

October 12, 2016

**By Electronic Delivery**

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street N.E.  
Washington, D.C. 20426

**Re: New York Independent System Operator, Inc.'s Compliance Filing;  
Docket Nos. RM16-1-000, RM16-8-000, ER17-\_\_\_\_-000**

Dear Ms. Bose:

In compliance with the Federal Energy Regulatory Commission's ("Commission's") Order No. 827<sup>1</sup> and Order No. 828,<sup>2</sup> the New York Independent System Operator, Inc. ("NYISO") respectfully submits revisions to the *pro forma* Large Generator Interconnection Agreement ("LGIA") and the Small Generator Interconnection Agreement ("SGIA") included in the NYISO's interconnection procedures set forth in Attachment X and Attachment Z of the NYISO Open Access Transmission Tariff ("OATT").<sup>3</sup>

The NYISO proposes revisions to the *pro forma* LGIA in Attachment X of the OATT and to the *pro forma* SGIA in Attachment Z of the OATT to incorporate the revisions set forth in Order Nos. 827 and 828, with a limited number of variations specifically permitted by the Commission in Order Nos. 827 and 828.<sup>4</sup> The proposed variations either (1) conform the revisions directed by Order Nos. 827 and 828 to the terminology of the NYISO OATT previously accepted by the Commission as "independent entity variations;"<sup>5</sup> or (2) propose

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<sup>1</sup> *Reactive Power Requirements for Non-Synchronous Generation*, Order No. 827, 81 Fed. Reg. 40,793 (June 23, 2016), 155 FERC ¶ 61,277 (2016) ("Order No. 827").

<sup>2</sup> *Requirements for Frequency and Voltage Ride Through Capability of Small Generating Facilities*, Order No. 828, 81 Fed. Reg. 50,290 (Aug. 1, 2016), 156 FERC ¶ 61,062 (2016) ("Order No. 828").

<sup>3</sup> Capitalized terms that are not otherwise defined in this filing shall have the meaning specified in Attachment Z of the NYISO OATT, and if not defined therein, in Attachment X of the NYISO OATT and Section 1 of the NYISO OATT.

<sup>4</sup> Order No. 827 at P 69, 76-77; Order No. 828 at 47.

<sup>5</sup> Order No. 827 at P 76; Order No. 828 at P 47.

language “consistent with or superior to” the language directed by the respective Orders.<sup>6</sup> The basis for such variations is discussed in detail in Section IV, *infra*.

The NYISO respectfully submits that with this compliance filing it fully complies with the requirements set forth in Order Nos. 827 and 828. The NYISO reviewed the proposed revisions with its stakeholders and did not receive any objections.

## **I. DOCUMENTS SUBMITTED**

1. This filing letter;
2. A clean version of the proposed revisions to the NYISO’s OATT (“Attachment I”); and
3. A blacklined version of the proposed revisions to the NYISO’s OATT (“Attachment II”).

## **II. COMMUNICATIONS**

All communications, pleadings, and orders with respect to this proceeding should be sent to the following individuals:

Robert E. Fernandez, General Counsel  
Karen Georgenson Gach, Deputy General Counsel  
Raymond Stalter, Director of Regulatory Affairs  
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## **III. BACKGROUND**

In its Order No. 2003, the Commission established the *pro forma* Large Facility Interconnection Procedures (“LFIP”), including a form Large Generator Interconnection Agreement, to set forth the terms and conditions under which public utilities must provide

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<sup>6</sup> Order No. 828 at P 77; Order No. 828 at P 47.

interconnection service to Large Facilities of more than 20 MW.<sup>7</sup> In its Order No. 2006, the Commission established the *pro forma* Small Generator Interconnection Procedures (“SGIP”), including a form Small Generator Interconnection Agreement, to set forth the terms and conditions under which public utilities must provide interconnection service to Small Generating Facilities of no more than 20 MW.<sup>8</sup> In compliance with Order Nos. 2003 and 2006, the NYISO incorporated the *pro forma* interconnection procedures in Attachment X of the OATT (the NYISO’s LFIP) and in Attachment Z of the OATT (the NYISO’s SGIP), with certain proposed variations to the *pro forma* requirements – variations accepted by the Commission under the “independent entity variation” or “consistent with or superior to” standard.<sup>9</sup>

Since incorporating the LFIP and SGIP into its OATT, the NYISO has incorporated revisions to its LFIP and SGIP pursuant to compliance directives from Order Nos. 661 and 792.<sup>10</sup> In addition, the NYISO has made periodic enhancements to these procedures pursuant to Section 205 of the Federal Power Act<sup>11</sup> and Part 35 of the Commission’s regulations.<sup>12</sup> For example, the NYISO proposed a number of changes to the LFIP in 2009 and 2010, including:

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<sup>7</sup> *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. 31,146 (2003), *order on reh’g*, Order No. 2003-A, FERC Stats. & Regs. 31,160 (2004), *order on reh’g*, Order No. 2003-B, FERC Stats. & Regs. 31,171 (2004), *order on reh’g*, Order No. 2003-C, FERC Stats. & Regs. 31,190 (2005), *affirmed sub nom. Nat’l Ass’n of Regulatory Util. Com’rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007); *Standardization of Small Generator Interconnection Agreements and Procedures*, Order No. 2006, 70 Fed. Reg. 34190 (June 13, 2005), 111 FERC ¶ 161,220 (2005), *order on reh’g*, Order No. 2006-A, 113 FERC ¶ 61,195, 70 Fed. Reg. 71760 (Nov. 30, 2005).

<sup>8</sup> *Standardization of Small Generator Interconnection Agreements and Procedures*, Order No. 2006, FERC Stats. & Regs. ¶ 31,180, *order on reh’g*, Order No. 2006-A, FERC Stats. & Regs. ¶ 31,196 (2005), *order on clarification*, Order No. 2006-B, FERC Stats. & Regs. 31,221 (2006).

<sup>9</sup> *See New York Independent System Operator, Inc. and New York Transmission Owners*, Order Conditionally Accepting Large Generator Interconnection Procedures and Large Generator Interconnection Agreement, 108 FERC ¶ 61,159 (2004) (accepting compliance filings and directing certain changes); *New York Independent System Operator, Inc. and New York Transmission Owners*, Letter Order, Docket No. ER04-449-004 (2005); *New York Independent System Operator, Inc. and New York Transmission Owners*, Order on Compliance Filing, 149 FERC ¶ 61,209, (2014); *New York Independent System Operator, Inc. and New York Transmission Owners*, Order on Small Generator Interconnection Compliance Filing, 118 FERC ¶ 61,130 (2007) (accepting compliance filing in part and directing certain changes); *New York Independent System Operator, Inc. and New York Transmission Owners*, Order Granting Rehearing in Part and Denying Rehearing in Part and Accepting Compliance Filing, 119 FERC ¶ 61,333 (2007) (granting in part and denying in part request for rehearing, clarifying aspects of February 2007 order, and accepting compliance filing in part and directing certain changes); *New York Independent System Operator, Inc. and New York Transmission Owners*, Letter Order, Docket Nos. ER06-311-004 and ER06-311-005 (March 3, 2008).

<sup>10</sup> *Interconnection for Wind Energy*, Order No. 661, FERC Stats. & Regs. 31,186 (2005); *Small Generator Interconnection Agreements and Procedures*, Order No. 792, 145 FERC ¶ 61,159, 78 Fed. Reg. 73239, (Nov. 22, 2013).

<sup>11</sup> 16 U.S.C. § 824d (2000).

<sup>12</sup> 18 C.F.R. § 35 *et seq.* (2009).

- Modifications to interconnection study base case assumptions to improve the technical quality of the studies and to improve efficiency;
- Modifications to the rules regarding the Class Year Interconnection Facilities Study (“Class Year Study”) process to provide flexibility to Developers while at the same time tightening the overall process to address “queue squatting” by projects making no reasonable progress toward commercial operation; and
- Addition of a non-refundable application fee and revised study deposits to discourage pre-mature or speculative projects from entering the queue, and to reduce the risk of default on study costs.<sup>13</sup>

The NYISO proposed revisions to the LFIP and SGIP in 2011 to (1) allow small generator projects to undergo a simpler Small Generator Facilities Study rather than the Class Year Study if only Local System Upgrade Facilities are indicated to be needed; and (2) allocate Class Year Study costs in both the SGIP and LFIP to address perceived inequity in the study cost allocation methodology.<sup>14</sup>

NYISO proposed further revisions to the LFIP and SGIP in 2013, including:

- Modification of the March 1st fixed calendar start date, replacing it with alternate start dates to allow Class Year Studies to proceed in a “head-to-tail” fashion (thus addressing the untenable situation of Class Years overlapping each other resulting in unrecoverable delays in the overall process);
- Modifications that provide Developers options and decisional flexibility to pursue or not pursue evaluation of deliverability upgrades in order to receive the full amount of requested Capacity Resource Interconnection Service (“CRIS”);
- Modifications that provide Developers with additional options earlier in the study process – specifically, whether to include a preliminary deliverability analysis;

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<sup>13</sup> See *New York Independent System Operator, Inc.*, Proposed Tariff Revisions Improving the Interconnection Study Queue Process, Docket No. ER10-290-000 (November 11, 2010). *New York Independent System Operator, Inc.*, Proposed Tariff Revisions to Perform the Class Years 2009 and 2010 Interconnection Facilities Studies on a Combined Basis, Request for Waiver of the Prior Notice Requirements, and Request for Expedited Consideration; and Proposed Tariff Sheets To Clarify the Process of Tendering Interconnection Facilities Study Agreements, Docket No. ER10-573-000).

<sup>14</sup> See *New York Independent System Operator, Inc.*, Order Accepting Tariff Revisions Subject to a Compliance Filing, 135 FERC ¶ 61,014 (2011).

- Modifications to allow Developers more flexibility in satisfying Headroom obligations;
- Modifications to allow security for System Upgrade Facilities to be reduced after discrete portions of such facilities are complete; and
- Modifications intended to encourage projects to move through the interconnection process without unnecessary delays (including, for example, limitations on permissible extensions of Commercial Operation Dates).<sup>15</sup>

Additional changes to the LFIP and SGIP were proposed by the NYISO in 2014 to permit *de minimis* increases in the energy capability of existing facilities without requiring a new Interconnection Request.<sup>16</sup>

On June 16, 2016, the Commission issued Order No. 827 to amend the *pro forma* LGIA and SGIA to require reactive power capability from non-synchronous generators.<sup>17</sup> The Commission identified as the impetus for the order the technological advancements that have been made since Order Nos. 2003 and 2006 and the resulting decrease in the cost to non-synchronous generators in providing reactive power.<sup>18</sup> The Commission also identified the potential for a deficiency in reactive power triggered by the growing penetration of wind generators on some systems.<sup>19</sup>

To address these concerns, the Commission established, through Order No. 827, revisions to the *pro forma* LGIA and SGIA to require “newly interconnecting non-synchronous generators that have not yet executed a Facilities Study Agreement as of the effective date” to “provide dynamic reactive power within the range of 0.95 leading to 0.95 lagging at the high-side of the generator substation.”<sup>20</sup> As a result of Order No. 827, the *pro forma* LGIA and SGIA, as revised, will include reactive power requirements for both synchronous and non-synchronous generation. Order No. 792 directed transmission providers to submit a compliance filing to revise their LGIA and SGIA to adopt the requirements of the order.<sup>21</sup>

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<sup>15</sup> See *New York Independent System Operator, Inc.*, Order Accepting Tariff Revisions With Modifications, 142 FERC ¶ 61,113 (2013).

<sup>16</sup> See *New York Independent System Operator, Inc.*, Letter Order Accepting Tariff Revisions to Improve Interconnection Process, Docket No. ER14-627-000 (Jan. 23, 2014).

<sup>17</sup> Order No. 827 at P 1.

<sup>18</sup> Order No. 827 at P 4.

<sup>19</sup> Order No. 827 at P 4.

<sup>20</sup> Order No. 828 at P 1.

<sup>21</sup> Order No. 827 at P 75.

Less than two months after issuing Order No. 827, the Commission issued Order No. 828 to amend the *pro forma* SGIA to frequency and voltage ride-through capability from Small Generating Facilities.<sup>22</sup> The Commission identified as the impetus for the order the multiple reports from the North American Electric Reliability Corporation (“NERC”) regarding the changing mix of generator resources, the high penetration of distributed energy resources and the resulting potential reliability impact to the electric grid if action is not taken to mitigate potential adverse impacts.<sup>23</sup> The Commission cited NERC’s finding:

that a lack of coordination between small generating facilities and Reliability Standards can lead to events where system load imbalance may increase during frequency excursions or voltage deviations due to the disconnection of distributed energy resources, which may exacerbate a disturbance on the Bulk-Power System.<sup>24</sup>

In addition to the above-referenced NERC reports, the Commission cited the growth in grid-connected solar photovoltaic generation and small generator interconnection requests driven by state renewable portfolio standards as well as the deployment of new technologies. The Commission also recognized that technology now available to newly interconnecting Small Generating Facilities, such as smart inverters, permits the capability to ride through frequency and voltage disturbances.<sup>25</sup>

To address these concerns regarding ride-through capability, the Commission established, through Order No. 828, revisions to the *pro forma* SGIA to require interconnecting Small Generating Facilities (those that execute or request the unexecuted filing of a new or modified SGIA on or after the effective date of Order No. 828) “to not disconnect automatically or instantaneously from the system or equipment of the transmission provider and any affected systems for an under-frequency or over-frequency condition, or an under-voltage or over-voltage condition.”<sup>26</sup> Like Order No. 827, Order No. 828 directed transmission providers to submit a compliance filing to revise their SGIA to adopt the requirements of the Order.<sup>27</sup> Recognizing that transmission providers had pending compliance obligations under Order No. 827 requiring revisions to the LGIA and SGIA, the Commission ordered that the compliance filings for both orders be filed in one compliance filing.<sup>28</sup>

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<sup>22</sup> Order No. 827 at P 1.

<sup>23</sup> Order No. 828 at P 8.

<sup>24</sup> Order No. 828 at P 8.

<sup>25</sup> Order No. 828 at P 8.

<sup>26</sup> Order No. 828 at P 2.

<sup>27</sup> Order No. 828 at P 44.

<sup>28</sup> Order No. 828 at P 45.

#### IV. COMPLIANCE REVISIONS

The NYISO proposes revisions to Attachments X and Z of the OATT to amend the NYISO's LGIA and SGIA to adopt the *pro forma* revisions set forth in Order Nos. 827 and 828 with a limited number of variations described below. In both Order Nos. 827 and 828, the Commission provides that a Transmission Provider may request variations from the *pro forma* provisions where the revisions are consistent with or superior to the *pro forma* LGIA and SGIA or in instances in which the Commission has previously accepted variations to the existing LGIA and SGIA and such variations continue to be justified.<sup>29</sup> The Commission has accepted previous variations to the NYISO interconnection procedures,<sup>30</sup> recognizing that where changes to *pro forma* interconnection procedures "are clarifying and/or ministerial in nature and/or NYISO has supplied sufficient justification," such modifications are acceptable under the "independent entity variation" standard.<sup>31</sup> The Commission has explained that under this standard, "the Commission will review the proposed variations to ensure they do not provide an unwarranted opportunity for undue discrimination or produce an interconnection process that is unjust and unreasonable."<sup>32</sup>

The revisions to Attachment X and Z that are proposed herein are fully justified under either the Commission's "independent entity variation" standard or because the language proposed is "consistent with or superior to" the language directed by Order Nos. 827 and 828, for the reasons explained below.

##### **A. Independent Entity Variation with respect to the term, "Transmission Provider"**

Both the NYISO and the NYTOs have responsibilities in the interconnection process in New York that are assigned to the "Transmission Provider" in the *pro forma* LGIA and SGIA. The Commission has previously accepted in the Order Nos. 2003 and 2006 proceedings the NYISO's proposed revisions to the *pro forma* term "Transmission Provider" that allocate the Transmission Provider's responsibilities between the NYISO and the NYTOs.<sup>33</sup>

Consistent with the existing allocation of the Transmission Provider's responsibilities in the NYISO's LGIA and SGIA, the NYISO proposes to replace the term "Transmission Provider" as used in the *pro forma* revisions in Order Nos. 827 and 828 with the terms "NYISO," and

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<sup>29</sup> Order No. 827 at PP 76-77; Order No. 828 at P 47.

<sup>30</sup> See, e.g., *New York Independent System Operator, Inc.*, 135 FERC ¶ 51,014 (2011); *New York Independent System Operator, Inc.*, 124 FERC ¶ 61,238 (2008).

<sup>31</sup> *New York Independent System Operator, Inc.*, 124 FERC ¶ 61,238 at PP 17-18.

<sup>32</sup> See *Id.* at P18.

<sup>33</sup> See, e.g., *New York Independent System Operator, Inc. and New York Transmission Owners*, Order Granting Rehearing in Part and Denying Rehearing in Part and Accepting Compliance Filing, 119 FERC ¶ 61,333 (2007) at P 34 (accepting compliance revisions filed by NYISO and NYTOs on March 22, 2007, in the Order No. 2006 proceeding, including the split of responsibilities between the NYISO and NYTO in the SGIP and SGIA.).

“Connecting Transmission Owner,” or both (e.g., “NYISO or the Transmission Owner in whose Transmission District the Small Generating Facility interconnects”) to clarify the respective reactive power and ride-through requirements applicable to the generation facility. Under the NYISO’s LGIA and SGIA, a generation facility is subject to not only the requirements set forth in the NYISO’s tariff and procedures, but also the requirements of the Connecting Transmission Owner or the Transmission Owner in whose Transmission District the facility interconnects. The definition of “Applicable Reliability Standards” in the NYISO’s LGIA and SGIA includes the requirements and guidelines of the Transmission District to which the facility is directly interconnecting. The NYISO’s proposed revisions make clear that the generation facilities are subject to the requirements of the applicable Transmission Owner and are thereby consistent with or superior to the *pro forma* language referring to the “Transmission Provider.”

**B. Independent Entity Variation with respect to the term “Interconnection Customer”**

The term “Developer” as used in the NYISO’s commission-approved LGIA, is a tariff-defined term referring to a project developer for a Large Facility (versus a Small Generating Facility). Throughout the LFIP and LGIA, the NYISO uses the term “Developer” instead of “Interconnection Customer.” To avoid confusion and for consistency with the other provisions in the LGIA and LFIP not subject to revision under Order No. 827, the NYISO proposes to continue to use the term “Developer” in place of “Interconnection Customer” in new subsections 9.5.1.1 and 9.5.1.2 of the LGIA. As this minor revision will maintain consistency and avoid confusion, it is consistent with or superior to the *pro forma* term “Interconnection Customer.”

**C. Variations Requiring Safe Operation and the Use of Good Utility Practice that are Consistent with or Superior to Order No. 827**

The NYISO’s LGIA contains the following language in its existing provisions regarding reactive power requirements for synchronous generation:

The Developer shall design and maintain the plant auxiliary systems to operate safely throughout the entire real and reactive power design range.

The Connecting Transmission Owner shall not unreasonably restrict or condition the reactive power production or absorption of the Large Generating Facility in accordance with Good Utility Practice.<sup>34</sup>

In the revisions to the LGIA required by Order No. 827, the NYISO proposes to retain the above-language requiring the Developer to design and maintain the plant auxiliary systems to

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<sup>34</sup> See Attachment X, Section 30.14, Article 9.5.1.



operate safely throughout the entire real and reactive power design range. The NYISO also proposes to include this same language in the new subsection 9.5.1.2 of the LGIA providing for reactive power capability for non-synchronous generation.

With regard to the above-cited language requiring regarding the Connecting Transmission Owner to not unreasonably restrict or condition the reactive power production or absorption of the Large Generating Facility in accordance with Good Utility Practice, the NYISO proposes to incorporate that existing LGIA requirement into the new *pro forma* tariff language by simply adding to the end of the first sentence of each subsection of Article 9.5.1 the phrase, “in accordance with Good Utility Practice.” The NYISO proposes to make this revision to the SGIA as well. This revision limits the ability of the applicable Transmission Owner to place unreasonable or unnecessary stringent reactive power requirements on a generation facility and is thereby consistent with or superior to the *pro forma* language.

#### **D. Variations with respect to Referenced Effective Dates that are Consistent with or Superior to Order No. 827**

Order No. 827 includes a transition rule in the new subsection 9.5.1.2 and Appendix G of the LGIA and in new subsection 1.8.1.2 of the SGIA regarding the applicability of the reactive power requirements to non-synchronous generation. That transition rule makes clear that the requirement specified in that subsection only applies to newly interconnecting non-synchronous generators that have not yet executed a Facilities Study Agreement as of the effective date of the Final Rule. For clarify, the NYISO proposes to insert that date – September 21, 2016 – into these tariff provisions. By adding the specific date, the transition rule is easier to understand and does not create any ambiguity regarding the transition rule. As such, this minor revision is consistent with or superior to the *pro forma* language referencing only the “effective date of the Final Rule.”<sup>35</sup>

### **V. EFFECTIVE DATE**

The NYISO respectfully requests that the tariff revisions filed herewith become effective on October 13, 2016, one day after this filing is made. To the extent that the Commission deems it to be applicable, the NYISO requests a waiver of the normal notice period under Section 35.3 of the Commission’s regulations to allow the requested effective date.

### **VI. SERVICE**

The NYISO will send an electronic copy of this filing to the official representative of each party to this proceeding, to the official representative of each of its customers, to each participant on its stakeholder committees, to the New York Public Service Commission and the

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<sup>35</sup> Order No. 827 at P 1.

New Jersey Board of Public Utilities. In addition, the complete public version of this filing will be posted on the NYISO's website at [www.nyiso.com](http://www.nyiso.com).

## **VII. CONCLUSION**

Wherefore, for the foregoing reasons, the New York Independent System Operator, Inc. respectfully requests that the Commission accept this compliance filing.

Respectfully submitted,

/s/ Sara B. Keegan

Sara B. Keegan

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Gary Will

## **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 12<sup>th</sup> day of October 2016.

/s/ Joy A. Zimmerlin

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