# Guide to Submitting New Registration Parameters and Forms in Online IESO

October 2023



# AN IESO MARKETPLACE TRAINING PUBLICATION

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# 1. Introduction

The IESO is implementing a renewed market in May 2025. As part of this implementation, new registration forms and parameters will be introduced and updated in Online IESO. This document provides a summary of these parameters and forms, as well as step-by-step instructions for market participants to follow when providing this information in Online IESO.

#### This document will:

- identify which resource registration parameters are new, updated, or will be retired in the renewed market;
- explain the purpose of each new or updated resource registration parameter or why a parameter is being deleted;
- explain how to submit the new or updated registration parameters in Online IESO;
- explain the concept of a Market Control Entity (MCE);
- identify who needs to submit MCEs; and
- explain how to update MCE information in Online IESO.

# 2. Resource Registration Parameters

#### 2.1 Pseudo-Unit Resources

Currently, combined cycle gas generators participating in the IESO market may elect to submit dispatch data for pseudo-unit (PSU) resources in lieu of the associated physical units. Currently, PSU modelling is only used during the current day-ahead commitment process and physical units are used for the pre-dispatch and real-time timeframes. Under the renewed market, PSU modelling will be used in all three calculation engines and scheduling timeframes. Furthermore, along with new dispatch data, one additional registration parameter is being introduced for PSU units as described below.

i. Parameter: Duct Firing 10-Minute Reserve Capability

Type of Change: New

**Description:** Steam turbines may not have the capability to initiate duct firing to respond to a 10-minute reserve activation within the duct firing operating region. Therefore, the new registration parameter will allow the IESO to schedule PSUs with this capability in the Day-Ahead Market (DAM), Pre-Dispatch (PD) and Real-Time Market (RTM) timeframes. When set to **No**, a PSU will not be scheduled for 10-minute synchronized or 10-minute non-synchronized operating reserve in the duct firing region. A value of **Yes** allows calculation engines to schedule any class of operating reserve in the duct firing region. The table below provides a summary of the new registration parameter that will be used by the IESO for scheduling PSU units.

Registration Parameter Name	Type of Change	Entered By	Mandatory or Optional	Brief Description
Duct Firing 10- Minute Reserve Capability	New	Market Participant	Mandatory	<ul> <li>Determines which class of operating reserve can be scheduled in the duct firing region</li> </ul>

Table 1 | New Registration Parameter for PSU Resources

The steps, which describe how to update this pseudo-unit parameter in Online IESO are listed in Appendix A of this document.

# 2.2 Hydroelectric Resources

In today's market there is a limited ability to model hydroelectric generation resource's operational constraints. To address this inefficiency, the IESO is introducing new dispatch data parameters along with five new registration parameters. One existing registration parameter is being updated and two are being deleted. A summary of the new and impacted parameters is provided below.

i. Parameters: Cascade Group and Forebay

Type of Change: New

**Description:** Hydro resources on a cascade river system will be registered by the IESO with the new *Cascade Group* and *Forebay* parameters in order to account for the constraints related to their interdependencies. Each resource registered on a *Forebay* must share its maximum daily energy limit and its minimum daily energy limit with all other resources registered on that *Forebay*. In the Day-Ahead Market and the Pre-Dispatch scheduling process, all resources registered on a *Forebay* are evaluated such that the sum of their hourly schedules respect market participant submissions of the maximum daily energy limit and the minimum daily energy limit dispatch data parameters.

ii. Parameter: Time LagType of Change: New

**Description:** Currently, there are specific intertemporal dependencies related to cascade hydro resources not easily reflected through offers submitted by market participants. To address this gap, the new *Time Lag* registration parameter is being introduced as a registration and dispatch data parameter. The value specifies the time for water discharged from an upstream resource to reach a downstream resource, which will be used by the IESO for more efficient scheduling of cascade hydro resources. The new registration parameter will be used by the calculation engine to validate that the associated dispatch data submission is less than the registered value.

iii. Parameter: Hourly Must Run Flag

Type of Change: New

**Description**: There are regulatory, environmental, and water management issues requiring hydro resources to run under certain conditions. The new *Hourly Must Run Flag* will be used by the calculation engine to determine eligibility for submission of the associated new "Hourly Must Run" dispatch data. If the *Hourly Must Run Flag* has a value of **Yes**, then the market participant will be permitted to submit the Hourly Must Run dispatch data parameter in the scheduling processes and the IESO would schedule hydro resource to no less than its hourly must run value. A value of **No** will not permit the market participant to submit the hourly must run dispatch data parameter in the calculation engine.

iv. Parameter: Start Indication Value

Type of Change: New

**Description**: A new *Start Indication Value* registration parameter (for Hydro Resources) will be used to identify the minimum quantity of energy that must be generated by the unit in order for it to be considered a material start. Additionally, hydro resources can be aggregated to represent more than one physical unit, but each unit may have a different *Start Indication Value*. The *Start Indication Value* in conjunction with the *Maximum Number of Starts Per Day* dispatch data will be used to limit the number of times a hydro resource can be scheduled, on an hourly basis.

v. Parameter: Forbidden Regions

**Type of Change:** Updated

**Description**: Forbidden Regions is an existing registration parameter that identifies operating ranges where resources are unable to operate safely. The number of forbidden regions that resources can provide is being expanded from three to five. This parameter will continue to be used by the calculation engine to validate dispatch data submissions.

vi. Parameter: Daily Cascading Hydroelectric Dependency

**Type of Change:** Retired

**Description**: This parameter is being replaced by the new *Time Lag* parameter.

vii. Parameter: Eligible Energy Limited Resource (EELR) Flag

**Type of Change:** Retired

**Description**: This parameter is currently used as a qualifier for daily energy limit submissions. This parameter will be retired as the new DAM will not have a re-submission window.

