Emergency Preparedness Plan are available here.	

Step	Instruction	Picture
10	Click **Tasks** on the menu bar at the top of the screen. Click **Confirm Connectivity for Organization Access Roles for <your organization>** from the list of available tasks displayed on the subsequent screen. Click **Yes** to confirm that you accept the task.	
11	Separately, confirm that your organization can connect to the tasks listed, then select the appropriate check box(es) via the **Confirm Connectivity to IESO Information Systems** screen, and click **Confirm**.	

Step	Instruction	Picture
12	Task: Assign Contact Roles Click **Tasks** on the menu bar at the top of the screen. Click **Assign Contact Role(s) for <your organization>** from the list of available tasks displayed on the subsequent screen. Click **Yes** to confirm that you accept the task. Note: A CMP has more mandatory contact roles than a CAP.	

Step	Instruction	Picture
13	Online IESO automatically determines the contact roles that apply to the CMP roles that you previously selected. Select the contact role that you wish to assign (you must assign roles one-at-a-time), and click **Assign Contacts**. At a minimum, one contact is required per Contact Role. If you already have pre-existing contacts assigned, then you are not required to assign any additional contacts. Note: Mandatory Contact Roles are the same for all organizations regardless of resource type.	

Add Mandatory Contact Roles

Please assign the following contact roles, which are mandatory for this request. If the mandatory contact role(s) have already been assigned from a previous participation request there will not be any mandatory contact role to assign in the Role(s) to Assign table below.

Request Details

Request Number: 19,090
Organization ID: 109111
Organization: POWERTRAIL INC.
Request Type: Enter Market Participation
Participation Type: CMP - MMP; CMP - Operator; CMP - Owner; CMP - RMP

Add Mandatory Contact Roles

Please assign the following contact roles, which are mandatory for this request. If the mandatory contact role(s) have already been assigned from a previous participation request there will not be any mandatory contact role to assign in the Role(s) to Assign table below.

Existing role(s) already assigned for your organization

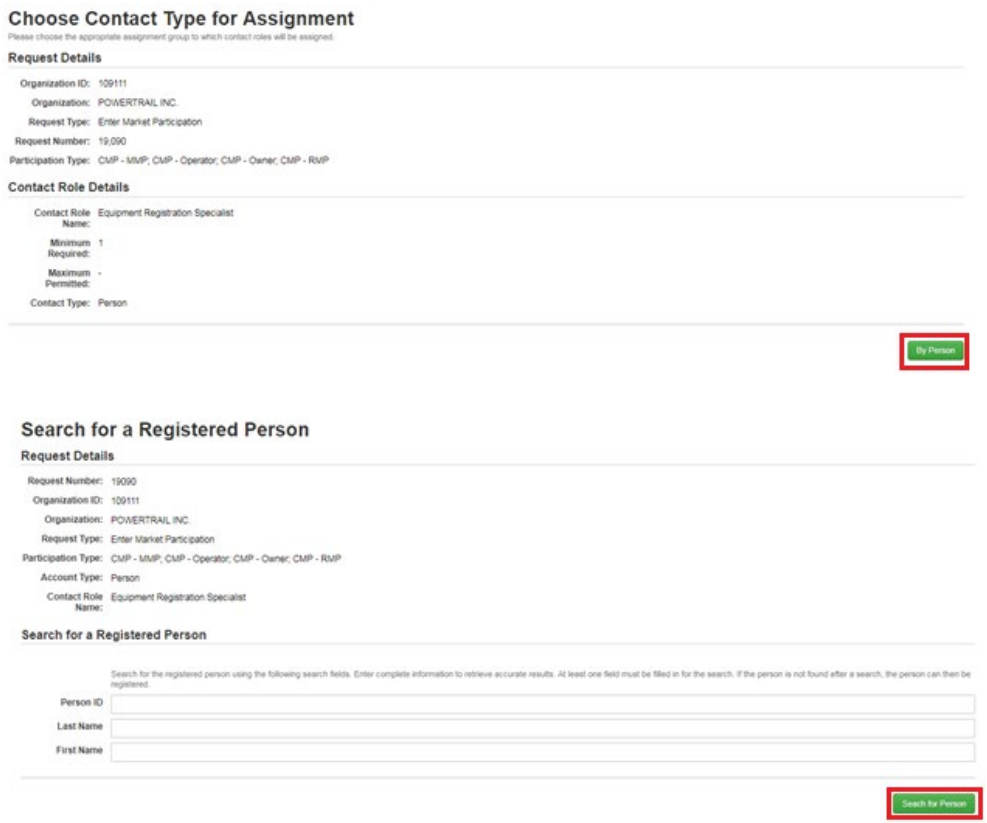
Contact Role Name	Description	Min. Required	No. of Existing
Invoicing and Banking	Person responsible for submitting and maintaining, or approving banking information for your organization.	1	1
Prudential Requirements	Person responsible for submitting prudential information and is the point of contact for any issues regarding prudentials (margin calls, warnings and defaults) for your organization.	1	1
Emergency Preparedness Plan	Person responsible for submitting and updating the Emergency Preparedness Plan for your organization.	1	1
Dispatch Data Submitter	Person or Section responsible for submitting and/or changing the bids or offers for your organization.	1	3

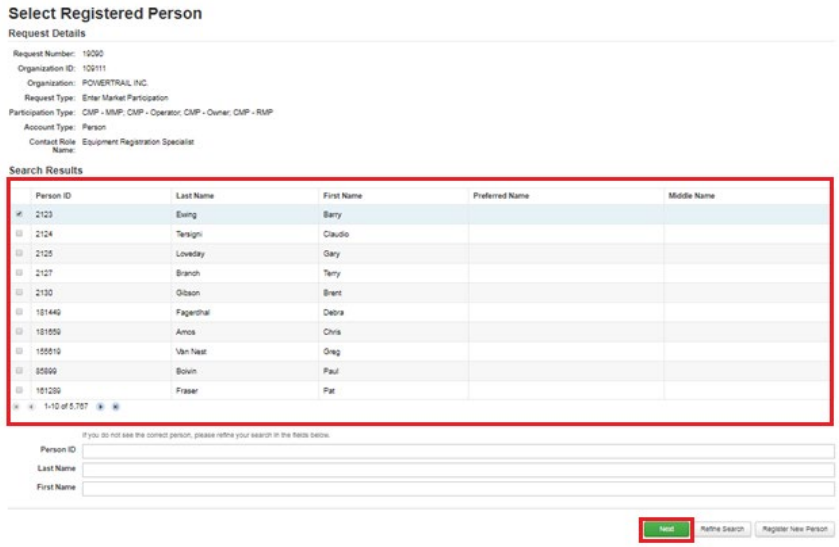
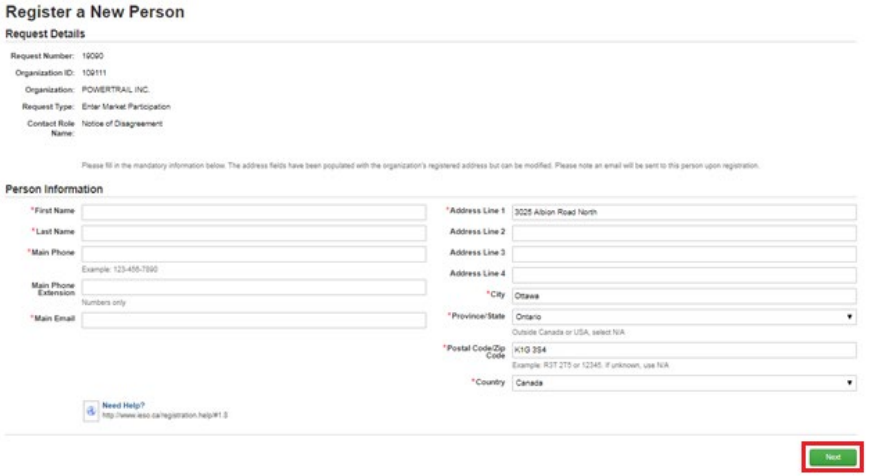
Role(s) to assign

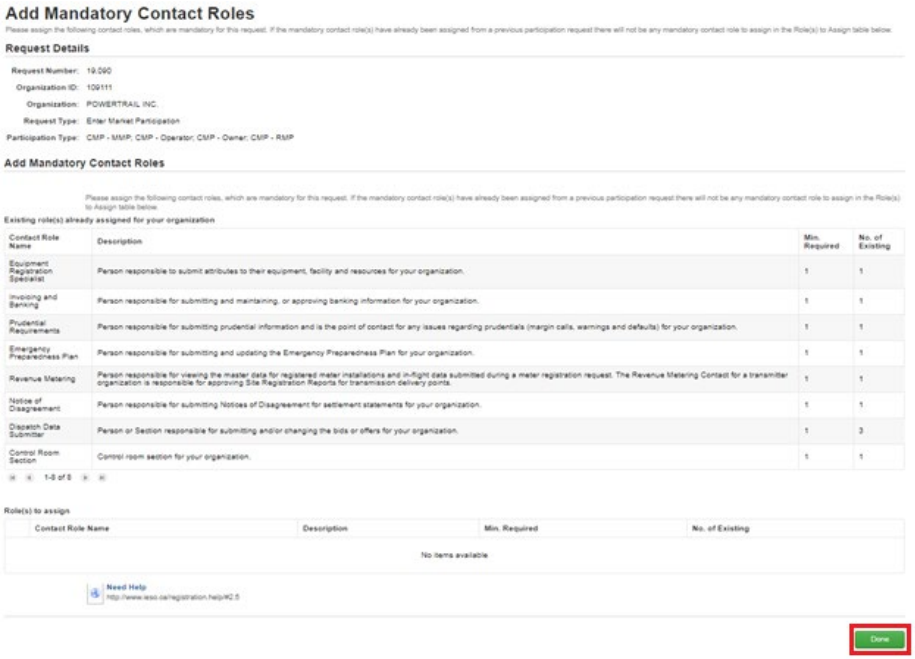
	Contact Role Name	Description	Min. Required	No. of Existing
	Equipment Registration Specialist	Person responsible to submit attributes to their equipment, facility and resources for your organization.	1	0
	Revenue Metering	Person responsible for viewing the master data for registered meter installations and in-flight data submitted during a meter registration request. The Revenue Metering Contact for a transmitter organization is responsible for approving Site Registration Reports for transmission delivery points.	1	0
	Notice of Disagreement	Person responsible for submitting Notices of Disagreement for settlement statements for your organization.	1	0
	Control Room Section	Control room section for your organization.	1	0

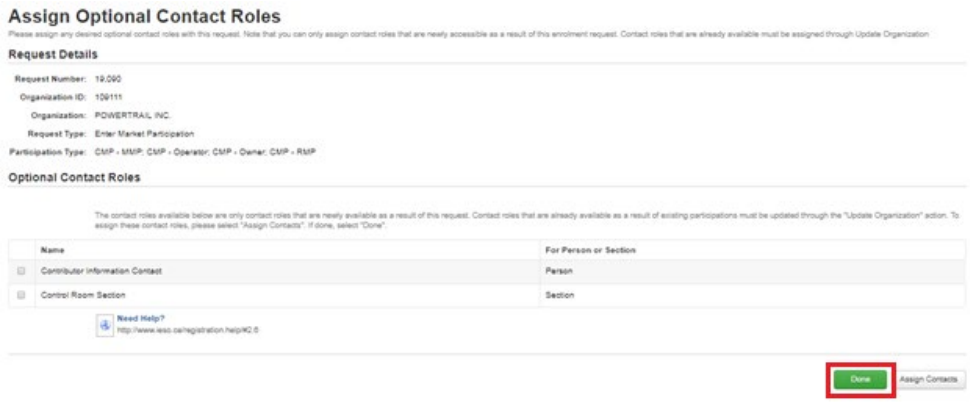
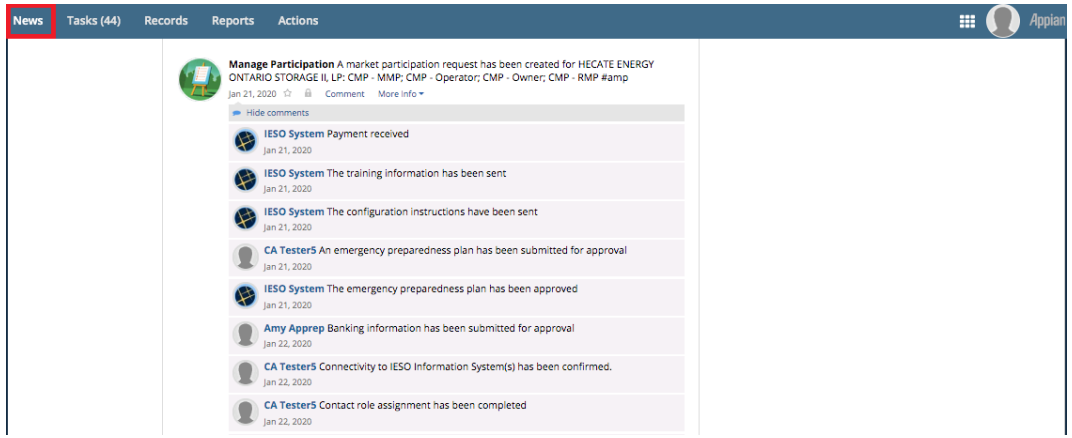
Need Help
http://www.ieso.ca/registration.help/#2.5

Assign Contacts

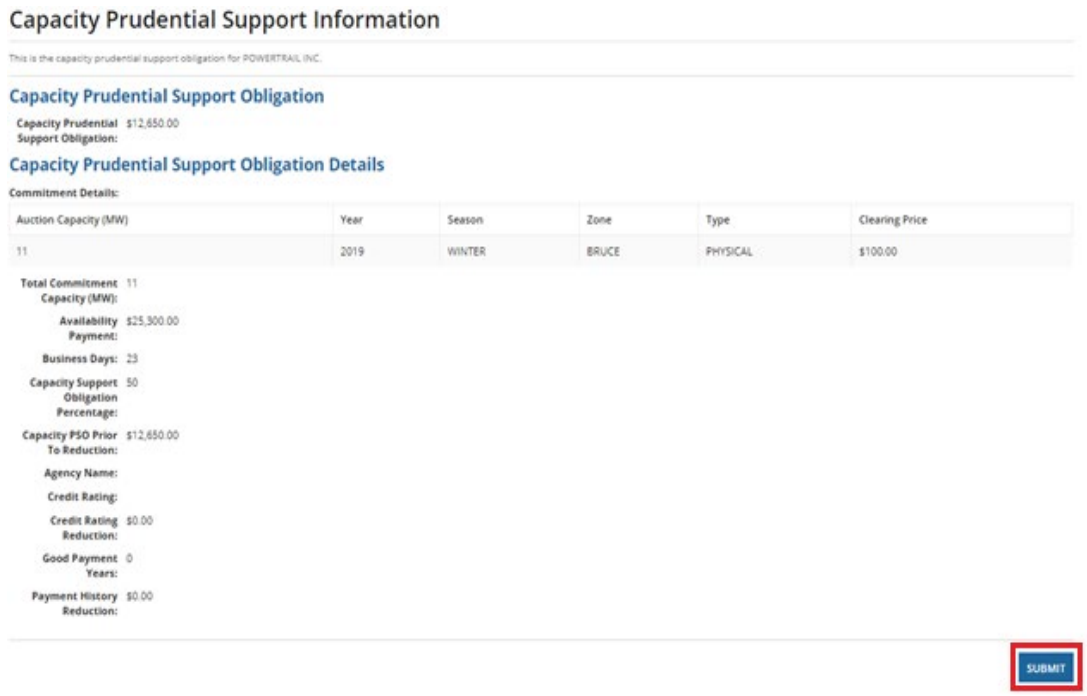
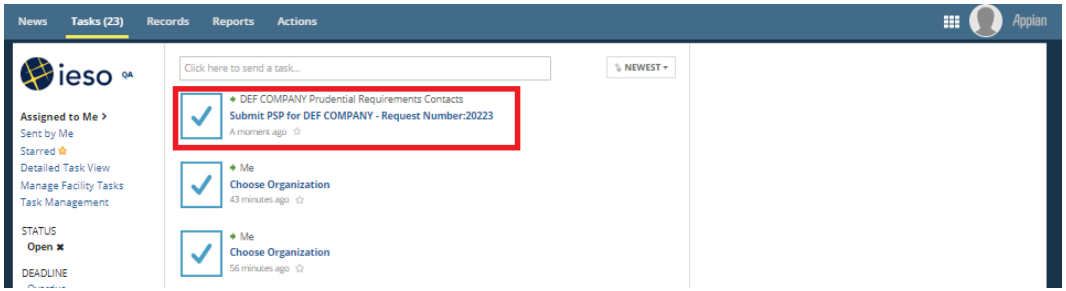
Step	Instruction	Picture
14	The **Choose Contact Type for Assignment** screen is displayed – review and click **By Person**. Click **Search for Person** to search for a person registered in the IESO database.	

