

# *Installed Capacity Manual*

*February 2016*

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### **4.2.1 DMNC Test Periods**

The DMNC Test Period for the Summer Capability Period is June 1st through September 15th and for the Winter Capability Period is November 1st through April 15th.

### **4.2.2 Resource Specific Test Conditions**

The Resources listed below must meet the applicable DMNC test conditions specified below hereto in order to be qualified as Installed Capacity Suppliers. Resources must also report DMNC test results to the NYISO. As used in this Section 4.2.2, DMNC shall mean the power delivered to the transmission system on a clock-hour basis (top-of-hour to top-of-hour), net of station service Load necessary to deliver that power, as described in Section [4.2.3](#) of this *ICAP Manual*.

#### ***Fossil Fuel and Nuclear Stations***

Valid DMNCs for fossil fuel or nuclear steam units are determined by the following:

- a. The unit's sustained maximum net output averaged over a four (4) consecutive hour period
- b. For common-header turbine-generators, the DMNC is determined on a group basis. Each such turbine-generator is assigned a rating by distributing the combined Capacity among the m.
- c. The sum of the DMNC of individual turbine-generators in a generating station cannot be greater than the capacity of the station taken as a whole; also the sum of the DMNC of individual turbine-generators under a single PTID cannot be greater than the DMNC of the PTID taken as a whole station. Each such turbine-generator is assigned a rating by distributing the combined Capacity among the units comprising the PTID.

#### ***Hydro Stations***

Valid DMNCs for hydro units are determined by the following:

- a. The sustained net output averaged over a four (4) consecutive hour period using average stream flow and/or storage conditions within machine discharge Capacity.

- b. For a multi-unit hydro station, the DMNC is determined as a group and each hydro unit in such a station is assigned a rating by distributing the combined station DMNC among them.
- c. The sum of the DMNC of individual units in a multi-unit hydro station cannot be greater than the capacity of the station taken as a whole; also the sum of the DMNC of individual hydro units under a single PTID cannot be greater than the DMNC of the PTID taken as a single station. Each such hydro unit is assigned a rating by distributing the combined Capacity among the units comprising the PTID.

***Internal Combustion Units and Combustion Turbines***

Valid DMNCs for internal combustion units and combustion turbines are determined by the following:

- a. The sustained maximum net output for a one (1) hour period.
- b. The unit’s winter DMNC rating is determined on the basis of the average ambient and cooling system temperature experienced at the time of the Transmission District’s winter peak as described in Section 4.2 of this manual.
- c. The unit’s summer DMNC is determined on the basis of the average ambient and cooling system temperature experienced at the time of the Transmission District’s summer peak as described in Section 4.2 of this manual.
- d. The sum of the DMNC of individual units in a multi-unit station cannot be greater than the capacity of the station taken as a whole; also the sum of the DMNC of individual units under a single PTID cannot be greater than the DMNC of the PTID taken as a single station. Each unit in the station is assigned a rating by distributing the combined Capacity among the units comprising the PTID.

***Combined Cycle Stations***

Valid DMNCs for combined cycle stations are determined by the following:

- a. The sustained maximum net output over four (4) consecutive hours.
- b. A combined cycle station’s winter DMNC rating is determined on the basis of the average ambient and cooling system temperature experienced at the time of the Transmission District’s winter peak as described in Section 4.2 of this manual.
- c. A combined cycle station’s summer DMNC rating is determined on the basis of the average ambient and cooling system temperature experienced at the time of the Transmission District’s summer peak as described in Section 4.2 of this manual.
- d. In cases where the sum of the DMNC rating of individual units in a combined cycle plant is greater than the DMNC of the plant taken as a single station, each unit is assigned a rating by distributing the plant DMNC among the units.

***Intermittent Power Resources***

The DMNC value of Intermittent Power Resources will be the combined nameplate capacity of all units (usually aggregated in groups of small individual units) in each station, net of any station service Load required for operation and delivery to the NYCA transmission system. The sum of the DMNC values of all units under a single PTID cannot be greater than the DMNC of the PTID taken as a single unit. Each such individual unit is assigned a rating by distributing the combined Capacity among the units comprising the PTID.

***Run-of-River Hydro Resources***

The DMNC value of Run-of-River Hydro Resources is the combined nameplate capacity of all units in each PTID, net of any station service Load required for operation and delivery to the NYCA transmission system. The sum of the DMNC values of all units under a single PTID cannot be greater than the DMNC of the PTID taken as a single unit. The NYISO will determine the rating of each such individual unit by distributing the combined Capacity among the units comprising the PTID.

***Special Case Resources***

A Special Case Resource that supplies Load reductions solely through the use of a Local Generator must submit a demonstration test of the generator maximum net output for a one (1) hour period net of any auxiliary loads (including, but not limited to station service Load).

