## COMMENTS OF THE INDICATED NEW YORK TRANSMISSION OWNERS ON PROPOSED ICAP DEMAND CURVES FOR 2014-17

Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York Power Authority, New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation (jointly, "Indicated NYTOs") submit the following comments on the installed capacity ("ICAP") demand curves for 2014-17 that were proposed to the Board.<sup>1</sup> We also request opportunity to participate in oral argument before the Reliability and Markets Committee of the NYISO Board on October 14<sup>th</sup>.

### **EXECUTIVE SUMMARY**

At issue on this demand curve reset is a significant decision for New York's wholesale electricity market and its customers. Contrary to the requirements of the NYISO tariff, the Proposal's ICAP demand curves are not based on the unit with the lowest fixed cost for the Lower Hudson Valley ("LHV") and New York City. The Proposal, if adopted, will result in a major unjustified price increase for New York State's electricity customers. Indeed, ICAP costs could unnecessarily increase by approximately \$140 million annually in the LHV and more than \$350 million annually in New York City if the appropriate proxy unit for those demand curves is not selected.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> Proposed NYISO Installed Capacity Demand Curves For the Capability Years 2014/2015, 2015/2016 and 2016/2017, Sept. 6, 2013 ("Proposal").

<sup>&</sup>lt;sup>2</sup> All estimates of the impact of changes in the ICAP demand curve on capacity costs have assumed that the amount of surplus capacity in the market is consistent with the assumptions made for 2013 by Tariq Niazi, the NYISO's Consumer Interest Liaison, in an affidavit that accompanied the NYISO's April 30, 2013 filing in Docket No. ER13-1380-000. The Indicated NYTOs believe, however, that it is likely that the amount of surplus capacity that will

The NYISO's Market Administration and Control Area Services Tariff ("MST" or "Tariff") requires NYISO to determine the Cost of New Entry ("CONE") based upon the net cost of developing, constructing and operating a "peaking unit [that] is 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."<sup>3</sup> Thus, NYISO's obligation under its Tariff is to choose the unit with the *lowest* fixed costs, but the Proposal fails to comply with that obligation for the LHV and New York City. In particular, the Proposal adopted the consultants' recommendation to reject a Frame unit with selective catalytic reduction ("SCR") due to technical feasibility reasons even though such a unit has already been approved for siting, financed, built, and has commenced operation in California. A Frame unit with SCR has also been the PJM proxy unit since 2007, and its use there has been approved numerous times by the Federal Energy Regulatory Commission ("FERC"). While the indicated NYTOs have other concerns, as discussed herein, this is the principal flaw in Proposal's analysis that must be corrected.<sup>4</sup>

The Indicated NYTOs request that the Board make the following changes to the Proposal so that the compliance filing it will make on the demand curve complies with its Tariff:

 The ICAP demand curves for New York City and the LHV should be based on the net cost of developing a two-unit simple cycle Frame turbine plant with SCR, a technology whose feasibility is now proven. A Frame generator with an SCR is currently in operation in California, and PJM has used such a proxy unit since 2007 when setting its ICAP demand

actually be present in the market for 2014-17 will be somewhat less than the amount assumed by Mr. Niazi. Consequently, these capacity cost estimates may be conservative.

<sup>&</sup>lt;sup>3</sup> MST § 5.14.1.2 (emphasis added).

<sup>&</sup>lt;sup>4</sup> The NYTOs understand that there may be a need to conduct additional analysis on the Frame Unit with SCR in order to determine its precise Net CONE (although at this time it appears to meet the tariff requirement as the unit with the lowest fixed costs). As the Proposal notes (at 41), further adjustments may be necessary if a Frame unit with SCR is adopted as the proxy unit.

curves. The Indicated NYTOs propose that the Board adopt a Frame unit that is dual fueled in New York City and that is not dual fueled in the LHV.