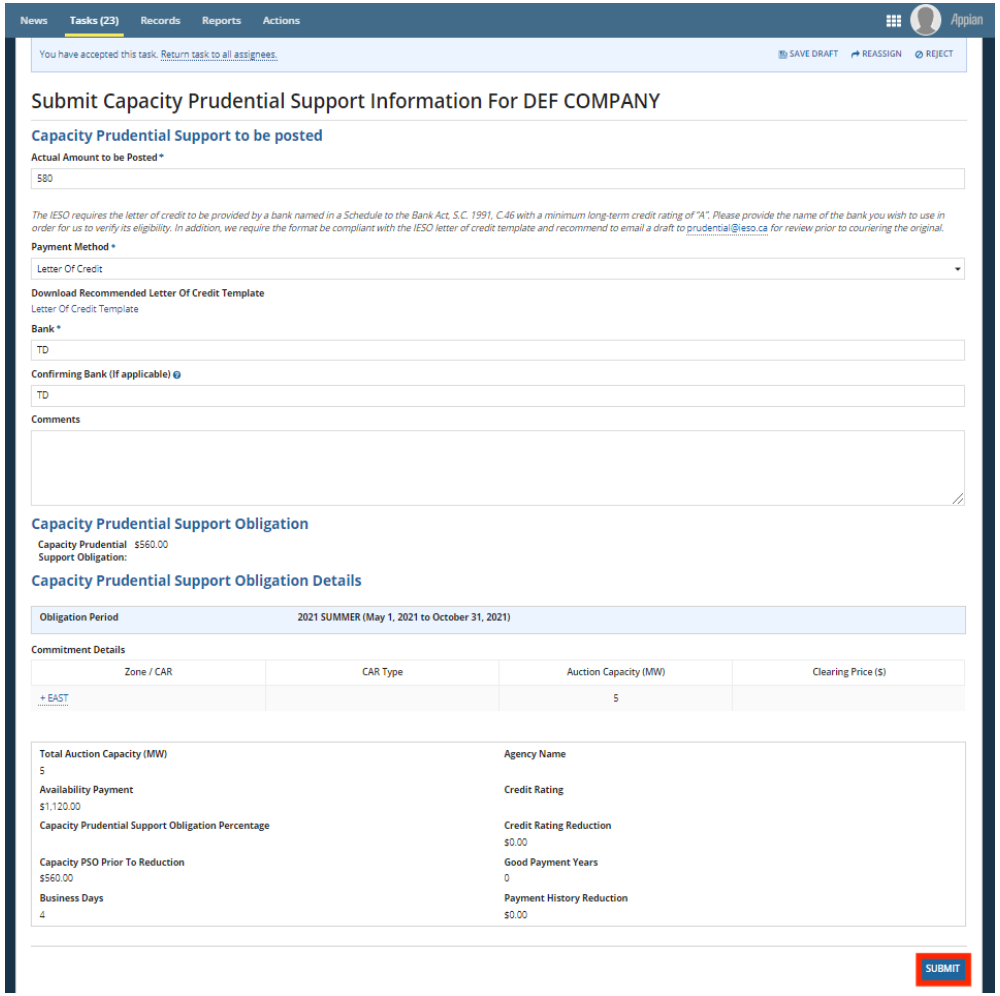
Step	Instruction	Picture
15	If a person is registered in the IESO database, that name appears in the Search Results via the **Select Registered Person** screen – select the corresponding check box, and click **Next**. If a person is not already in the IESO database, you must register that individual by clicking **Register New Person**, and providing their contact information. Repeat for each contact role – once all mandatory roles have been assigned, click **Done**.	 

Step	Instruction	Picture
16	After all roles are filled with the appropriate registered person(s), the **Add Mandatory Contact Roles** screen is displayed – click **Done**.	

Step	Instruction	Picture
17	The **Assign Optional Contact Roles** screen is displayed – click **Done**.	
18	You can verify completion on the **News** screen and viewing a notification that contact roles assignment has been completed.	

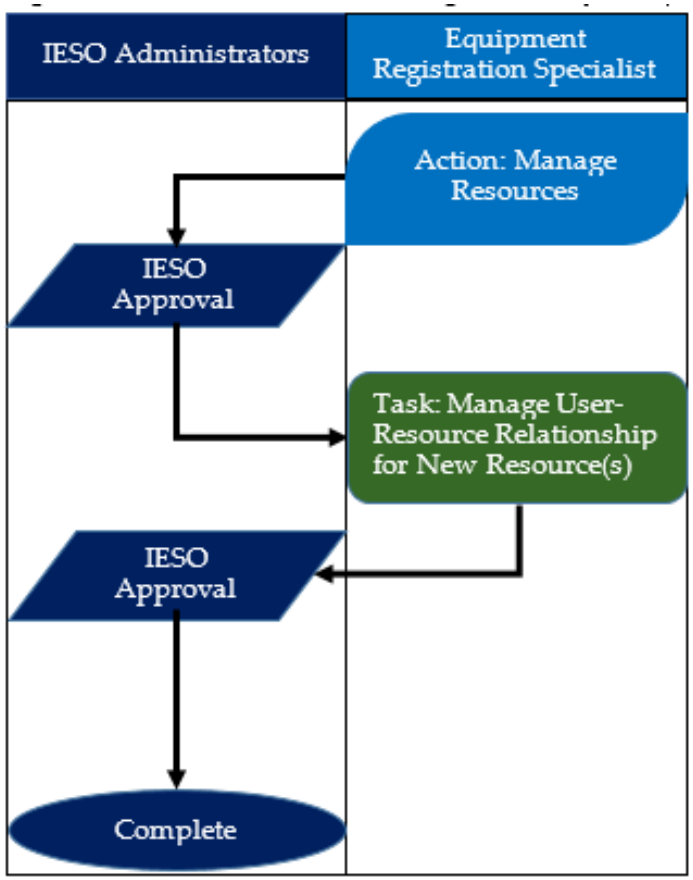
Step	Instruction	Picture
19	Task: Show PSO Click **Tasks** on the menu bar at the top of the screen. Click **Show PSO for <your organization>** from the list of available tasks displayed on the subsequent screen. Click **Yes** to confirm that you accept the task. Note: This task is made available after the Prudential Requirements contact is assigned as part of Assign Contact Role(s).	

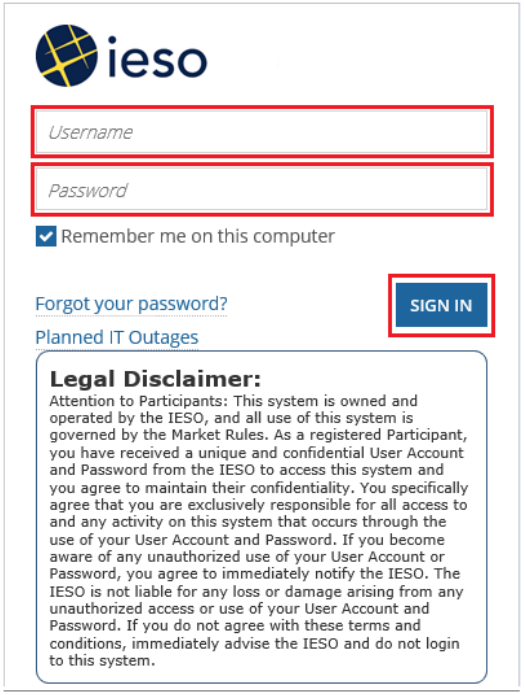
Step	Instruction	Picture
20	The Capacity Prudential Support Information screen is displayed - click **Submit**.	
21	Task: Submit PSP Click **Tasks** on the menu bar at the top of the screen. Click **Show PSO for <your organization>** from the list of available tasks displayed on the subsequent screen.	

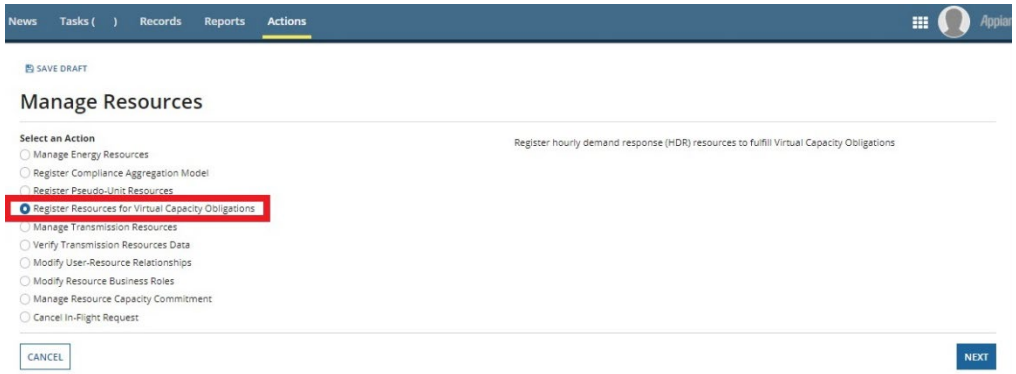
Step	Instruction	Picture
	Enter the required prudential support obligation amount in the **Actual Amount to be Posted** field, select the Payment Method from the **Payment Method** drop-down list (the Letter of Credit must be provided per the template), enter bank name in the **Bank** field, and click **Submit** to confirm the information submission. Following the submission you may proceed with sending the funds to the IESO using the payment method specified.	

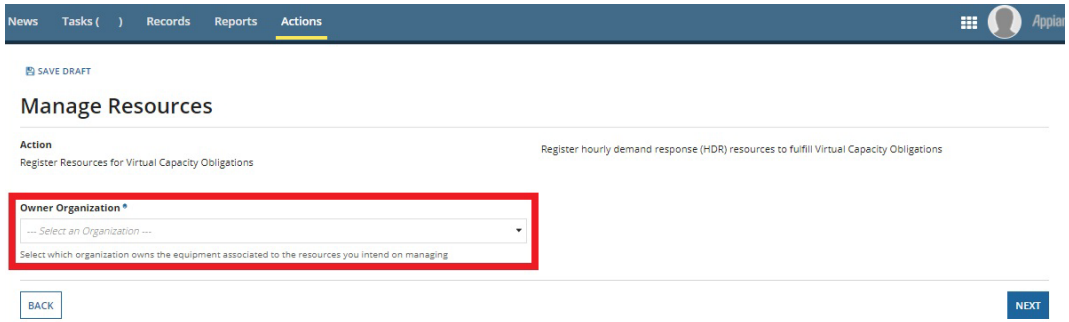
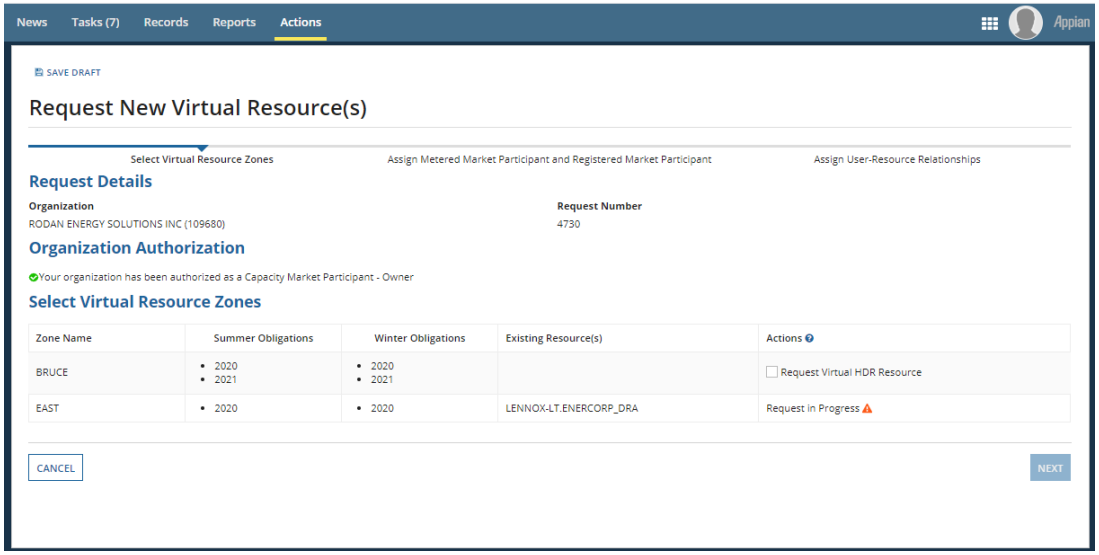
Appendix E: How to Register a Virtual Demand Response Resource

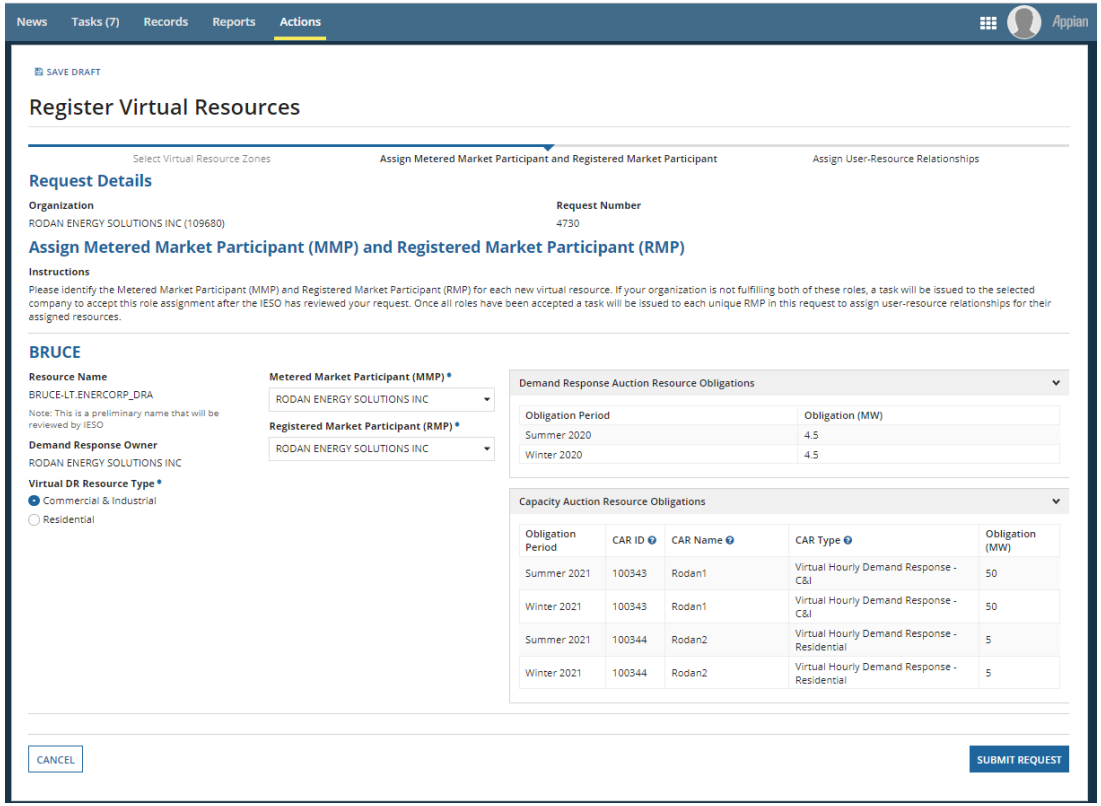
The following table provides step-by-step instructions, with accompanying screen captures, describing how to register/update virtual Demand Response Resources using the Online IESO web-based registration system.



Step	Instruction	Picture
1	Action: Manage Resources Log in to the Online IESO web-based registration system using this link. Enter your Username and Password, and click **Sign In**.	
2	Click **Actions** on the menu bar at the top of the screen. Select **Manage Resources** from the list of available action items displayed on the subsequent screen.	

Step	Instruction	Picture
	Note: In order to assign capacity, if you already have resources assigned to your virtual CARs, use the Manage Demand Response Contributor Registry Information action (Appendix G: How to Manage Contributors for Virtual HDR Resources).	
3	The **Manage Resources** screen is displayed. Select the option corresponding to **Register Resources for Virtual Capacity Obligations**, and click **Next**.	

Step	Instruction	Picture
4	On the following screen, select from the drop down list the name of the organization that owns the equipment associated to the resource you intend on managing, and click **Next**.	
5	The **Request New Virtual Resource(s)** screen is displayed. Select the check box corresponding to the zone(s) requiring a resource, and click **Ne**xt. Note: After finishing this process, a virtual resource is assigned to your virtual obligation.	

Step	Instruction	Picture
6	Identify the Metered Market Participant (MMP), the Registered Market Participant (RMP), and the Virtual DR Resource Type for each resource, and click **Submit Request**. Note: After the IESO approves the resource modelling name, another task is initiated.	

News | Tasks (7) | Records | Reports | Actions | Appian

SAVE DRAFT

Register Virtual Resources

Select Virtual Resource Zones | Assign Metered Market Participant and Registered Market Participant | Assign User-Resource Relationships

Request Details

Organization: RODAN ENERGY SOLUTIONS INC (109680)

Request Number: 4730

Assign Metered Market Participant (MMP) and Registered Market Participant (RMP)

Instructions

Please identify the Metered Market Participant (MMP) and Registered Market Participant (RMP) for each new virtual resource. If your organization is not fulfilling both of these roles, a task will be issued to the selected company to accept this role assignment after the IESO has reviewed your request. Once all roles have been accepted a task will be issued to each unique RMP in this request to assign user-resource relationships for their assigned resources.

