# 1.3 RFP Objectives, Scope, and Deliverables

The objective of this Request for Proposal is to select a consultant to conduct a study of the parameters, and the assumptions and methodology to identify them, used as the basis to set the NYISO's Installed Capacity<sup>1</sup> ("ICAP") Demand Curves beginning with the Summer 2017 Capability Period. The consultant will assess whether, and if so how, these parameters should apply to Demand Curves for a three, four or five year period. The consultant will also propose and evaluate alternative methodologies to enhance the projection of Energy and Ancillary Services revenues (including shortage pricing) used to determine the Unit Net CONE of the Demand Curve proxy plant, including approaches to reflect impacts from expected market rule changes. Such methodologies will need to consider that there may not be robust historical data regarding the affect of certain market rules (for example, Coordinated Transaction Scheduling) or other market rules (for example, shortage pricing). Further details are set forth below, and certain background facts are described in Appendix J. The items required for submittal in response to this letter are listed in Appendix K. The timeline for developing the ICAP Demand Curves is set forth in Appendix L. The information provided by each bidder will be used by the NYISO to evaluate each bidder's proposed approach.

## 1.3.1 Scope of the Services to be performed

The "consultant" will be required to recommend parameter values for the ICAP Demand Curves for the 2017-18 through 2019-2020 Capability Years.<sup>2</sup> As described further below, the Scope of Work also will include a requirement that the consultant evaluate and recommend methodologies for determining parameters for an additional one or two years beyond this initial three year Demand Curve period, as well as the specific Demand Curve parameters resulting from the application of that methodology, or if determined to be appropriate, years four and five can be established based on utilizing year three with adjustments or identified modifications pursuant to the methodology(ies) the consultant will propose .

As currently applied, ICAP Demand Curves are derived from: (a) a point defined by the minimum ICAP requirement (currently 117.0 percent of the NYCA peak load forecasted by the NYISO) set based on the Installed Reserve Margin set by the New York State Reliability Council, and the cost of a new peaking generation plant (the reference point); and (b) a point at which the ICAP requirement declines to zero ("Zero Crossing Point") that reflects the declining value of capacity reserves and an appropriate slope for the ICAP Demand Curve. The reference point is determined by an estimate of the annual capital and fixed operation and maintenance costs, including a return on investment, to practicably construct a new peaking plant (which may be one or more units,) less an offset for a projection of the likely Energy and Ancillary Services revenues, net of variable operating costs, that the new peaking plant could expect to earn in the NYISO-administered markets, at the level of requirements plus a determined level of excess capacity.

<sup>&</sup>lt;sup>1</sup> Capitalized terms that are not otherwise defined in this filing shall have the meaning specified in the NYISO's Market Administration and Control Area Services Tariff ("Services Tariff").

<sup>&</sup>lt;sup>2</sup> Capability Years begin on May 1.

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Additional information regarding the Demand Curve review can be found in Services Tariff Section 5.14.1.2, and Installed Capacity Manual Sections 5.5 and 5.6.

The consultant will be required to deliver a written report to the NYISO documenting the consultant's study methodology, calculations, results, and recommendations consistent with the existing regulatory requirements and certain proposed regulatory requirements covering the three, four, or five Capability Years beginning May 1, 2017. The consultant will be required to deliver to the NYISO the model utilized in performing the computations, and the econometric model will be posted on the NYISO's web site for its stakeholders to access. Currently, the Services Tariff requires that the ICAP Demand Curves be reviewed and set covering three Capability Years. The Statement of Work anticipated by this RFP is for the consultant to develop and evaluate proposed approaches, and present the supporting analysis for consideration by the NYISO, with input from its stakeholders, to extend the Demand Curve period from three years to both four and five years.

Prior to drafting the written report, the consultant will provide its recommendations regarding extending beyond the three year period for the Demand Curves. The consultant will also provide recommendations to enhance the projection of Energy and Ancillary Services revenues. These recommendations are intended to inform the NYISO, its independent Market Monitoring Unit, and stakeholders in their consideration of modifying the Services Tariff prescribed cycle for resetting the ICAP Demand Curves to a period of longer than the current three year period. The result may be the NYISO submitting a filing with FERC to modify its tariff.

Bidders are required to submit one proposal that encompasses the necessary analysis, so that future three, four, or five years of ICAP Demand Curves can be derived from the consultant's study, or if determined to be appropriate, years four and five can be established based on utilizing year three with adjustments or identified modifications pursuant to the methodology(ies) the consultant will propose, as described in the written report and recommendations.

The report's findings and recommendations shall include at least the following, with a description and analysis of the basis thereof:

 Total installed costs as of May 2017: the localized, levelized embedded cost of a peaking plant cost, defined as "the unit with technology that results in the lowest fixed costs and highest variable costs among all other units' technology that are economically viable," including transmission and deliverability impacts, in the G-J, NYC, and LI Localities, and any New Capacity Zone proposed by the NYISO in the March 31, 2016 filing as referenced in Attachment A("NCZ"), and in the following Rest of State regions: various locations within Load Zones A through F.

The NYISO will provide support to the Demand Curve consultant including performing the deliverability study consistent with Services Tariff Section 5.14.1, for the cases specified above. In the event the peaking plants are determined to not be deliverable, the NYISO will provide support to the consultant by determining an appropriate system deliverability upgrade. Determining the cost of any defined deliverability upgrades are the responsibility of the consultant.