- 2. The NYISO Board should also consider a single-unit Frame GT without SCR and without dual-fuel capability and adopt it as the proxy unit for the LHV zone if it is the least-cost unit. The Proposal incorrectly concludes that such a Frame unit could not be built in the LHV zone without dual-fuel capability (and a unit that is dual fueled and does not have SCR cannot meet air emissions standards). But, there currently are no NYISO or interstate pipeline dual fuel requirements on generators that locate in the LHV zone and there is at least one existing generator in the LHV that has chosen not to be dual fueled. Consequently, a new generator in the LHV would not have to be dual fueled, in which case it could meet the emissions standards that are applicable to most of the LHV zone.
- 3. The calculation of net CONE should continue to include 30 years' of projected energy and capacity revenue, as in past demand curve resets. The Proposal adopts the consultants' recommendation to set the demand curves at levels that assume that new generation must recover enough revenue to make the initial investment worthwhile in the first 20-25 years that the generator is in service, instead of the first 30 years as was assumed and approved by the FERC in previous demand curve resets. But purchasers are willing to pay significant amounts for generators that are more than 20-25 years old, demonstrating that it would be unreasonable to assume that energy or capacity revenues received more than 20-25 years after a generator is placed into service have little value. Likewise, it is unreasonable to assume that the developer could not finance the significant residual value of the generator.
- 4. The zero-crossing point ("ZCP") for the LHV zone, *i.e.*, the point on the ICAP demand curve where the price reaches zero, should be set to 114 percent of the requirement, consistent with the only analysis that has been performed of the appropriate ZCP for that zone. Dr. Patton's analysis indicates that ZCP should be set at 114 percent of the ICAP requirement for the LHV zone and there is no analysis supporting any other figure. The Proposal recommends that the ZCP for the LHV zone be set at 115 percent of the requirement, but such a recommendation is arbitrary as the Proposal provides no justification for doing so. NYISO Staff has recommended maintaining the current ZCPs for the other ICAP demand curves because, in the absence of substantial evidence indicating that changing the ZCPs would be beneficial, NYISO should maintain the status quo. There is, however, no status quo for the LHV zone, so that rationale cannot justify the proposed ZCP.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> We are raising these issues before the Board, but there are additional issues, which have been previously raised in other comments in the stakeholder process, that we may raise at the FERC after the NYISO files its proposed demand curves: (1) NYISO should revise its estimates of the net costs of building the generators that serve as the basis for the ICAP demand curves, to reflect, *inter alia*, increased profits from energy and ancillary services sales that will result from various market rule changes that will increase prices; and (2) Con Edison believes that the Proposal incorrectly calculates the interconnection costs of New York City generators. In addition, the Indicated NYTOs reserve their right to argue for a phase-in of the price impact in either or both New York City and the LHV

I. AS REQUIRED BY THE NYISO TARIFF, THE BOARD SHOULD ADOPT THE LEAST COST PROXY UNIT FOR THE NEW YORK CITY AND LHV ZONES.

We support the Proposal to the extent that it provides that the "proxy unit" used for the NYCA ICAP demand curve be a single-unit simple cycle Frame turbine without SCR because it appears to be the least-cost unit. The Proposal, however, uses a two-unit simple cycle LMS 100 plant as its proxy unit for two zones (New York City and the LHV), even though this proposal violates the Tariff requirement that the proxy unit be the unit with the "lowest" fixed costs. The Board should modify the Proposal by selecting the unit with the lowest fixed costs as the proxy unit as follows: (1) for the LHV, either a Frame unit with SCR that is not dual-fueled, whichever is lower cost; and (2) for New York City, a Frame unit with SCR that is dual-fueled.<sup>6</sup>

## A. The Proxy Unit for Zone J and the LHV Should be the Least Expensive Unit, a Frame Unit with SCR

The Proposal provides the estimated cost of a simple cycle Frame turbine plant with SCR in various regions of the state, but recommends against using those estimates as the basis for the CONEs in any of the NYCA subzones or "Localities." SCR would be required in New York City and could be required in portions of the LHV for a gas turbine to limit its nitrogen oxide ("NOx") emissions.<sup>7</sup> The Proposal adopts the consultants' recommendation to reject a Frame Unit with SCR in these zones because of its alleged technological infeasibility.<sup>8</sup> The consultants found that a simple cycle Frame turbine plant with SCR should not be evaluated due to problems

if the unit with the lowest fixed costs is not chosen as the proxy unit. The NYISO filed for a phase-in when it originally filed to implement sloped demand curves and a similar phase-in would be justified here if the NYISO files as set forth in the Proposal.

<sup>&</sup>lt;sup>6</sup> The Indicated NYTOs also assume that, if the Board determines that a Frame unit with SCR is feasible, then it would be the proxy unit for any zone in which it is the least cost unit.

