UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc. Docket No. ER11-2224-00_

AFFIDAVIT OF STEVEN COREY

Mr. Steven Corey declares:

1. I have personal knowledge of the facts and opinions herein and if called to testify could and would testify competently hereto.

I. Purpose of this Affidavit

2. The purpose of this Affidavit is to describe the deliverability analysis for each of New York City ("NYC"), Long Island, and the Rest of State ("ROS") capacity regions that the NYISO performed for the Compliance Filing.[1]

II. Qualifications

3. My name is Steven Corey, and I am the Manager of Interconnection Projects for the New York Independent System Operator, Inc. ("NYISO"). In this position I am responsible for interconnection studies, which include the NYISO's Class Year Facilities Study process ("Class Year process") pursuant to OATT Attachment S; addressing requests for Capacity Resource Interconnection Service (CRIS) and Energy Resource Interconnection Service (ERIS); performing engineering and related analyses of proposed new, and changes to

[1] Terms with initial capitalization not defined herein or in the compliance filing transmittal letter to which this Affidavit is made part of, have the meaning set forth in the NYISO's Market Administration and Control Area Services Tariff, and if not defined therein, then as defined in the NYISO's Open Access Transmission Tariff.

existing, generation and merchant transmission interconnections, including system impacts; and providing input to interconnection agreements.

4. As the Manager responsible for the Class Year process, I am responsible for determining the eligibility of projects to participate in a Class Year, identifying the inputs in the annual Class Year study, determining whether projects electing to be evaluated for CRIS are deliverable, and if not deliverable, the necessary System Deliverability Upgrade(s) ("SDUs") and project cost allocation(s) thereof; and determining the System Upgrade Facilities ("SUFs") necessary for projects electing ERIS and the project cost allocation(s) of the SUFs.

5. I have held my current position for five years. Prior to my current position, I was Manager of Transmission Planning for the NYISO for six years. I was responsible for interconnection studies during that time as well. Prior to the NYISO, I was employed for nearly 26 years by the New York Power Pool, where, among other positions, I served as Manager of Transmission Planning prior to the transition to the NYISO. I received a Bachelor of Science degree in Electrical Engineering from Clarkson College of Technology (now Clarkson University) and a Master of Engineering degree in Electrical Engineering also from Clarkson University.

III. Background

6. Pertinent to my responsibilities, the Commission's January Order requires that the NYISO, among other things:

- Perform a "deliverability analysis that reflects a level of capacity that slightly exceeds the minimum capacity requirements."[2]
- Calculate the System Deliverability Upgrades, if any.[3]

IV. Performing the Deliverability Test

A. General Approach

7. The deliverability analysis for this compliance filing ("Deliverability Test") is conceptually and procedurally similar to the deliverability analysis performed in the Class Year process. The starting base case ("DCR Base Case") is somewhat different in order to be compliant with the January Order. Other than the variations from the Annual Baseline Transmission Assessment ("ATBA") to create the compliance filing base case, which are described herein, the methodology for evaluating deliverability for the Demand Curve peaking plant MW is the same as the methodology used to evaluate deliverability for projects in the Class Year process. Table A to my Affidavit provides a summary of the basic input data and results of the Deliverability Test.

B. DCR Base Case Generation Project Assumptions

8. The base case: When conducting the annual Class Year Deliverability Study, pursuant to OATT Attachment S, the NYISO establishes the deliverability of the ATBA – the base case, which includes existing generation and projects that have completed the Class Year process and accepted their respective SDU cost allocations (if any). For purposes of the compliance filing, the base case ("DCR Base Case") was established as the same ATBA

[2] January Order at P 62.

[3] *Id.*

case utilized for Class Year 2009 and Class Year 2010 projects, with certain projects added.

9. The NYISO determined that certain additional projects should be included as part of the DCR Base Case. To determine which Class Year 2009 and Class Year 2010 projects should be added to the DCR Base Case, the NYISO applied a two-part criterion. First, the project must have either an executed Interconnection Agreement or an unexecuted agreement that was filed with the Commission. Second, and in conjunction with the first, the project must have been determined to be deliverable, based on the NYISO's draft Class Year 2009 Deliverability Study – Report Revision 2, and draft Class Year 2010 Deliverability Study – Report Revision 3, both dated December 2, 2010. The DCR Base Case therefore included projects for which there is reasonable basis to conclude that they will be in service in during the period of the new Demand Curves (May 2011 through April 2014).