BRUCE

Resource Name: BRUCE-LT.ENERCORP_DRA

Note: This is a preliminary name that will be reviewed by IESO

Demand Response Owner: RODAN ENERGY SOLUTIONS INC

Virtual DR Resource Type *: Commercial & Industrial / Residential

Metered Market Participant (MMP) *: RODAN ENERGY SOLUTIONS INC

Registered Market Participant (RMP) *: RODAN ENERGY SOLUTIONS INC

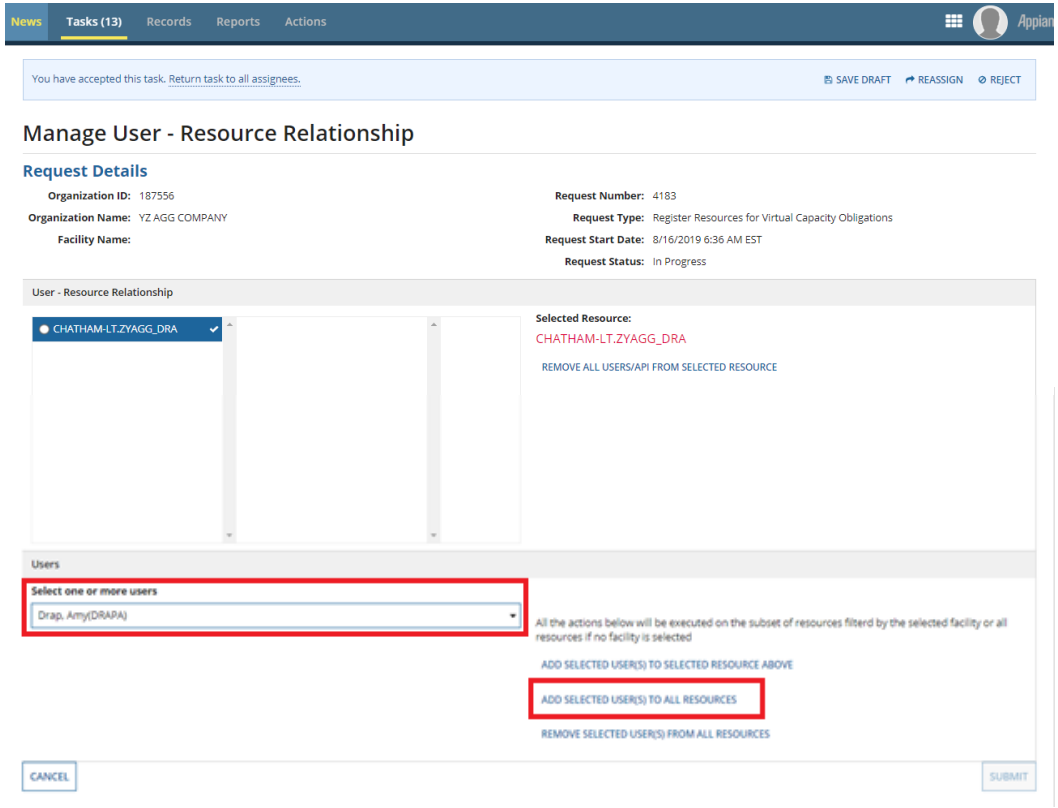
Demand Response Auction Resource Obligations

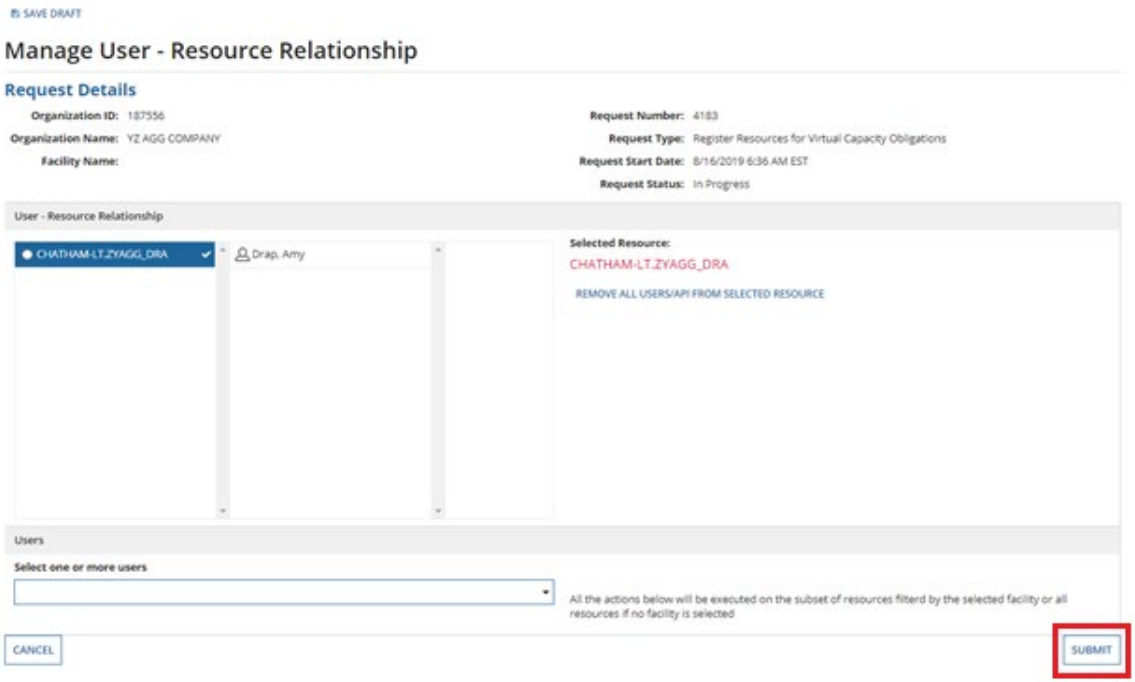
Obligation Period	Obligation (MW)
Summer 2020	4.5
Winter 2020	4.5

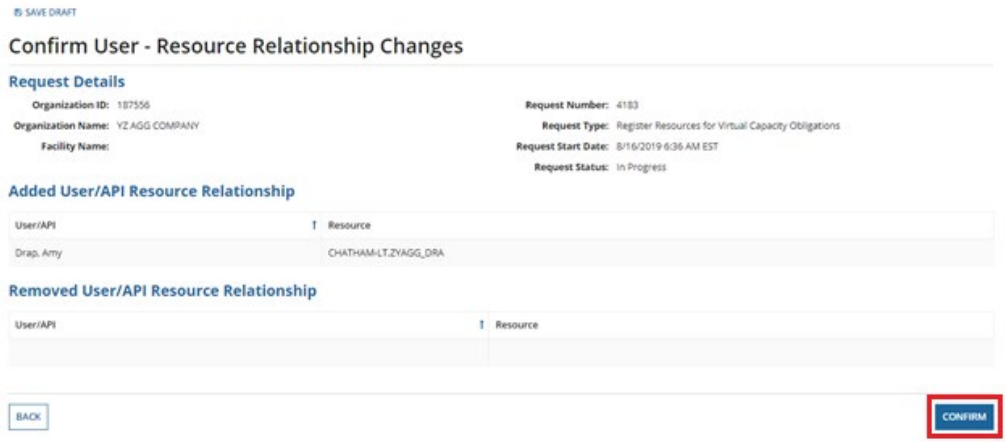
Capacity Auction Resource Obligations

Obligation Period	CAR ID	CAR Name	CAR Type	Obligation (MW)
Summer 2021	100343	Rodan1	Virtual Hourly Demand Response - C&I	50
Winter 2021	100343	Rodan1	Virtual Hourly Demand Response - C&I	50
Summer 2021	100344	Rodan2	Virtual Hourly Demand Response - Residential	5
Winter 2021	100344	Rodan2	Virtual Hourly Demand Response - Residential	5

CANCEL | SUBMIT REQUEST

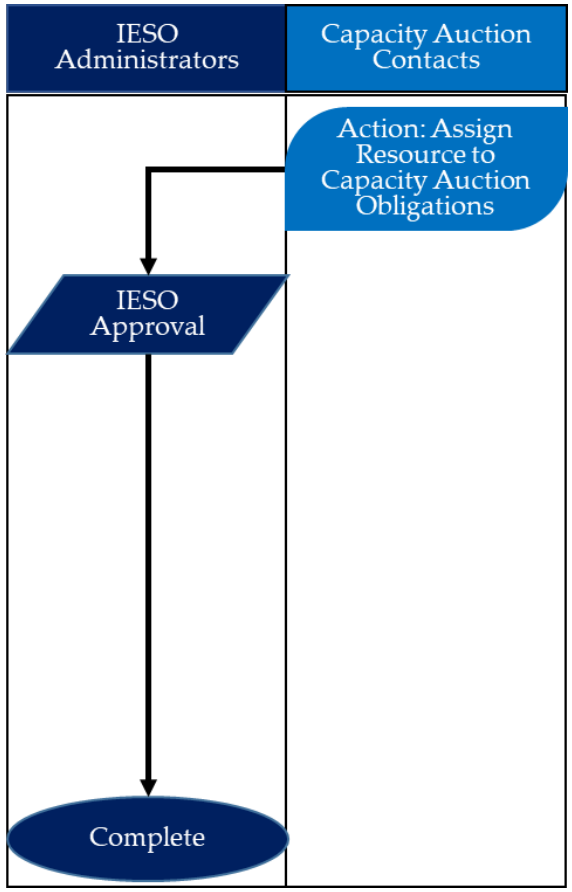
Step	Instruction	Picture
7	Task: Manage User-Resource Relationship for New Resource(s) Click **Tasks** on the menu bar at the top of the screen. Select **Manage User-Resource Relationship for New Resources <your organization>** from the list of available tasks displayed on the subsequent screen. The **Manage User – Resource Relationship** screen is displayed. Select the appropriate resource(s), and click **Add Selected User(s) to all Resources.**	

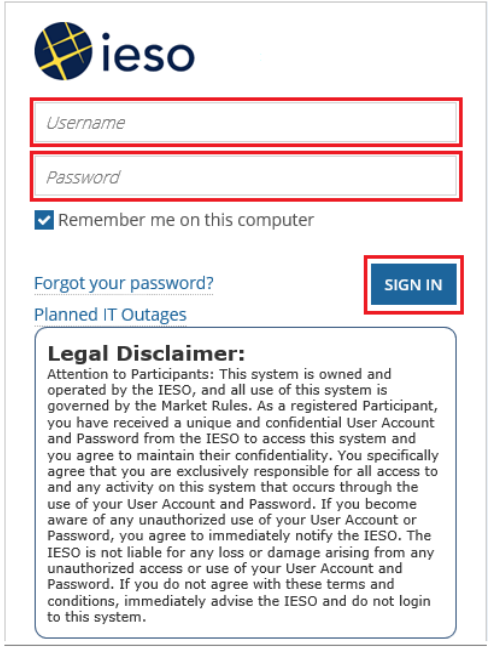
Step	Instruction	Picture
8	Review/confirm your selection, and click **Submit**.	

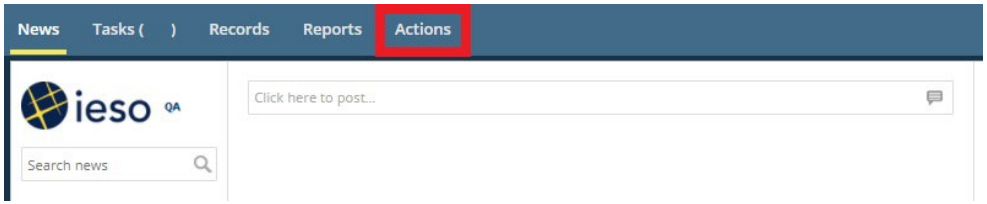
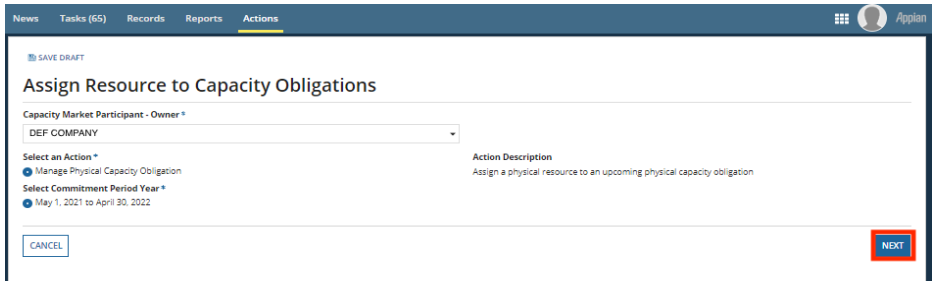
Step	Instruction	Picture
9	The **Confirm User – Resource Relationship Changes** screen is displayed. Click **Confirm**. Note: The IESO issues a Registration Approval Notice (RAN) after completing an assessment of the submission.	

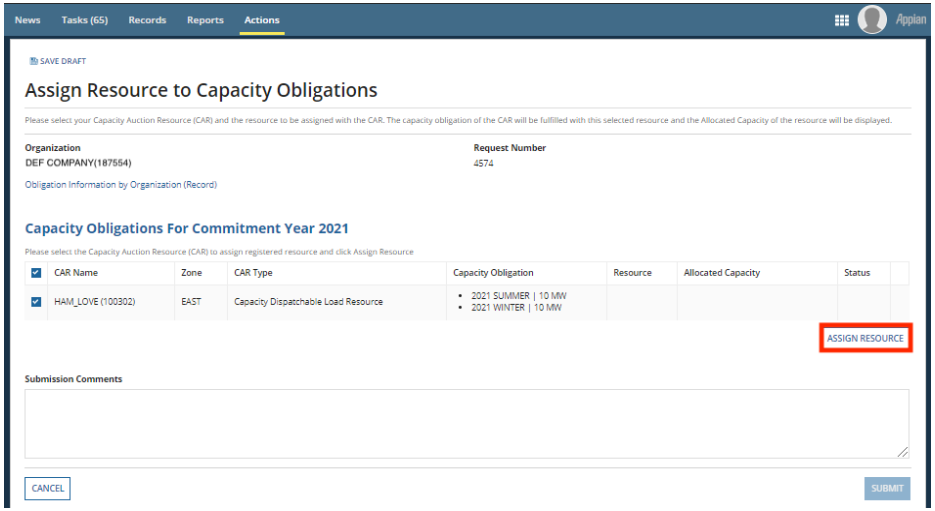
Appendix F: How to Assign a New Physical DR Resource to an Obligation

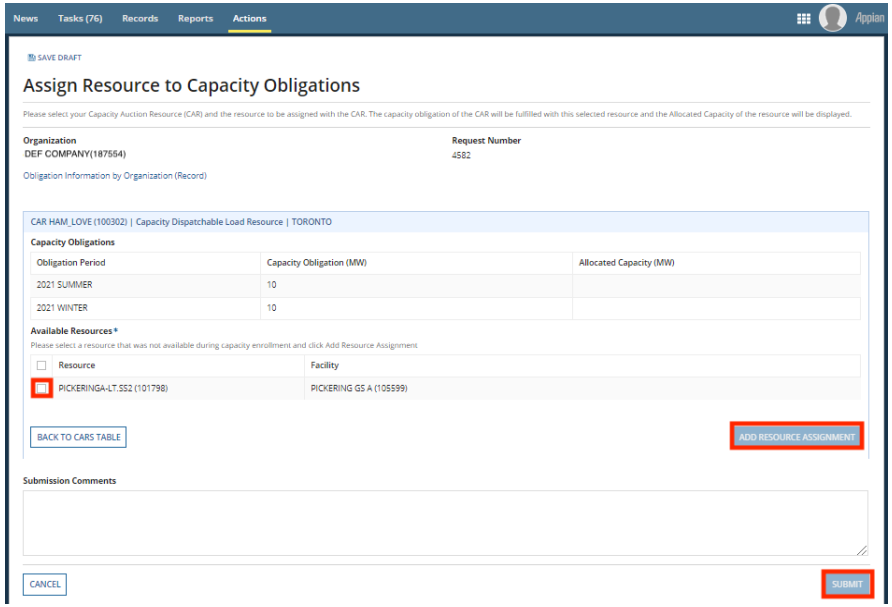
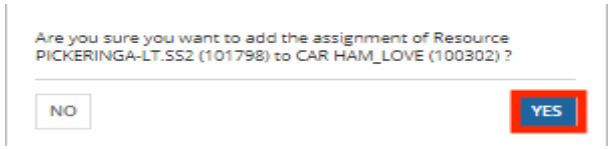
The following table provides step-by-step instructions, with accompanying screen captures, describing how to assign physical resources to a Capacity Obligation using the Online IESO web-based registration system.



Step	Instruction	Picture
1	Action: Assign Resource to Capacity Obligation Log in to the Online IESO web-based registration system using this link. Enter your Username and Password, and click **Sign In**.	

Step	Instruction	Picture
2	Click **Actions** on the menu bar at the top of the screen. Select **Assign Resource to Capacity Auction Obligations** from the list of available action items displayed on the subsequent screen.	
3	The **Assign Resource to Capacity Obligations** screen is displayed. Select the CMP name from the drop-down list. Online IESO will pre-select the available action(s). If needed, select the **Action** and **Commitment Year**, and click **Next**.	

Step	Instruction	Picture
4	On the following screen, your capacity obligations for the selected commitment period will be displayed. Choose the desired capacity obligation and click **Assign Resource**.	

