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Via Electronic Mail
June 5, 2013

Hon. Jeffrey C. Cohen
Acting Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

Re: Case 12-E-0577 – Proceeding on Motion of the Commission to Examine Repowering Alternatives to Utility Transmission Reinforcements.

Dear Secretary Cohen:

NRG Energy, Inc. ("NRG") submits these supplemental comments and a third party assessment of the two benefits studies conducted by NRG's consultant Longwood Energy Group LLC ("LEG") and alternatively the report conducted by National Grid, upon which they based their recommendations filed with the commission on May 17, 2013. The two reports: "*Report and recommendations comparing repowering of Dunkirk Power LLC and transmission system reinforcements*", published by National Grid (NG) on May 17, 2013 ("National Grid Report"), and "*NRG Dunkirk Repowering Project Economic Impact Analysis*", published by Longwood Energy Group LLC ("LEG") on March 20, 2013 ("LEG Report"), were each submitted to Case 12-E-0577 at the New York Public Service Commission (the "Commission").

As NRG stated in its initial reply on May 22, 2013, many aspects of the National Grid Report are flawed and raise serious questions concerning the findings which led them to recommend development of their transmission upgrades over the Dunkirk repower or gas conversion options. NRG has subsequently engaged London Economics International LLC

("LEI"), a well-known firm with expertise in performing such energy market and macro-economic cost-benefit studies, including extensive experience in market analysis for the New York power market and neighboring regions, to conduct a review of two reports ("Comparative Review"). In the attached Comparative Review, "*Comparative review of May 17, 2013 National Grid and March 20, 2013 Longwood Energy Group reports submitted in Case 12-E-0577*", LEI identifies the differences in the modeling framework, modeling inputs and assumptions. LEI also compares the results of the two reports and considers potential explanations for the differing conclusions. NRG offers this additional perspective to aid the Commission and Department of Public Service Staff in its review of the studies conducted by each company and to provide assistance and information that may help with its own analysis of the alternatives.

I. LEI COMPARATIVE REVIEW

LEI's assessment of the National Grid report identified a number of factors that contributed to the different results between the two studies and led to an understatement of benefits for the Dunkirk Repowering project ("Project"). In LEI's opinion, the differences are partially related to modeling inputs, but also to varying analytical approaches with respect to what measures should be used for the evaluation. In terms of measuring consumer benefit, National Grid focuses on production cost benefits, while LEG reports both market price impacts and production cost savings. LEI believes both are important measures for the Commission and states that "National Grid is incorrect in dismissing market price impacts altogether. Indeed, given the constructs of the NYISO markets for energy and capacity (and given that these market products form the majority of the supply costs of power to consumers) market prices are more relevant for a cost-benefit analysis focused on the consumer. It is also notable that NYISO recognizes the importance of market price impacts in its second stage of CARIS." Additionally, while National Grid has provided an assessment of potential delivery

cost impacts, these are cost related only, and do not take into account any capacity and energy market impacts or macroeconomic benefits. Therefore, this aspect of the analysis does not offer a complete picture.

While the various findings and recommendations of the National Grid report are described by LEI in great detail in its Comparative Review, there are several that stand out most notably in NRG's view as having had a significant impact that led to an incorrect conclusion and recommendation by National Grid. We believe that a balanced assessment that appropriately models and incorporates all of the relative costs and benefits of repowering the Dunkirk plant at the existing sites would demonstrate the true benefits of this option and support a finding that it is in the best interest of New Yorkers over the long term.

Overall, LEI agrees with the premise of a cost-benefit analysis, but believes that the National Grid Report did not properly address all of the benefits of repowering to consumers, and may have too narrowly considered "consumers" in its definition of the cost-benefit analysis. Moreover, National Grid asserted that energy and capacity market price impacts should be ignored in assessing the net benefits to, and rate impacts on, consumers. However, this is a central benefit of the Dunkirk Repowering project. According to LEI, Grid "underestimated the macroeconomic benefits of the repowered plant by excluding the potential energy and capacity market price reductions and resulting cost savings to customers." LEI also confirmed that the specific energy and capacity price reductions used in the Dunkirk Repowering proposals are reasonable assumptions based on forecast market demand and prices.