<sup>&</sup>lt;sup>7</sup> As discussed below in Point B, we do not believe that such a unit is required to have SCR, but assume it for the purposes of this section.

<sup>&</sup>lt;sup>8</sup> Proposal at 28.

with controlling exhaust temperatures that can be necessary for the SCR to operate.<sup>9</sup> The generation technology consultant, in its July 9, 2013 presentation,<sup>10</sup> stated that SCRs have not been "successfully applied" to Frame turbines with higher exhaust temperatures and cited two examples: Puerto Rico Electric Power Authority, Central Cambalache facility, and the Riverside Generating Company in Frankfurt, Kentucky.

The Board should reject the consultant's determination. First, these two facilities were placed into operation more than 10 years ago<sup>11</sup> and are therefore not an appropriate indicator of technology available today. Second, the Central Cambalache facility was an *oil-only* facility and the evidence is that the SCR failed due to "catalyst poisoning due to high SO2 emissions resulting in sulfuric acid mist (H2SO4) emissions as well as emissions of heavy metals."<sup>12</sup> Third, the Riverside Generating Company facility remains in operation today and has not shown any failing due to its SCR although it appears that the SCR is no longer used in operation.<sup>13</sup>

Most importantly, the generation consultant ignored more recent information which shows that a Frame Unit with SCR is feasible. Specifically, there is substantial evidence that SCR is a feasible technology for a Frame turbine because exhaust temperatures could be reduced

<sup>&</sup>lt;sup>9</sup> *Id.* at 12.

<sup>&</sup>lt;sup>10</sup> Responses to Comments Demand Curve Reset Study Report, S&L presentation to NYISO ICAP Working Group, available at:

http://www.nyiso.com/public/webdocs/markets\_operations/committees/bic\_icapwg/meeting\_materials/2013-07-09/SL%20Pres%20ICAP%20WG%202013.07.09.pdf

<sup>&</sup>lt;sup>11</sup> Riverside Generating Company commenced service in 2002

<sup>(</sup>http://www.epa.gov/airtransport/pdfs/controltechnologies.xls); and Puerto Rico Electric Power Authority commenced service in 1997

<sup>(</sup>http://www.epa.gov/region7/air/title5/petitiondb/petitions/prepa\_cambalache\_petition2005.pdf).

<sup>&</sup>lt;sup>12</sup> Bridgeport Peaking Station Bridgeport, CT, Permit to Construct Application, p 4-7 (June 2007). This application concludes that "the installation of SCR at the Riverside Generating facility in Kentucky and discussions with SCR vendors indicates that the application of SCR to the project is technically feasible." *Id*. The report is available at <u>http://www.ct.gov/csc/lib/csc/pendingproceeds/petition 841/attachment f bulk exhibit air permit app june07.pdf</u> Notably, the developer of this project stated that it *intended* to combine a Frame turbine operated in combustion turbine mode with SCR but it appears that this project was ultimately abandoned.

prior to treatment with SCR. The Marsh Landing Generating Station in California, which is owned by NRG Energy, Inc. (formerly owned by GenOn prior to its merger with NRG), combines four Frame model turbines in simple cycle configuration with SCR that has a total capacity of 720 MW. The California Energy Commission decision approving construction of the plant expresses no concern with the feasibility of using SCR. It notes only that "[d]ilution air fans will temper flue gas temperatures to meet SCR catalyst temperature requirements."<sup>14</sup>

The Marsh Landing facility utilizes the same Siemens SGT6-5000F technology that was examined by the consultant's final report. The consultant stated with respect to the Marsh Landing facility that "[e]missions data are publicly available and will be monitored," and it does not appear that the consultant engaged in any follow-up. Instead, the consultant based its rejection of this Frame Unit with SCR on its statement that "[o]ur experience is that clients often choose aero-derivatives or combined cycles to avoid technical and operational issues."<sup>15</sup> But this subjective statement is directly contrary to the Tariff requirement that NYISO choose the feasible unit with the lowest fixed costs and not what the consultant's clients may have "often" chosen in the past.<sup>16</sup>

Moreover, PJM has required that the reference resource used to determine its demand curve be modeled as a Frame unit with SCR technology since 2007.<sup>17</sup> In the last PJM demand curve reset, no supplier (many of whom also participate in the NYISO) protested the use of the

<sup>14</sup> California Energy Commission, *Marsh Landing Generating Station*, Docket Number 08-AFC-03, at 8 (August 31, 2010), available at: http://docketpublic.energy.ca.gov/PublicDocuments/Regulatory/Non%20Active%20AFC%27s/08-AFC-

3%20Marsh%20Landing/2010/August/TN%2058247%2008-31-10%20Final%20Commission%20Decision.pdf.