Step	Instruction	Picture
5	Your available resources will be shown. Select one resource that will satisfy the capacity obligation and click **Add Resource Assignment**. Click **Submit** at the bottom of the page.	
6	From the pop-out box, click **Yes** to confirm the assignment.	

Step	Instruction	Picture
7	Upon approval, you will receive an email from the IESO summarizing the resource assignment.	

- This is an automated message: Do not reply to this Email Address -

The IESO has approved the capacity obligation physical resource assignment for DEF COMPANY. as part of Request #4584

CAR Name	CAR TYPE	Resource	Zone	Obligation Id	Obligation Period	Capacity Obligation (MW)	Allocated Capacity (MW)
HAM_LOVE (100302)	Capacity Dispatchable Load Resource	PICKERINGA-LT.SS2 (101798)	TORONTO	1075	2021 SUMMER	10 MW	0 MW ⚠
				1076	2021 WINTER	10 MW	0 MW ⚠

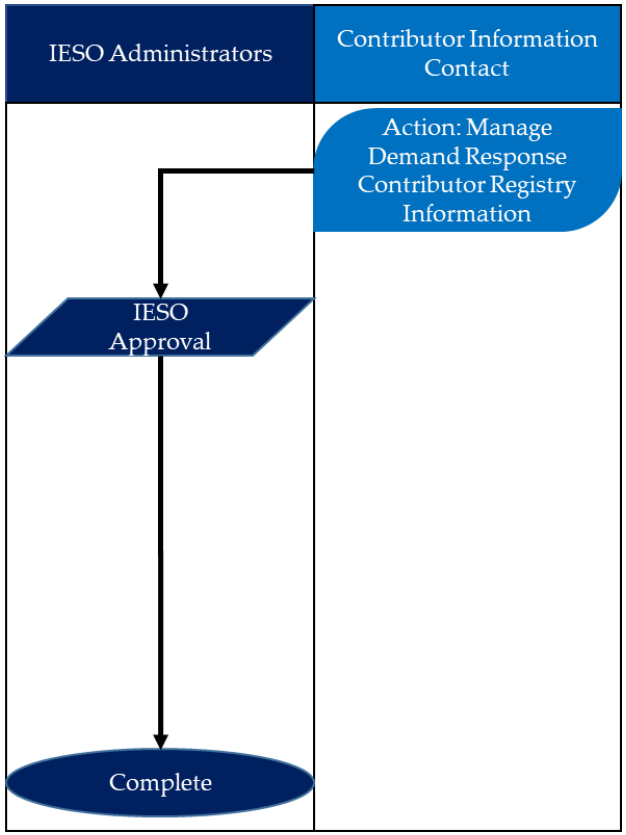
⚠ Please note that the resource capability is lower than the capacity obligation.

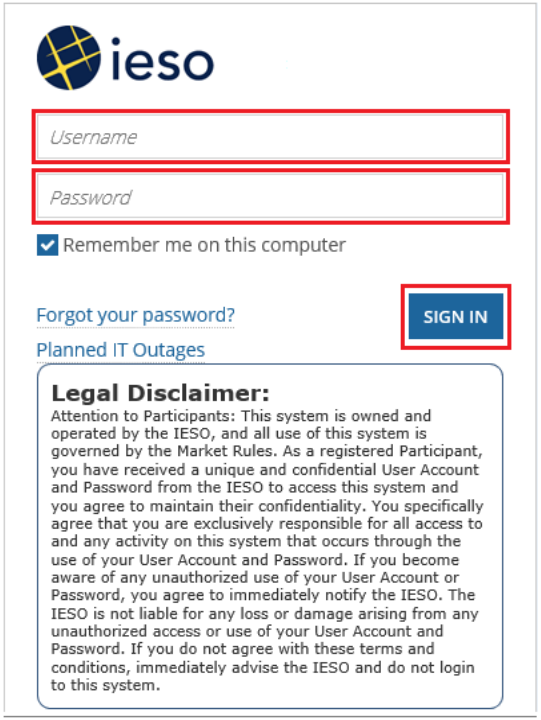
Sincerely,
IESO

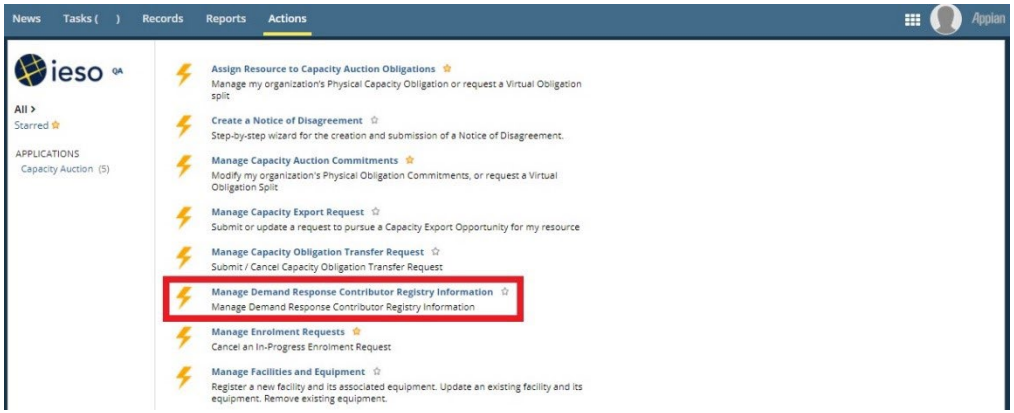
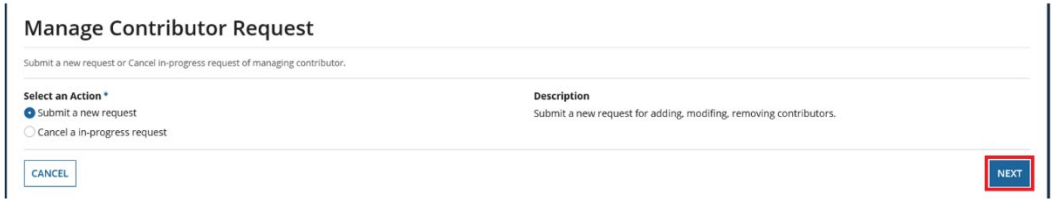
To
IESO Enrolment Specialist

Appendix G: How to Manage Contributors for Virtual HDR Resources

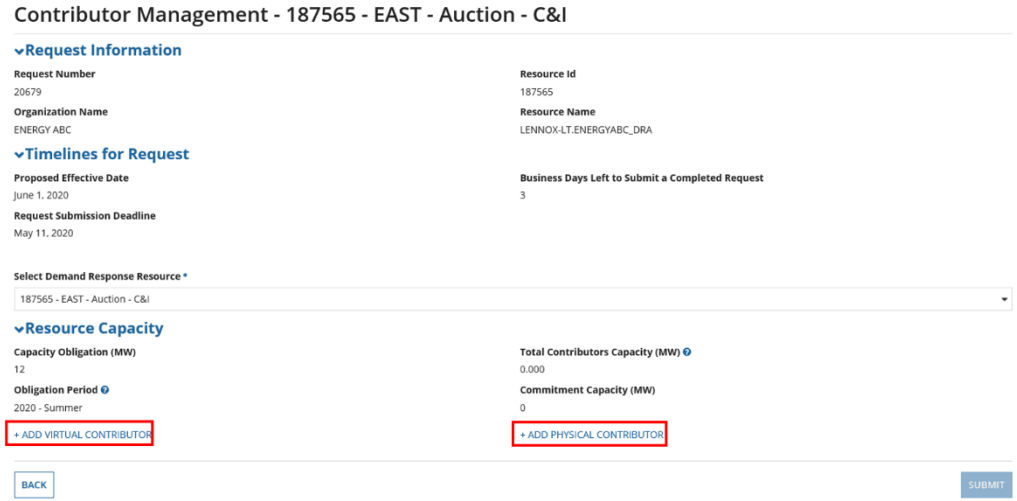
The following table provides step-by-step instructions, with accompanying screen captures, describing how to manage contributors using the Online IESO web-based registration system.

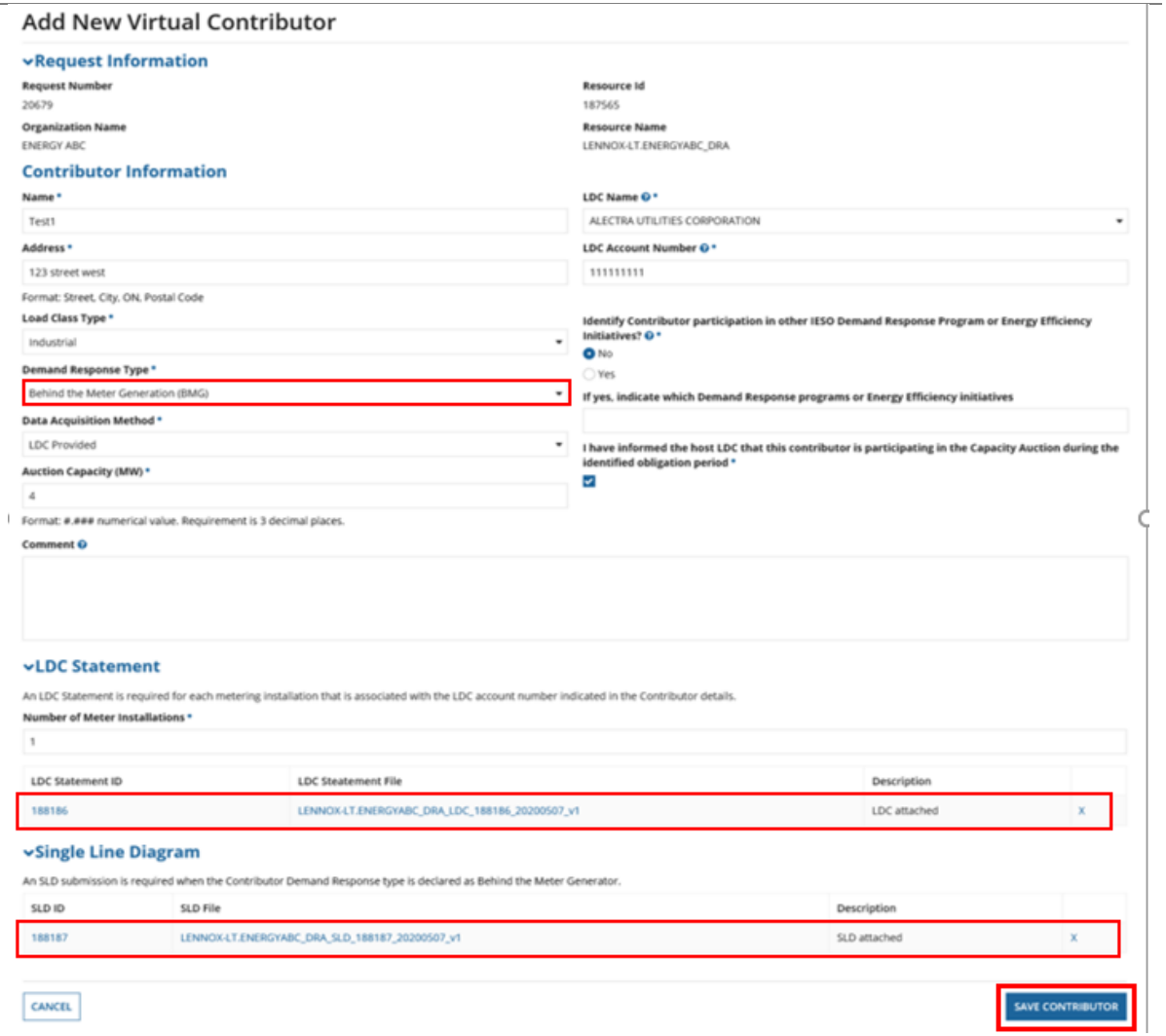


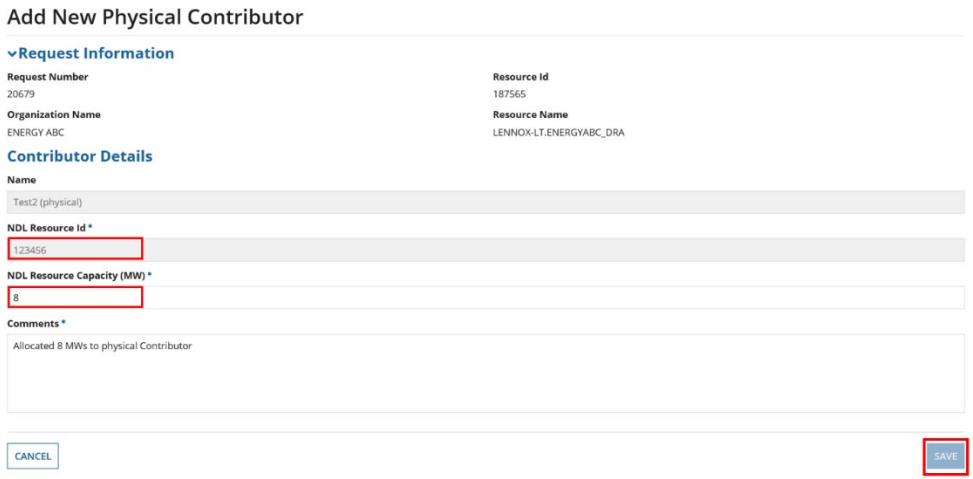
Step	Instruction	Picture
1	Action: Manage Demand Response Contributor Management Registry Log in to the Online IESO web-based registration system using this link. Enter your Username and Password, and click **Sign In**.	
2	Click **Actions** on the menu bar at the top of the screen. Select **Manage Demand Response Contributor Registry Information** from the list of available action items displayed on the subsequent screen.	

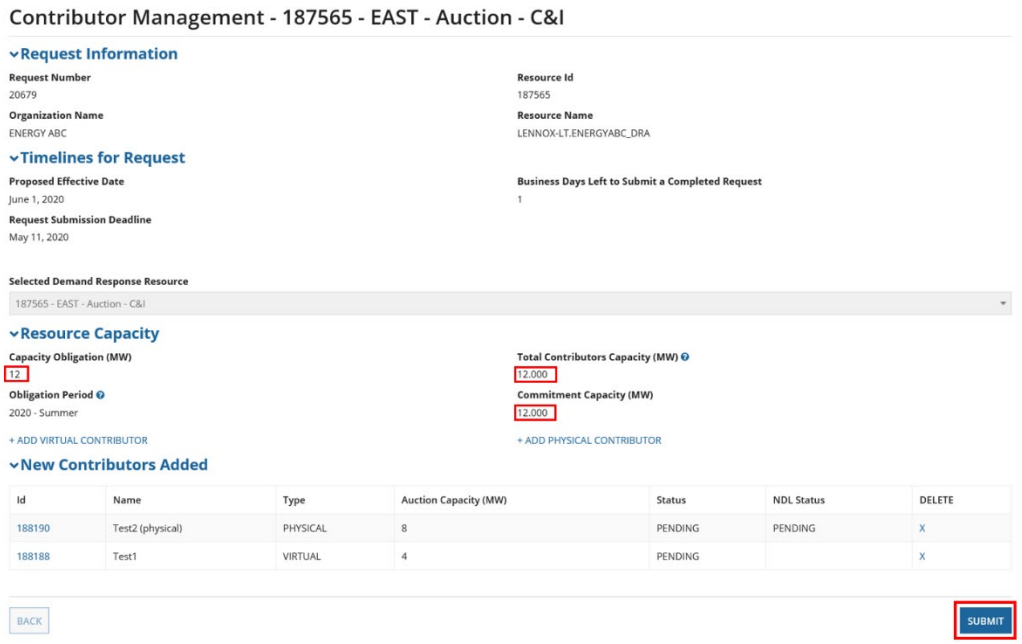
Step	Instruction	Picture
	Note: This allows you to: Register new Virtual or Physical contributors to a Demand Response Resource. Modify or remove Virtual or Physical contributors associated to a Demand Response Resource.	
3	Select the organization you will be representing while completing this action, and click **Next**.	
4	If your organization already has a request open under another resource, then the **Manage Contributor Request** screen is displayed, giving the option to submit a new request or to cancel an in-progress request. Choose "Submit s new request", and click **Next**.	

Step	Instruction	Picture
	Note: It is possible to cancel the request, provided that the request has not passed final approval.	
5	On the following screen, select a Demand Response Resource from the drop-down list.	

Step	Instruction	Picture
6 **(C&I)**	Commercial and Institutional (C&I) Resources The screen is populated with registration data for the selected resource. Click **Add Virtual Contributor** or **Add Physical Contributor** (based on your requirements).	

Step	Instruction	Picture
7 **(C&I)**	For virtual contributors, provide details for each contributor using the form (an asterisk indicates a mandatory item), and click **Save Contributor** to create a virtual contributor. Design Updates: The requirement to submit a record of installation (ROI) has been removed. CMPs will now be required to submit a copy of an LDC Statement (issued within three months of the contributor effective date) with each metering installation 'Premise ID' field is removed 'Data Acquisition Method' extended to include 'other' SLD only required if the Demand Response type is selected as Behind the Meter Generation	

Step	Instruction	Picture
8 **(C&I)**	For physical contributors, provide details for each contributor using the form (a red asterisk indicates a mandatory item). If the resource ID type is invalid, the system will check and return the following error message: "Error: NDL Resource ID not available where one or more parameters are not valid: (1) NDL Resource ID has already been registered as a physical contributor (2) Associated NDL metering installation active for less than two months. (3) Resource ID not fully registered as an NDL." Click **Save** to add a physical Contributor.	