One of the most dubious aspects of the National Grid Report is its simulation study projections that suggests the combined cycle repowering of Dunkirk would increase New York production costs and that much of its power would be exported to neighboring regions. LEI raises serious questions with respect to that finding, concluding that the modeling in National

Grid's Report "may be over-stating the level of simulated imports and exports between interconnected markets and therefore 'exporting' all the market benefits of the repowering to other markets (such as PJM)." The issue is that GEMAPS modeling requires detailed calibration of hurdle rates in order to achieve appropriate results over the interties, otherwise, "leakage" of production costs to external markets may occur. LEI is concerned that the calibration in the Grid study was not done correctly which likely led to Grid's low estimate of energy price reductions that would result from the Dunkirk repowering and National Grid's forecast production cost changes.

With regard to the capacity analysis, LEI finds that the average capacity price reduction forecast in the National Grid Report "is lower than what would be expected from the current demand curve parameters for NYCA capacity market. LEI believes this is due to a combination of 1) Cayuga not retiring in the reference case, which depresses reference case capacity prices and 2) new entry being delayed one year in the repowering case." The assumption for keeping Cayuga in the reference case is inconsistent with National Grid's assumption to retire Dunkirk in the reference case and results in additional supply and lower capacity prices as the baseline for comparison. This assumption is illogical because Cayuga is similarly situated in that it has filed notice with the Commission of intent to mothball and is temporarily continuing to operate under a Reliability Support Services agreement.

The National Grid report incorrectly asserts that all the risks of the Dunkirk project would be transferred to consumers. According to LEI, although the project would have a regulatory approved power purchase contract, all of the construction risk would be on the developer, NRG, rather than consumers. LEI also found that the transmission solution likely implemented by Grid would be on a cost-of-service basis and that the construction risk of Grid's project, not NRG's, would be transferred to consumers. This risk differential and the relative benefit to consumers were not reflected in National Grid's analysis.

LEI also noted that "Grid may have allocated the costs of the repowering to a very small group of consumers", despite the fact that benefits from the repowering or refueling projects will accrue to ratepayers and consumers across the entire state. National Grid points out in its report that it advocates for a broader recovery base for purposes of cost allocation of a repowering project such as those being considered in response to a reliability problem and in fact, National Grid supports cost allocation across the entire state. LEI concludes that "a broader cost allocation, paired with a more comprehensive consideration of benefits, may lead to a different conclusion."

In the Repowering Order, the Commission also asked for calculation of environmental impacts. LEG recorded 2.6 million metric tons of reduced CO_2 emissions, 4,800 metric tons of reduced SO_2 emissions, and 5,000 metric tons of reduced NOx emissions over the 10-year forecast period, from the repowering of Dunkirk. Unfortunately, National Grid's Report did not present any emissions findings on a metric ton basis. Percentage reductions were specified, and show that NOx and SO_2 reductions are largely in agreement between the two studies. However, National Grid forecasts an increase in CO_2, which appears to be driven again by the issues with how imports and exports are modeled and the fact that the reduced CO_2 may be allocated to regions outside the NYCA in National Grid's analysis.

II. OTHER NRG COMMENTS

Other flaws in National Grid's proposal are also apparent. Rather than meet its own requirement for a full ten-year reliability solution, Grid's project appears to leave a four-year gap based on the statement in its report which simply affirms that implementing its five transmission projects would be "expected to address all N-1 reliability problems and greatly mitigate N-1-1 reliability exposure resulting from the shutdown of Dunkirk through at least *2021* [emphasis added]." This timeframe falls short of the ten year minimum for long-term solutions required by the Commission and National Grid's study horizon through May 31, 2025