Registration Parameter Name	Type of Change	Entered By	Mandatory or Optional	Brief Description
Cascade Group & Forebay	New	IESO	Optional	<ul> <li>Registered by the IESO to establish the relationship between upstream and downstream resources</li> <li>All resources registered on a Forebay must have the same registered market participant</li> <li>All resources registered on each Forebay within a Cascade Group must have the same owner</li> </ul>

Registration Parameter Name	Type of Change	Entered By	Mandatory or Optional	Brief Description
Time Lag	New	Market Participant	Optional	<ul> <li>Time required for water discharged from an upstream forebay to reach the adjacent downstream forebay</li> <li>Market participants are required to submit documentation that demonstrates cascading dependency</li> <li>Used by the calculation engine to ensure that dispatch data submissions for time lag are less than the registered value</li> </ul>
Hourly Must Run Flag	New	Market Participant	Optional	<ul> <li>Indicator for a resource that has hourly must run conditions</li> <li>Market participant must submit supporting documentation demonstrating hourly must run conditions</li> <li>Used by the calculation engine to determine eligibility for submission of hourly must run as dispatch data</li> </ul>
Start Indication Value	New	Market Participant	Optional	<ul> <li>Minimum quantity of energy to which a generation unit must be scheduled</li> <li>Used by the day-ahead and pre- dispatch calculation engines to determine the number of available starts remaining for the resource</li> </ul>
Number of Forbidden Regions	Updated	Market Participant	Optional	<ul> <li>Will be expanded from three to five pre-defined operating ranges where resources are unable to operate safely</li> <li>Will be used by THE CALCULATION ENGINE to validate dispatch data submissions</li> </ul>
Daily Cascading Hydroelectric Dependency	Retired	N/A	N/A	Replaced by the new <i>time lag</i> registration parameter
Eligible Energy Limited Resource (EELR) Flag	Retired	N/A	N/A	<ul> <li>New Day-Ahead Market will not have a re-submission window</li> <li>Currently used as qualifier for daily energy limit submission</li> </ul>

Table 2 | New, Updated and Retired Registration Parameters for Hydroelectric Resources

The steps, which describe how to update these hydroelectric parameters in Online IESO are listed in Appendix B of this document.

# 2.3 Non-Quick Start Resources

There are a number of changes to Non-Quick Start (NQS) modelling as a result of the renewed market.

i. Parameter: GOG Eligibility Flag

Type of Change: Updated

**Description**: This parameter will replace the existing *Production Cost Guarantee (PCG) Eligibility Flag*, and will indicate whether or not a resource is eligible for a generator offer guarantee. The *GOG Eligibility Flag* is automatically set by the IESO. The resource is eligible when the following criteria are met:

Quick Start = No

AND Minimum Loading Point > 0 MW

AND Minimum Generator Block Run Time > 1 hour

AND Estimated Time to Dispatch > 60 min

**ii. Parameters**: *Minimum Loading Point (MLP)* and *Minimum Generator Block Run Time (MGBRT)* 

Type of Change: Updated

**Description**: Both the MLP and MGBRT are currently used by the calculation engine to validate dispatch data. In the renewed market, the calculation engine will no longer use these parameters for validation. However, these parameters are retained to establish GOG eligibility.

iii. Parameters: Speed No-Load and Start-Up Offer Flag

**Type of Change:** New

**Description**: New parameters, which will replace the existing three-part offer flag. These parameters indicate that the market participant is intending to submit speed no-load and start-up offers respectively.

iv. Parameters: Day Ahead-Production Cost Guarantee Eligibility Flag, Real Time-Generator Cost Guarantee Eligibility Flag, and Production Cost Guarantee Eligibility Flag

Type of Change: Retired

**Description**: The GOG Eligibility Flag will replace the above existing parameters.

Registration Parameter Name	Type of Change	Entered By	Mandatory or Optional	Brief Description
GOG Eligibility Flag	New	IESO	Optional	New parameter that will replace the existing PCG Eligibility Flag

Registration Parameter Name	Type of Change	Entered By	Mandatory or Optional	Brief Description
Minimum Loading Point (MLP)	Updated	Market Participant	Mandatory	<ul> <li>No longer used by the calculation engine to validate dispatch data submissions</li> <li>Will be used to establish GOG eligibility</li> </ul>
Minimum Generator Block Run Time (MGBRT)	Updated	Market Participant	Optional	<ul> <li>No longer used by the calculation engine to validate dispatch data submissions</li> <li>Will be used to establish GOG eligibility</li> </ul>
Speed No-Load Flag	New	Market Participant	Mandatory	Indicates the market participant's intent to submit speed no-load offers
Start-Up Offers Flag	New	Market Participant	Mandatory	Indicates the market participant's intent to submit start-up offers
DA-PCG Eligibility Flag	Retired	N/A	N/A	Day-Ahead Production     Cost Guarantee program     will be retired
RT-GCG Eligibility Flag	Retired	N/A	N/A	Real-Time Generator     Cost Guarantee program     will be retired
PCG Eligibility Flag	Retired	N/A	N/A	Parameter will be replaced by the Generator Offer Guarantee Eligibility Flag

Table 3 | New, Updated and Retired Registration Parameters for NQS Resources

# 2.4 Price Responsive Loads

Non-dispatchable loads may participate in the renewed market as a Price Responsive Load (PRL). To support this new resource type, the existing bid/offer type parameter will be updated to allow PRLs to submit bids in the Day-Ahead Market. Furthermore, a new parameter is being added to validate bids from PRLs that also act as an Hourly Demand Response (HDR) participant.