Step	Instruction	Picture
9 **(C&I)**	Upon completing the forms, you can view added contributor(s) on the **Contributor Management** screen in the **New Contributors Added** section, and then click **Submit**. Finally, on the **Submit Request – Confirmation** screen, select **Click Here to Finish Submission**.	

Contributor Management - 187565 - EAST - Auction - C&I

Request Information

Request Number: 20679
Resource Id: 187565
Organization Name: ENERGY ABC
Resource Name: LENNOX-LT.ENERGYABC_DRA

Timelines for Request

Proposed Effective Date: June 1, 2020
Business Days Left to Submit a Completed Request: 1
Request Submission Deadline: May 11, 2020

Selected Demand Response Resource: 187565 - EAST - Auction - C&I

Resource Capacity

Capacity Obligation (MW): 12
Total Contributors Capacity (MW): 12.000
Obligation Period: 2020 - Summer
Commitment Capacity (MW): 12.000

+ ADD VIRTUAL CONTRIBUTOR
+ ADD PHYSICAL CONTRIBUTOR

New Contributors Added

Id	Name	Type	Auction Capacity (MW)	Status	NDL Status	DELETE
188190	Test2 (physical)	PHYSICAL	8	PENDING	PENDING	X
188188	Test1	VIRTUAL	4	PENDING		X

BACK
SUBMIT

10

(C&I)

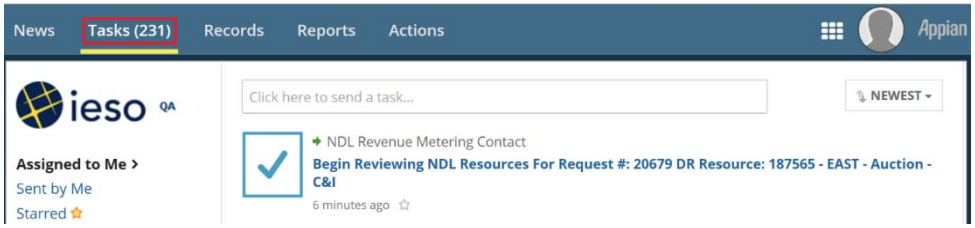
Once the request has been submitted by the CMP, Online IESO will generate a separate task for the Non-Dispatchable Load (NDL) Revenue Metering Contact to approve the capacity allocated to the physical contributor.

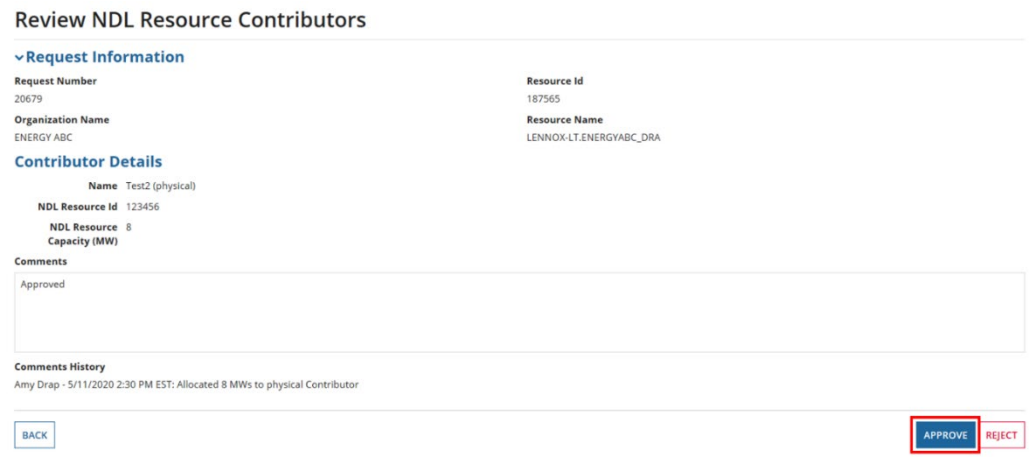
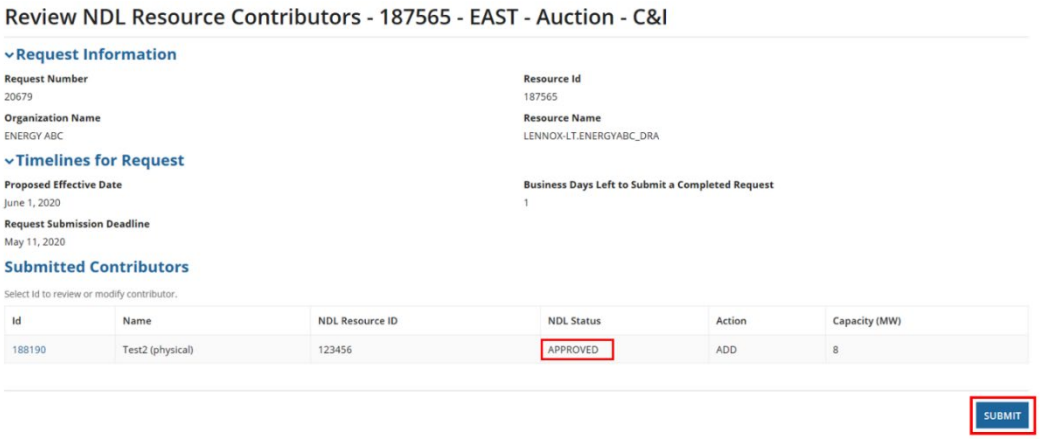
The NDL Revenue Metering Contact must log in to the Online IESO web-based registration system in order to approve the request.

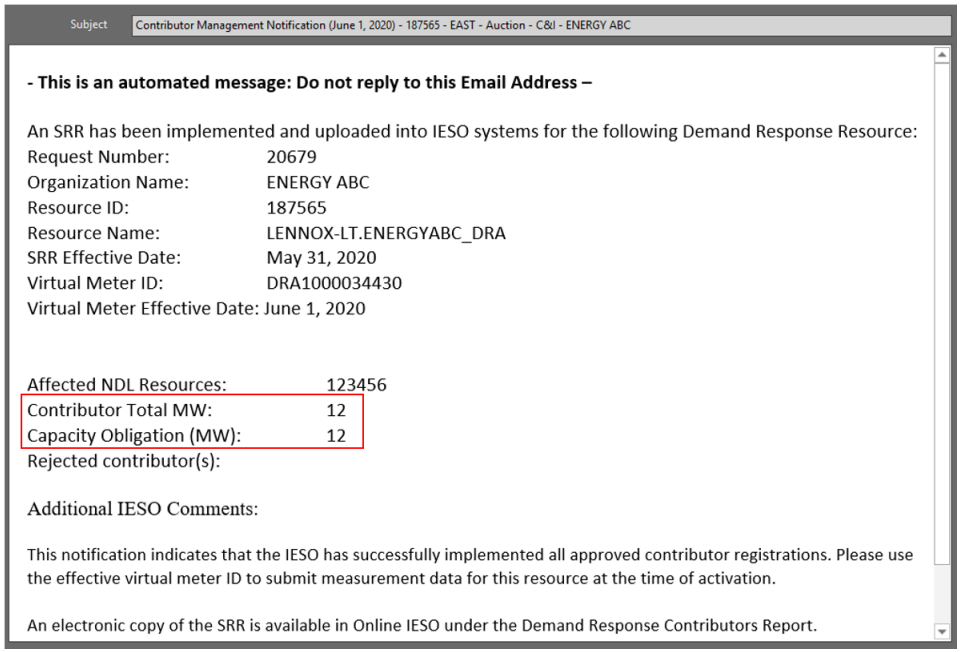
Click **Tasks** on the menu bar at the top of the screen and select **Begin Reviewing NDL Resource**s from the list of tasks.

Once selected, the NDL Revenue Metering Contact must first **Accept** the task before completing it.

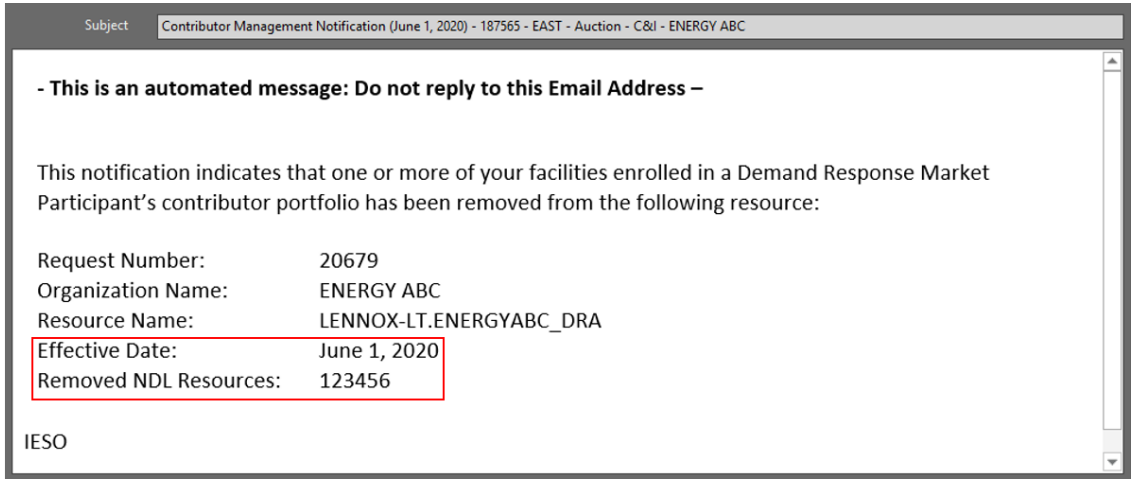
Under **Submitted Contributors**, click on the **Contributor ID** to see contributor details.



Step	Instruction	Picture
1 **(C&I)**	Next, review **Contributor Details**, update comments as needed, and click **Approve**. On the main screen, click **Submit**.	 

Step	Instruction	Picture
12 **(C&I)**	Finally, at the **Review NDL Resource – Confirmation** screen select **Click Here to Finish Submission**.	
13 **(C&I)**	Scenario #1 – IESO Approves Contributor Request Once the IESO has reviewed and approved all contributor registrations within a request, an email notification is sent to the CMP's Contributor Information Contact (CIC) summarizing the registration details.	

Step	Instruction	Picture
14 **(C&I)**	Scenario #2 – IESO Rejects a Contributor Request Design Updates: Monthly Contributor Management Registrations will be processed by "individual contributors" and not by "monthly task" Registration requests will move forward with the contributors that have been approved. CMPs will be notified of all **Rejected Contributors** via email notification. If a physical contributor has been rejected by the IESO or removed by the CMP, the NDL Revenue Metering Contact of the physical load will receive a separate email notification indicating the removal of their facility from the Demand Response Resource.	Subject: Contributor Management Notification (June 1, 2020) - 187565 - EAST - Auction - C&I - ENERGY ABC **- This is an automated message: Do not reply to this Email Address –** An SRR has been implemented and uploaded into IESO systems for the following Demand Response Resource: Request Number: 20679 Organization Name: ENERGY ABC Resource ID: 187565 Resource Name: LENNOX-LT.ENERGYABC_DRA SRR Effective Date: May 31, 2020 Virtual Meter ID: DRA1000034430 Virtual Meter Effective Date: June 1, 2020 Affected NDL Resources: 123456 Contributor Total MW: 4 Capacity Obligation (MW): 12 Rejected contributor(s): Test2 (physical) Additional IESO Comments: This notification indicates that the IESO has successfully implemented all approved contributor registrations. Please use the effective virtual meter ID to submit measurement data for this resource at the time of activation. An electronic copy of the SRR is available in Online IESO under the Demand Response Contributors Report.

Step	Instruction	Picture
	The Online IESO contributor management process has been modified to eliminate the need for NDL Approval before removing physical contributors.	

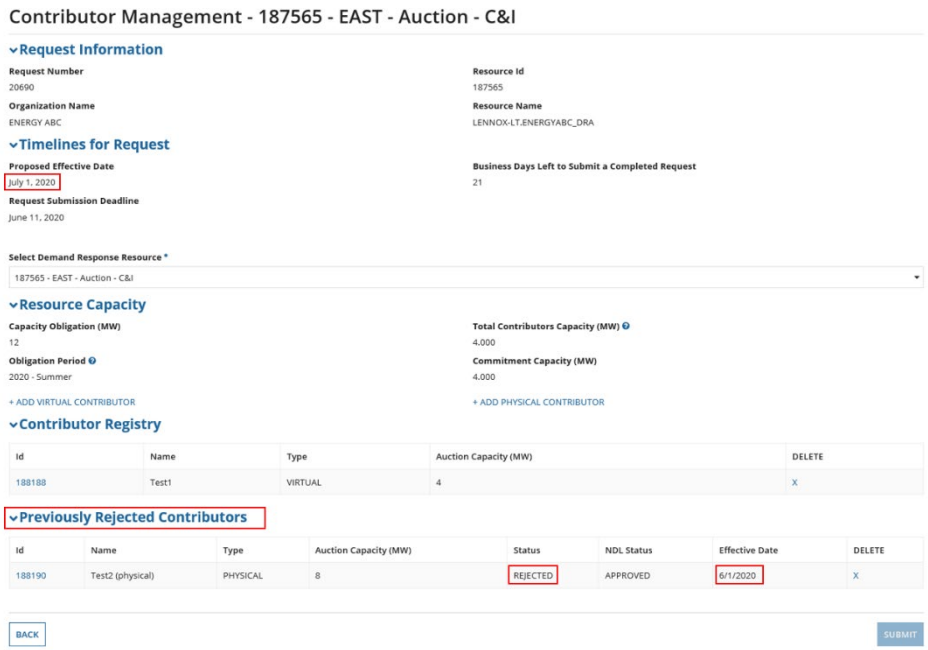
Subject: Contributor Management Notification (June 1, 2020) - 187565 - EAST - Auction - C&I - ENERGY ABC

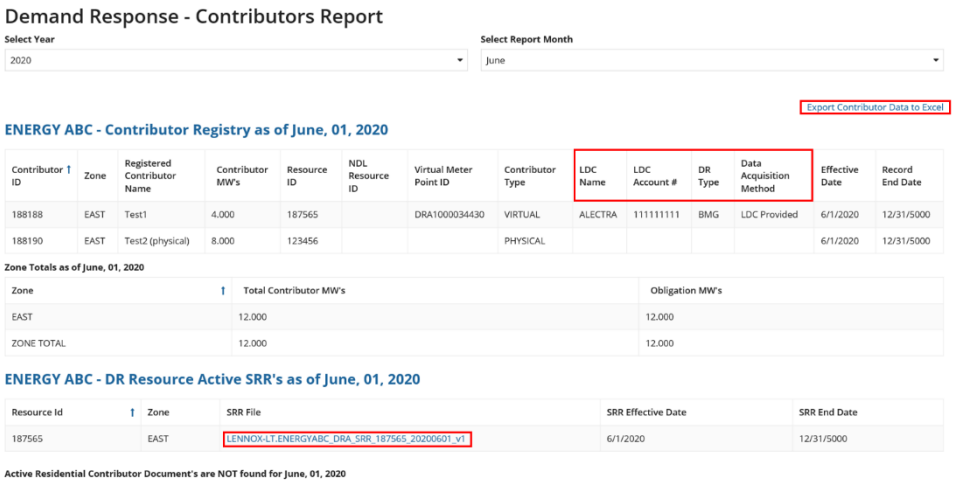
- This is an automated message: Do not reply to this Email Address –

This notification indicates that one or more of your facilities enrolled in a Demand Response Market Participant's contributor portfolio has been removed from the following resource:

Request Number:	20679
Organization Name:	ENERGY ABC
Resource Name:	LENNOX-LT.ENERGYABC_DRA
Effective Date:	June 1, 2020
Removed NDL Resources:	123456

IESO

Step	Instruction	Picture
15	The Online IESO system will save the Rejected Contributors registration information and present it to the user (CMP) for the subsequent month's registration with a **Rejected** status.	
16 **(C&I)**	Click **Reports** on the menu bar at the top of the screen, and select **Demand Response – Contributors Report** to view the **Registered Active Contributors** list for each zone/Demand Response Resource by month. You can view your **Site Registration Report (SRR)** by clicking the	

Step	Instruction	Picture
	hyperlinks at the bottom of the screen. Select **Export Results to Excel** to export the **Contributors Report** to Excel. The **Contributors Report** is now available for download as an Excel workbook. Design Updates: Contributor Reports updated to include four additional columns: LDC Name, LDC Account #, DR Type, and Data Acquisition Method	 Demand Response - Contributors Report Select Year: 2020 Select Report Month: June Export Contributor Data to Excel ENERGY ABC - Contributor Registry as of June, 01, 2020 Zone Totals as of June, 01, 2020 ENERGY ABC - DR Resource Active SRR's as of June, 01, 2020 Active Residential Contributor Document's are NOT found for June, 01, 2020