and suggests that additional upgrades and additional costs to fund the reliability gap left by the proposed transmission alternative may be needed. This contrasts with National Grid's finding that the Dunkirk Repowering Option 1 and Option 2 would meet the stated reliability needs. It is also noteworthy that National Grid is separately pursuing other additional transmission upgrades including the construction of a new 345kV/115kV substation at Five Mile Rd, reconductoring of the Falconer-Warren 115kV tie line with PJM, and the Gardenville station rebuild. While National Grid has asserted that these upgrades and others included in its Western NY Reinforcement Project are needed regardless of whether Dunkirk generation remains in service, they also have stated that the retirement advances the need in some cases. These additional upgrades were taken as a given in National Grid's analysis and consequently, the potential benefit to further defer or avoid some of these additional transmission upgrades and their associated costs was not considered in National Grid's review of the Dunkirk Repowering alternative and its cost benefit. Based on information from National Grid's most recent rate case, the cost of these upgrades is believed to be in excess of $100 million dollars.

III. RESPONSE TO COMMENTS OF THE CONCERNED PARTIES

The Business Council of New York State, Inc. ("Business Council"), the Sierra Club, Alliance For Clean Energy New York, the Vote Solar Initiative, Citizens Campaign for the Environment, Earthjustice, Northeast Energy Efficiency Partnership, and Environmental Advocates of New York (collectively, the "Concerned Parties") submitted comments in this proceeding on May 29, 2013. In general the Concerned Parties recommend development of other Non-Transmission Alternative ("NTA") clean energy technologies or alternatively transmission upgrades in lieu of generation repowering.

NRG notes that the Dunkirk Repower Option 1 would be a highly efficient, best available control technology generator that would displace emissions from other existing higher emitting resources. Additionally both Option 1 and the Option 2 Refueling proposed by NRG

in response to the RFP would result in a significant net reduction in emissions. Construction of the combined cycle would facilitate the replacement of the coal fired generation at the site ensuring that it would not return to service in the future and would be permanently retired. Finally, it would complement further deployment of variable renewable energy resources in Upstate New York. The deployment of such clean energy resources, like wind is already happening with NYSERDA authorized to routinely conduct RPS solicitations and millions of dollars per year committed to support this development. Many of the largest and best opportunities for large scale wind deployment lie right in the western NY region and over 2,200 MW are currently proposed in the queue statewide. The combined cycle proposal can be flexibly dispatched and cycled to match the output of intermittent wind and other renewable resources. The NYISO in its 2010 wind integration study concluded that it will need to commit more flexible resources a combined cycle unit to address higher magnitude ramping events and increased variable wind generation on the system. The Concerned Parties state that if NTAs are insufficient or too costly, transmission upgrades are preferable because they can help support renewable energy development, but this statement ignores the fact that flexible combined cycle generation can do so equally as well if not better than transmission supported by older inflexible resources since a combined cycle can be dispatched to compliment variable generation and provide a controllable relief valve to avoid "spilling" water or wind to relieve transmission overloads and benefit NYISO power system operations more broadly than local transmission upgrades.

IV. CONCLUSION

NRG appreciates this opportunity to submit comments to the Commission, and encourages the Commission to comprehensively assess all aspects of the Dunkirk Repowering Project as well as the full range of costs that may be presented under the transmission

alternative. We believe doing so will show superior long-term benefits of the Dunkirk Repowering and is in the best interest of New York consumers.

Respectfully submitted,

/s/ Bradley Kranz

Bradley Kranz
Vice President, Wholesale Regulatory Strategy & Policy
NRG Energy, Inc.

cc: Active parties (via e-mail)

Attachment

Comparative review of May 17, 2013 National Grid and March 20, 2013 Longwood Energy Group reports submitted in Case 12-E-0577

(Executive Summary)

Comparative review of May 17, 2013 National Grid and March 20, 2013 Longwood Energy Group reports submitted in Case 12-E-0577

June 5, 2013

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1 Executive Summary

1.1 Overview of LEI's assignment and focus of review

LEI was engaged by NRG to provide an independent review of two reports: "*Report and recommendations comparing repowering of Dunkirk Power LLC and transmission system reinforcements*", published by National Grid (NG) on May 17, 2013 (hereafter, "NG Report"),[1] and "*NRG Dunkirk Repowering Project Economic Impact Analysis*", published by Longwood Energy Group LLC ("LEG") on March 20, 2013 (hereafter, "LEG Report").[2] The two reports were each submitted to Case 12-E-0577 at the New York Public Service Commission (the "Commission").