i. Parameter: Maximum Load – Active Power

Type of Change: New

**Description**: This new parameter is the maximum energy withdrawal capacity of the resource, which is calculated automatically by the IESO as the sum of "Total Peak Load - Active power" from all associated load equipment. It will be used by the calculation engine to validate energy bids. If a PRL is also an HDR participant, the parameter will be used to reject energy bids that result in a total HDR and energy bid amount greater than the registered value. The validation will prevent a PRL from submitting a bid quantity that is greater than its physical consumption ability.

ii. Parameters: Bid/Offer Type

Type of Change: Updated

**Description**: To support the addition of the new PRL resource type, a new "Day Ahead Price Responsive" option will be added to the existing list of options (Non-Dispatchable and Dispatchable).

Registration Parameter Name	Type of Change	Entered By	Mandatory or Optional	Brief Description
Maximum Load – Active Power	New	IESO	Mandatory	<ul> <li>Maximum withdrawal capacity of a price responsive load.</li> <li>Calculated as the sum of "Total Peak Load - Active power" from all associated load equipment</li> <li>To be used by the calculation engine to prevent PRLs that also participate as physical HDR resources from implicitly acting like virtual traders</li> </ul>
Bid/Offer Type	Updated	Market Participant	Mandatory	Values will be updated to include "Day-Ahead Price Responsive"

Table 3 | New and Updated Registration Parameters for PRLs

The steps that describe how to identify a resource as a price responsive load in Online IESO are listed in Appendix C of this document.

# 3. Market Control Entity

# 3.1 What are Market Control Entities (MCEs)?

MCEs are persons and/or entities that have the ability to control or influence, directly or indirectly, the participation of a market participant (MP) in the Day-Ahead Market and Real-Time Market. An MCE can be a person or an entity already registered with the IESO or external to the IESO.

There are two types of MCEs that are required to be disclosed to the IESO by MPs as described below.

# **Market Control Entity**

*Market Control Entity* is an entity that is associated with an MP but may not necessarily have total control of its market operations. This information is used to assist the IESO to conduct general market monitoring activities. MPs are **required** to disclose **all** persons or entities that:

- own voting securities of the MP,
- are able to appoint or elect directors of the MP,
- are a partner in or of the MP, have beneficial interest in the MP,
- are an affiliate of the MP, receive profits of the MP,
- has the right or ability to determine a resource's bids and offers of the MP, or
- the ability to follow the dispatch instructions given to a resource of the MP.

For more details, refer to Market Rules Chapter 7, section 22.9.

A *Market Control Entity* is required\_to be identified by the MP for each of its resources that is a generation resource, dispatchable load, PRL, electricity storage resource, energy trader, or a virtual trader.

#### Market Control Entity for Physical Withholding

The MP is required to designate one of the MCEs disclosed above as the *Market Control Entity for Physical Withholding*. The Market Entity for Physical Withholding is a single entity that has control of a market participant that owns dispatchable resources. Physical Withholding is when the MP is submitting energy offers or operating reserve offers that are significantly less than their reference quantities. When MPs hold back available supply, it may result in higher prices in the market. All MPs are required to designate one entity as the *Market Control Entity for Physical Withholding* for each of their resources. The MP is required to select the MCE for Physical Withholding using the criteria as set out in Sections 22.9.4 - 22.9.8 of Chapter 7 of the Market Rules.

Refer to Appendix D of this document for instructions on how to submit MCE information in Online IESO.

### 3.2 Who has to disclose MCE information to the IESO?

The following Market Participant types are required to submit MCE information to the IESO:

- 1. Generators which includes:
  - Dispatchable Generators
  - Non-Dispatchable Generators
- 2. Wholesale Consumers which includes:
  - Dispatchable Loads
  - Price-Responsive Loads (PRLs)
- 3. Electricity Storage Resources which includes:
  - Dispatchable generation resource and dispatchable load resource
  - Self-scheduling generation resource
  - Non-Dispatchable generation resource
- 4. Energy Traders
- 5. Virtual Traders

### 3.3 Best Practices

MPs are required to type out the Market Control Entity details such as the Legal Name, mailing address, postal code, and mailing country. When MPs type out the Legal Name of their Market Control Entity, it is important for MPs to submit accurate MCE information and to not use abbreviations. The IESO will review MCE submissions to ensure accuracy before approving them. If the IESO rejects the MCE submission, the IESO will send a comment through Online IESO to explain the reason for rejection, and the MCE task (under the Tasks tab) will be sent to the Applicant Representative to revise and resubmit.

#### 3.4 Maintenance of MCE Information

Any changes to MCE information should be updated in Online IESO as soon as possible. If the MP wishes to transfer the registration of a facility to other MPs as a result of their intent to sell, lease, assign, or transfer control of the facility, the market control entity and/or the market control entity for physical withholding needs to be updated in Online IESO. It is important for MPs to have updated MCE information in Online IESO as the IESO conducts maintenance procedures from time to time to ensure that all facilities continue to meet the minimum requirements as per Market Manual 7.3. The maintenance procedures also ensure any changes or additions to facilities and their associated resources participating in the IESO-administered market do not negatively impact the security and reliability of the IESO-controlled grid.