ENERGY ABC - Contributor Registry as of June, 01, 2020

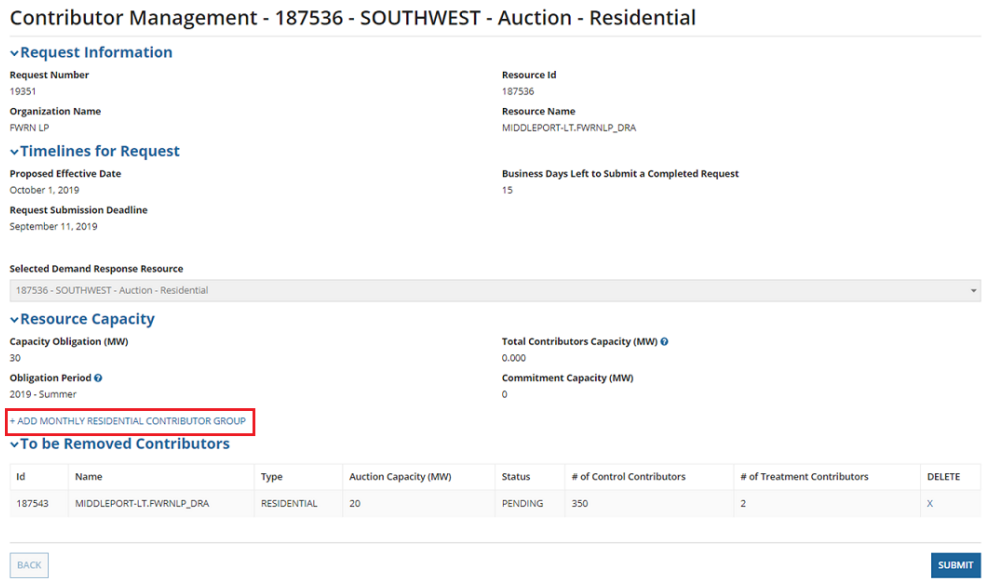
Contributor ID	Zone	Registered Contributor Name	Contributor MW's	Resource ID	NDL Resource ID	Virtual Meter Point ID	Contributor Type	LDC Name	LDC Account #	DR Type	Data Acquisition Method	Effective Date	Record End Date
188188	EAST	Test1	4.000	187565		DRA1000034430	VIRTUAL	ALECTRA	111111111	BMG	LDC Provided	6/1/2020	12/31/5000
188190	EAST	Test2 (physical)	8.000	123456			PHYSICAL					6/1/2020	12/31/5000

Zone Totals as of June, 01, 2020

Zone	Total Contributor MW's	Obligation MW's
EAST	12.000	12.000
ZONE TOTAL	12.000	12.000

ENERGY ABC - DR Resource Active SRR's as of June, 01, 2020

Resource Id	Zone	SRR File	SRR Effective Date	SRR End Date
187565	EAST	LENNOX-LT.ENERGYABC_DRA_SRR_187565_20200601_v1	6/1/2020	12/31/5000

Step	Instruction	Picture
17 **(Res)**	Residential Resources The **Contributor Management** screen is populated with registration data for the selected resource. Click **Add Monthly Residential Contributor Group**.	

Contributor Management - 187536 - SOUTHWEST - Auction - Residential

Request Information

Request Number
19351

Resource Id
187536

Organization Name
FWRN LP

Resource Name
MIDDLEPORT-LT.FWRNLP_DRA

Timelines for Request

Proposed Effective Date
October 1, 2019

Business Days Left to Submit a Completed Request
15

Request Submission Deadline
September 11, 2019

Selected Demand Response Resource
187536 - SOUTHWEST - Auction - Residential

Resource Capacity

Capacity Obligation (MW)
30

Total Contributors Capacity (MW)
0.000

Obligation Period
2019 - Summer

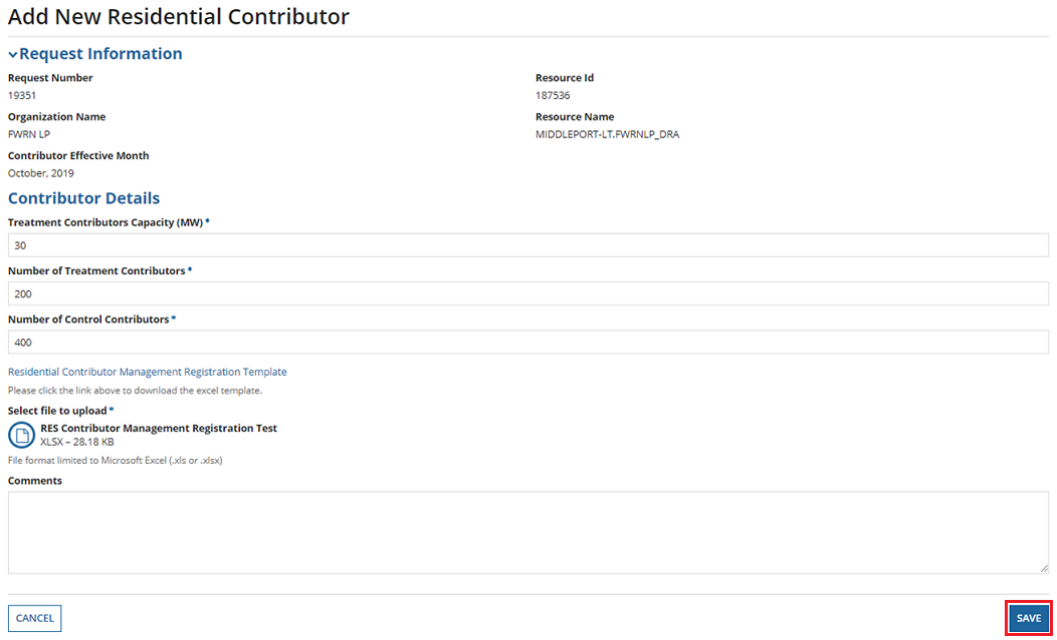
Commitment Capacity (MW)
0

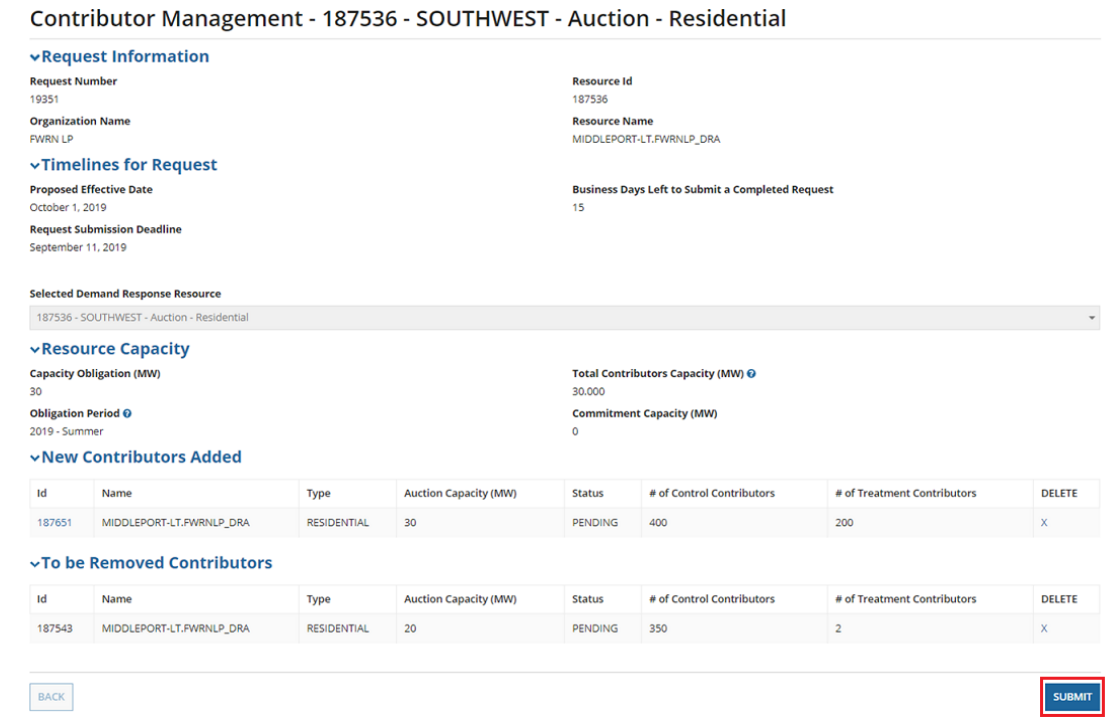
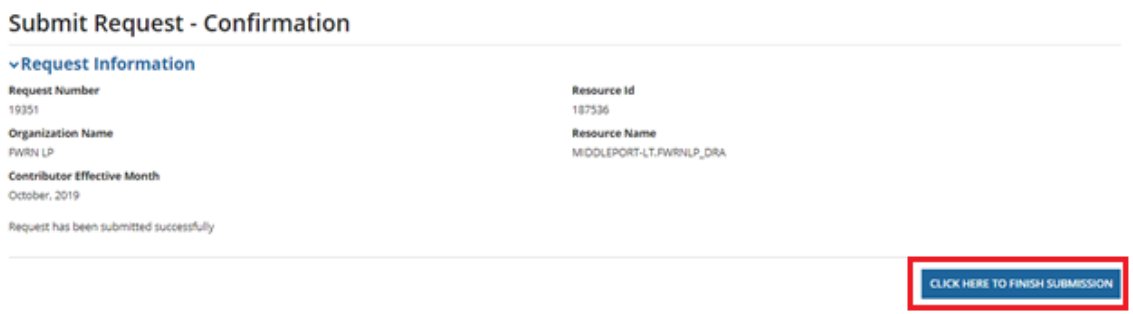
+ ADD MONTHLY RESIDENTIAL CONTRIBUTOR GROUP

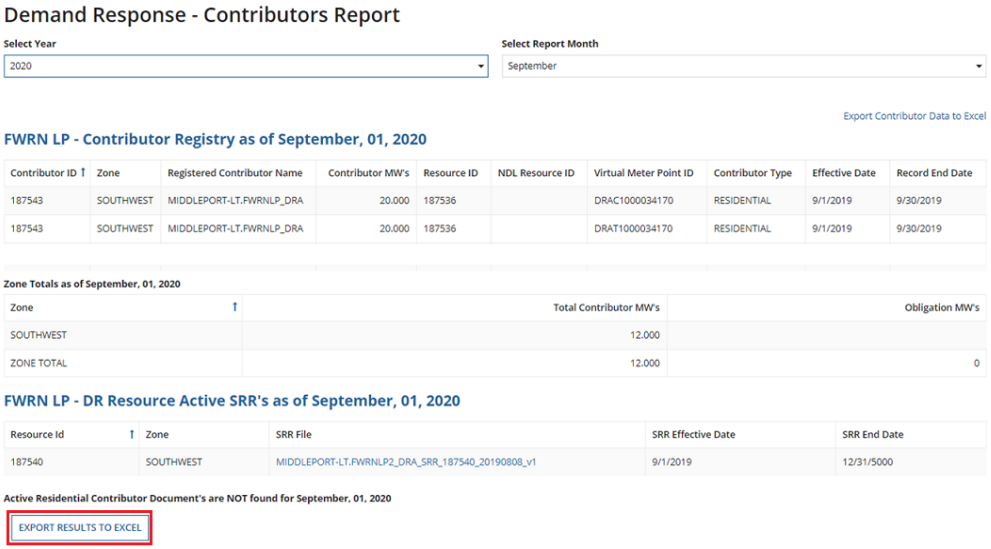
To be Removed Contributors

Id	Name	Type	Auction Capacity (MW)	Status	# of Control Contributors	# of Treatment Contributors	DELETE
187543	MIDDLEPORT-LT.FWRNLP_DRA	RESIDENTIAL	20	PENDING	350	2	X

BACK SUBMIT

Step	Instruction	Picture
18 **(Res)**	Enter **Contributor Details**, and upload the Contributor list file. Click **Save** to create the new Residential Contributor.	 Contributor list format: A: Contributor Address B: LDC Name C: LDC Account# D: Control Group Flag (Y/N)

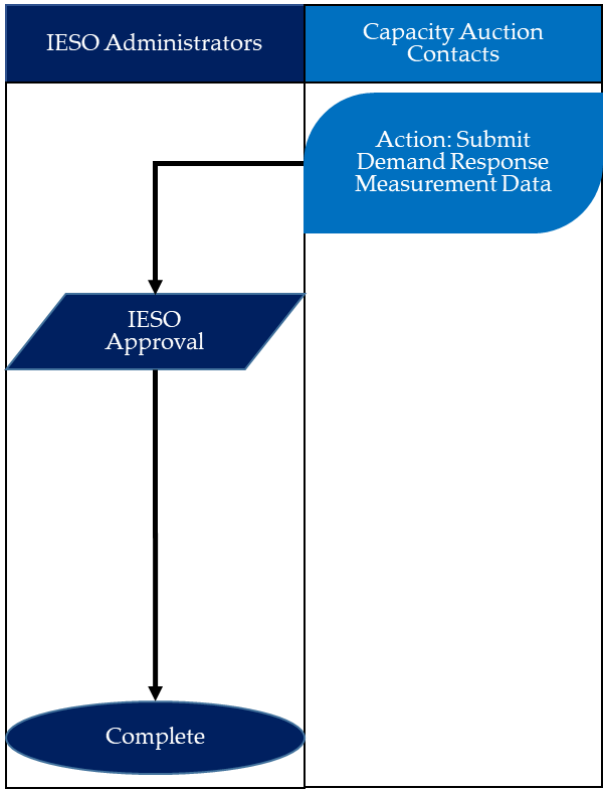
Step	Instruction	Picture
19 **(Res)**	Upon completing the forms, you can view added contributor(s) on the **Contributor Management** screen in the **New Contributors Added** section. Click **Submit**, and complete the submission by selecting **Click Here to Finish Submission**.	 

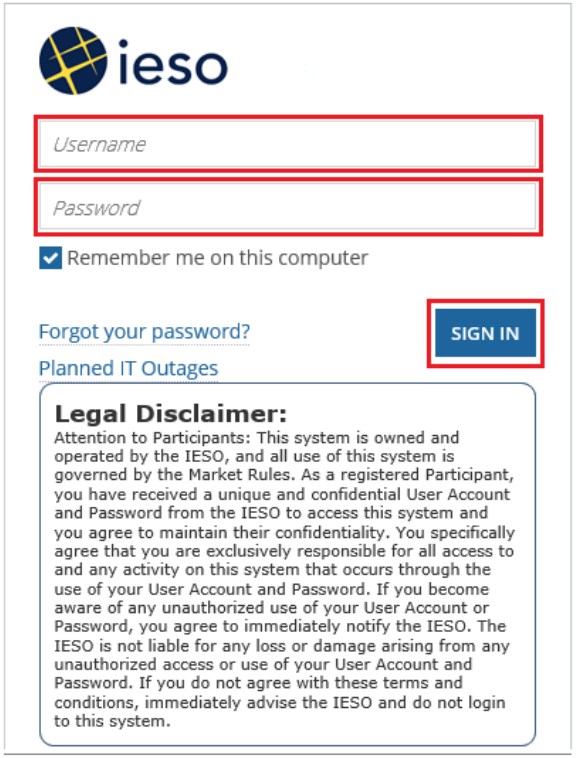
Step	Instruction	Picture
20 **(Res)**	An email notification is sent after the IESO has approved the submission.	
21 **(Res)**	Click **Reports** on the menu bar at the top of the screen, and select **Demand Response – Contributors Report** to view the registered active contributors list for each zone/Demand Response Resource by month. Select **Export Results to Excel** to export the **Contributors Report** to Excel. The **Contributors Report** is now available for download as an Excel workbook.	 