The results of the two reports are based on detailed simulation modeling of the New York power market and economy, and therefore relied on a number of modeling tools and software models. Such models require extensive inputs and many assumptions. LEI has not had an opportunity to review the specific modeling parameters and inputs in each study because LEI had access only to the reports and some limited additional descriptive data. Therefore, LEI relied on its own professional experience in conducting similar analyses to support its findings and recommendations.

It should also be noted that LEI's review focused on the substance of the economic analyses, rather than commenting on any technical/reliability matters addressed in either of the reports.

1.2 Summary of key findings

A review of the two reports quickly makes clear that the results of LEG's analysis and NG's analysis differ significantly. In LEI's opinion, the differences are partially related to modeling inputs, but also, and perhaps just as importantly, to varying analytical approaches with respect to what measures should be used for the evaluation. LEI's review of the NG Report indicates that it employed a narrow view on analytical metrics (e.g., exclusion of projected market price reductions from consideration in the cost-benefit analysis and in the macroeconomic study) and that this may contribute to the negative net benefits it estimates for the combined cycle repowering project. On the basis of prior experience in conducting similar economic analyses, LEI also believes that PA Consulting's (hereafter, "PA") modeling may have understated the energy market price reductions and production cost savings due to the assumptions inherent in the model's treatment of interregional trade. In contrast, LEI finds that LEG's analysis may overstate the benefits to consumers of the repowering as they did not take into account the

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[1] National Grid. *Report and recommendations comparing repowering of Dunkirk Power LLC and transmission system reinforcements*. May 17, 2013.

[2] Longwood Energy Group LLC. *NRG Dunkirk Repowering Project Economic Impact Analysis*. March 20, 2013

proposed contracts costs to support the repowering projects.[3] The following figure lists areas of concern.

Figure 1. Areas of concern in reports

National Grid Report	Longwood Report
• Lacking price impacts in the benefit side of the equation, and allocated costs to a very small set of beneficiaries • Production cost changes and market price impacts may be under-stated due to hurdle rate assumptions used in the calibration of the GEMAPS model, and other modeling inputs/assumptions for neighboring markets • Production cost changes in the cost-benefit analysis were not comprehensive - productive efficiency changes modeled to occur outside the NYCA were excluded • Cayuga was not retired in the reference case and may therefore bias downward the market price impacts forecast for Dunkirk • New entry and retirements in response to Dunkirk retirement need to be further examined • Capacity market impacts were lower as a result of PA's assumptions on the New Capacity Zone, which is not yet approved • Macroeconomic modeling of GDP impacts and employment did not take into account the benefits of market price reductions	• Cost-benefit analysis was not completed as the costs of the contracts were not known at the time the report was prepared • Market price impacts and production cost changes did not consider the potential for changes in imports and exports • New entry and retirements in response to Dunkirk retirement need to be further examined • Macroeconomic modeling of GDP impacts and employment did not take into the costs of the contracts

LEI's specific findings for each report are detailed below. Note that these are presented in the natural order of the analysis (e.g., simulation modeling followed by macroeconomic analysis), and does not indicate a specific level of significance. Without access to the specific models and inputs, it would be difficult to establish which of the elements noted below contributed more to the differences in results. LEI has not had the opportunity to examine all aspects of the underlying market simulation studies and macroeconomic modeling that underpin the NG Report and LEG Report. Therefore, LEI's conclusions do not specify a numerical value adjustment to either report. Instead, LEI proposes a number of additional comparative analyses be undertaken to confirm the preliminary conclusions.

NG Report

[3] NRG clarified to LEI that LEG did not have the contract costs available to it at the time that it was conducting its analysis. The contract costs were developed by NRG specifically for the RFP proposal, which was submitted 6 days after the release of the LEG Report.