10. Using that criterion, the NYISO added the Bayonne Energy Center, LLC project, which is in Interconnection Queue position 232; and Long Island Solar Farm, LLC, which is in Interconnection Queue position 330.

11. The NYISO considered whether it would be appropriate to establish a specific date by which a project had signed an Interconnection Agreement or the NYISO had filed an unexecuted Interconnection Agreement. As described in the compliance filing transmittal letter, the NYISO determined that by requiring that projects satisfy both parts of the criterion described in Paragraph 9, the projects included in the DCR Base Case and DCR Study Case were a reasonable identification of generation projects to utilize.

12. The ATBA already included 891 MW from the Poletti I power plant, which has since been removed from service, and a portion of the CRIS transferred to the Astoria Energy II plant.

C. Deliverability Test Load Assumptions

13. The Deliverability Test utilized the same load forecast that Attachment S requires the NYISO to utilize for the Class Year 2009 and Class Year 2010 projects, which is the 2015 Summer Peak Demand forecast (34,021 MW) from the NYISO 2010 Load & Capacity Data Report. The Class Year process uses a 5-year planning forecast. It is a 5-year planning window and not a period associated with the expected entry date of projects.

14. Use of the same 5-year forecast used for the ATRA for the Class Year 2009 and Class Year 2010 projects is appropriate for the Deliverability Test. Although the 5-year forecast includes years beyond the Demand Curve reset period, it wholly includes the 3-year period of the Demand Curves that are the subject of the compliance filing. More importantly, it is the forecast used for evaluation of Class Year 2009 and 2010 projects, all of which have proposed in-service dates within the three-year Demand Curve reset period.[4]

[4] In addition to determining that it is appropriate to use the 5-year load forecast used for the Class Year 2009 and Class Year 2010 projects, the NYISO also determined that it is not appropriate to use the load forecast that is anticipated to be included in the NYISO 2011 Load & Capacity Data Report ("Gold Book"). The 2016 Summer Peak Demand forecast of the 2011 Gold Book will be used in the deliverability analysis for Class Year 2011 which will not be performed until late in calendar year 2011. Further, that forecast was not finalized at the time of the Deliverability Test.

D. Deliverability Test Capacity Levels

15. Initially, the amount of capacity in the DCR Base Case as described above exceeded the minimum Installed Capacity requirements. Starting with ATBA for Class Years 2009 and 2010, and adding the generation projects described in Section IV.B. above, the NYISO established a DCR Base Case by scaling down the capacity of all generation sources within each of the three capacity regions on a pro rata basis to match the minimum Installed Capacity requirement for each capacity region. The NYISO used this scaling approach to be consistent with the Attachment S Class Year deliverability base case conditioning rules. The minimum Installed Capacity requirement for the NYC and Long Island capacity regions are based on the Locational Minimum Installed Capacity Requirement for those capacity regions, which is 81.0% of the summer peak load forecast for NYC, and 101.5% of the summer peak load forecast for Long Island, respectively. The NYCA Minimum Installed Capacity Requirement is based on the NYCA Installed Reserve Margin, which is 115.5% of the summer peak load forecast for the NYCA. There is no Locational Capacity Requirement for the Rest of State capacity region per se, but the Rest of State minimum Installed Capacity requirement level is computed as the net of the minimum Installed Capacity requirement for NYCA minus the NYC and Long Island minimum Installed Capacity requirements. At this point in the Deliverability Test, there is no excess or deficiency in the DCR Base Case.

16. Although the MW level to be studied in the Deliverability Test could have been achieved by increasing load, it is more appropriate to reduce generation. When scaling load upwards, there is an increasing likelihood that false overloads would be indicated,

particularly on the local lower voltage facilities. Such indicated overloads would be due to excessive load and not indicative of transmission deliverability constraints.

17. In developing the DCR Base Case, a portion of the minimum capacity requirements of the capacity regions are met by external capacity, including 1,080 MW from PJM (to model New York State Electric & Gas Corporation's Existing Transmission Capacity for Native Load ("ECTNL")) and 1,090 MW from Quebec via Chateauguay. The remaining portion of the Base Case requirements are met by internal capacity. The external capacity was modeled consistent with the Attachment S deliverability assumptions[5] so it was not included in the scaling described in Paragraph 15. Only internal capacity was scaled to achieve the baseline capacity levels for each capacity region.