# **Further Reading**

### Market Rules under the MRP Webpage:

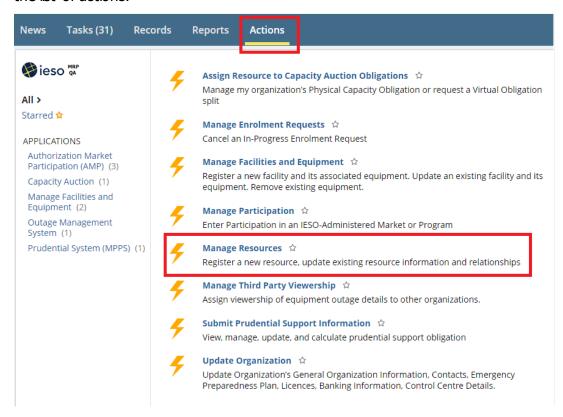
• Market Rules Chapter 7: System Operations and Physical Markets

### Market Manuals under the MRP Webpage:

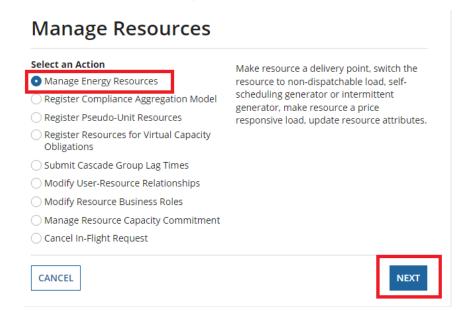
- Market Manual 1.5: Market Registration Procedures
- Market Manual 4.1: Submitting Dispatch Data in the Physical Markets
- Market Manual 7.3: Outage Management
- Market Manual 14.1: Market Power Mitigation Procedures

# Appendix A: Updating Pseudo-Unit Parameters in Online IESO

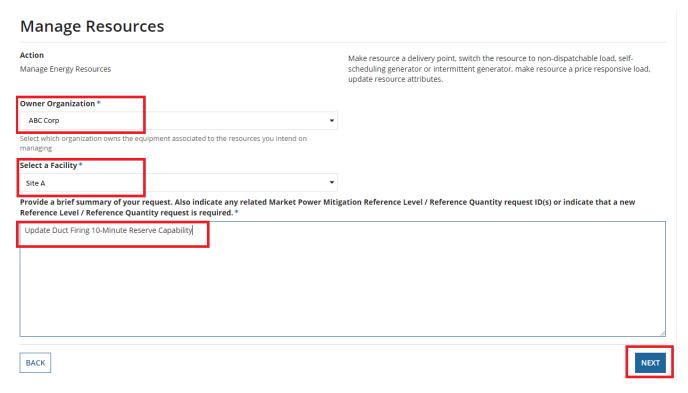
1. Log in to <u>Online IESO</u> and select **Actions** on top of screen. Then select **Manage Resources** from the list of actions.



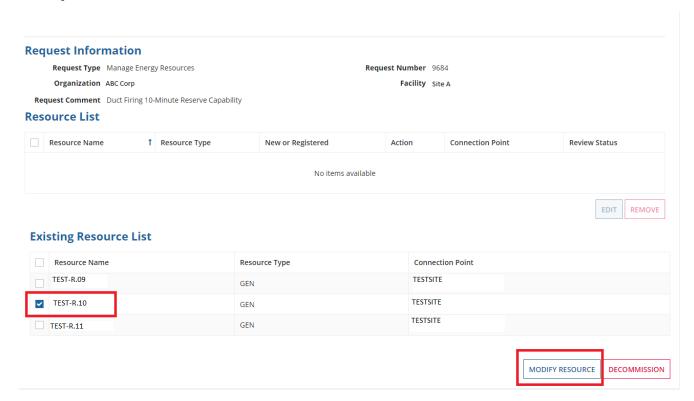
2. Select Manage Energy Resources and click on Next.



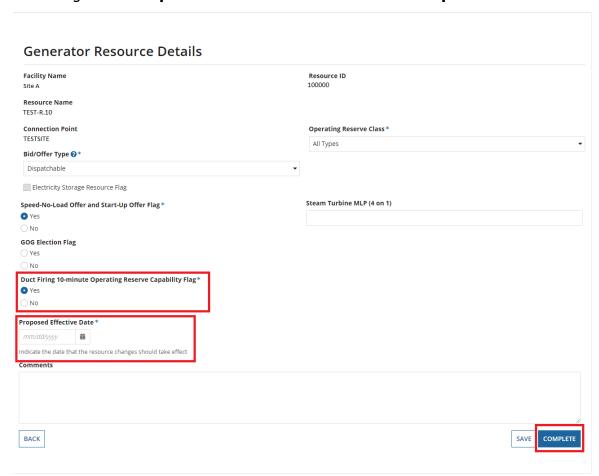
3. Select the **Owner Organization** and **Facility**. Provide a brief description in the text box provided and click on **Next**.



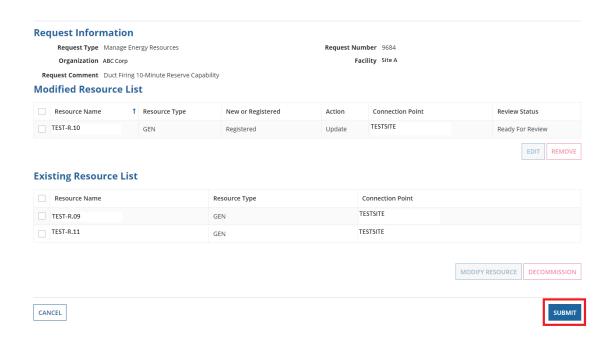
4. Select the appropriate steam turbine resource listed from **Existing Resource List** and click on **Modify Resource**.



5. From the **Generator Resource Details** page, scroll down and select either **Yes or No** under the **Duct Firing 10-minute Operating Reserve Capacity Flag** option. Indicate an effective date for this change in the **Proposed Effective Date** field and click **Complete**.