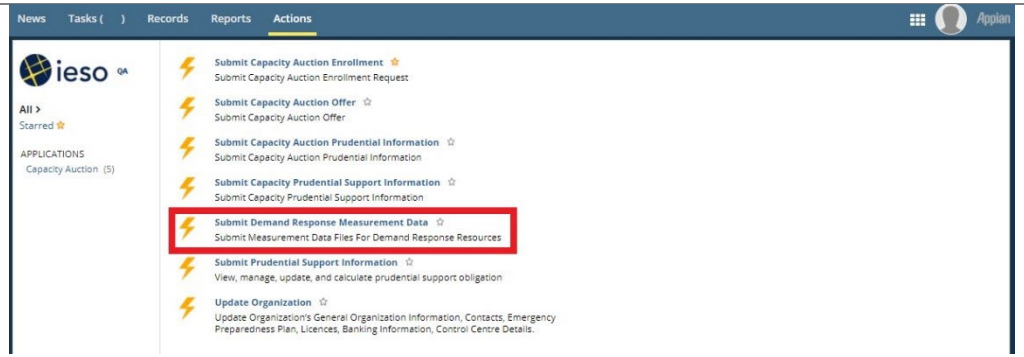
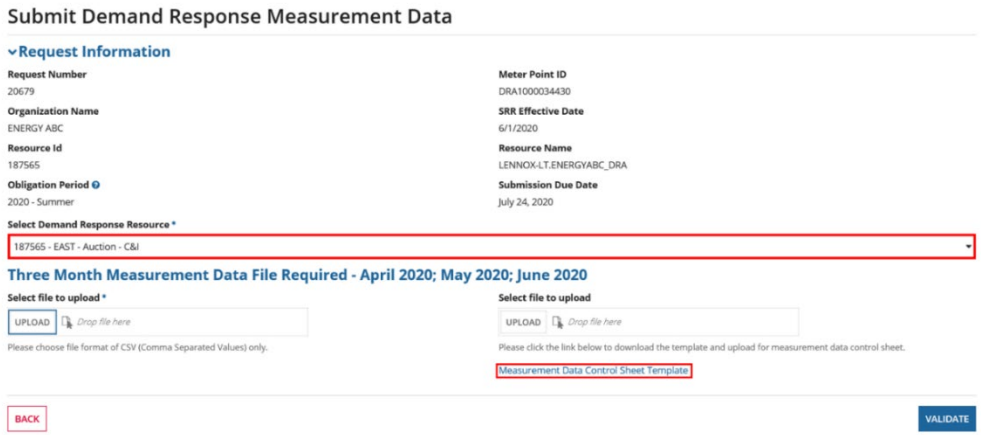
Step	Instruction	Picture
22 **(Res)**	Select the desired Residential Contributor File, and use the pop-up on the screen to download the file.	ENERGY ABC - Residential Contributor Document's as of May, 01, 2017 Resource Id ↑ | Zone | Residential Contributor File | Effective Date | End Date 143357 | WEST | CHATHAM-LT.ENERGY-ABC_DRA_RES_143394_20170501_v1 | 5/1/2017 | 5/31/2017

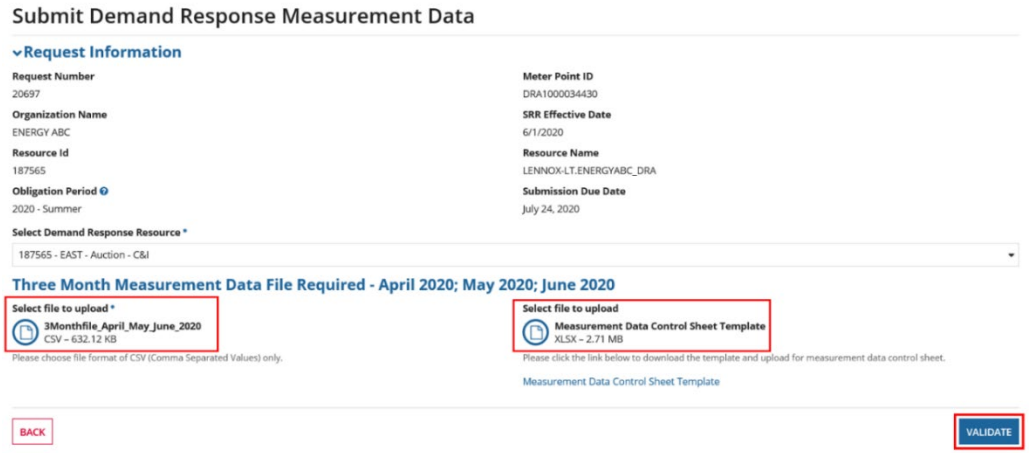
Appendix H: How to Submit Demand Response Measurement Data

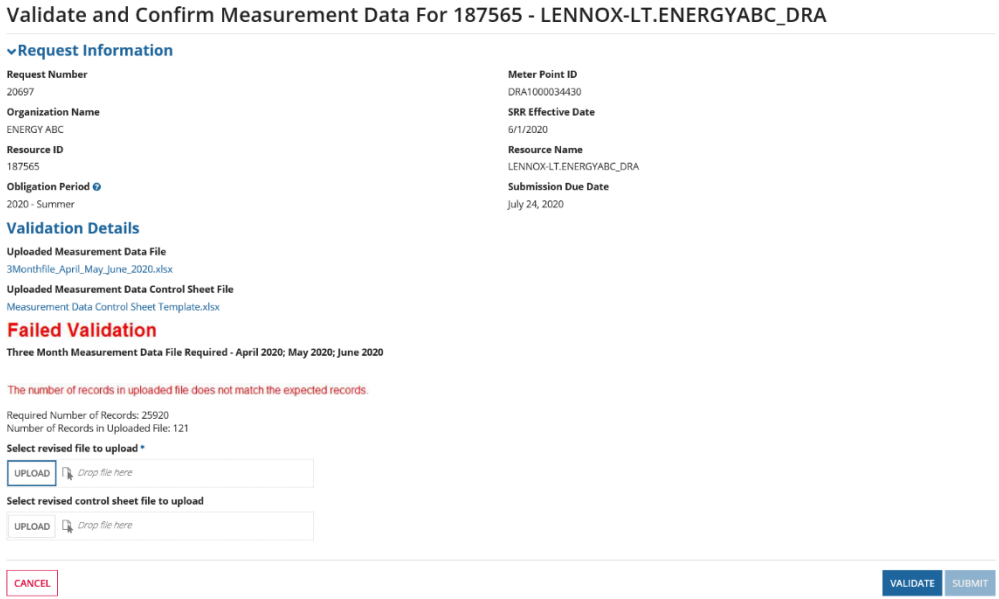
The following table provides step-by-step instructions, with accompanying screen captures, describing how to submit demand response measurement data using the Online IESO web-based registration system.

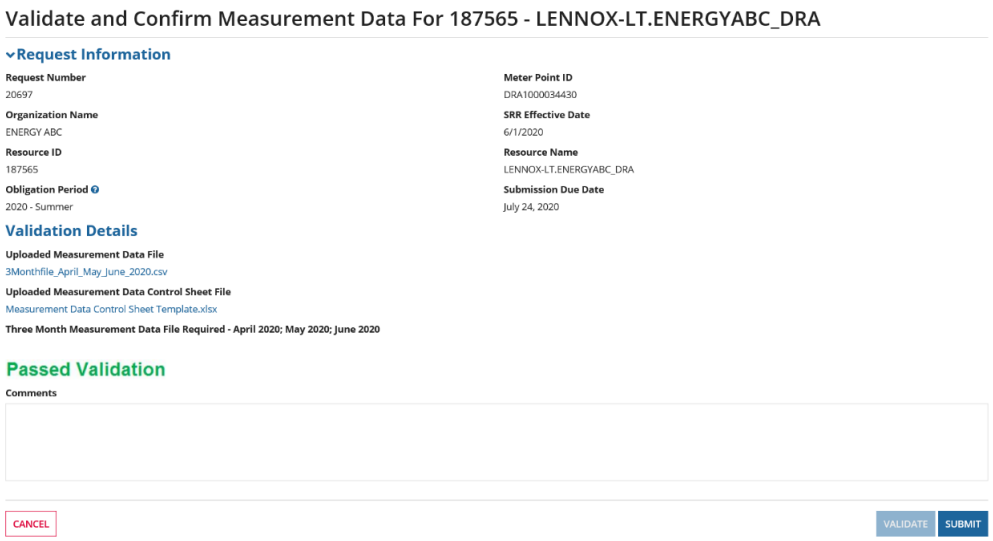


Step	Instruction	Picture
1	Action: Submit Demand Response Measurement Data Log in to the Online IESO web-based registration system using this link. Enter your Username and Password, and click **Sign In**.	

Step	Instruction	Picture
2	Click **Actions** on the menu bar at the top of the screen. Select **Submit Demand Response Measurement Data** from the list of available action items displayed on the subsequent screen. Note: This allows you to submit Virtual Measurement data with a virtual meter point ID associated to a Demand Response Resource.	
3	Select a **Demand Response Resource** from the drop-down list. Design Updates: 1. Measurement Data Control Sheet Template added to the Data Submission Task	

Step	Instruction	Picture
	2. Measurement Data Submissions will be triggered based on Activation 3. Each submission will require a Three Month Measurement Data File	
4	The screen is populated with registration data for the selected resource. Click **Upload** to locate and upload a measurement data file (in CSV format only). Note: The system will indicate the data required in the measurement submission (i.e., months of interest).	

Step	Instruction	Picture
5 **(C&I)**	Example of a Failed Validation Click **Validate**. The screen is populated with results when the validation process is complete. The validation will check: 1. That the file format meets requirements; 2. Three months of data is submitted. Specific errors will be identified if the data does not pass validation. In this example, the number of records did not match what was expected (i.e., uploaded the wrong month).	

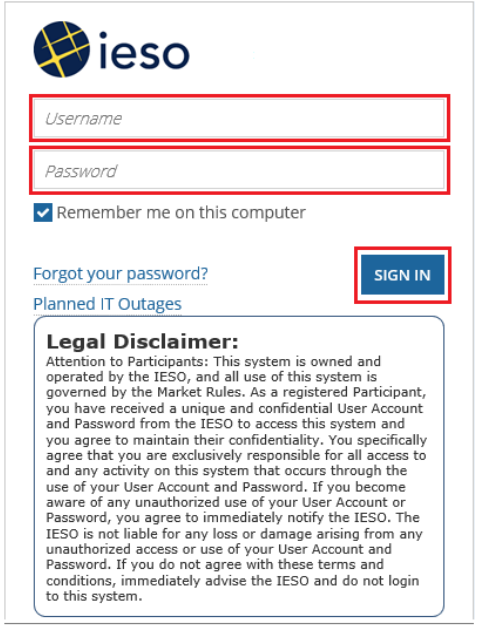
Step	Instruction	Picture
6 **(C&I)**	Example of a Passed Validation Click **Validate**. The screen is populated with the results when the validation process is complete. Important Note: The process of completing the validation for the three-month file can take up to one minute because of the number of records. Do not navigate away from the screen during this time.	 Validate and Confirm Measurement Data For 187565 - LENNOX-LT.ENERGYABC_DRA Request Information Request Number: 20697 Meter Point ID: DRA1000034430 Organization Name: ENERGY ABC SRR Effective Date: 6/1/2020 Resource ID: 187565 Resource Name: LENNOX-LT.ENERGYABC_DRA Obligation Period: 2020 - Summer Submission Due Date: July 24, 2020 Validation Details Uploaded Measurement Data File: 3Monthfile_April_May_June_2020.csv Uploaded Measurement Data Control Sheet File: Measurement Data Control Sheet Template.xlsx Three Month Measurement Data File Required - April 2020; May 2020; June 2020 Passed Validation Comments CANCEL VALIDATE SUBMIT
7 **(C&I)**	A confirmation page is displayed after the file has been successfully validated. Click **Finish** to complete the process.	 Confirmed Measurement Data For 187565 - LENNOX-LT.ENERGYABC_DRA Request Information Request Number: 20697 Meter Point ID: DRA1000034430 Organization Name: ENERGY ABC SRR Effective Date: 6/1/2020 Resource ID: 187565 Resource Name: LENNOX-LT.ENERGYABC_DRA Obligation Period: 2020 - Summer Submission Due Date: July 24, 2020 Your Measurement Data has been submitted successfully. FINISH

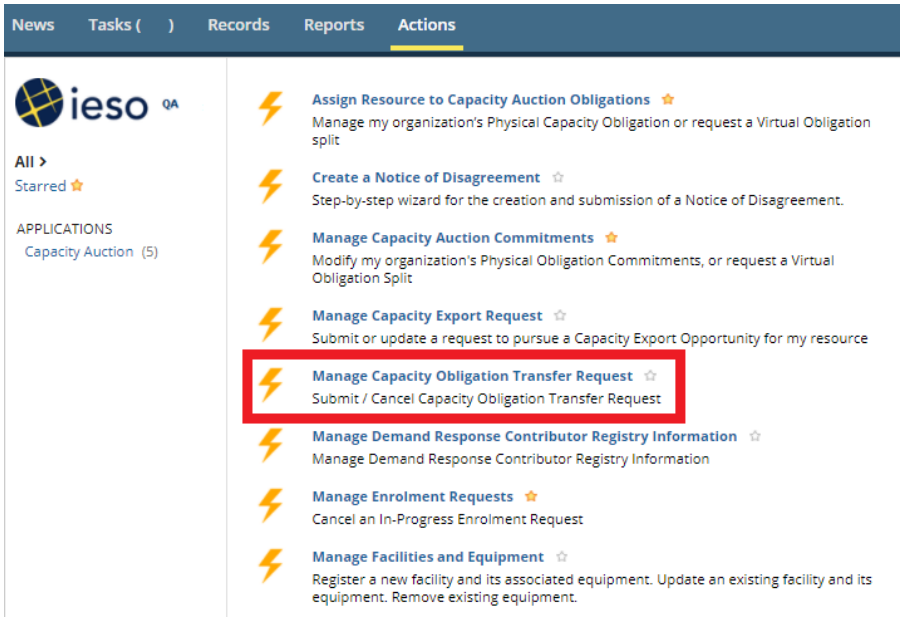
Step	Instruction	Picture
8 **(C&I)**	An email notification is sent after the IESO has implemented and approved the measurement data submission.	Subject: Measurement Data Submission Notification (June 2020) - 187565 - ENERGY ABC **- This is an automated message: Do not reply to this Email Address –** A Measurement Data File has been received, reviewed, approved and uploaded into IESO systems for the following Demand Response resource: Request Number: 20679 Organization Name: ENERGY ABC Resource ID: 187565 Resource Name: LENNOX-LT.ENERGYABC_DRA Effective Submission Month: June 2020 Submitted File Name: 3Monthfile_April_May_June_2020 Submission Date: July 24, 2020 Virtual Meter ID: DRA1000034430 Measurement Data Coverage: April 2020; May 2020; June 2020 This notification indicates IESO has successfully received measurement data submissions. IESO
9 **(C&I)**	To view measurement submissions for each zone/DR resource by month, select **Demand Response - Measurement Data Submission Report** in the **Reports** tab. Note: You can view all the details of your submissions for any previous month.	Demand Response - Measurement Data Submission Report Report Filters: Submission Year: 2020 DRMP Name: ENERGY ABC Effective Submission Month: June *Note: "Obligation Period" refers to each of the two six-month seasonal periods, the same as seasonal commitment period defined in the Demand Response Auction. In the Capacity Auction, the term "Commitment Period" refers to the entire length of time (i.e. 1 year) over which each auction secures capacity. DRMP Name: ENERGY ABC; Zone Name: EAST; Resource ID: 187565; Resource Name: LENNOX-LT.ENERGYABC_DRA; Virtual Meter Point ID: DRA1000034430; SRR Effective Date: 6/1/2020; Measurement File Type: Three Month; Final Status: Submitted; Submission Date: 7/24/2020; Re-Submission Date: ; Obligation Id: 0001; Obligation Period*: Summer 2020; Effective submission date: 6/1/2020 EXPORT RESULTS TO EXCEL

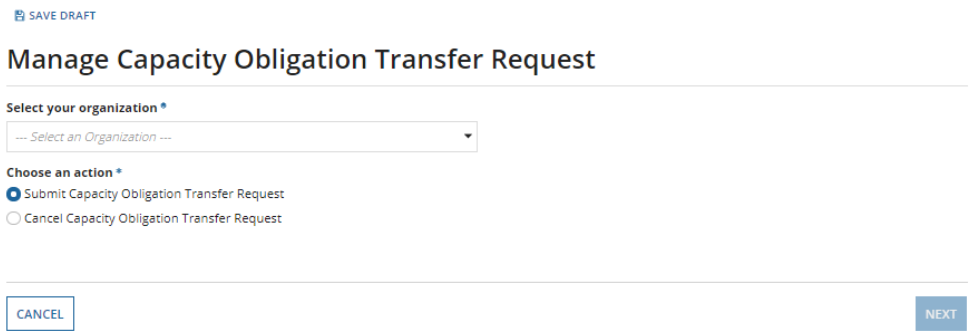
Step	Instruction	Picture
	Select **Export Results to Excel** to export the **Measurement Data Submission Report** to Excel.	