18. To achieve the NYISO's proposed Excess Capacity Levels, the MW of the peaking plants at specific locations in each of the three capacity regions were added to the DCR Base Case to create the DCR Study Case. Identifying a specific location is necessary and it is also consistent with the manner in which the Class Year deliverability analysis is performed.

19. The capacity and locations of these proxy generators were: Rest of State – 413 MW at the Rotterdam 230 kV Substation (in NYISO Load Zone F); NYC – 195 MW at the West 49th Street 345 kV Substation; Long Island – 195 MW at the Ruland Road 69 kV Substation.

[5] *See* OATT Attachment S § 25.7.8.2.9.

E. Additional Assumptions and Base Case Conditioning for Deliverability Test

20. The Deliverability Test was performed for both the DCR Deliverability Base Case and the DCR Study Case described above, in the same manner of the deliverability analyses performed for the ATBA and ATRA deliverability cases in the Class Year process. In order to perform the Deliverability Test, the DCR Base Case and the DCR Study Case were further modified in accordance with the Attachment S deliverability assumptions and methodology. Examples of the key assumptions and the methodology are as follows.

21. Deliverability base case conditioning steps consistent with those used for the NYISO's Comprehensive Reliability Planning Process and Area Transmission Review transfer limit calculation methodology were applied, consistent with the Attachment S deliverability methodology.[6]

22. UCAP Deration Factors were applied to the NYCA generation capacity in the deliverability cases in order to convert the ICAP values to unforced capacity UCAP values, consistent with the Attachment S deliverability methodology.[7]

23. The DCR Base Case and the DCR Study Case modeled Load Forecast Uncertainty ("LFU") added to the NYISO 2015 summer peak load forecast, consistent with the Attachment S deliverability methodology.[8] Attachment S specifies that the deliverability analysis use the LFU from the most recent base case Installed Reserve Margin. Therefore,

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[6] *See* OATT Attachment S § 25.7.8.2.5.

[7] *See* OATT Attachment S § 25.7.8.2.3.

[8] *See* OATT Attachment S § 25.7.8.2.4.

LFU used for the Deliverability Tests used the base case from the 2011 Installed Reserve Margin, whereas the LFU for the Class Year 2009 ATBA deliverability analysis used the base case from the previous year (2010) Installed Reserve Margin.

24. Like the DCR Base Case as described in Paragraph 17, the DCR Study Case modeled external system imports consistent with the Attachment S deliverability assumptions including: 1,080 MW from PJM (to model New York State Electric & Gas Corporation's Existing Transmission Capacity for Native Load ("ECTNL")) and 1,090 MW from Quebec via Chateauguay.[9]

25. Also consistent with the Attachment S deliverability assumptions, the MW output of generators within each of the three capacity regions in the deliverability cases were set to values proportional to the generators' respective UCAP values to satisfy the basic power balance equation – Area Generation + Area Net Import = Area Load – for each capacity region.[10]

V. Results of the Deliverability Test

26. The results of the Deliverability Test performed for the DCR Study Case shows that the DCR Study Case capacity within each capacity region is deliverable. Therefore, no SDUs are required to achieve deliverability for the peaking plants. The attached table provides a summary of the Deliverability Test.

[9] *See* OATT Attachment S § 25.7.8.2.9.

[10] *See* OATT Attachment S §25.7.8.2.11.

27. Comparing these DCR Deliverability Test results to the Class Year 2009 (CY09) ATBA results, there was a significant difference in the deliverability for the Rest of State capacity region as measured at the UPNY-SENY interface. In the CY09 ATBA, a large portion of capacity in Rest of State was undeliverable with negative headroom (commonly referred to as bottled capacity) of 1,586 MW as measured at the UPNY-SENY interface; whereas the DCR Deliverability Test result was that capacity in Rest of State was deliverable with positive headroom of 1,571 MW on the UPNY-SENY interface: a 3,157 MW increase in headroom. The main cause of this difference in Rest of State deliverability was due to 3,818 MW less capacity within Rest of State in the DCR Study Case compared to the CY09 ATBA case as a result of scaling the internal capacity to meet the minimum Installed Capacity requirement. A smaller contributing factor for the change in deliverability was that the CY09 ATBA used LFU from the base case for the 2010 Installed Reserve Margin, whereas the DCR Study Case used LFU from the base case for the 2011 Installed Reserve Margin, which resulted in Rest of State load being 706 MW higher in the DCR Study Case than the CY09 ATBA case.