<sup>15</sup> Sargent & Lundy presentation to ICAP Working Group on July 9, 2013: <u>http://www.nyiso.com/public/webdocs/markets\_operations/committees/bic\_icapwg/meeting\_materials/2013-07-09/SL% 20Pres% 20ICAP% 20WG% 202013.07.09.pdf</u>

<sup>&</sup>lt;sup>16</sup> *Responses to Comments Demand Curve Reset Study Report*, Presentation to NYISO ICAP Working Group, Christopher D. Ungate (July 9, 2013).

<sup>&</sup>lt;sup>17</sup> PJM Interconnection, L.L.C , 117 FERC ¶ 61,331 (2006)

Frame Unit with SCR as the proxy unit for the demand curve.<sup>18</sup> The Proposal's response to PJM's longstanding use of a Frame Unit with SCR is that NYISO uses a process that is more "rigorous" than PJM's,<sup>19</sup> but the Proposal provides no basis in its Tariff for doing so and ignores that the FERC has on numerous occasions determined that it is just and reasonable for a proxy unit to be a Frame Unit with SCR.<sup>20</sup> The Proposal's rejection of the least cost proxy unit cannot be supported by the Proposal's unexplained claim that its process is more "rigorous" than PJM's, nor does it provide a basis for deviating from the FERC's numerous decisions approving the use of this unit.

The Proposal fails to fully consider the Frame Unit with SCR because it improperly rejected this option. But it appears that the proposal to reject a Frame model turbine with SCR as the proxy unit for the New York City and the LHV will increase capacity costs for New York State customers by more than one billion dollars over the next three years, an amount that simply cannot be justified when there is a lower cost feasible alternative. The Indicated NYTOs therefore request NYISO to utilize the Frame model turbine with SCR as the proxy unit for these regions, with the only difference being that the proxy unit should be dual-fueled for New York City and should not have dual fuel capability in the LHV.

<sup>&</sup>lt;sup>18</sup> The PJM tariff provides: "Reference Resource" shall mean a combustion turbine generating station, configured with two General Electric Frame 7FA turbines with inlet air cooling to 50 degrees, Selective Catalytic Reduction technology in CONE Areas 1, 2, 3, and 4, dual fuel capability, and a heat rate of 10.096 MMBtu/ MWh PJM Open Access Transmission Tariff, Attachment DD, § 2.58. The use of the Frame Unit with SCR for PJM was most recently approved by the FERC in PJM Interconnection, LLC, 138 FERC ¶ 61,062, P 19 at n. 24 (2012).

<sup>&</sup>lt;sup>19</sup> Proposal at14.

<sup>&</sup>lt;sup>20</sup> PJM Interconnection, L.L.C , 117 FERC ¶ 61,331 (2006), in PJM Interconnection, LLC, 138 FERC ¶ 61,062, P 19 at n. 24 (2012)

B. The Assumption that the Proxy Unit for the LHV Zone Must Be Dual Fueled is Incorrect, and the Board Should Consider the Adoption of a Frame Unit without SCR that does not have Dual Fuel Capability in the Lower Hudson Valley as the Proxy Unit.

The NYISO's obligation is to adopt the least-cost unit as the proxy unit. It appears that a Frame unit with SCR and no dual fuel capability would be the least-cost unit for the LHV. If, however, a Frame unit without SCR is the least cost unit in the LHV, then it should be the proxy unit for that zone. In addition, if the Board opts not to utilize a Frame turbine plant with SCR as the basis for the CONE in New York City and the LHV, it should adopt a single Frame unit without SCR for the LHV. The Proposal's assumption that the use of a Frame Unit without SCR could not meet emissions requirements because it needs to have dual fuel capability cannot withstand scrutiny.