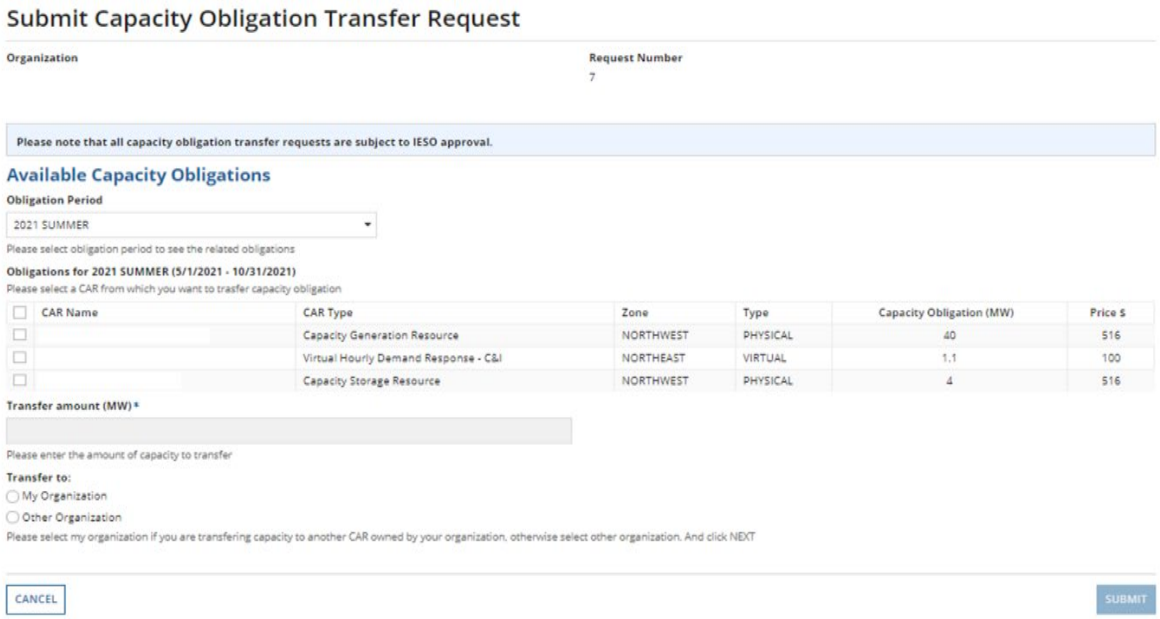
Appendix I: How to Complete a Capacity Obligation Transfer Request

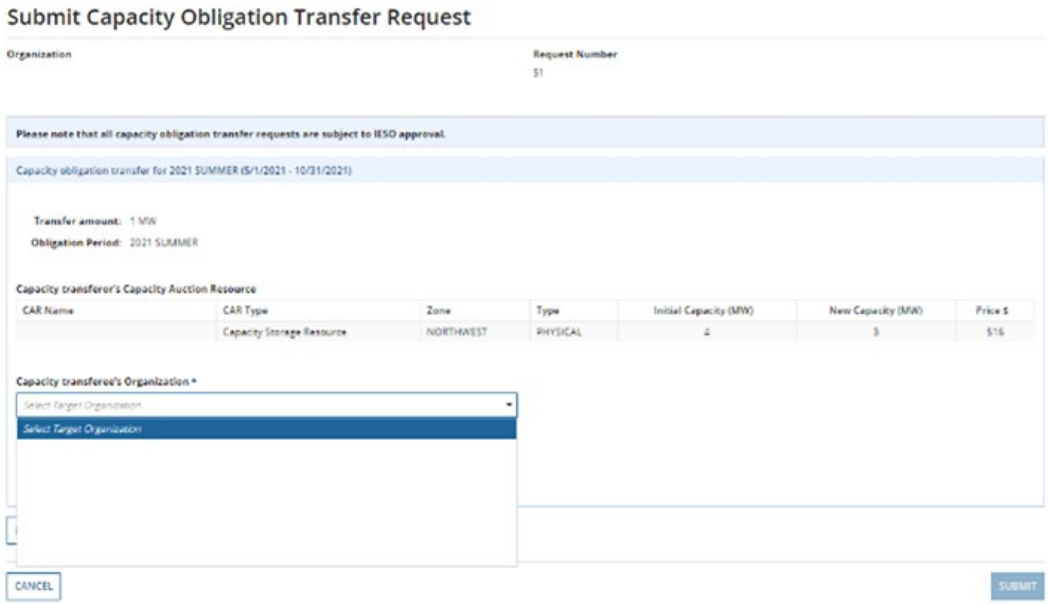
The following chapter provides step-by-step instructions, with accompanying screen captures, describing the process for completing a capacity obligation transfer request using the Online IESO web-based system.

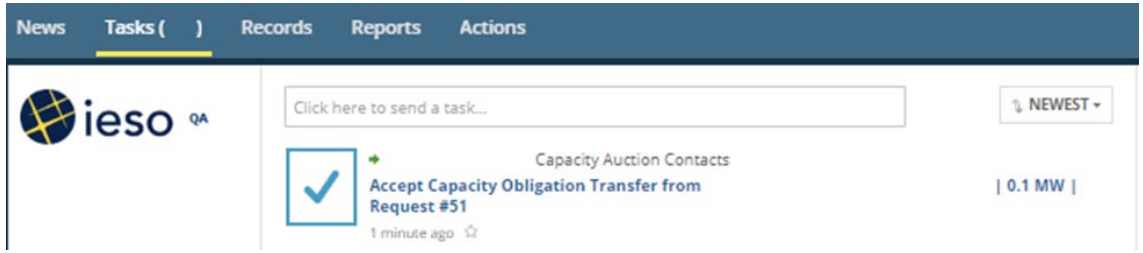
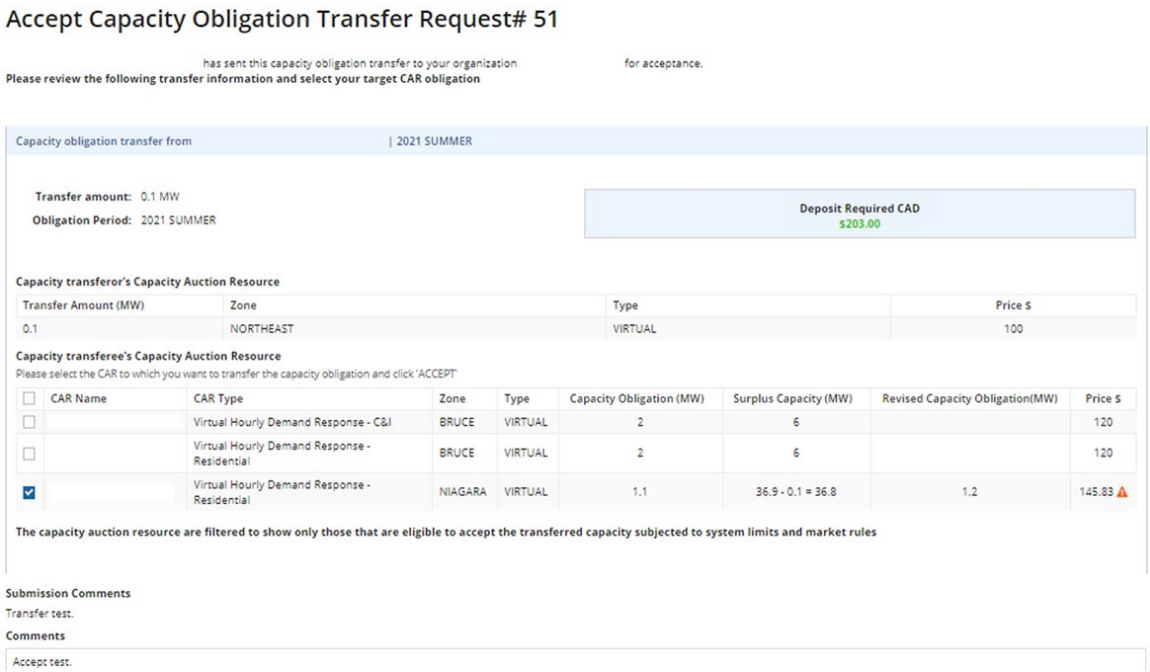
Step	Instruction	Picture
1	Log in to the Online IESO web-based registration system using this link. Enter your Username and Password and click **Sign In**.	

Step	Instruction	Picture
2	Click **Actions** on the menu bar at the top of the page. Select **Manage Capacity Obligation Transfer Request** from the list of available action items displayed on the subsequent screen. **Note**: This action allows you to transfer some or all of an individual capacity obligation to another organization, or to yourself.	

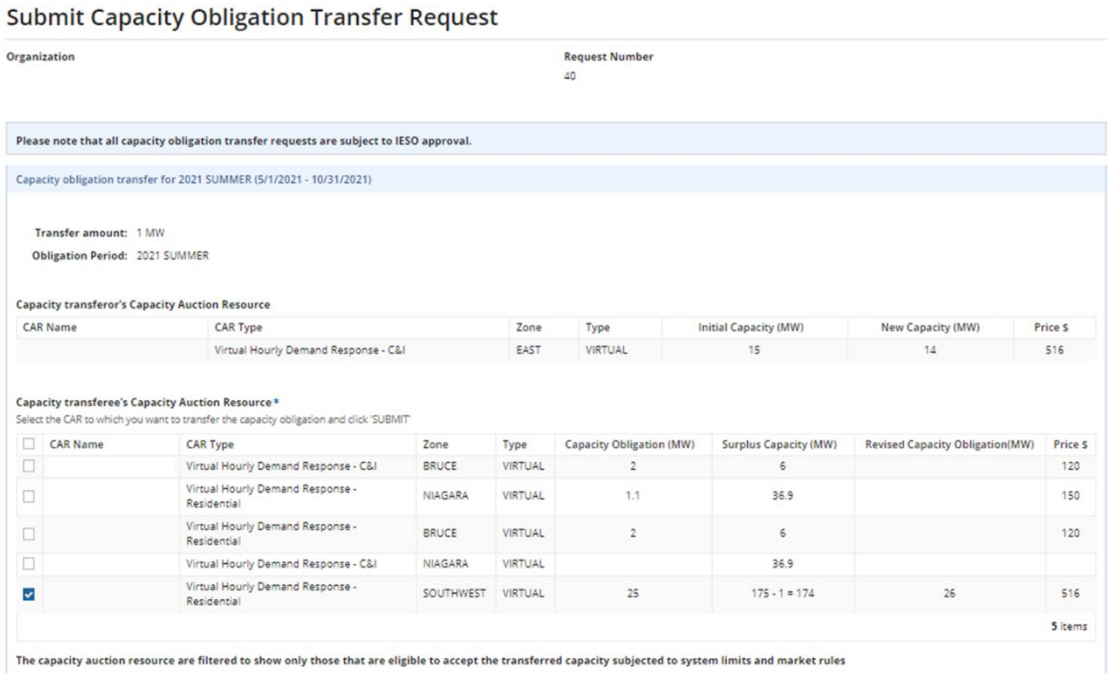
Step	Instruction	Picture
3	Select your organization name from the drop-down list and choose whether you wish to **Submit** or **Cancel** a capacity obligation transfer request. Choose to submit a request and click **Next.** (To cancel a request, skip to Step 9).	

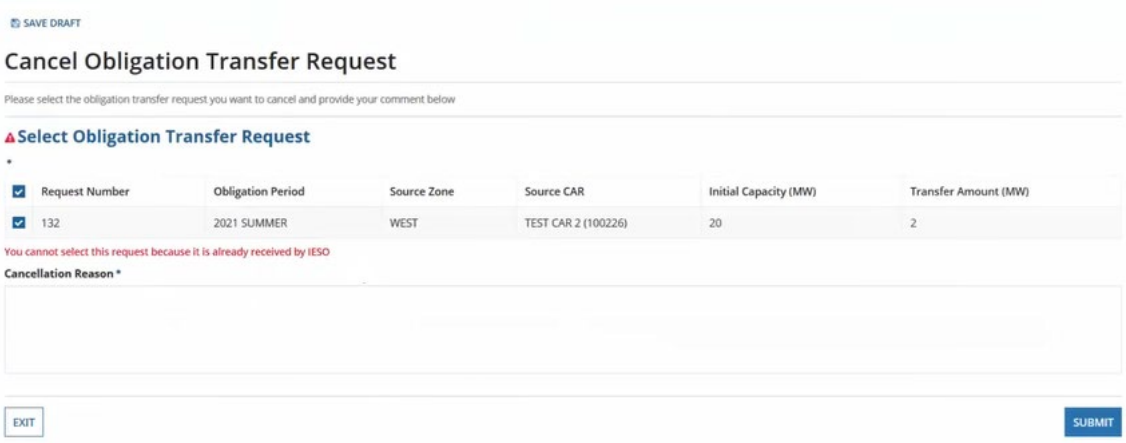
Step	Instruction	Picture
4	On the following screen, you will select the applicable obligation period in which you wish to make the transfer from the drop-down list. **Note**: the transfer can only be made within the same obligation period. Based on the obligation period that is selected, the applicable Capacity Auction Resource (CAR) data relevant to your organization will be displayed on the screen. As part of this request, you will need to identify: - The CAR from which you wish to transfer the obligation from; - The amount of capacity you wish to transfer; - The organization to which you wish to transfer capacity, or if to your own organization, the CAR that will receive the obligation.	 Submit Capacity Obligation Transfer Request Organization Request Number 7 Please note that all capacity obligation transfer requests are subject to IESO approval. Available Capacity Obligations Obligation Period 2021 SUMMER Please select obligation period to see the related obligations Obligations for 2021 SUMMER (5/1/2021 - 10/31/2021) Please select a CAR from which you want to trasfer capacity obligation CAR Name | CAR Type | Zone | Type | Capacity Obligation (MW) | Price $ Capacity Generation Resource | NORTHWEST | PHYSICAL | 40 | 516 Virtual Hourly Demand Response - C&I | NORTHEAST | VIRTUAL | 1.1 | 100 Capacity Storage Resource | NORTHWEST | PHYSICAL | 4 | 516 Transfer amount (MW) * Please enter the amount of capacity to transfer Transfer to: My Organization Other Organization Please select my organization if you are transfering capacity to another CAR owned by your organization, otherwise select other organization. And click NEXT CANCEL SUBMIT

Step	Instruction	Picture
	Each transfer request is submitted for one CAR at a time and can be accepted by only one CAR. Click **Next**.	
5	If the transfer is to another organization, you will need to identify the receiving organization to which the transfer will take place, from the drop-down list. If the transfer is to your own organization, proceed to step 8. **Note:** Online IESO will only display organizations that are eligible to receive the transfer. Click **Submit**, and a task will issued to the capacity auction contact of the receiving organization.	

Step	Instruction	Picture
6	The Capacity Auction Contact of the receiving organization will accept the transfer by working through the issued Task: Accept Capacity Obligation Transfer. As part of accepting the capacity obligation transfer, the receiving organization must identify the CAR that will receive the obligation. Online IESO will limit the receiver to CAR's with the following characteristics: - They must be the same obligation type (i.e. physical vs virtual); - The CAR must have surplus capacity; - The CAR must be in a zone that's not at it's zonal limit (i.e. zonal limits will not be exceeded as a result of the transfer). Once a CAR has been selected, click **Accept**, and the request will go to the IESO for approval.	 

Step	Instruction	Picture
	As part of this approvals process, the IESO will evaluate whether any additional deposit or prudential amount is required and will coordinate this accordingly. If the receiving organization chooses to reject the transfer request, an email will be sent to the transferor to inform them.	
7	If the receiving organization accepts the capacity obligation using a CAR that is not yet registered, or if they are not a capacity market participant (CMP), they must become a CMP, register the resource and use the Assign Resource to Capacity Obligation action in Online IESO. Failure to complete all of these tasks during the forward period may result in non-performance charges or inability to receive an availability payment.	*<See steps for CMP authorization, Register a Resource and Assign Resource to Capacity Obligation found in Appendix D, E and F>*

Step	Instruction	Picture
8	If the transfer is to your own organization, the screen will display your available CAR data for the selected obligation period. The upper portion of the table (Capacity transferor's CAR) displays the source obligation information, while the lower portion of the table (Capacity transferee's CAR) displays the destination obligation information. Choose one transferee CAR to receive the transfer. Once a CAR has been selected, click **Submit**, and the request will go to the IESO for approval. As part of this approvals process, the IESO will evaluate whether any additional deposit or prudential amount is required and will coordinate this accordingly.	 Submit Capacity Obligation Transfer Request Organization Request Number 40 Please note that all capacity obligation transfer requests are subject to IESO approval. Capacity obligation transfer for 2021 SUMMER (5/1/2021 - 10/31/2021) Transfer amount: 1 MW Obligation Period: 2021 SUMMER Capacity transferor's Capacity Auction Resource CAR Name | CAR Type | Zone | Type | Initial Capacity (MW) | New Capacity (MW) | Price $ Virtual Hourly Demand Response - C&I | EAST | VIRTUAL | 15 | 14 | 516 Capacity transferee's Capacity Auction Resource * Select the CAR to which you want to transfer the capacity obligation and click 'SUBMIT' CAR Name | CAR Type | Zone | Type | Capacity Obligation (MW) | Surplus Capacity (MW) | Revised Capacity Obligation(MW) | Price $ Virtual Hourly Demand Response - C&I | BRUCE | VIRTUAL | 2 | 6 | 120 Virtual Hourly Demand Response - Residential | NIAGARA | VIRTUAL | 1.1 | 36.9 | 150 Virtual Hourly Demand Response - Residential | BRUCE | VIRTUAL | 2 | 6 | 120 Virtual Hourly Demand Response - C&I | NIAGARA | VIRTUAL | | 36.9 | Virtual Hourly Demand Response - Residential | SOUTHWEST | VIRTUAL | 25 | 175 - 1 = 174 | 26 | 516 5 items The capacity auction resource are filtered to show only those that are eligible to accept the transferred capacity subjected to system limits and market rules

Step	Instruction	Picture
9	If your submitted transfer is to another organization and you wish to cancel, you may do so up to the point the receiving organization processes their task. Once the task is processed, the option to cancel is not available in Online IESO. To cancel, click **Actions** on the menu bar at the top of the page. Select **Manage Capacity Obligation Transfer Request** from the list of available action items displayed on the subsequent screen. Choose the request you wish to cancel by selecting the check box, enter the cancellation reason in the field that's provided, and click **Submit**. If your transfer is to your own organization, there is no option to cancel it in Online IESO after the request is submitted to the IESO.	

Step	Instruction	Picture
	Note: if you wish to submit a second transfer request from the same capacity obligation, you cannot do so until the first transfer request is approved by the IESO. Approval includes satisfying any revised prudential or deposit requirements.	

Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto, Ontario M5H 1T1

Phone: 905.403.6900
Toll-free: 1.888.448.7777
E-mail: customer.relations@ieso.ca

ieso.ca

@IESO_Tweets
linkedin.com/company/IESO

Connecting Today.
Powering Tomorrow.