Analytical framework

1. NG presents a cost-benefit analysis of several repowering options as well as its proposed transmission solution. LEI agrees with the premise of a cost-benefit analysis, but believes that NG did not properly address all the benefits to consumers, and may have narrowly considered "consumers" in its definition of the cost-benefit analysis.
2. NG appropriately retained a consulting firm, PA Consulting ("PA"), to run a simulation model to consider how certain repowering projects at the Dunkirk site would affect market prices in energy and capacity markets in New York ISO ("NYISO"). PA used GEMAPS. Although LEI does not use GEMAPS, LEI has had an opportunity to compare the performance of GEMAPS to its own proprietary simulation model in other projects, and is confident that the model can produce accurate simulations if it is well calibrated.
3. LEI disagrees with NG and its consultant, Michael D. Cadwalader, that energy and capacity market price impacts should be ignored in assessing the net benefits (and rate impacts on) consumers; consumers will pay for the costs of the reliability contract and the benefits they may receive from lower electricity supply costs are directly measurable by reference to the projected changes in market prices.
4. NG correctly considered the costs of the repowering options in its cost-benefit analysis. However, it may have allocated the costs to a very small group of consumers. Indeed, NG points out in its report that it advocates for a broader recovery base for purposes of cost allocation of a repowering project such as those proposed by NRG in response to a reliability problem. In fact, NG supports cost allocation across the entire state. A broader cost allocation, paired with a more comprehensive consideration of benefits, may lead to a different conclusion. LEI recommends that NG re-examine the cost-benefit analysis assuming a wider beneficiary pool (consistent with PA's modeling), include all segments of benefits (including market price reductions), and couple the benefits with a broader allocation of costs.
5. Production cost savings advocated by NG are also a useful measure for the Commission to consider in its evaluation of the repowering. Although the production cost metric is used by NYISO for purposes of its assessment of generic transmission projects for reliability under Phase I of the Congestion Assessment and Resource Integration Studies ("CARIS"), it is important to recognize that the NYISO does not make determinations on actual projects for cost recovery in Phase II of CARIS based on production cost savings – the identification of beneficiary savings and cost allocation decisions under NYISO's Tariff use market price metrics (referred to as "zonal LBMP load savings"), as well as other qualifying criteria.[4] LEI believes it is important to recognize that projected production cost savings are not directly relevant to consumers under the construct of wholesale power markets, where the cost of electricity is set by reference to a market price.

Energy Market Modeling Inputs/Assumptions and Results

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[4] NYISO. *NYISO Tariffs: OATT Section 31, Attachment Y New York ISO Comprehensive System Planning Process.* Document Generated On: 10/1/2012. P52.

6. The reported energy price reduction of $0.07/MWh in PA's report appears to be very low. LEI is concerned that PA's simulation modeling of the NYISO energy market using GEMAPS may be over-stating the level of simulated imports and exports between interconnected markets and therefore "exporting" all the market benefits of the repowering to other markets (such as PJM). Exports are dependent on the hurdle rates used in modeling, and LEI is not certain the calibration was done correctly.
7. GEMAPS modeling requires detailed calibration of hurdle rates in order to achieve appropriate results over the interties, otherwise, "leakage" of production costs to external markets may occur. PA states "The GE-MAPS model shows a 1.3 GWh annual average increase in energy exports from NYISO West to PJM in Option 1 relative to the Reference Case". LEI is not certain the hurdle rate calibration was done correctly, as the phenomenon of significant amounts of exports flowing through to PJM as a result of the Dunkirk repowering is surprising. Furthermore, PA describes additional energy being produced in New England ISO, and being wheeled all the way across New York for export in PJM, which seems even less likely. PA's 2010 backcast results suggest that their GEMAPS modeling may not reflect actual export behavior. LEI recommends that PA document its hurdle rate assumptions to the Commission and demonstrate the effectiveness of the assumptions given actual observed import and export trends versus modeled results under the reference case.
8. PA's forecast production cost changes are subject to the same concerns regarding "exporting of market benefits". PA's forecast of production cost increases for NYCA likely arise from this export phenomenon. In addition, NG ignored production costs outside of NYCA, which contribute to the efficiency benefits created by the repowering project. LEI recommends that NG present to the Commission the full set of production cost changes modeled by PA – both inside and outside the NYCA.
9. PA's average capacity price reduction over the forecast period is $0.46/kW-month, which is lower than what would be expected from the current demand curve parameters for NYCA capacity market. LEI believes this is due to a combination of 1) Cayuga not retiring in the reference case, which depresses reference case capacity prices and 2) new entry being delayed one year in the repowering case. NG's assumption for keeping Cayuga in the reference case is inconsistent with their assumption to retire Dunkirk in the reference case.
10. LEI would expect that low capacity prices may lead to future retirements in upstate NY and at that time, capacity market prices would rise back up and the capacity market savings would decline. However, in contrast to the stylized examples presented by NG's expert witness, Mr. Cadwalder, which assumed an immediate response, LEI expects that such market response would take at least three years if not longer to develop. This lagged response is consistent with actual observed dynamics. PA has not included any additional retirements in upstate New York as a result of the lower capacity prices, and in fact has assumed the continued operation of the Cayuga plant. LEI recommends that PA explain its position on the lack of "market response" from existing generation, given its modeled capacity prices.
11. LEI finds PA's modelled "market response" for generic new entry difficult to reconcile with PA's use of a New Capacity Zone ("NCZ") and the relatively low energy market impacts. PA's generic new entry in the reference case does not begin until 2022, and is concentrated in downstate New York (e.g., a peaker in Zone G – which is part of the

NCZ, as well as a combined cycle gas plant ("CCGT") in each of Zone G, NYC and Long Island). LEI does not have sufficient information to comprehensively evaluate the reasonableness of new entry, and recommends that PA provide additional detail about the economics of the new entry units, and its basis for the "market response" from new entrants to the Commission for further review.

12. PA considered the impact of the proposed NCZ in its modeling of the capacity market benefits. However, it should be noted that the specifics of the NCZ are not yet approved and certain. Therefore, PA's analysis may need to be adjusted when the NCZ parameters are finally adopted.

Macroeconomic Analysis

13. NG underestimated the macroeconomic benefits of the repowered combined cycle by excluding the potential energy and capacity market price reductions and resulting cost savings to customers, though it was correct in considering the costs of the contract for repowering in its assessment of the macroeconomic benefits. LEI recommends that NG present a revised REMI study that considers the results of PA's modeling with reference to energy and capacity market price reductions, net of the costs of the contracts. In addition, LEI recommends that NG provide the Commission with a list of actual input variables and values used in the REMI model for comparison with the LEG Report.

Other comments

14. LEI believes that NG's economic comparison of the transmission solution and repowering options through a cost-benefit analysis is generally valid, but requires some adjustment. Although the repowering project would have a regulatory approved contract for cost recovery, it should also be noted that its contract would still inure construction risks to the developer, rather than to consumers. The transmission solution would presumably be implemented by the utility on a cost-of-service basis and therefore construction risk (i.e., risk of cost overruns) would be transferred to consumers. This has not been taken into account in NG's analysis to date and LEI would recommend that NG consider revising its analysis to reflect this differential in risk.

LEG Report

Analytical framework

1. LEG presented a number of metrics in its report for assessing the benefits of a repowering at Dunkirk. However, LEG did not conduct a complete cost-benefit analysis within its Report as it did not have available the contracts that NRG proposed in its submission to NG's Request for Proposals. LEI recommends that LEG supplement its forecast of benefits with a more complete cost-benefit analysis.
2. LEG appropriately used a simulation model to consider how a repowering project at the Dunkirk site would affect market prices in energy and capacity markets in NYISO.