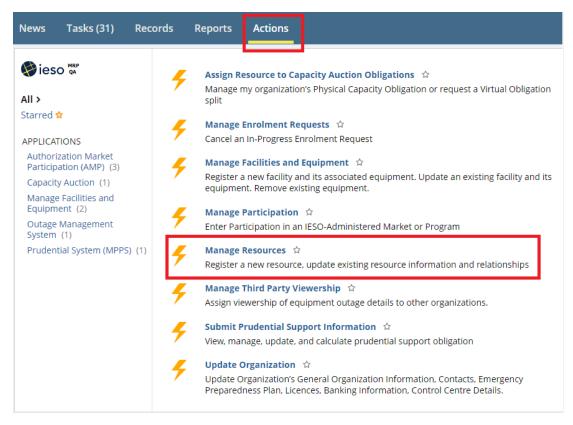
6. The modified resource will appear under the **Modified Resource List**. Click on **Submit** to complete the resource update request. The IESO will review and approve the changes.



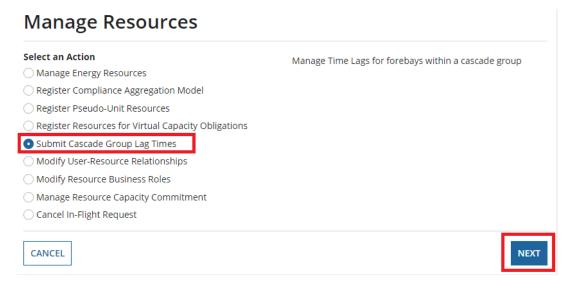
# Appendix B: Updating Hydroelectric Parameters in Online IESO

#### Time Lag

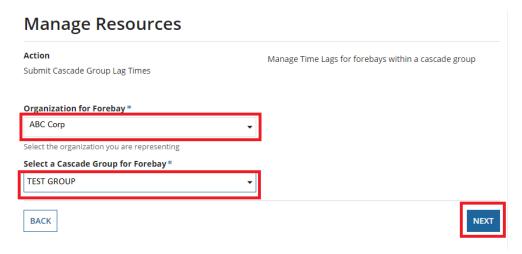
1. Log in to Online IESO and select **Actions** on top of screen. Then select **Manage Resources** from the list of actions.



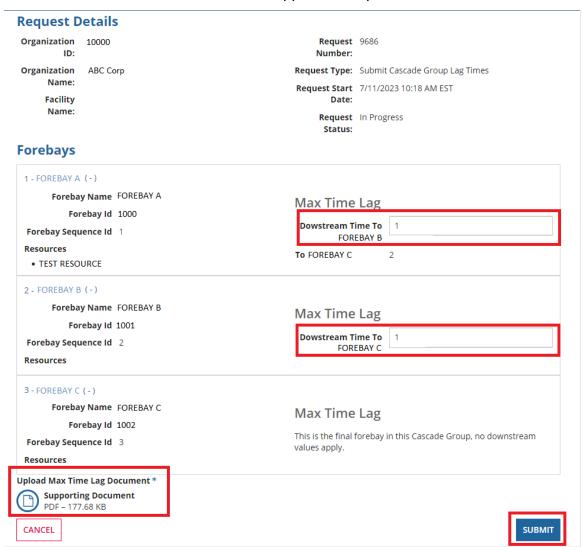
2. Select **Submit Cascade Group Lag Times** and click on **Next**.



3. Select the **Organization** and **Cascade Group** and click on **Next**.

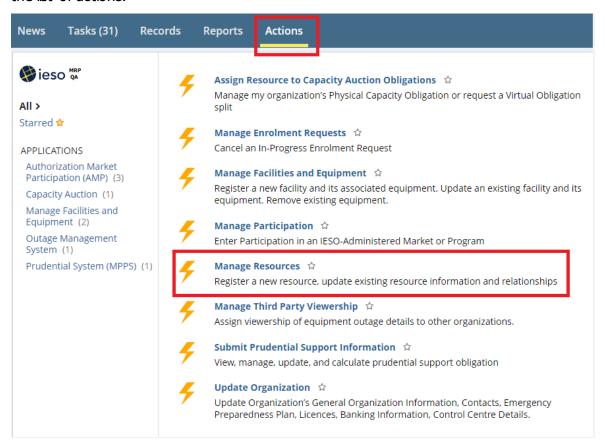


4. Enter the **Max Time Lag** value for each Forebay that is upstream of the final Forebay. **Max Time Lag** values should be greater than or equal to 0 and less than or equal to 24. Upload the mandatory supporting documentation demonstrating the "Time Lag" conditions, then click **Submit** to complete the submission. The IESO will review and approve the update.

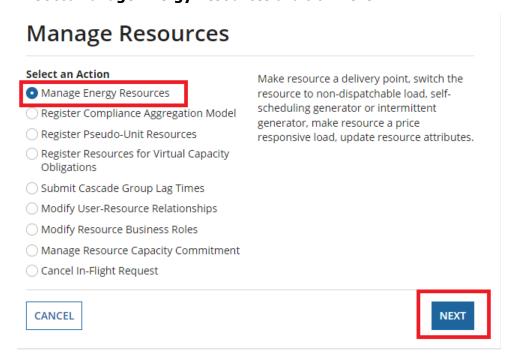


#### Hourly Must Run Flag, Start Indication Value, and Forbidden Regions

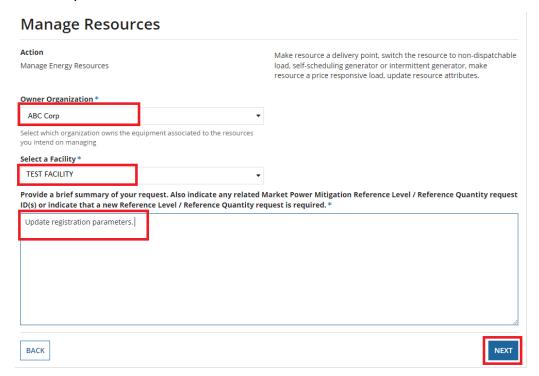
1. Log in to <u>Online IESO</u> and select **Actions** on top of screen. Then select **Manage Resources** from the list of actions.



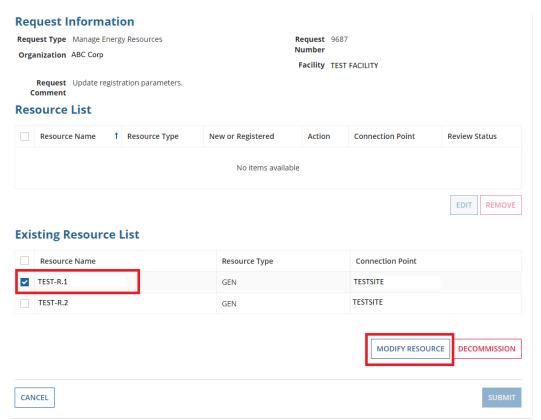
2. Select Manage Energy Resources and click Next.



3. Select the **Owner Organization** and **Facility**. Provide a brief description of the request in the text box provided and click on **Next**.



4. Select the resource name listed under the **Existing Resource List**, and click on **Modify Resource**.



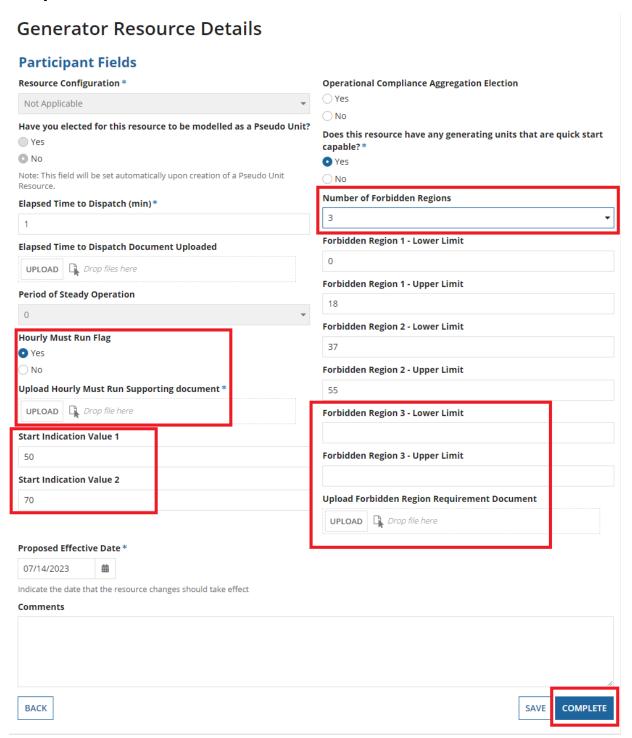
5. From the Generator Resource Details page, scroll down to the Participant Fields.

Under this section, select **Yes** or **No** for the **Hourly Must Run Flag**. If **Yes** is selected, attach supporting documentation to the request.

If applicable, enter up to eight **Start Indication Values**.

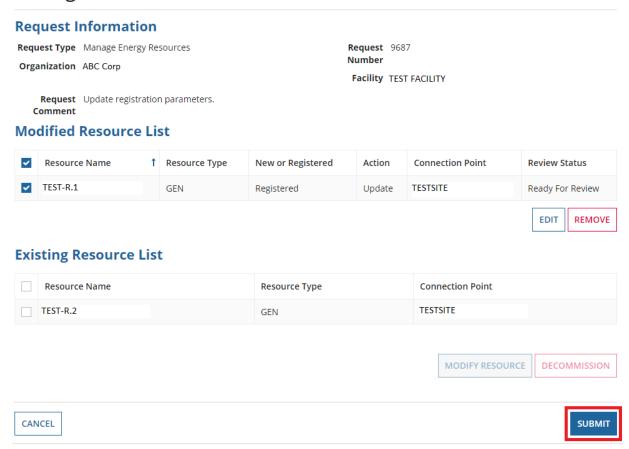
You may also increase the number of **Forbidden Regions** to a maximum of 5. For each new region, enter the lower and upper limits, and upload documentation to support this change.

Indicate an **Effective Date** for the changes in the **Proposed Effective Date** field and click on **Complete**.



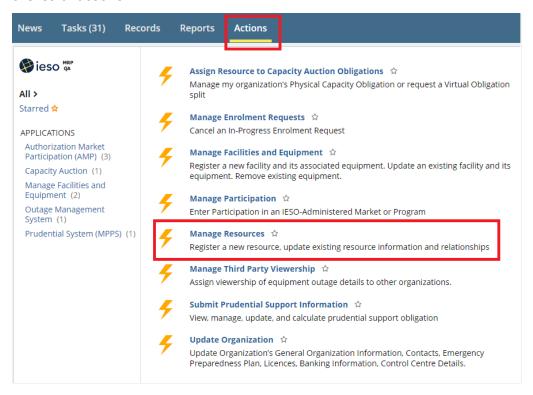
6. The modified resource will appear under the **Modified Resource List**. Click on **Submit** to complete the resource update request. The IESO will review and approve the changes.

# **Manage Resources**



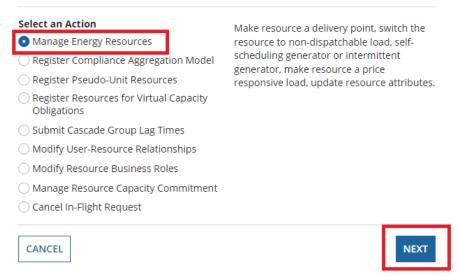
# Appendix C: Updating a Load Resource to a Price Responsive Load in Online IESO

1. Log in to <u>Online IESO</u> and select **Actions** on top of screen. Then select **Manage Resources** from the list of actions.

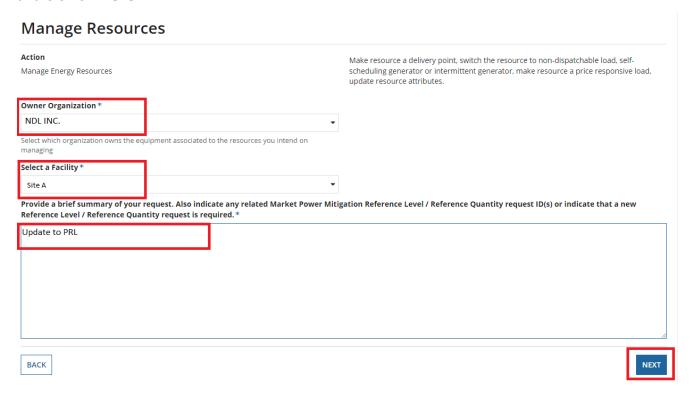


2. Select Manage Energy Resources and click on Next.

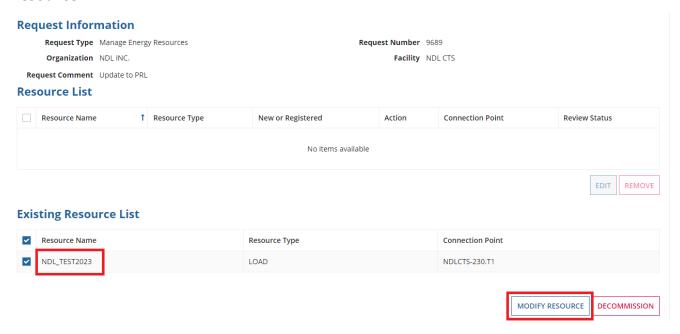
# Manage Resources



3. Select the **Owner Organization** and **Facility**. Provide a brief description in the text box provided and click on **Next**.

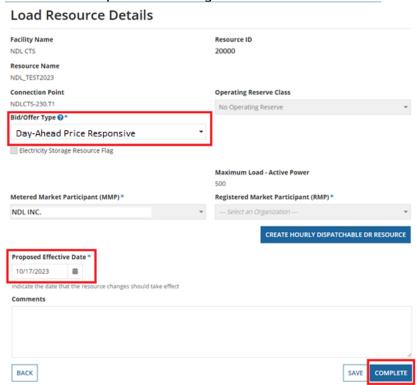


4. Select the appropriate load resource listed from **Existing Resource List** and click on **Modify Resource**.

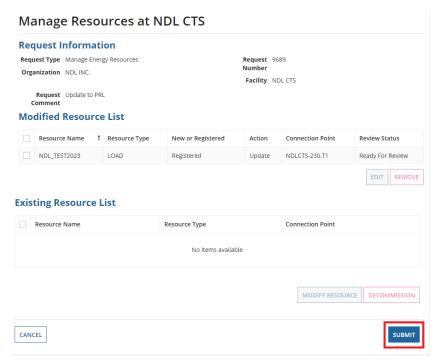


5. From the Load Resource Details page, update the **Bid/Offer Type** option to **Day-Ahead Price Responsive**. Indicate an **Effective Date** for this change in the **Proposed Effective Date** field and click on **Complete**.

A screenshot showing the screen to modify a MPs Exisiting ResourcesA screenshot showing the screen to modify a MPs Exisiting Resources

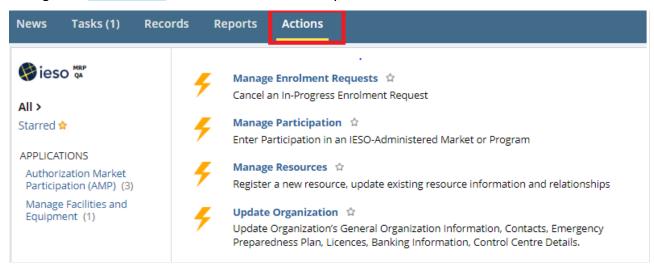


6. The modified resource will appear under the **Modified Resource List**. Click on **Submit** to complete the resource update request. The IESO will review and approve the changes.