It is unreasonable to assume that a combustion turbine constructed in the Lower Hudson Valley during the three-year reset period (i.e., May 2014 through April 2017) must have dual fuel capability. At present, there is no NYISO dual fuel requirement for generators in the Lower Hudson Valley. Some Local Distribution Companies ("LDCs") – *e.g.*, Con Edison, O&R and Central Hudson – require generators that interconnect with their gas systems to install back-up fuel capability, but the interstate pipelines serving the area, as is typical, have no such requirement. Moreover, neither NYISO's interconnection requirements nor its capacity market rules require generators to have dual fuel capability, and there is currently no pending proposal to create such a requirement. It is uncertain, at best, that such a dual fuel requirement would take effect in the next three years and would be applicable to a combustion turbine.

The Proposal contends that units must have dual fuel capability because (1) LDC gas service tariffs require generators to have back-up fuel; (2) a "majority" of recent projects that

-8-

have been completed or proposed in these areas have had dual fuel capability; and (3) dual fuel capability expands the siting options for these generators.<sup>21</sup> There are, however, three projects currently seeking to interconnect in the LHV and none have proposed to interconnect to an LDC gas system; each would interconnect directly to an interstate pipeline.<sup>22</sup> Additionally, although two of the three projects have proposed to install back-up fuel capability, one has stated that it will be a gas-only facility.<sup>23</sup> The Board should reject the Proposal's reasoning that, because a "majority" has chosen to be dual-fueled, NYISO should assume that the proxy unit for the LHV must be dual-fueled. NYISO's obligation, under its Tariff, is to choose the unit with the lowest fixed costs and not what the "majority" of units may be in the interconnection queue, especially when none of those units is a combustion turbine.

Lower Hudson Valley developers that choose to install dual fuel capability likely do so because they believe the economic benefits of doing so will exceed the costs for their combinedcycle units. But this is not a reason to increase capacity costs to customers. The gas-fired combined-cycle generation projects proposed in the LHV are significantly different than the simple cycle plants reviewed in the Proposal, because they use a different technology and are significantly larger than the proxy units evaluated in the Report. Projects with these characteristics are intended to run at a much higher capacity factor than the simple cycle units evaluated in the NERA Final Report and would potentially benefit, to a greater extent, from being able to run more often economically due to fuel flexibility. In the absence of any NYISO

<sup>&</sup>lt;sup>21</sup> Proposal at 4.

 $<sup>^{22}</sup>$  At the very least, the NYISO Proposal should exclude the cost of connecting to an LDC gas system and the associated 27¢ per Dth transportation charge. Since none of the projects in the interconnection queue are seeking to interconnect with an LDC's gas system, the cost of LDC transportation is unnecessary and should, therefore, be eliminated from the cost of the proxy unit used for the LHV zone.

<sup>&</sup>lt;sup>23</sup>Cricket Valley Final Environmental Impact Statement, Page 1-13. (Link)

dual fuel requirement for the LHV, it is unreasonable to assume that a simple cycle turbine would need, or be willing to pay for, dual fuel capability.<sup>24</sup>

Finally, with respect to the argument that requiring dual fuel capability will expand siting options, the Proposal has not presented any analysis demonstrating that it will not be possible to site new gas-fired generators without dual fuel capability, and there is already one generator in the interconnection queue that has not chosen to be dual-fueled. Consequently, it is highly unlikely that developers would choose to site at any locations where dual fuel capability is required, thereby increasing their costs unnecessarily.<sup>25</sup> An economically rational developer will not install dual fuel capability unless it perceives it will benefit from doing so in the form of increased energy and ancillary revenues. Including the cost of dual fuel capability in the proxy unit cost will overpay developers that choose not to install such capability given that there is no requirement to do so. Accordingly, a project of the configuration assumed by NYISO may not be economically viable, as required under the Tariff, so long as lower-cost configurations are available.

The Proposal fails to justify that a peaking unit located in the LHV must have dual fuel capability. Given this, peaking units without dual fuel capability should be eligible for consideration as the proxy unit for the LHV. As a result, a single-unit Frame GT without SCR that would not be dual fueled should be adopted if it is least-cost, as it would meet the emissions

<sup>24</sup> The Indicated NYTOs provided an appendix to their comments on the draft Staff report that describes how a peaking unit would be able to be operate without being dual fueled Comments of the Indicated New York Transmission Owners (Aug. 30, 2013) at 8-13, available at: http://www.nyiso.com/public/webdocs/markets\_operations/committees/bic\_icapwg/meeting\_materials/2013-08-22/NYTO% 20Demand% 20Curve% 20Reset% 20Comments.pdf.