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- 2) Total installed costs as of May 2017: the localized, levelized embedded cost of a combined cycle generator that results in the lowest cost net of Energy and Ancillary Services revenues under current conditions, accounting for the amount of capacity excess associated with the technology, and including transmission and deliverability impacts, in the G-J, NYC, and LI Localities, and any NCZ, and in the following Rest of State regions: various locations within Load Zones A through F.
- 3) In determining items1 and 2 above, the consultant is to develop and present the analysis to NYISO stakeholders, and consider stakeholder input. Upon the request of the NYISO, the consultant will participate in meetings and Federal Energy Regulatory Commission ("Commission") proceedings regarding the proposed Demand Curves.
- 4) Factors impacting total installed costs include but are not limited to:
  - A. Regulatory requirements
  - B. Minimum capacity of each unit and/or the total plant
  - C. Utility scale -the MW size or footprint of the plant,
  - D. Ability to be called upon or dispatched with short notice. The technology requirements are as specified in the RFP.
  - E. Dual fuel capability (if natural gas is primary fuel) If it is a requirement of the location of the plant, it should be included in the evaluation.
  - F. Commercial availability of the technology
- 5) Projected Energy and Ancillary Services revenues (including shortage pricingas referenced in Section 1.3) for the identified plants in each Locality, NCZ and the Rest of State regions noted in items (1) and (2) above, at the peaking plant's capacity equal to the number of MW.
- 6) Recommended shape and slope of the ICAP Demand Curves for each Locality noted in items (1) and (2) above, and the NYCA as a whole. ICAP Demand Curve shape and slope recommendations may take into account recommended "zero-crossing points" (*i.e.*, the quantity of capacity beyond which the price of capacity is zero) and should balance market stability and certainty while seeking to minimize market power, minimize price volatility, recognize the reliability value of extra capacity, and minimize cost impacts to end users.
- 7) Recommended "zero-crossing points" for each Locality, NCZ, and the NYCA as a whole.
- 8) Projected costs and revenues for the identified plants in each Locality, NCZ, and the Rest of State regions noted in items (1) and (2), for the three, four, and five Capability Years starting May 1, 2017; or if determined to be appropriate, years four and five established based on utilizing year three

with adjustments or identified modifications pursuant to the methodology(ies) the consultant will propose.

- 9) Financial parameters and amortization period proxy plant revenues for each Locality, NCZ, and the Rest of State regions noted in items (1) and (2), that include, but are not limited, to the Demand Curve escalation factor, the short-term inflation rate component that is included in the Demand Curve escalation factor, and the long-term inflation rate that is used to calculate the annual carrying charge.
- 10) Approaches (data and analytical modeling/simulation and scaling methodologies) proposed to determine proxy plant revenues for each Locality, NCZ, and the Rest of State regions noted in items (1) and (2) above. Projected Energy and Ancillary Services revenues (including shortage pricingas referenced in Section 1.3) must account for Energy and Ancillary Services market designs that are reasonably expected to be in effect during the period of the Demand Curves. The consultant may also consider proposing an approach that requires formulaic annual updates to determine the appropriate revenues to be used in the Demand Curves applied for the next Capability Year.
- 11) A determination of the lowest net cost of entry (totalized installed costs less Energy and Ancillary Services net revenues) in each Locality, NCZ, and the Rest of State regions noted in items (1) and (2) above for the three, four or five Capability Years beginning May 1, 2017.
- 12) A comparison of costs to historical values and those in similar studies.
- 13) The point above the minimum Installed Capacity requirement equal to the MW of the identified peaking plants proposed to establish each ICAP Demand Curve.
- 14) The consultant is to develop and propose the principles and framework to be used to guide the consideration of whether, and if so, how to implement ICAP Demand Curves for a 4 or 5 year period. The consultant will be required to make a recommendation with regard to extending the current three year demand curve period in accordance with the schedule provided in Appendix L.
- 15) The consultant is to develop and propose the principles and framework to be used to guide the consideration of enhanced methodologies for the projection of Energy and Ancillary Services revenues (including shortage pricingas referenced in Section 1.3) used to determine the Unit Net CONE, including, but not limited to, proposed approaches to reflect impacts from expected market rule and design changes. The consultant will be required to make a recommendation with regard to such methodologies in accordance with the schedule provided in Appendix L.

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16) All sources of data and assumptions used in the report shall be clearly identified in the report, and Demand Curve and econometric models shall be delivered to the NYISO for posting to the NYISO website.<sup>3</sup>

The Consultant will be required to provide testimony and affidavits in relation to the NYISO's Demand Curve filing on or before November 30, 2016, and subsequent filings in response to comments and protests. Upon the request of the NYISO, the consultant will participate in proceedings and meetings before, the Commission.

The consultant's participation in NYISO stakeholder meetings will be in person or phone, as identified by the NYISO. The number of stakeholder meetings in which the consultant will participate is uncertain. The number of Commission meetings, affidavits, and testimony also is uncertain. As a result, clearly separate the pricing for preparing, attending, and participating in those meetings <u>(for stakeholders and Commission meetings</u>). There should be a separate line item – with an hourly rate – for Commission meeting preparation, attendance, and participation. Pricing should be further segregated between in-person and teleconference costs. The consultant will be required to meet with the NYISO in preparation for these meetings and may also be required to provide the NYISO with preliminary presentations and progress reports at weekly NYISO planning sessions.

1.3.2. Schedule for Completion of the Services

The written report shall be due on the following dates:

- Draft Report: June 15, 2016
- Final Report: mid-August 2016

<sup>&</sup>lt;sup>3</sup> The model used by the consultants for the 2011-2014 Demand Curve reset is available on the NYISO website <<u>http://www.nyiso.com/public/markets\_operations/market\_data/icap/index.jsp</u>>, under "ICAP Documents & Resources, then "Reference Documents", then "2011-2014 Demand Curve Reset."

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