***Energy Limited and Capacity Limited Resources***

Valid DMNCs for Energy Limited and Capacity Limited Resources are determined by the following:

- a. The sustained maximum net output averaged over a four (4) consecutive hour period, with the exception of Internal Combustion units or Combustion Turbines that are approved as Energy Limited or Capacity Limited Resources, which will instead use the sustained maximum net output for a one (1) hour period.
- b. For a multi-unit station, the DMNC is determined for the group and each unit in such a station is assigned a rating by distributing the combined station DMNC among them.
- c. The sum of the DMNCs of individual units in a multi-unit station cannot be greater than the capacity of the station taken as a whole; also the sum of the DMNC of individual units under a single PTID cannot be greater than the DMNC of the PTID taken as a single plant. Each such unit is assigned a rating by distributing the combined Capacity among the units comprising the PTID.

**4.2.3 Treatment of Station Service Load**

In general, the DMNC rating for a Resource is the amount of power delivered to the transmission grid. The DMNC rating should reflect a reduction in gross output of the Resource for station service Load. In most cases, this determination is straightforward

because the Resource is connected to the Transmission System, and the amount of power provided to the Transmission System reflects the station service Load reduction.

In other cases, a portion of the station service Load may be provided from sources other than the Resource. In these cases, separate measurements must be made of the station service Load and subtracted from the Resource's gross output measured at the generator leads at the time of the DMNC test.

In the event of disagreement concerning the station service Load for facilities that fall into the later category, the relevant Transmission Owners will provide to the NYISO any information available to it, which relates to the configuration of the Resource and its station service Load. If the disagreement concerning the station service Load is not resolved by the additional information the Transmission Owners provide, the NYISO Expedited Dispute Resolution Procedures [as set forth in Section 5.16 of the *NYISO Services Tariff* (available from the NYISO Web site at the following URL:

[http://www.nyiso.com/public/documents/tariffs/market\\_services.jsp](http://www.nyiso.com/public/documents/tariffs/market_services.jsp)) shall be used to determine the station service Load in dispute.

#### **4.2.4 Required DMNC Generating Capability Test Data**

An entity that wants to establish a DMNC rating for its Resources must report the DMNC test data for each of its Resources to the NYISO using the ICAP Market System. The *ICAP Automated Market User's Guide* can be found at:

[http://www.nyiso.com/public/markets\\_operations/market\\_data/icap/index.jsp](http://www.nyiso.com/public/markets_operations/market_data/icap/index.jsp)

#### **4.2.5 New Resources and Resources Returning from an Inactive State**

New Resources and Resources returning from an Inactive state must qualify as Installed Capacity Suppliers based on the results of an appropriate DMNC Demonstration or Special Case Resource (SCR) registration before participating as an Installed Capacity Supplier in the NYISO Installed Capacity market. DMNC test data or data from actual operation must be received by the NYISO as prescribed by this *ICAP Manual* by the date and time specified in the [ICAP Event Calendar](#). They will also be subject to validation requirements as set forth herein. All simple-cycle gas turbine and combined cycle units must temperature-adjust the results of their DMNC test data or data from actual operation using the procedures noted in this *ICAP Manual* or in the *ICAP Automated Market User's Guide* as noted above. New Resources and Resources returning from an Inactive state approved as qualified Installed Capacity Suppliers after submitting the necessary DMNC test data or data from actual operation from outside the normally applicable DMNC Test Period ("out-of-period") must verify the approved "out-of-period" DMNC rating during the next DMNC Test Period. If the supplier is unable to verify the "out-of-period" DMNC rating in the next DMNC Test Period, then deficiency charges shall apply to any shortfall between the Installed Capacity equivalent of the UCAP sold from the unit and the results of the "in-period" test.

In addition to reporting appropriate DMNC Demonstration results, new generating Resources that want to participate in NYISO-administered auctions shall notify the NYISO

in a letter. SCR notification is detailed in Section [4.12](#) of this *ICAP Manual*. The new generating Resource notification letter must include the unit's point ID (PTID) and shall state the intention of the Resource to seek qualification as an Installed Capacity Supplier, and include the Resource's name, location, and other information as the NYISO may reasonably request. This letter does not obligate a Resource to qualify as an ICAP Supplier; it allows the NYISO to prepare and be able to accommodate a Resource should that Resource request qualification and if the NYISO receives appropriate DMNC Demonstration results before an auction. A Resource shall notify the NYISO via a letter on or before 5:00:00 P.M. on the first business day of the month before that month in which it wishes to qualify as an Installed Capacity Supplier. For example, to qualify in the month of April to participate in the May Installed Capacity market, the NYISO must receive the notification letter no later than 5:00:00 P.M. on the first business day of March.

To qualify Installed Capacity for a Bilateral Transaction or for a self-supplying LSE, new Resources shall report to the NYISO the results of an appropriate DMNC Demonstration or Special Case Resource registration prescribed by this *ICAP Manual* by the date and time specified in the ICAP Event Calendar, which can be found at:

[http://icap.nyiso.com/ucap/public/evt\\_calendar\\_display.do](http://icap.nyiso.com/ucap/public/evt_calendar_display.do)

#### **4.2.6 NYISO Distribution of Resource Capacity Data to the NYCA Transmission Owners**

The NYISO provides the DMNC data collected pursuant to this ICAP Manual to the operating function unit of the appropriate Transmission Owners (TOs) sixty (60) days following the end of the capability period. Provision of generator reactive capability data to TOs is described in Section 3.6.4 of the Ancillary Services Manual.