<sup>&</sup>lt;sup>25</sup> IPPNY has also argued that the proxy unit used for the LHV zone should have dual fuel capability suggesting that there are similarities between the lower Hudson Valley and New England, but IPPNY fails to provide the basis for such a comparison.

standards applicable to most of the LHV zone. Emissions requirements in most areas of the LHV are no more restrictive than in Zone C or Zone F. As shown in Figure II-1 of the NERA Final Report and Tables 1 and 2 of the Proposal, Prevention of Significant Deterioration ("PSD") emissions thresholds in Zone F and most of the Lower Hudson Valley, including Dutchess, Putnam, Sullivan, Ulster and portions of Orange counties, are effectively identical. The more restrictive emissions constraints described in the NERA Final Report apply only in Rockland, Westchester and lower Orange counties. Table II-6 of the Final Report acknowledges that a simple cycle GT could operate up to 1,056 hours per year in Dutchess County without exceeding NOx emission limits, a level that is virtually identical to the 1,075 hours per year permitted in Zone F.<sup>26</sup> Indeed, two of the three major generation projects proposed in Zones G, H and I in recent years would be located in areas where NOx emissions of up to 40 tons per year would be permitted. Consequently, a Frame unit without SCR that is not dual-fueled can be permitted and operated in the LHV. It should also be considered as the proxy unit for the LHV and should be adopted as the proxy unit for the LHV if it is the least cost unit.

The Indicated NYTOs estimate that this incorrect assumption that the Proxy Unit for the LHV zone must be dual fueled, thus preventing the less expensive Frame Unit without SCR to be used as the Proxy Unit in the LHV zone instead of the LMS 100 unit, could also unnecessarily increase capacity costs for electric customers in the G-H-I zone similar to the impact of failing to use the Frame unit with SCR, *i.e.*, by as much as \$420 million over the three-year period to which the proposed ICAP demand curves will apply.

<sup>26</sup> NERA Final Report, p. 34

http://www.nyiso.com/public/webdocs/markets\_operations/committees/bic\_icapwg/meeting\_materials/2013-08-13/Demand%20Curve%20FINAL%20Report%208-2-13.pdf

II. THE PROPOSAL HAS NOT PROVIDED SUFFICIENT JUSTIFICATION FOR SHORTENING THE AMORTIZATION PERIOD

The Proposal adopts the consultants' recommendation to base its calculation of the net cost of developing a proxy unit on the assumption that the developer must recover all of those costs over the first 20 years it is in service (in the case of the proxy unit used for the NYCA ICAP demand curve) or 25 years (in the case of the proxy unit used for the demand curves for the three Localities). While the NERA Final Report states only that the 20-25 years life cycle is "an economic life that represents the period over which an investor would analyze cost recovery,"<sup>27</sup> it concedes that "a new peaking unit will likely physically last thirty years or more." NERA then claims without any support that "investors will use a shorter time horizon in determining the levelized cost."<sup>28</sup>

In the last two demand curve reset cycles, the consultants have based their CONE estimates on a 30-year life cycle. The proposed change results in effective amortization periods for the proxy generators that are far shorter than the effective amortization periods used in the past. The amortization period for the New York City proxy generator has declined from 17.5 years in the 2011-14 demand curve reset to 14.5 years in the Proposal, while the amortization period for the NYCA has declined from 20.5 years to 17.5 years.<sup>29</sup>

Neither the NERA Final Report nor the Proposal provides any citations or sources to support the claim that investors will examine the proxy unit's value over a 20-25 year period

<sup>&</sup>lt;sup>27</sup> NERA Final Report, pp. 91-92.

<sup>&</sup>lt;sup>28</sup> Id.

<sup>&</sup>lt;sup>29</sup> The amortization period is typically shorter than the period over which a developer must recover its investment, because the amortization period indicates the period of time over which the developer will recover its investment if the amount of capacity provided in the summer is equal to the minimum requirement. The demand curve, on the other hand, assumes that there will be some excess capacity provided in equilibrium, so it takes longer to recover the investment.

instead of 30 years. Moreover, the NERA Final Report offers no explanation as to why developers will demand an accelerated recovery of their funds for the unit that would be built in the Rest of State region (i.e., Zones A-F). The assumptions made by NERA regarding technological progress are the same as in the last reset, so there is no reason to believe that technological progress will make these plants economically obsolete sooner than would have been expected when the last reset was performed.