However, LEI has not had an opportunity to use the model that LEG relied upon or study how it performs relative to other models. Thus, LEI cannot comment on the robustness of the specific model used by LEG and that model's ability to represent the New York power market. LEI recommends that LEG supplement its report with a back-cast analysis to demonstrate the relevance of its model to the New York power market.

Energy Market Modeling Inputs/Assumptions and Results

3. LEG's reported 10 year average NYISO energy price reduction of $1.11/MWh is within the range of possible outcomes depending on the starting market price levels in the "reference case" and the projected dispatch dynamics of the repowered combined cycle plant;. LEI would recommend that LEG provide additional detail documenting the extent of the price reduction geographically across NYISO zones so that the Commission can better understand the market impacts and identify the pool of beneficiaries;
4. LEG's reported average NYCA capacity price reduction of $0.89/kW-month in summer season and $0.78/kW-month in winter season is generally consistent with the current demand curve parameters for NYCA spot market for capacity. However, it should be noted the price reduction creates very low capacity prices in NYCA given current market prices for capacity. LEG did not provide its actual capacity price forecast in its report, therefore, LEI recommends that LEG document its capacity price levels in both the reference case and the repowering case for further review and comparison to PA's forecast in the NG Report.
5. Within its Report, LEG did not discuss the repercussions of the repowering on other generators' retirement decisions in the face of such low capacity prices. Some "market response" can and should be projected. For example, LEI would expect that a low capacity price could lead to some incremental future retirements in upstate NY, where generation profit margins are already weak given the amount of oversupply and overall market conditions. If there are retirements, capacity market prices would rebound and the capacity market savings attributed to the repowered combined cycle would decline. However, LEI expects that this repercussion would take at least three years if not longer to develop. LEI recommends that LEG explain its position on the potential for such "market response" given its modeled capacity prices.
6. LEG's new entry profile for NYCA is comprised of renewables, peaking units in NYC and CCGTs in Long Island. The first generic gas-fired entry occurs in 2020. When considering repowering, LEG delays one of the NYC peakers beyond the forecast horizon. LEI would have expected that the NYC peaker would be receiving primarily capacity revenues keyed off the NYC local capacity market, rather than NYCA capacity markets that are impacted by the ROS. LEI does not have sufficient information to evaluate the reasonableness of LEG's forecast new entry, and recommends that LEG provide additional detail about the economics of the new entry units, and the peaker, which is delayed.

Macroeconomic Analysis

7. LEG was conservative in discounting the market impacts by 25% before incorporating them as an input into the REMI macroeconomics model. LEI would recommend that

LEG provide the Commission with a list of actual input variables and input values used in its REMI modeling for purposes of reconciling results with the NG Report.

8. LEG overstated the macroeconomic benefits to the New York economy and employment because its projected market impacts (energy and capacity price reductions) did not deduct the costs of the contract. LEI understands that the omission was outside LEG's control. Specifically, NRG has told LEI that the contract costs were not yet fully developed at the time of publication of the LEG Report. LEI recommends that LEG adjust the inputs it used in the REMI modeling to consider the net costs of the contract (e.g., gross capacity payments to NRG less capacity revenues).

In summary, both the NG Report and the LEG Report employ generally recognized techniques for assessing the economic and market benefits of the repowering project. The differences in results stem from specific assumptions/inputs as well as analytical considerations. On the whole, LEI believes that PA may have understated forecasted energy market benefits of the repowering project within the simulation modeling and NG further constrained the cost-benefit analysis by its choice of metrics used for estimating benefits to customers and the breadth of the cost allocation. On the other hand, the LEG analysis may be overstating net benefits by not taking into account the net costs of the repowering contract. Notwithstanding the above observations, LEI further notes that the draft version of the demand curve reset report recently filed with the ICAP Working Group at NYISO suggests a "very significant (over 75%) increase in the reference point" in Rest of State ("ROS").[5] Therefore, both studies may have been conservative in terms of their estimate of capacity market benefits.

[5] NERA Economic Consulting. *Independent Study to Establish Parameters of the ICAP Demand Curve for the New York Independent System Operator (Interim Draft Final Report)*. May 22, 2013.