

Capacity Auction Design Memo 2.1

Engagement Topic: Performance Assessment – Testing Framework

Engagement Status: Complete

Date: January 2023

The purpose of this memo is to lay out the Capacity Auction testing framework, which includes a Capacity Test applicable to all resource types, and an additional Dispatch Test applicable to all resource types except capacity import resources. Details on the associated charges are described in [Capacity Auction Design Memo 3.0](#).

1. Capacity Test

1.1 Testing to Installed Capacity

Existing Framework

Some capacity auction resources including capacity generation resources, capacity storage resources, capacity dispatchable load resources are assessed on their ability to deliver to their full capacity obligation when tested.

Hourly demand response resources are assessed against their submitted energy market bids when tested, which could be lower than their full obligation, and are eligible for a payment for the test activation. These resources are also eligible for a reduced test duration if the resource has delivered its capacity obligation amount through a previous activation (test based or non-test based).

Post-Implementation Framework

All participating capacity auction resources will be assessed on their ability to deliver their installed capacity (ICAP) value (or cleared ICAP value, if a resource clears only a portion of its capacity),

within the stipulated performance assessment thresholds. Further details are provided in Table 1-1 below.

1.2 Capacity Test Scheduling

Existing Framework

Except in the case of generator-backed capacity import resources, the IESO is responsible for scheduling and dispatching resources to conduct a test, up to two times per obligation period. Generator-backed capacity import resources are required to self-schedule to at least its cleared ICAP once per obligation period, occurring sometime in the first two months of the obligation period.

Post-Implementation Framework

All capacity auction resources will be required to self-schedule to at least their cleared ICAP within an IESO-determined Capacity Test window once per obligation period. IESO will issue the notice to conduct the capacity test during the first two months of the obligation period (May – June in the summer obligation period and November – December for winter obligation period), when possible.

The IESO will communicate when the five business day capacity test window will take place during the obligation period, with details issued at least 10 business days in advance of the first day of the testing window. Resources must get scheduled by submitting bid/offer prices to ensure a dispatch schedule/activation notice is received (i.e., submit price taker offers/bids). Participants with generator-backed capacity import resources will continue to self-schedule their test in accordance with their existing framework.

Resources will not be eligible for test payments for a Capacity Test under the new framework, but hourly demand response resources will receive payments for a capacity auction dispatch test as detailed in section 2 below. Hourly demand response resources will not be eligible for a reduced test duration.

Further details, by resource type, are provided in Table 1-1 below.

Allowable Exceptions:

In limited circumstances, the IESO may consider scheduling a second testing window if a capacity auction resource is unable to complete the capacity auction capacity test during the entirety of the first testing window. These circumstances are as follows:

- The capacity auction resource is unable to comply with the capacity auction capacity test due to an outage caused by a third-party market participant.
- The capacity auction resource is unable to comply with the capacity auction capacity test due to a force majeure event.

Table 1-1: Testing, data submission and performance assessment requirements

Capacity Auction Resource Type	Testing Mechanism	Data Submission Requirements	Performance Assessment
<p>Capacity Generation Resource</p> <p>Capacity Storage Resource</p> <p>Capacity Dispatchable Load resource</p> <p>Hourly Demand Response Resource</p>	<p>Submit energy bids/offers to ensure a schedule/activation is received in the energy market to the greater of their cleared ICAP or their minimum loading point (for generation resources) during the testing week within the availability window for the following durations:</p> <ul style="list-style-type: none"> Capacity generation resources (quick start and non-quick start generators), capacity storage resources, and hourly demand response resources (HDRs) – four consecutive hours Capacity dispatchable loads – three consecutive dispatch intervals <p>Note – the demand response bid price thresholds for HDRs and capacity dispatchable loads will be removed for all hours of the availability window during the testing window.</p>	<p>Notify the IESO of the specific day, hours and dispatch intervals for which they wish their performance to be assessed within the following timeline:</p> <ul style="list-style-type: none"> For capacity dispatchable load resources, capacity generation resources and capacity storage resources, no later than five business days after the end of the testing window For HDR resources, no later than the 6th business day before the end of the subsequent month following the testing window <p>Failure of a capacity market participant to notify the IESO by the applicable deadline may result in non-performance charges</p>	<p>Test will be deemed a pass if the resource:</p> <ul style="list-style-type: none"> For a generation, storage or HDR resources, delivered, on average for each hour of its 4 consecutive hour test duration, at least its cleared ICAP within the specified threshold For a dispatchable load resource, the resource delivered at least its cleared ICAP for each dispatch interval of the 3 consecutive interval test requirements
<p>System Backed Capacity Import Resource</p>	<p>The IESO may direct system-backed capacity import resources to perform up to two capacity tests per obligation period for each capacity auction resource to verify that the auction capacity is deliverable. The tests will be conducted as follows:</p> <ul style="list-style-type: none"> Up to two hours in advance of any test, applicable system-backed capacity import resources will receive a constraint and a schedule should appear in PD-1. Tests may be scheduled for a duration of up to four consecutive hours. 		<p>If a system-backed capacity import resource being tested is successfully scheduled in pre- dispatch and not curtailed as per “Market Manual 4.3: Real-Time Scheduling of the Physical Markets”, the test will be deemed a success.</p>

Capacity Auction Resource Type	Testing Mechanism	Data Submission Requirements	Performance Assessment
	<p>The IESO may determine a test activation for a system-backed capacity import resource is not required if all the following criteria are met. The:</p> <ul style="list-style-type: none"> • system-backed capacity import resource receives and follows sufficient dispatch instructions in the energy market, • dispatches are within the availability window, and • system-backed capacity import resource demonstrates that its capacity obligation has been met 		

2. Dispatch Test

Existing Framework

This test does not exist under the current framework.

Post-Implementation Framework

The IESO will reserve the right to perform up to two capacity auction dispatch tests per obligation period to validate a capacity auction resource’s ability to deliver against their bid/offer quantity with minimal notice. Capacity auction dispatch tests for all applicable capacity auction resource types will be scheduled for a duration of up to four hours within the availability window of the dispatch day. If the resource follows IESO’s dispatch instructions within the applicable threshold, the test will be deemed pass.

Hourly demand response resources will be eligible for an out-of-market payment for this test activation.

Further details, by resource type, are provided in Table 1-2 below.

Table 1-2 Testing and Performance Assessment Requirements

Capacity Auction Resource Type	Testing Mechanism	Performance Assessment
Capacity Generation Resource Capacity Storage Resource Capacity Dispatchable Load resource	For capacity generation resources and capacity storage resources, the IESO will apply a constraint to the resource’s offered MW amount in advance of the capacity auction dispatch test up to: <ul style="list-style-type: none"> • One hour for capacity generation resources that are quick start facilities and capacity storage resources. • One business day for capacity generation resources that are non-quick start facilities in the day-ahead timeframe and prior to the day-ahead commitment process. Capacity dispatchable loads will have a constraint applied to curtail up to their bid MW amount up to one hour in advance of the capacity auction dispatch test.	If the capacity auction resource demonstrates it was able to follow its dispatch instructions within the applicable compliance dead band as per the Market Rule Interpretation Bulletin (IMO MKRI 0001), the test will be deemed a pass.
Hourly Demand Response Resource	Capacity market participants with hourly demand response resources will receive a standby notice on the pre-dispatch day and an activation notice approximately 2 hours and 30 minutes in advance (but no later than 2 hours in advance) of the first dispatch hour of the capacity auction dispatch test. Resources will receive a schedule in pre-	If the HDR resource being tested demonstrates a curtailment of electricity withdrawal from the IESO-controlled grid equal to their demand response energy bid within a 15% dead-band for every dispatch interval (or every dispatch hour for residential HDRs) for the duration of the test (up

Capacity Auction Resource Type	Testing Mechanism	Performance Assessment
	dispatch and real-time, regardless of the demand response energy bid price submitted.	to 4 hours), the test will be deemed a pass.