The use of a 20-25 year life cycle amounts to an assertion that investors will place a value of zero on potential cash flows more than 20 or 25 years in the future. This conclusion is contradicted by the results of NERA's financial model, which indicate that each of the plants evaluated will remain economic beyond the 20-25 year life cycle. Moreover, simple cycle units older than 40 years are common in New York City, as shown in the table below.



Chart 1. Age of New York City Peaking Units

Even if one were to assume that the unit will receive no energy revenues, its capacity payment (at Net CONE) will likely exceed its remaining costs. Even when many of them have a low capacity factor (1 percent or less), they continue to receive a steady capacity payment. The net present value of the residual cash flow after year 25 (*i.e.*, Net CONE less operating and maintenance costs, property taxes and insurance times one minus the tax rate) is over \$1200/kW or over 60 percent of the initial investment. This high residual value demonstrates the reason most existing peaking units continue to operate well past 40 years.

Finally, it appears that NERA may have changed the amortization period in response to an IPPNY comment without conducting a rigorous independent analysis as to what the appropriate time period should be. In its comments on the NERA Final Report, IPPNY stated:

[I]f the market exceeds the model's assumed excess levels by a very small amount, it will cause the amount of time required to recover the proxy plant investment to rise to unreasonable levels. For example, for both the NYC and NYCA Demand Curves, recovering financing costs would take more than 35 years if the average excess level was 2.5%. Given that a 2.5% average excess level is well below the historic excess and also well below what might be expected from forecast errors alone, it is unlikely that the proxy unit could be funded based upon the proposed Demand Curves. *Therefore, the Demand Curves should be based upon shorter amortization periods to ensure a reasonable period in which to recover the investment costs over the average excess levels that are likely to occur in the market.*<sup>30</sup>

The Tariff provides that "[t]he cost and revenues of the peaking plant used to set the reference point and maximum value for each Demand Curve shall be determined under conditions in which the available capacity is equal to the sum of (a) the minimum Installed Capacity requirement and (b) the peaking plant's capacity equal to the number of MW specified

<sup>&</sup>lt;sup>30</sup> IPPNY Comments on Final Consultant Report: NYISO Demand Curves (Aug. 16, 2013), at 9 (emphasis added).

in the periodic review and used to determine all costs and revenues.<sup>31</sup> In claiming that NYISO should assume a shorter amortization period to account for the actual excess being allegedly higher than the assumed excess, IPPNY was asking NYISO to execute an end run around the Tariff provision requiring the appropriate amount of excess.

NYISO should reject such suggestions that it violate its Tariff. Instead, given that no other rationale has been provided for the assumption that developers will disregard revenue streams more than 20-25 years after a plant goes into service, NYISO should include 30 years' of energy and capacity revenues in these calculations, as it has done in past resets.

Alternatively, if NYISO elects to keep the unsupported 20-25 year assumption made by the consultants, it should revise the residual value for the proxy units to reflect the fact that a 20-to-25-year-old generator is more valuable than a 30-year old generator.<sup>32</sup> The NERA Final Report and the Proposal both assume that the residual value of the LMS 100 plant is 5 percent of its original value and that the residual value of the ROS Frame GT is zero, the same values that were used for each of those units in the last demand curve reset, when the demand curves were based on a 30-year life cycle. This does not properly recognize the additional net revenues that the proxy unit will receive during the remainder of its useful life and is not consistent with the sales price that older plants have often realized in New York, as was most recently demonstrated by the announcement earlier this month that US Power Generating Company ("USPG") will be

<sup>&</sup>lt;sup>31</sup> MST section 5.14.1.2.

 $<sup>^{32}</sup>$  For example, if a generator receives the same cash stream (in inflation-adjusted terms) each year, the net present value of that cash stream over 20 years is only 77 percent of the net present value of that cash stream over 40 years. Consequently, by disregarding revenues received in the  $21^{st}$  through  $40^{th}$  years of such a generator's life, the NYISO would disregard 23 percent of the value of that generator. In comparison, disregarding revenues received over the  $31^{st}$  through  $40^{th}$  years of such a generator's life would only cause the NYISO to disregard 8 percent of the value of that generator.

acquired by Tenaska Capital Management for \$902 million, implying a value of \$475/kW for USPG's generation.