VI. Deliverability Test for Additional NYC Locations

28. For purposes of the NYISO's discussion of its methodology to analyze SUF costs, the NYISO also performed the Deliverability Test for the DCR Study Case at Rainey 345 kV substation and Hudson Avenue 138 kV substation. The result is that the DCR Study Case capacity is deliverable at these locations. The results are set forth in Table B to this Affidavit. In addition, from the deliverability analysis performed above and the results of the Deliverability Test, as well as the results of the draft Class Year 2009 and draft Class Year 2010 study reports identified in Paragraph 9 above, it is evident that the "headroom"

in the system is adequate for the DCR Study Case capacity to be deliverable at the Astoria Annex 345 kV. Therefore, no SDU is required to achieve deliverability for the peaking plant at these three locations.

VII. Deliverability Test With Modified External System Import Assumption

29. As described in Paragraph 15, the NYSIO scaled generation down on a pro rata basis to achieve the DCR Base Case and the DCR Study Case. As described in Paragraphs 17 and 23, the NYISO recognized imports consistent with Attachment S and, accordingly, did not pro rate the 1080 MW of ETCNL or the 1090 MW at Quebec via Chateauguay. The NYISO believes these assumptions are appropriate for the reasons described herein. However, were these MW of imports scaled down along with scaling down other generation, from the deliverability analysis performed and the results of the Deliverability Test, it is evident that the "headroom" in the system is adequate for DCR Study Case capacity to be deliverable for this scenario.

VIII. Deliverability Test at 2008 Reset Order Levels of Excess

30. From the deliverability analysis performed above and the results of the Deliverability Test, it is evident that the "headroom" in the system is adequate for capacity within each capacity region to be deliverable at levels of excess of: 4% above the Location Minimum Installed Capacity Requirement in NYC, 4% above the Location Minimum Installed Capacity Requirement in Long Island, and 1.5% above the NYCA Minimum Installed Capacity Requirement.

IX. Calculating the System Deliverability Upgrade Costs

31. Because the peaking plants in each location were determined to be deliverable, an SDU is not needed in any of the capacity regions and under either DCR Study Case Excess Capacity Levels or the 2008 Reset Order levels of excess. Therefore, there are zero SDU costs.

This concludes my Affidavit.

ATTESTATION

I am the witness identified in the foregoing affidavit. I have read the affidavit and am familiar with its contents. The facts set forth therein are true to the best of my knowledge, information, and belief.

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Steven L. Corey

Subscribed and sworn to before me
this 29th day of March 2011

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Notary Public

My commission expires: _____

Table A: DCR Base Case, DCR Study Case, Deliverability Test Results

	ROS	NYC	LI	NYCA
DCR Base Case – Initial ICAP	25,754	11,099	5,983	42,835
Load Forecast (w/o Load Forecast Uncertainty)	16,539	12,065	5,417	34,021
IRM / LCR	N/A	81.00%	101.50%	15.50%
ICAP Requirements (at 100% of IRM / LCR)	24,023	9,773	5,498	39,294
Capacity of a Proxy Unit [1][2][3]	413	195	195	N/A
DCR Study Case – ICAP at proposed level of excess	24,436	9,968	5,693	40,097
External Capacity in DCR Study Case	1,931	960	990	3,881
Internal Capacity in DCR Study Case	22,505	9,008	4,703	36,216
Headroom – based on limiting constraint [4]	1571	346	104	N/A

Notes:

1) ROS proxy unit modeled in zone F at 230 kV bus
2) NYC proxy unit modeled in zone J at 345 kV bus
3) LI proxy unit modeled in zone K at 69 kV bus
4) Limiting constraints: ROS: Leeds-Pleasant Valley 345 kV; NYC: Rainey-Vernon 345/138 kV transformer; LI: Belmore-Newbridge Rd 138 kV

* Above values in MW, rounded to the nearest whole MW

Table B: Deliverability Test for Additional NYC Locations – Affidavit Paragraph 28

	NYC - Rainey 345 kV	NYC- Hudson Ave 138 kV
DCR Study Case – ICAP at proposed level of excess	9,968	9,968
External Capacity in DCR Study Case	960	960
Internal Capacity in DCR Study Case	9,008	9,008
Headroom – based on limiting constraint [1]	343	55

1) Limiting constraints: Rainey-Vernon 345/138 kV transformer; Farragut 345/138 kV transformer

* Above values in MW, rounded to the nearest whole MW