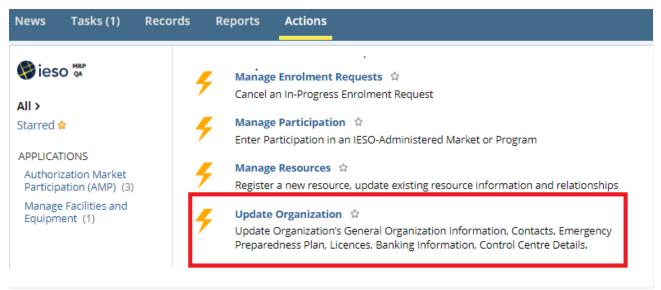


# Appendix D: Using Online IESO to Enter MCE Information

1. Log in to Online IESO and select **Actions** on top of the screen.

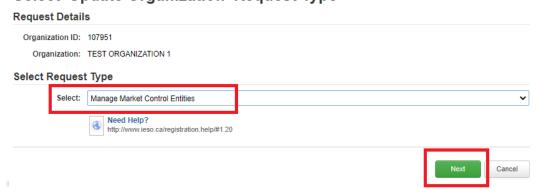


# 2. Select **Update Organization**.

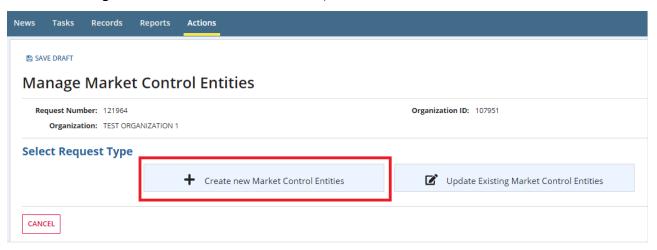


3. From the **Select 'Update Organization' Request Type** window, select **Manage Market Control Entities** as the request type and select **Next**.

# Select 'Update Organization' Request Type

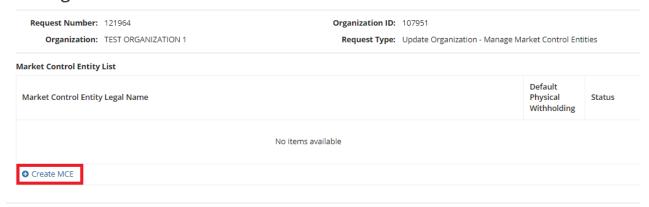


4. In the Manage Market Control Entities window, select Create new Market Control Entities.

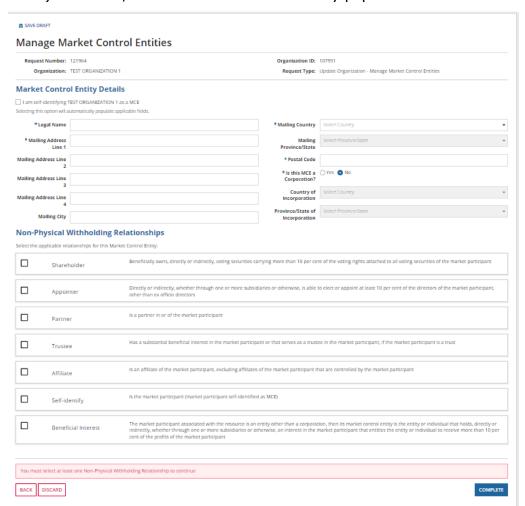


5. Select Create MCE.

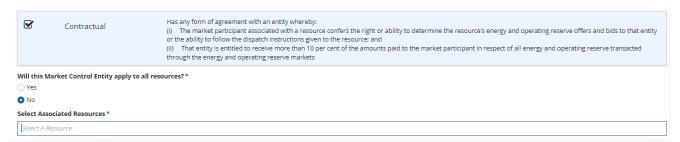
# **Manage Market Control Entities**



6. Populate MCE details. If the user selects the checkbox "I am self-identifying (Insert Organization's Name) as a MCE", all of the fields will automatically populate.



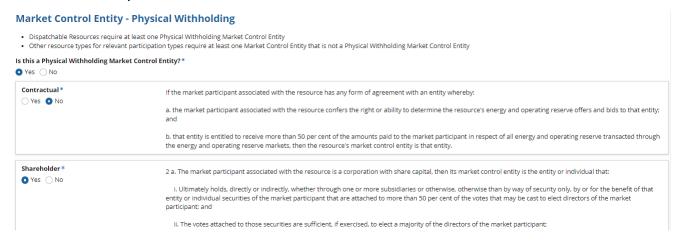
Note: if the MP has registered dispatchable resources, Contractual will also be listed under the "Non-Physical Withholding Relationships" heading. If Contractual has been selected, a question will appear asking "Will this Market Control Entity apply to all resources?" If the user selects **Yes**, then the Market Control Entity will apply to all resources of the MP. If the user selects **No**, the user can identify which resources the MCE applies to.



If the MP has registered dispatchable resources, once the user has selected the applicable Non-Physical Withholding Relationship, the user needs to scroll down and answer if it is a Physical Withholding Market Control Entity. If the user selects **Yes**, then the user must select a relationship as they appear on the screen. If the user selects **Yes** to any of the relationship, that relationship defines the *Market Control Entity for Physical Withholding* and the step is complete. If the user selects **No**, the next relationship appears.

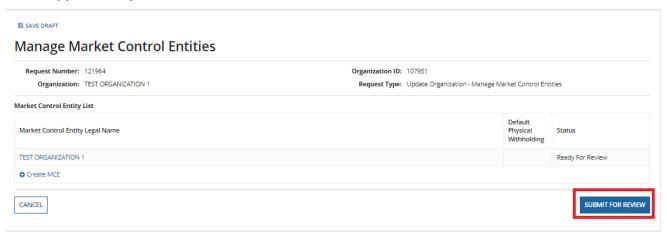
The order of relationships that appear is as follows:

- 1. Contractual
- 2. Shareholder
- Appointer
- 4. Beneficial Interest
- 5. Partner
- 6. Self-Identify



Once all of the information has been populated, select **COMPLETE** to submit.

7. Submit the MCE for IESO review by selecting **SUBMIT FOR REVIEW.** If the IESO rejects the MCE, they will provide a comment to explain the reason for rejection and the MCE task is sent back to the Applicant Representative for resubmission.



8. Once the IESO has approved the MCE, the Applicant Representative can view all their approved and registered MCE by accessing the **Records** window and selecting **Market Control Entities.** 



# **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