The Indicated NYTOs estimate that assuming that developers must recover their investments over 20-25 years, instead of the more reasonable 30 years assumed in the past, could increase capacity costs by as much as \$500 million over the three-year period to which the proposed ICAP demand curves will apply.

# III. THE ZERO-CROSSING POINT FOR THE LHV ZONE DEMAND CURVE SHOULD BE 114 PERCENT

The Proposal reversed changes to the zero-crossing points to the ICAP demand curves used for the NYCA, the LHV zone, and New York City that NYISO Staff had recommended in the initial draft version, which were based upon analysis performed by the Market Monitoring Unit ("MMU") of the marginal impact that additions of capacity in each of those regions would have on loss of load expectation ("LOLE"). The Proposal explained the reversal as follows:

In its review of the various methodologies and recommendations regarding the zero-crossing points, the NYISO found that the analyses conducted were highly sensitive to methodology, input assumptions and transmission system topology.... The NYISO contends that there is insufficient information to demonstrate that a revised methodology would send a more accurate price signal or otherwise better align the ICAP Demand Curve with system reliability. Thus, there would not necessarily be a benefit that could, in whole or in part, offset the additional uncertainty that might be introduced. Therefore, the NYISO proposes to make no changes to the existing NYCA, NYC and LI zero crossing points....<sup>33</sup>

The Indicated NYTOs do not disagree with this argument, but it does not address the issue of where to set the ZCP for the LHV zone. Concerns that changing ZCPs from current levels would unnecessarily introduce uncertainty into the ICAP market may be relevant for the other ICAP demand curves, since those ZCPs have remained the same since 2003, when the

<sup>&</sup>lt;sup>33</sup> Proposal at 31-32.

current demand curve-based approach to operating the ICAP market was introduced. But there is no current ZCP for the LHV zone, so such concerns do not apply and the recommendation contained in the Proposal is not based on any analysis. The NERA Final Report proposed setting the ZCP for the LHV zone at 115 percent because it is halfway between the NYCA ZCP (112 percent) and the New York City and Long Island ZCPs (118 percent). The Proposal simply repeated this recommendation without adding any analysis to support it.

Although we share some of the Proposal's concerns that the analysis conducted by the MMU may not be robust to changes in system conditions in the future, it is nevertheless the <u>only</u> <u>analysis</u> that has been performed regarding where the ZCP for the LHV zone should be set. An imperfect analysis is better than no analysis at all. Consequently, given that the MMU's analysis is the only analysis available, the Indicated NYTOs believe that the ZCP for the LHV zone should be set at 114 percent of the requirement for that Locality, consistent with the MMU's finding that the marginal impact that additional capacity in the LHV zone has on LOLE reaches zero when the amount of capacity provided in that Locality is about 114 percent of its requirement. The Indicated NYTOs estimate that setting the ZCP for the LHV zone at 115 percent of the requirement, instead of 114 percent, may increase capacity costs by as much as \$70 million over the three-year period to which the proposed ICAP demand curves will apply.<sup>34</sup>

#### CONCLUSION

The Indicated NYTOs respectfully request that the Board modify the proposed ICAP demand curves consistent with the comments and recommendations herein: (1) the ICAP

<sup>&</sup>lt;sup>34</sup> The Indicated NYTOs concur, however, that the NYISO should not commit to using this methodology in future demand curve resets.

demand curves for New York City and the LHV should be based on the net cost of developing a two-unit simple cycle Frame turbine plant with SCR, a technology whose feasibility is now proven; (2) a single-unit Frame GT without SCR and without dual-fuel capability should be considered and adopted as the proxy unit for the LHV zone if it is the least-cost unit; (3) the calculation of net CONE should continue to include 30 years' of projected energy and capacity revenue, as in past demand curve resets; and (4) the ZCP for the LHV zone should be set to 114 percent of the requirement, consistent with the only analysis that has been performed of the appropriate ZCP for that zone.

Dated: October 2, 2013

Respectfully submitted,

**The Indicated NYTOs:** Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York Power Authority, New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation.