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CRITICAL ENERGY INFRASTRUCTURE INFORMATION REMOVED

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Linden VFT, LLC)	
)	
Complainant,)	
)	
v.)	Docket No. EL12-64-000
)	
New York Independent System Operator, Inc.)	
)	
Respondent)	

ANSWER OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

Pursuant to Rule 213¹ of the Commission’s Rules of Practice and Procedure, the New York Independent System Operator (“NYISO”) respectfully submits this answer to the May 4, 2012 complaint filed by Linden VFT, LLC (“Linden VFT”) in this proceeding (“Complaint”). Linden VFT alleges that the NYISO has acted in a discriminatory manner with regard to Linden VFT’s Merchant Transmission Facility² that connects the transmission systems operated by PJM Interconnection, LLC and the NYISO (“Linden VFT Project”). Linden VFT requests that the Commission direct the NYISO to award the Linden VFT Project an additional 15 MW of Unforced Capacity Delivery Rights (“UDR”), without requiring the submission of a new Interconnection Request.

Linden VFT has failed to satisfy its burden of demonstrating that the NYISO violated its tariffs or acted in a discriminatory manner. As demonstrated herein, the NYISO’s determination was consistent with its tariffs and Commission precedent requiring the submission of an

¹ 18 C.F.R. § 385.213 (2011).

² Terms with initial capitalization that are not otherwise defined herein shall have the meaning set forth in the NYISO’s Open Access Transmission Tariff (“OATT”), or, if not defined therein, in the NYISO’s Market Administration and Control Area Services Tariff (“Services Tariff”).

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Interconnection Request for any increase in the capacity of an existing facility. Thus, the Complaint must be denied.

I. COMMUNICATIONS

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II. STATEMENT OF FACTS

The Linden VFT Project is a 300 MW Merchant Transmission Facility. Linden VFT submitted its first interconnection request for the project on July 18, 2002.⁴ This was prior to the issuance of the Commission's Order No. 2003⁵ and the NYISO's compliance filing in response

³ Waiver of the Commission's regulations (18 C.F.R. § 385.203(b)(3) (2011)) is requested to the extent necessary to permit service on counsel for the NYISO in both Richmond, VA and Houston, TX.

⁴ See Complaint at Exhibit 3A - NYISO Interconnection Request (July 10, 2002).

⁵ *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, *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), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007).

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to that order. On January 20, 2004, the NYISO submitted compliance filings in response to Order No. 2003's directives, including tariff revisions to implement the OATT Attachment X Large Facility Interconnection Procedures ("LFIP"). On August 6, 2004, the Commission accepted the NYISO's LFIP ("August 2004 Order"),⁶ subject to additional compliance filings. The Commission-accepted LFIP included new tariff provisions regarding the rules for new Interconnection Requests. Most relevantly, the LFIP included the Commission's *pro forma* definition of Interconnection Request⁷ which clearly requires the submission of a new Interconnection Request for any increase in capacity to an existing facility.

Pursuant to the LFIP, the Linden VFT Project was studied as a 300 MW project in the Class Year 2006 Interconnection Facilities Study and completed all of its Interconnection Studies in 2007. The Commission accepted the Interconnection Agreement on April 29, 2008, effective February 29, 2008.⁸ The Interconnection Agreement provided that the Linden VFT Project would consist of three 100 MW variable frequency transformers ("VFTs"), associated transmission facilities, and appurtenant equipment with a total transmission transfer capacity of 300 MW.

On October 5, 2007, the NYISO submitted a compliance filing in response to Commission directives in the August 2004 Order which proposed a *Consensus Deliverability Plan*⁹ for the establishment of Capacity Rights Interconnection Service ("CRIS").¹⁰ The

⁶ *New York Independent System Operator, Inc.*, 108 FERC ¶ 61,159 (2004) ("August 2004 Order").

⁷ See Docket No. RM02-1-000 Compliance Filing at Attachment I at Original Sheet No. 745, Docket No. ER04-449-000 (filed January 20, 2004).

⁸ *New York Independent System Operator, Inc.*, 123 FERC ¶ 61,093 (2008).

⁹ See *Consensus Deliverability Plan of the New York Independent System Operator, Inc. and the New York Transmission Owners* at 6, Docket No. ER04-449-016 (filed October 5, 2007).

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Consensus Deliverability Plan proposed to grandfather projects prior to Class Year 2007 from the deliverability requirements by granting them a pre-determined level of CRIS. The Commission accepted the *Consensus Deliverability Plan*, directing the NYISO to file compliance tariff revisions.¹¹ In that order, the Commission found that all projects prior to Class Year 2007, including the Linden VFT Project, would be grandfathered from the deliverability requirement.¹²

The Commission issued an order in January 15, 2009¹³ accepting the tariff sheets containing a detailed implementation of the framework contained in the *Consensus Deliverability Plan*. With respect to controllable lines, like the Linden VFT Project, the accepted tariff language provides that “the CRIS capacity level for controllable lines pre-dating Class Year 2007 will be set at the MWs of Unforced Deliverability Rights awarded to them.”¹⁴ An entity may request Unforced Capacity Deliverability Rights (“UDRs”) rights for new, incremental, controllable transmission projects that connect a Locality in the New York Control Area (“NYCA”) to a non-constrained, non-Locality region of the NYCA or an External Control Area.¹⁵ The NYISO assigns the UDRs, measured in an amount of MW.¹⁶

¹⁰ CRIS is required for generators in order for them to participate in the capacity market, and for Merchant Transmission Facilities requesting UDRs. Their capacity must be found deliverable or their facility must agree to fund transmission upgrades necessary to make the capacity deliverable. *See* OATT Attachment S, § 25.3.1.

¹¹ *New York Independent System Operator, Inc.*, 122 FERC ¶ 61,267 (2008).

¹² *Id.* at PP 63-67.

¹³ *New York Independent System Operator, Inc.*, 126 FERC ¶ 61,046 (2009).

¹⁴ *See* OATT Attachment S § 25.9.3.1.

¹⁵ *See* Services Tariff § 2.21 at definition of “Unforced Capacity Deliverability Right”; *see also* NYISO *Installed Capacity Manual* at § 4.14 (January 2012) *available at* <http://www.nyiso.com/public/webdocs/documents/manuals/operations/icap_mnl.pdf> (“ICAP Manual”).

¹⁶ *See* ICAP Manual at § 4.14, *et seq.*

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On May 16, 2007, Linden VFT formally requested 300 MW of UDRs for the project.¹⁷

On June 13, 2008, the NYISO granted Linden VFT's request. In October 2009, more than two years after its request for UDRs, the Linden VFT Project conducted its pre-commercial operations testing, and, according to Linden VFT, it became apparent that the facility was capable of producing 315 MW.¹⁸ On November 13, 2009, after the project achieved commercial operation, albeit in limited operations,¹⁹ Linden VFT requested that the NYISO increase the number of UDRs granted to 315 MW to reflect the project's actual transmission transfer capability. Linden VFT indicated that the 15 MW increase was the result of capabilities proven during facility testing and did not involve any changes to the project. On January 15, 2010, the NYISO denied the request and informed Linden VFT that it was required to submit a new Interconnection Request to increase its capacity from the current 300 MW.

On February 26, 2010, Linden VFT submitted a new Interconnection Request for the additional 15 MW noting that it "reserves the right to dispute the determination of the NYISO ... rejecting Linden VFT's request for an additional 15 MW of UDRs and require a separate interconnection request." A System Reliability Impact Study was completed for the requested 15 MW increase, and Linden VFT signed a Facilities Study Agreement with the NYISO and the Connecting Transmission Owner. Additionally, the requested 15 MW increase is being studied as part of the Class Year 2011 Interconnection Facilities Study, which is currently well

¹⁷ See Attachment 2 - May 16, 2007 Letter from Mr. Andrew Kelemen, Vice President East Coast Power LLC to Mr. Henry Chao requesting 300 MW UDR and attaching information to support the request ("2007 UDR Request").

¹⁸ All projects are required to conduct pre-commercial operation testing under Article 6 of the *pro forma* Interconnection Agreement.

¹⁹ Pursuant to Article 5.9 of the Interconnection Agreement, Linden VFT commenced Commercial Operations prior to Linden VFT's completion of the construction of certain required system upgrades. Linden VFT's construction of the system upgrades has been delayed.

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underway. On September 27, 2011,²⁰ Linden VFT provided a Notice of Dispute requesting dispute resolution regarding its disagreement with NYISO's January 15, 2010 determination.

III. ANSWER

A. The NYISO Complied With its Tariffs When it Grandfathered the Linden VFT Project From the Deliverability Requirement at 300 MW of CRIS

Linden VFT materially misrepresents the tariff requirements when it states that the

OATT provisions implementing the Deliverability Plan state that the amount of grandfathered Capacity for all existing facilities and pre-Class Year 2007 projects would be determined by the highest value achieved in a test of each project's actual physical capability.

Similarly, Linden VFT's contention that the NYISO must recognize "315 MW as the Project's CRIS value because that is the transmission capability to which it is entitled as a grandfathered 2006 Class Year Project"²¹ conflicts with the clear language of the OATT.

When the NYISO's tariff was amended in 2009 to add a second level of interconnection service that included a deliverability requirement (*i.e.* CRIS), existing projects and certain proposed projects were grandfathered from the new deliverability requirement. Accordingly, the tariff language implementing deliverability explicitly addresses how facilities were grandfathered from deliverability. First, the tariff identifies which facilities are grandfathered, which were all facilities predating Class Year 2007. Second, the tariff sets forth the process by which the NYISO determines the CRIS MW level at which each facility would be grandfathered

²⁰ Linden VFT asserts that requiring a new Interconnection Request has resulted in delays due to the need to perform necessary studies which have caused it to incur additional costs. *See, e.g.*, Complaint at 5. However, more than two years have passed between the date the NYISO formally determined that the 15 MW increase requires a new Interconnection Request and the filing of this Complaint. The interconnection process for Linden VFT's new Interconnection Request for the 15 MW increase has progressed significantly during that time.

²¹ Complaint at 17; *see also* Complaint at 5.

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from deliverability. Using that process, the NYISO properly grandfathered the Linden VFT Project at 300 MW.

OATT Attachment S section 25.9.3.1, titled “Retaining CRIS Status” contains the provisions applicable to awarding CRIS for facilities grandfathered from the deliverability requirement. It states, in relevant part:

For generators pre-dating Class Year 2007, the CRIS capacity level will be set at the maximum DMNC level achieved during the five most recent Summer Capability Periods prior to October 5, 2008, even if that DMNC value exceeds nameplate MWs.

For a generator pre-dating Class Year 2007 and not having DMNC levels recorded for five Summer Capability Periods prior to October 5, 2008, its CRIS capacity level will be set, and reset if necessary, at the maximum DMNC level achieved during successive Summer Capability Periods until it has DMNC levels recorded for five Summer Capability Periods. Prior to the establishment of the generator’s first DMNC value for a Summer Capability Period, the generator’s CRIS level will be set at nameplate MW, and the CRIS capacity level for intermittent resources pre-dating Class Year 2007 will be set at nameplate MW, **and the CRIS capacity level for controllable lines pre-dating Class Year 2007 will be set at the MW of Unforced Capacity Deliverability Rights awarded to them.**²²

It is clearly evident from the plain language of the tariff that the grandfathered CRIS capacity level for a controllable line like Linden VFT was to be set at the MW of UDRs awarded to the line. The NYISO’s tariff is just as clear that the CRIS capacity level for a grandfathered generator was to be set quite differently by using the generator’s highest Dependable Maximum Net Capability (“DMNC”) value achieved over a five-year time period, or by using the

²² OATT Attachment S § 25.9.3.1 (emphasis added).

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generator's nameplate MW rating, when the generator had not yet established a DMNC value.²³ Intermittent Resources were grandfathered using their nameplate value.

As of the effective date of the applicable tariff provisions, all controllable lines that were grandfathered from deliverability, including Linden VFT, had been awarded UDRs. Linden VFT submitted a request for 300 MW of UDRs on May 16, 2007²⁴ and was awarded 300 MW of UDRs on June 13, 2008.²⁵ Accordingly, pursuant to the tariff, the Linden VFT Project was properly grandfathered from deliverability at 300 MW of CRIS.²⁶

Further, Linden VFT's assertion, that it is discriminatory to establish a different basis for the grandfathering from deliverability of controllable lines and generators, must be rejected.²⁷ These were logical and appropriate distinctions to make because they were based upon characteristic features of the different NYISO capacity market rules that already applied to controllable lines and generators, well before the implementation of the new deliverability requirement.²⁸

UDRs are rights, measured in MW, that are awarded to new incremental controllable lines that provide a transmission interface to an area or Locality in the NYCA, such as New York

²³ A multi-year time period was selected in an effort to identify a reasonable representation of the generator's capacity since a DMNC value from a single summer might be impacted by temporary conditions at the generator.

²⁴ See Attachment 2 - 2007 UDR Request.

²⁵ See Complaint at Exhibit 13 - NYISO Letter (dated June 13, 2008).

²⁶ See Complaint at Exhibit 3A - NYISO Interconnection Request (July 10, 2002).

²⁷ Complaint at 22-28.

²⁸ The clear distinction between grandfathering controllable lines and generators for purposes of deliverability were described in section III.A.6 of the filing letter for the August 5, 2008, NYISO compliance filing to implement the new capacity deliverability rules in Attachment X. See *Joint Compliance Filing of New York Independent System Operator, Inc. and the New York Transmission Owners on Consensus Deliverability Plan*, Docket No. ER04-449-017 (filed August 5, 2008).

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City, in which a minimum amount of Installed Capacity must be maintained by the Load Serving Entity. When combined with generation capacity located in an External Control Area that is deliverable to the Locality interface created by the interconnection of the controllable line, UDRs allow external capacity to be treated as if it was located within the NYCA Locality itself, thereby helping to satisfy the Load Serving Entity's Minimum Installed Capacity Requirement for the Locality. In this way, Linden VFT's UDRs, when combined with 300 MW of generation capacity located in the PJM Control Area, can contribute those 300 MW to a Load Serving Entity's Locational Minimum Installed Capacity Requirement for the New York City Locality. Thus, the award of 300 MW of UDRs to Linden VFT defined the maximum amount of capacity for New York City that can be attributable to the new controllable line.

In contrast, DMNC values help define the maximum amount of capacity that generators interconnected within the NYCA can bring to the New York capacity markets. A DMNC test measures "[t]he sustained maximum net output of a Generator, as demonstrated by the performance of a test or through actual operation, averaged over a continuous time period as defined in the ISO Procedures."²⁹ Following procedures described in section 4.2 of the ICAP Manual, this generator performance test data is used to calculate the maximum MW of capacity that the generator can supply to the NYISO administered capacity markets. Section 4.2 of the ICAP Manual requires identified types of generator resources to submit results from a DMNC test or a DMNC Demonstration using specific procedures. The ICAP Manual does not provide any resource-specific DMNC test conditions for controllable lines. Controllable lines do not perform DMNC tests and, therefore, do not have to report DMNC test results to the NYISO.³⁰

²⁹ Services Tariff § 2.4

³⁰ ICAP Manual at 4.2.2.

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The NYISO's OATT sets the CRIS MW capacity value for each grandfathered controllable line and generator using established NYISO capacity market procedures associated with each different resource type. This process allowed consistent grandfathering within each resource type and used information that was already being compiled to administer the capacity market. For generators, DMNC test results were used, because those resources were already required to perform DMNC tests.³¹ For controllable lines grandfathering was done based on the amount of UDRs awarded to them. Therefore, grandfathering controllable lines at their UDR MW for CRIS purposes was consistent with, and reasonable in light of, all applicable tariff requirements. Linden VFT's extensive discussion and assertions regarding its startup test and the NYISO's tariff provisions regarding CRIS updates based on DMNC are altogether inapplicable.³² The tariff reasonably and explicitly applies an entirely different standard to controllable lines.

Linden VFT's contention that it was considered a generator and therefore the deliverability grandfathering provisions that apply to generators should be applied to Linden VFT should be rejected.³³ It is undisputable that the Linden VFT Project is not a generator; it is a controllable line.³⁴ This distinction is pronounced in the case of Linden VFT since it creates a

³¹ In order for the grandfathered CRIS values to be comparable, the NYISO had to use a number that all resources in a given category possessed. For example, the NYISO could not have used MW studied in the interconnection process, because most existing generators pre-dated the NYISO.

³² Complaint at 19-22.

³³ *Id.* at 14.

³⁴ Throughout the interconnection process, and after, Linden VFT has consistently described its facility as a Merchant Transmission Facility or VFT transmission facility, not a generator. *See, e.g.*, Attachment 2 - 2007 UDR Request; Attachment 3 - October 15, 2004 email from Mr. Thomas Hoatson, VP Goldman Sachs & Company to Mr. Steve Corey regarding NYISO Interconnection Request - Linden Transmission Project and attached interconnection request form ("2004 Interconnection Request"); Complaint at Exhibit 3A - NYISO Interconnection Request (July 10, 2002); Complaint at Exhibit 7 - Linden VFT System Reliability and Impact Study (dated August 1, 2005); Complaint at Exhibit 16 -

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new tie between control areas. There was no reasonable basis for Linden VFT to believe that the tariff provision that referred to DMNC applied to it, because as discussed above the tariff is clear that DMNC does not apply to controllable lines. To read the tariff as Linden VFT suggests would invalidate the unambiguous provisions regarding the awarding of CRIS for grandfathered controllable lines based on UDRs.

Also, Linden VFT's assertions that extrinsic evidence³⁵ shows that a "performance test" should have been used to grandfather Linden VFT from deliverability, are misleading and should be rejected. Linden VFT's contention that the July 2, 2008 Interconnection Issues Task Force Deliverability Issues List ("Issues List") is evidence that the NYISO identified the need for an equivalent DMNC test for controllable lines, but "never developed such a procedure" is unquestionably false.³⁶ The very document that Linden VFT points to as showing the "DMNC level equivalent for ... controllable lines" as an open issue actually contains the proposed resolution of that issue.³⁷ Specifically, the Issues List clearly shows that the NYISO had proposed in its stakeholder meetings to grandfather controllable lines for purposes of CRIS at the awarded UDR value.³⁸ Consistent with the proposal discussed with stakeholders, the Commission-accepted tariff language explicitly provides that "[c]ontrollable lines will be

Project Letter (dated November 13 2009); Complaint at Exhibit 20 - Project Letter (dated February 26, 2010); and Merchant Transmission Facility Interconnection Agreement effective 2/29/08, Docket No. ER08-618-000 (filed February 29, 2008).

³⁵ See *New York Independent System Operator, Inc.*, 131 FERC ¶ 61,032 at P 30 (2010) (finding that "when presented with a dispute concerning the interpretation of a tariff or contract, the Commission looks first to the tariff or contract itself, and only if it cannot discern the meaning of the contract or tariff from the language of the contract or tariff, will it look to extrinsic evidence") (internal citations omitted).

³⁶ Complaint at 27 and Exhibit 18.

³⁷ *Id.* at Exhibit 18.

³⁸ See *Id.* at Exhibit 18 at 1. It is clear from the document that the list contained issues that had been discussed and the bracketed language was the "proposed resolution."

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grandfathered at the MWs of UDRs awarded to them.”³⁹ There was no intention or need to subsequently develop a “performance test” process. The tariff language fully addressed how UDRs would be grandfathered.

Furthermore, the Complaint is a collateral attack on the Commission’s order⁴⁰ accepting these provisions. The Commission looks with disfavor upon parties that seek to re-litigate applicable precedent, especially when those parties were active in the earlier proceedings.⁴¹ Linden VFT was a party in the proceedings regarding the tariff language on grandfathering controllable lines for CRIS at their level of UDR. Linden VFT filed comments in support of those tariff revisions.⁴² Those tariff provisions clearly provide that controllable lines would be grandfathered from deliverability based on their MW level of UDRs. There is no reasonable basis for Linden VFT to now allege that it was unaware or did not understand those tariff provisions.⁴³ Therefore, the Commission must reject Linden VFT’s collateral attack on the prior

³⁹ OATT Attachment S § 25.9.3.1

⁴⁰ *New York Independent System Operator, Inc.*, 126 FERC ¶ 61,046 (2009).

⁴¹ *See, e.g., San Diego Gas & Electric Co. v. Sellers of Energy and Ancillary Services, et al.*, 134 FERC ¶ 61,229 at P 15 (2011) (“[collateral attacks on final orders and relitigation of applicable precedent by parties that were active in the earlier cases thwart the finality and repose that are essential to administrative efficiency and are strongly discouraged.”) *citing Entergy Nuclear Operations, Inc. v. Consolidated Edison Co.*, 112 FERC ¶ 61,117, at P 12 (2005); *see also EPIC Merchant Energy NJ/PA, LP v. PJM Interconnection, LLC*, 131 FERC ¶ 61,130 (2010) (dismissing as an impermissible collateral attack a complaint that merely sought to re-litigate the same issues as raised in the prior case citing no new evidence or changed circumstances).

⁴² *See, Comments and Conditional Protest of Linden VFT, LLC* at 1-2, Docket No. ER04-449-017 (filed August 26, 2008) (stating that Linden VFT supported the compliance filing, discussing the grandfathering of controllable lines using UDRs); *Comments of Linden VFT, LLC*, Docket No. ER04-449-019 (filed May 18, 2009) (supporting the further compliance filing).

⁴³ Linden VFT’s assertion that: “The CRIS value, which is a limit on how much of a project’s Capacity may be allowed to participate in the ICAP market, is now based on a deliverability test. Until the Deliverability Plan was effective, beginning with Class Year 2007, the ‘CRIS value’ was 100% of project actual maximum net capability as determined through testing because no project had to demonstrate that its Capacity was deliverable” is not accurate. *See* Complaint at n. 41. Prior to the implementation of the

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orders by attempting to establish an entirely new deliverability grandfathering standard nearly four years after the original tariff language was submitted to the Commission.

B. The NYISO Complied with Applicable Commission Precedent and its Tariff When it Required That Linden VFT Submit an Interconnection Request for the Additional 15 MW for the Linden VFT Project

Linden VFT's assertion that the NYISO violated its tariff by requiring the submission of a new Interconnection Request for the additional 15 MW of capacity for the Linden VFT Project must be rejected. The NYISO's determination that a new Interconnection Request was necessary is consistent with Commission precedent regarding increases in capacity for existing facilities.

The NYISO's OATT Attachment X defines "Interconnection Request" as a:

Developer's request, in the form of Appendix 1 to the Standard Large Facility Interconnection Procedures, in accordance with the Tariff, to interconnect a new Large Generating Facility or Merchant Transmission Facility to the New York State Transmission System, or to increase the capacity of, or make a material modification to the operating characteristics of, an existing Large Generating Facility or Merchant Transmission Facility that is interconnected with the New York State Transmission System.⁴⁴

The tariff clearly states that where a Developer is seeking to increase the capacity of an existing facility, an Interconnection Request must be filed. A determination regarding a "material modification" is separate and distinct from an "increase in capacity." Thus, the tariff requires that a Developer submit an Interconnection Request for any increase in capacity or material modification to an existing facility.

Commission precedent requires the submission of new Interconnection Request for any increase in the capacity of an existing facility. An existing facility is one that has completed all

deliverability tariff provisions, CRIS did not exist under the NYISO's tariff, and thus there was no calculation of CRIS values.

⁴⁴ OATT Attachment X § 30.1.

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interconnection studies and possesses an effective interconnection agreement, even if it is not yet fully constructed and interconnected.⁴⁵ When interpreting the tariff provision requiring the submittal of an Interconnection Request, the Commission has stated that “any increase in generation capacity from an existing generator requires a new interconnection request and a new LGIA conforming to the transmission provider’s current pro forma LGIA.”⁴⁶ The Commission has found that “[i]nsisting that parties file new *pro forma* LGIAs when electing to increase generation capacity ... provides consistency and eliminates confusion.”⁴⁷ Further, the Commission has held that there is no *de minimis* increase that would be exempt from the requirement to submit an Interconnection Request.⁴⁸

The Commission has explained that increases in capacity require the submission of a new Interconnection Request, because

an increase in the amount of power the Generating Facility will produce should be treated as significant because it is an important change in one of the most

⁴⁵ *Midwest Independent Transmission System Operator, Inc.*, 125 FERC ¶ 61,210 at P 15 (2008) (finding that a facility was existing and thus required to submit a new Interconnection Request to change its MW level of capacity where it had completed the interconnection process).

⁴⁶ *See, e.g., Midwest Independent Transmission System Operator, Inc.*, 124 FERC ¶ 61,277 at P 11 (2008) (interpreting Midwest ISO provisions regarding the submittal of Interconnection Requests which use similar language to that found in the NYISO’s OATT Attachment X); *see also, Midwest Independent Transmission System Operator, Inc.*, 132 FERC ¶ 61,241 at P 33(2011) (same).

⁴⁷ *Midwest Independent Transmission System Operator, Inc.*, 124 FERC ¶ 61,277 at P 11 (2008).

⁴⁸ Additionally, the Commission has stated that “[i]n Order No. 2003, and in company-specific cases, the Commission has found that any increase in generation capacity from an existing generator requires a new LGIA conforming to the Transmission Provider’s current pro forma LGIA” *see Midwest Independent Transmission System Operator, Inc.*, 122 FERC ¶ 61,019 at P 16 (2008), *citing, New England Power Co.*, 109 FERC ¶ 61,364 at P 13 (2004); *Pacific Gas and Electric Co.*, 109 FERC ¶ 61,392 (2004); *Southern California Edison Co.*, 109 FERC ¶ 61,375 at P 10 (2004); *Jersey Central Power & Light Co.*, 110 FERC ¶ 61,273 (2005); *Midwest Independent Transmission System Operator, Inc.*, 117 FERC ¶ 61,125 at P 3 (2006); *330 Fund I, L.P. v. New York Independent System Operator, Inc.*, 121 FERC ¶ 61,001 at P 32 (2007) (stating that “Order No. 2003’s interconnection requirements do not apply where no increase in capacity or material modification of the characteristics of an existing facility are proposed”).

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fundamental characteristics of a Generating Facility. How much power a Generating Facility will produce is critical to the very nature of the Generating Facility, and it is reasonable to treat a change to that characteristic as a new Interconnection Request.⁴⁹

Commission precedent provides that existing facilities must submit a new Interconnection Request, even for small increases in capacity.⁵⁰ Linden VFT contends that this precedent does not apply to its project, because its increase is not due to a physical change in its facility.⁵¹

However, contrary to that assertion, the Commission has found that an Interconnection Request is necessary even where the increase is due to changes in how capacity was estimated for purposes of the interconnection process.⁵²

The issue in this proceeding is not whether the facility has physically changed, but whether the facility's characteristics have changed from how the project was originally proposed by Linden VFT and studied in the NYISO interconnection process. The original Linden VFT project was proposed and studied as a 300 MW facility. Linden VFT's 2002 interconnection request and "Study Application" represented that the facility size was 300 MW.⁵³ The 2004 Interconnection Request form submitted by Linden VFT clearly described the Linden VFT Project as having a Maximum Rating of 300 MW import to New York, and also indicated a

⁴⁹ See *Midwest Independent Transmission System Operator, Inc.*, 122 FERC ¶ 61,019 at P 16 (2008).

⁵⁰ *Midwest Independent System Operator, Inc.*, 124 FERC ¶ 61,277 at P 11 (2008) (requiring the submission of an interconnection request for a 0.7 MW increase in capacity); see also *Midwest Independent Transmission System Operator, Inc.*, 118 FERC ¶ 61,270 at P 16 (rejecting arguments that a new interconnection request should not be required where the increase in capacity was *de minimis*).

⁵¹ Complaint at 19-20.

⁵² *Midwest Independent Transmission System Operator, Inc.*, 125 FERC ¶ 61,210 at PP 7, 12-16 (2008) (requiring the submission of a new Interconnection Request where the increase in capacity was not due to a physical change in facility but rather on the development of a better estimate of the output for the facility").

⁵³ See Complaint at Exhibit 3A - NYISO Interconnection Request (dated July 10, 2002)

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maximum 300 MW export from New York adjusted for losses.⁵⁴ Additionally, the August 1, 2005 System Reliability Impact Study⁵⁵ clearly studied the facility at 300 MW, stating, for example:

- “[a] 300MW Variable Frequency Transformer (VFT) which is an asynchronous bi-directional transmission tie, between the PSE&G 230 kV system and Con Edison’s 345 kV system has been proposed”,⁵⁶
- “[t]he 300MW VFT project will consist of three 100MW VFT modules or channels”,⁵⁷
- “[a] system reliability impact study (SRIS) was performed to evaluate the impact of the proposed 300MW project on the bulk power transmission system in the southeast New York area.”⁵⁸

Linden VFT also consistently described the Linden VFT Project in various Commission proceedings, during the time it was progressing through the NYISO’s interconnection process, as a 300 MW facility. For example, in its petition for authority to make sales of transmission rights at negotiated rates, Linden VFT stated that the Linden VFT Project “will provide 300 MWs of additional transmission capacity in the New York City area”⁵⁹ That petition also stated that:

⁵⁴ See Attachment 3 - 2004 Interconnection Request.

⁵⁵ See Complaint at Exhibit 7 - Linden VFT System Reliability and Impact Study (dated August 1, 2005).

⁵⁶ *Id.* at Exhibit 7 at viii.

⁵⁷ *Id.*

⁵⁸ *Id.* at Exhibit 7 at ix. The statement noted by Linden VFT on page 6 of its Complaint regarding each of the Variable Frequency Transformers having a nominal rating of 110 megavolt amperes (MVA), does not support the assertion that Linden VFT was modeled with a capability above 300 MW in the power flow analysis or other relevant analyses. In fact, Linden VFT was consistently modeled at 300 MW throughout the interconnection process for its original queue position. See, Class Year 2006 Interconnection Facilities Study Reports (dated May 2, 2007 and August 16, 2007).

⁵⁹ *Application of Linden VFT, LLC for Authority to Make Sales of Transmission Rights at Negotiated Rates* at 1, Docket No. ER07-543-000 (submitted February 14, 2007).

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- “[t]he 2006 DOE Study also identified constraints in the PJM region as included the constraint from PJM to New York City. The additional 300 MW of transmission capacity provided by the Linden VFT Project directly addresses resolving that constraint”;⁶⁰
- “[t]he Linden VFT Project consists of three variable frequency transformers, associated transmission facilities and appurtenant equipment that will have a total electrical transmission transfer capacity of approximately 300 MW”;⁶¹
- “Linden VFT intends to develop the Linden VFT Project in a manner that will make 300 MW of incremental transmission capacity available to market participants pursuant to PJM’s Open Access Transmission Tariff.”⁶²

The Commission clearly relied on these representations, as evidenced by its order which stated that:

[T]he capacity on the new transmission line between PJM and Linden’s existing 345 KV line is 300 MW. This is the same amount of capacity that Linden proposes to add to its 345 kV line. Therefore, customers that desire to utilize this project for the transfer of power between the PJM and NYISO systems are limited to the 300 MW of capacity offered by the new transmission line which connects the PJM line to Linden’s 345 kV line.⁶³

Because Linden VFT was a 300 MW project, recognizing an additional 15 MW is an increase in capacity requiring a new Interconnection Request.

Contrary to what Linden VFT states, the identified nameplate for the facility is not the issue or what triggers the need for Linden VFT to submit an Interconnection Request for the additional 15 MW.⁶⁴ It is the fact that Linden VFT’s actual capability exceeds the original project size that was studied at the Developer’s request. At the time it made the request for the additional 15 MW, the Linden VFT Project had completed all of its interconnection studies, had

⁶⁰ *Id.* at 1.

⁶¹ *Id.* at 4.

⁶² *Id.* at 11.

⁶³ *Linden VFT, LLC*, 119 FERC ¶ 61,066 at P 46 (2007).

⁶⁴ Complaint at 14, 18-19.

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an interconnection agreement in effect since February 29, 2008, and had completed construction on October 15, 2009. Thus, consistent with Commission precedent, and the tariff,⁶⁵ the Linden VFT Project was an existing facility when it requested the additional 15 MW.

Linden VFT's assertion that section 4.14.1 of the ICAP Manual requires the measurement of an adjustment to establish transmission capability for controllable lines, is irrelevant.⁶⁶

Section 4.14.1 of the ICAP Manual does indicate that UDRs are subject to future adjustment due to the "transmission capability, reliability, availability of the facility, and appropriate NYSRC reliability studies."⁶⁷ However, nothing in that provision indicates that the tariff requirement that a new Interconnection Request be submitted for increases in capacity of existing facilities is inapplicable. Additionally, section 4.14.2 of the ICAP Manual states that UDR requests "may be made anytime after submittal of the studies required to support the NYISO's Interconnection process, or if the NYISO is conducting those studies, after the NYISO has completed the studies."⁶⁸ Thus, while the provision acknowledges that measurement and adjustment to establish transmission capability for purposes of adjusting UDRs may occur, it does not invalidate the tariff obligation to submit a new Interconnection Request.

Further, the contention that the increase will not have an effect on reliability is irrelevant in determining whether a new Interconnection Request is required.⁶⁹ The Commission has made clear that there is no materiality consideration for increases in capability of existing facilities like

⁶⁵ OATT Attachment X, Section 30.1.3 requires that Linden VFT submit a new Interconnection Request for any proposal to "increase the capacity ... of an existing ... Merchant Transmission Facility that is interconnected to the New York State Transmission System."

⁶⁶ Complaint at 25-26.

⁶⁷ ICAP Manual § 4.14.1.

⁶⁸ *Id.* at § 4.14.2.

⁶⁹ Complaint at 28-29.

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Linden VFT. It is circular for Linden VFT to argue its position that the 15 MW of CRIS should be awarded without a new Interconnection Request because there was no reliability impact as shown in the SRIS study that was conducted for the Interconnection Request for the 15 MW increase.⁷⁰ The fact that the SRIS for the additional 15 MW found no reliability impacts does not mean that the study was unnecessary or that it was inappropriate for the NYISO to require the submission of a new Interconnection Request. Further, Linden VFT's conclusion that the 2005 SRIS is evidence that its additional 15 MW is reliable is also unreasonable.⁷¹ The results of a seven year old study do not account for other system conditions or standards that may have changed since the original study was conducted with the Linden VFT Project studied at 300 MW. Thus the Commission must reject Linden VFT's circular argument regarding the reliability impact studies.

C. The Linden VFT Project Was Not Grandfathered From the NYISO's LFIP

Linden VFT's novel contention that there is a "logical and equitable flaw" in the application of "the OATT definition of interconnection request, first effective in August 2004, to interpret the rights of a developer pursuant to an interconnection request made in July 2002"⁷² is wholly without merit. Linden VFT had an interconnection request pending in the NYISO queue at the time the LFIP became effective. Linden VFT's original interconnection request was not grandfathered from the application of the LFIP, but in fact transitioned to the LFIP under specific transition rules prescribed by the LFIP.

⁷⁰ *Id.* at 29.

⁷¹ *Id.* at 28-29.

⁷² *Id.* at 18.

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The LFIP addresses the transition of pending projects. Specifically, section 30.5.1.1.1 of OATT Attachment X states:

If an Interconnection Study Agreement has not been executed as of the effective date of these Large Facility Interconnection Procedures, then such Interconnection Study, and any subsequent Interconnection Studies, shall be processed in accordance with these Large Facility Interconnection Procedures.

To implement these tariff provisions, the NYISO, in October 2004, issued a notice to the projects in the interconnection queue. The notice stated the following:

As you know, the NYISO's new Large Facility Interconnection Procedures ("LFIP") became effective with FERC's order on August 6, 2004. The procedures, with few exceptions, require the NYISO and developers to transition outstanding interconnection requests to the new procedures within 60 days of the August 6 effective date, which is October 5, 2004.

Whether and how a specific project will transition to the new procedures will depend on the project's status as of the effective date of the LFIP. For clarity, we have provided the attached chart identifying the status of each project in the NYISO's queue. This chart groups projects that have reached the same milestones in the interconnection process. ...

Group C: Have Not Executed a Study Agreement

The projects in Group C must complete all studies and enter into a three-party IA under the new procedures.⁷³

As shown above, the Notice clearly provided that projects in the NYISO's interconnection queue that had not yet executed a study agreement would be transitioned to the newly accepted rules (*i.e.*, the LFIP). For projects such as Linden VFT's, the NYISO required that a new Interconnection Request form be submitted, and that those projects "continue the interconnection process under the new procedures." The submission was required because the form requested

⁷³ See Attachment 4 - Notice to Market Participants Concerning Transition to New Interconnection Procedures and attachment (dated October 1, 2004).

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data that was necessary for projects to proceed in accordance with the new procedures, but which had not been collected pursuant to the prior procedure.

In fact, the Notice explicitly identified Linden VFT as a project that was required to transition to the new rules. Pursuant to the Notice, Linden VFT submitted a new Interconnection Request form for the project on October 15, 2004, the deadline established by the NYISO. Linden VFT's email submitting the new Interconnection Request form stated that it was doing so "[i]n accordance with the new NYISO interconnection procedures."⁷⁴ Clearly, Linden VFT was aware that the LFIP provisions were applicable to its then pending interconnection request. Thus, its assertions regarding the continued applicability of the prior tariff provisions are baseless and must be rejected.

Additionally, Linden VFT misleadingly characterizes NYISO statements made at a NYISO Transmission Planning Advisory Subcommittee ("TPAS") meeting regarding the transition. Linden VFT twists a statement made by a NYISO representative and claims that the NYISO took the position that "non-material change criteria would continue to apply to projects then in the interconnection queue, notwithstanding the new rule, which would only be applied to new entrants."⁷⁵ Linden VFT contends, therefore, that a materiality determination should have been applied to the 15 MW increase request. The minutes from the TPAS meeting which Linden refers to deal with a discussion of a materiality determination for a facility that was not yet an existing facility.⁷⁶ Those minutes reflect that NYISO represented that the new procedures would

⁷⁴ See Attachment 3 - 2004 Interconnection Request.

⁷⁵ Complaint at 21.

⁷⁶ See Complaint at Exhibit 19 at 3 (stating that "[t]he NYISO has reviewed the change and determined this is non-material change. Mr. Corey stated that the project has not yet completed an SRIS or a scope yet...").

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be applied to projects going forward “once the transition of pre-existing projects in the queue has been completed.”⁷⁷ It is unclear what Linden VFT is referring to as the source of its contention because no such language appears in the document that Linden VFT cites. As described above in the Notice, the transfer of projects to the new process was completed shortly after the effective date of the new rules.

D. The Determinations Cited by Linden VFT to Support its Claim of Discriminatory Treatment Are Distinguishable

Linden VFT’s assertion that even if the NYISO tariff interpretation is correct, the NYISO has not consistently applied this interpretation to other projects, must be rejected. The determinations which Linden VFT cites are all distinguishable. In addition, they were all presented to and discussed openly with stakeholders. The projects that Linden VFT identifies in its Complaint, as having increased capacity subject to non-materiality determinations, are all proposed facilities still in the interconnection process, as opposed to existing facilities that have completed the interconnection process studies and have an effective Interconnection Agreement. OATT Attachment X section 30.4.4 regarding modifications to Interconnection Requests applies only to requests for increases in capacity by proposed facilities being evaluated in the interconnection process.⁷⁸ Section 30.4.4.3 includes provisions allowing a proposed facility being evaluated in the interconnection process to request the NYISO to determine whether a change, including a capacity change, is a Material Modification.⁷⁹ Where the NYISO determines

⁷⁷ *Id.*

⁷⁸ See OATT Attachment X § 30.4.4 (stating that “The Developer shall submit to the NYISO, in writing, modifications to any information provided in the Interconnection Request. The Developer shall retain its Queue Position if the modifications are in accordance with Sections 30.4.4.1, 30.4.4.2, 30.4.4.5 or 30.4.4.6, or are determined not to be Material Modifications pursuant to Section 30.4.4.3”).

⁷⁹ See OATT Attachment X § 30.4.4.3.

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that a change would be a Material Modification, a new Interconnection Request must be submitted, or the proposed modification must be withdrawn.⁸⁰

The projects which Linden VFT identifies in the Complaint⁸¹ were all pending facilities as of the date of the materiality determination, as they had yet to complete their interconnection studies or have an effective interconnection agreement or both. Thus, consistent with OATT Attachment X § 30.4.4, the NYISO determined that modifications in those projects' capacities were not Material Modifications. Because the NYISO's determinations were not inconsistent with the tariff or with the determination made for Linden VFT, the Commission must reject Linden VFT's assertion.

The NYISO did not discriminate against Linden VFT by requiring the submittal of a new Interconnection Request for the additional 15 MW, but is rather properly applying its tariff requirements. In fact the NYISO has made materiality determinations with respect to other types of changes that Linden VFT has requested, that did not involve increases in capacity, consistent with its tariff. OATT Attachment X § 30.3.1 provides that, where a change does not involve a capacity increase, only a "material modification to operating characteristics" requires the submission of a new Interconnection Request. Pursuant to that provision, the NYISO has made two non-materiality determinations for changes to Linden VFT's existing facility, finding

⁸⁰ *Id.*

⁸¹ Linden VFT cites as its examples Stony Creek Wind Farm, CPV Valley Energy Center, Cricket Valley Energy Center. Complaint at 30; *see also* Complaint at Exhibit 9 - List of Project/Facility Changes Submitted to NYISO and Determined to be Non-Material Under the NYISO Interconnection Procedures (Updated as of 03/12/2012).

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proposed changes to the existing facility to be non-material.⁸² Therefore, Linden VFT's assertion that it is being treated in a discriminatory manner must be rejected.

Further, Linden VFT uses the NYISO's treatment of the Caithness Long Island ("Caithness") project as its primary illustration of the supposed discriminatory treatment. However, the Caithness request did not involve a materiality determination. The NYISO's decision regarding Caithness's winter capability was appropriate because of the specific facts of that project, which are distinguishable from the facts in this Complaint.

The Caithness request was unique because it related to the winter capability of a temperature sensitive⁸³ unit that completed its SRIS under the pre-LFIP procedures. Caithness began the interconnection process under the old procedures when the interconnection request form did not request a winter capability. Caithness was not required to submit the new Interconnection Request form currently required by OATT Attachment X because of its status at the time the LFIP went into effect.⁸⁴ Under the procedures in effect at the time, the NYISO's interconnection studies evaluated the facility's capability under summer peak conditions.

Caithness was appropriately studied under the applicable procedures. Caithness's request did not involve a change to the existing facility as it was studied in the interconnection process. Caithness' was not requesting a modification of its summer capability; rather it was seeking an acknowledgement of the winter capability. Out of an abundance of caution the NYISO and the

⁸² See Complaint at Exhibit 9 - List of Project/Facility Changes Submitted to NYISO and Determined to Be Non-Material Under the NYISO Interconnection Procedures (Updated as of March 2, 2012).

⁸³ The capability of a temperature sensitive unit varies depending on the ambient temperature, and typically that capability increases as the temperature decreases.

⁸⁴ Caithness was a "Group B" project, pursuant to the NYISO's Notice regarding the transition to the LFIP. As a Group B project, Caithness had an executed Study Agreement but had not completed its Facilities Study or Cost Allocation.

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Developer agreed to perform an analysis of the higher winter capability. The analysis was not an input into a materiality determination, because there was no change from what was studied.

Since only the summer capability number was studied and that did not change, the request was not considered an increase in capacity.⁸⁵

Linden VFT cannot claim that its project is situated in a manner similar to Caithness.

Because the Caithness facts are inapposite, Linden VFT's contention that the "NYISO has failed to apply the "no increase" tariff to similarly situated projects" must be rejected.⁸⁶

IV. COMPLIANCE WITH COMMISSION RULE 213(c)(2)(i)

Attachment 1 to this Answer addresses the formal requirements of Commission Rule 213(c)(2) in order to ensure the NYISO's compliance with them.

V. SUPPORTING ATTACHMENTS

The NYISO attaches the following documents in support of the facts of this answer:

- Attachment 1- Compliance with Commission Rule 213(c)(2)
- Attachment 2 - Letter from Mr. Andrew Kelemen, Sr. VP GE Energy Financial Services to Mr. Henry Chao regarding 300 MW UDR Request for Linden VFT merchant transmission project (dated May 16, 2007) and attachment.
- Attachment 3 - October 15, 2004 email from Mr. Thomas Hoatson, VP Goldman Sachs & Company to Mr. Steve Corey regarding NYISO Interconnection Request - Linden Transmission Project and attached interconnection request form.
- Attachment 4 - *Notice to Market Participants Concerning Transition to New Interconnection Procedures* and attachment (dated October 1, 2004)

⁸⁵ The NYISO's contemporaneous table of non-materiality determinations, posted on the NYISO website did not, and has not, included any entry for the winter capability of Caithness.

⁸⁶ Complaint at 29.

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VI. REQUEST FOR CEII TREATMENT

Pursuant to the Commission's regulations at 18 C.F.R. §388.112 (2011), the NYISO requests that the one-line diagram included as part of Attachment 3 to this Answer be protected from disclosure as Critical Energy Infrastructure Information ("CEII"). The diagram depicts electric transmission facilities that constitute a significant tie between the New York and PJM control areas. Pursuant to 18 C.F.R. § 388.112(b) the CEII Data has been efiled with the Commission pursuant to the procedures provided for on the Commission's website.

VII. CONCLUSION

WHEREFORE, for the foregoing reasons, the New York Independent System Operator, Inc. ("NYISO"), respectfully requests that the Commission deny the Complaint and the relief sought by Linden VFT.

Respectfully submitted,

/s/Vanessa A. Colón

Vanessa A. Colón

Counsel to

the New York Independent System Operator, Inc.

May 24, 2012

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CERTIFICATE OF SERVICE

I hereby certify that I have this day caused the foregoing document to be served 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 (2011).

Dated at Washington, DC this 24th day of May, 2012.

By: /s/Catherine A. Karimi
Catherine A. Karimi
Hunton & Williams LLP
2200 Pennsylvania Avenue, NW
Washington, D.C. 20037

Attachment 1

Compliance with Commission Rule 213(c)(2)

Compliance with Commission Rule 213(c)(2)

A. Specific Admissions and Denials of Material Allegations

In accordance with Commission Rule 213(c)(2)(i), to the extent practicable and to the best of the New York Independent System Operator, Inc.'s ("NYISO") knowledge and belief at this time, the NYISO admits or denies the factual allegations in the Complaint, as specified below. To the extent that any fact or allegation in the Complaint is not specifically admitted below, it is denied. Except as specifically stated herein, the NYISO does not admit any facts in the form or manner stated in the Complaint. Denials of allegations made in the text of the Complaint should be understood as encompassing all related allegations and assertions in, and regarding, the attachments accompanying the Complaint.

1. Denials

- The NYISO denies all allegations and characterizations that requiring Linden VFT to submit a new Interconnection Request for the additional 15 MW of capacity for the project violated the tariff or was discriminatory. (Complaint at 2, 17, 18, 19, 20, 22, 23, 24, 26, 28, 30, 31, 32, 34).
- The NYISO denies all allegations and characterizations that the tariff requires all projects, including controllable lines, to be awarded CRIS equal to their maximum capability established through testing. (Complaint at 5, 12, 13, 14, 25, 26).
- The NYISO denies all allegations and characterizations that the tariff does not make a distinction between the bases for grandfathering for purposes of deliverability different resources types. (Complaint at 14).
- The NYISO denies all allegations and characterizations that the existing tariff provisions and Installed Capacity Manual provisions are circular, ambiguous, or provide "no guidance on how the award of UDRs to a grandfathered project was to be determined." (Complaint at 25, 27).
- The NYISO denies all allegations and characterizations that its application of the tariff is contrary to interpretations it has provided in the past. (Complaint at 21, 22).
- The NYISO denies all allegations and characterizations that it agreed that the tariff should include a procedure for establishing a DMNC level equivalency test for controllable lines or intermittent resources, but "it never developed such a procedure." (Complaint at 27).
- The NYISO denies all allegations and characterizations that the tariff supports Linden VFT's assertions that its project should be allowed to use its 2009 performance test to "demonstrate its transmission capability or 'DMNC equivalent.'" (Complaint at 7).
- The NYISO denies all allegations and characterizations that a transmission capability of 315 MW was consistent with Linden VFT's data submittals supporting its 2002

interconnection request or was used in the NYISO's studies for the project. (Complaint at 6, 28, 29).

- The NYISO denies all allegations and characterizations that its materiality criteria, or the application of those criteria to other projects, support Linden VFT's contention that a new Interconnection Request for the additional 15 MW of capacity for the project is not necessary. (Complaint at 6, 29, 30).
- The NYISO denies that its determinations regarding other projects have been inconsistent with its tariff. (Complaint at 30, 31).
- The NYISO denies all allegations and characterizations that Linden VFT's assertions regarding reliability studies somehow relieve Linden VFT of the tariff obligations to submit a new Interconnection Request. (Complaint at 7, 8, 17).
- The NYISO denies all allegations and characterizations that requiring Linden VFT to submit a new Interconnection Request for the additional 15 MW of capacity for the project has resulted in costs, delays or the subjecting of the project to "unwarranted deliverability assessments." (Complaint at 5, 34).
- The NYISO denies all allegations and characterizations that the inability to resolve this matter using alternative dispute resolution is due to NYISO being "under continued stakeholder pressure to treat" Linden VFT's project differently. (Complaint at 16).
- The NYISO denies all allegations and characterizations that it has incorrectly applied to the Linden VFT Project the Large Facility Generator Interconnection Procedures ("LFIP") which became effective in 2004 (*i.e.*, August 6, 2004). (Complaint at 17, 18).

2. Admissions

- The NYISO admits that it is a not-for-profit corporation formed under New York Law. (Complaint at 4).
- The NYISO admits that it is subject to the Commission's jurisdiction and administered the New York State Transmission system. (Complaint at 4).
- The NYISO admits that it is an independent body that provides open access transmission service, facilitates reliability services, and administers organized wholesale markets for electricity, capacity, and ancillary services in New York State pursuant to its OATT and Services Tariff. (Complaint at 4).
- The NYISO admits that it has required Linden VFT to submit a new Interconnection Request for the additional 15 MW of capacity for the project. (Complaint at 7, 10, 15, 16).

- The NYISO admits that the interconnection procedures in the OATT have materially changed since 2002 as a result of the Commission’s Order No. 2003, including the addition of the LFIP. (Complaint at 8, 17).
- The NYISO admits that it revised its OATT, in compliance with Order No. 2003, to add a second level of interconnection service (*i.e.*, Capacity Resource Interconnection Service (“CRIS”)) which incorporates a deliverability component. (Complaint at 8).
- The NYISO admits that its OATT contains both Energy Resource Interconnection Service, which provides a basic level of interconnection service and CRIS, which provides interconnection customers with the ability to participate in the NYISO’s installed capacity (“ICAP”) market to the extent of its deliverable capacity. (Complaint at 9).
- The NYISO admits that its OATT provides that the NYISO studies projects as a class and groups projects which satisfy certain milestones into a Class Year. (Complaint at 8).
- The NYISO admits that the Linden VFT project was a member of Class Year 2006. (Complaint at 8, 9, 12).
- The NYISO admits that it has stated that provisions in the LFIP require the submittal of a new Interconnection Request for any increases in capacity of an existing facility. (Complaint at 17).
- The NYISO admits that its Installed Capacity Manual “contains the procedures that will be followed by the NYISO and its Customers with regard to the Installed Capacity Markets administered by the NYISO pursuant to the Services Tariff.” (Complaint at 23).

B. Defenses

In accordance with Commission Rule 213(c)(2)(ii), the NYISO sets forth the following defenses.

- Complainant has failed to meet its burden of proof under section 206 of the FPA, and Commission Rule 206.
- Complainant has failed to show that the NYISO did not comply with its tariffs or treated Linden VFT in a discriminatory manner, when it grandfathered the Linden VFT project from deliverability at 300 MW.
- Complainant has failed to show that the NYISO did not comply with Commission precedent or its tariffs when it required that Linden VFT submit a new Interconnection Request for the additional 15 MW of capacity for the project.
- Complainant has failed to show that its project was grandfathered from the NYISO OATT’s LFIP.

- Complainant has failed to show that the NYISO has engaged in any discriminatory treatment.

C. Proposed Resolution Process

Commission Rule 213(c)(4) states that an answer “is also required to describe the formal or consensual process it proposes for resolving the complaint.” In compliance with that requirement, the NYISO requests that the Complaint be dismissed based solely on the pleadings in this proceeding.

Attachment 2

Letter from Mr. Andrew Kelemen, Sr. VP GE Energy Financial Services to Mr. Henry Chao regarding 300 MW UDR Request for Linden VFT merchant transmission project (dated May 16, 2007) and attachment



GE
Energy Financial Services

Andrew Kelemen
Senior Vice President

120 Long Ridge Road
Stamford, CT 06927

T 203-357-3608
F 203-585-0758
andrew.kelemen@ge.com

VIA FEDEX AND E-MAIL

Henry Chao
Director, System and Resource Planning
New York Independent System Operator
10 Krey Boulevard
Rensselaer, New York 12144

May 16, 2007

Subject: 300 MW UDR Request for Linden VFT merchant transmission project (NYISO queue position 125)

Dear Mr. Chao:

In a letter from Steve Corey of NYISO dated May 10, 2007, we were advised that the NYISO Operating Committee has approved the proposed cost allocation of System Upgrade Facilities required for reliable interconnection of the Class 2006 Projects, as specified in the report entitled "Facilities Study for Class 2006: Part 2 - System Upgrade Facilities, May 2, 2007". We understand this represents the completion of NYISO's interconnection studies for Class 2006 Projects, including the Linden VFT merchant transmission project (the "Project"). Section 4.14.2 of the NYISO Installed Capacity Manual (the "ICAP Manual") provides that an incremental transmission project may formally request Unforced Capacity Delivery Rights ("UDRs") following NYISO's completion of those studies. Accordingly, on behalf of the Project, East Coast Power, LLC, hereby submits its request for 300 MW of UDRs for the Project.

Attached please find the information required to support the UDR request as specified in Section 4.14.2 of the ICAP Manual.

We stand ready to assist NYISO in its evaluation of this request. Please contact me if you require additional information or clarification.

Regards,

A handwritten signature in black ink, appearing to read 'A. Kelemen'.

Andrew Kelemen
Vice President
East Coast Power, LLC

Linden Transmission Project

NYISO Queue Position 125
PJM Queue Position G22_MTX5

Statements on NYISO ICAP Manual Criteria (Section 4.14.2)

1. Interconnection points (i.e., bus names and voltage levels)

NYISO Interconnection: 345 kV, Goethals substation
PJM Interconnection: 230 kV, new switchyard on U-2273 230 kV line

2. Expected in-service date

4th quarter, 2009

3. External Control area of interconnection, if applicable

PJM – PSE&G zone

4. Internal Locality(ies) of interconnection

NYISO Zone J

5. Normal summer/winter ratings in MW of facility, and design temperatures

100 MW per channel (300 MW total) summer and winter rating; cooling systems within the facility adjust to maintain 100 MW per channel across expected temperatures.

6. Limiting element(s)

Rotary transformers, 100 MW each

7. Average expected outage rate, and average expected repair time

Average expected outage rate (including routine maintenance) is 2.5% and the average expected repair time for forced outage is approximately 16 hours.

8. Rights holder of record at the time of the request:

East Coast Power, LLC

Attachment 3

October 15, 2004 email from Mr. Thomas Hoatson, VP Goldman Sachs & Company to Mr. Steve Corey regarding NYISO Interconnection Request - Linden Transmission Project and attached interconnection request form

"Hoatson, Thomas" < Thomas.Hoatson@gs.com > 10/15/2004 02:51 PM	To	SCorey@nyiso.com
	cc	"Stappenbeck, Arthur R." < arthur.stappenbeck@gs.com >, "Cullon, John (Cogentrix)" < JohnCullon@Cogentrix.com >, "johnm@eig-llc.com" < johnm@eig-llc.com >, "DrRoyShanker" < droyshanker@comcast.net >
	Subject	NYISO Interconnection Request - Linden Transmission Project

Mr. Corey,

In accordance with the new NYISO Interconnection Procedure, please find attached is an Interconnection Request for the Linden Transmission Project. Also attached is a copy of the executed signature page. "Hard" copies of the request will be sent to you via overnight delivery. If you have any questions or require additional information please contact me at the numbers below.

<<Interconnection Request Form 10-15-2004 VFT Project.pdf>> <<Linden Transmission Project Signature Page.tif>>

Tom Hoatson
 Vice President
 Goldman Sachs & Company
 85 Broad Street
 New York, NY 10004
 (212) 357-9723 (W)
 (212) 493-9780 (fax)
 (973) 951-1770 (cell)
thomas.hoatson@gs.com

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Attachment A To Appendix I
Interconnection Request
(Page 2)

6. Evidence of Site Control as specified in the LFIP (check one)

☒ Is attached to this Interconnection Request☐ Will be provided at a later date in accordance with the Large Facility Interconnection Procedures

7. This Interconnection Request shall be submitted to the representative indicated below:

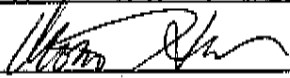
Name: Steven L. Corey
Title: Manager Transmission Planning
Address: New York Independent System Operator
290 Washington Avenue Ext.
Albany, NY 12203
Telephone No. (518) 356-6134
FAX No. (518) 356-6208
E-mail Addr. scorey@nyiso.com

8. Representative of the Developer to contact:

Name: Tom Hoatson
Title: Vice President
Company: Goldman Sachs & Company
Address: 85 Broad Street
New York, NY 10004
Telephone: (212) 357-9723
Fax: (212) 493-9780
Mobile: (973) 951-1770
E-Mail: thomas.hoatson@gs.com

This Interconnection Request is submitted by:

Name of Developer:

EAST COAST POWER LLC
By (signature): 
Name (type or print): THOMAS HOATSON
Title: VP
Date: 10/15/04

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VFT Modeling For Planning Studies

January 31, 2001

Principal Contributors

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Foreword

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Appendix A BUS 7 MACHINE MODEL DATA



1. Scope

The VFT (“Variable-Frequency Transformer”) is a new technology for interconnecting two asynchronous ac power systems. A brief description of the VFT is included in Section 2 of this document. The remainder of this document defines model structures appropriate for typical planning studies, covering load flow, short-circuit, and stability analysis.

2. VFT Description

2.1 VFT installation

A VFT installation, illustrated in Figure 2-1, includes the following major components:

1. Rotary transformer, which provides a continuously-controllable phase shift for any angle, including different frequencies on the two sides.
2. Drive system and control to adjust the angle and speed of the rotary transformer to regulate power flow through the VFT.
3. Reactive compensation on either medium-voltage or high-voltage buses. This can be in the form of switched capacitors or static var compensation, as needed for the application.
4. Transformers to connect the medium-voltage windings of the rotary transformer to the high-voltage transmission bus.

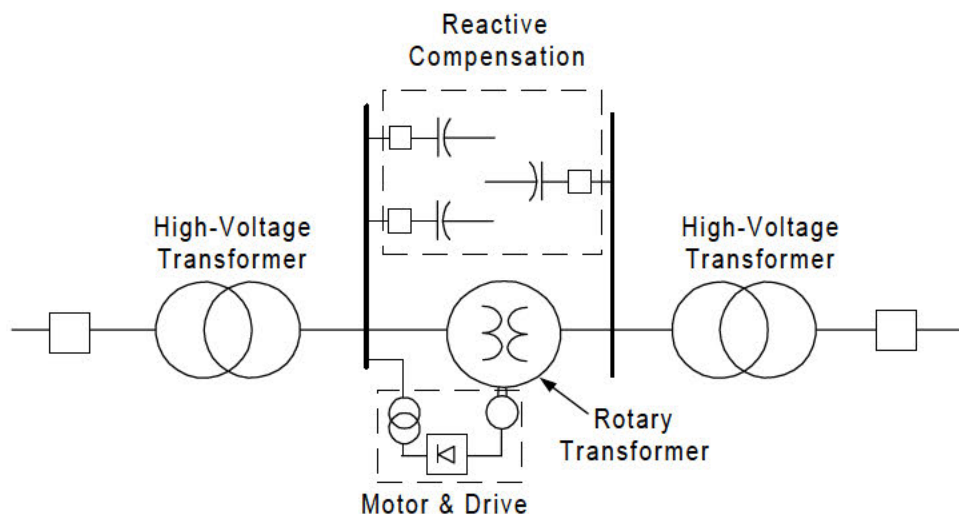


Figure 2-1 Typical Elements of a VFT Installation



2.2 VFT Operation

Power flow is proportional to the angle of the rotary transformer, as with any ac power circuit. The impedance of the rotary transformer plus transformers and ac grid determine the amount of angle shift needed to obtain a given power transfer. Typically the total impedance from high-voltage bus to high-voltage bus is on the order of 35% to 40% of the VFT rating.

The power regulator senses power flow through the VFT and adjusts the angle until the actual power matches the power command. If the two grids have different frequency, the rotary transformer will continuously rotate to maintain the appropriate effective power angle.

For reactive power flow, the VFT acts just as any transformer. The series impedance of the rotary transformer plus high-voltage transformers determines reactive flow through the system as a function of voltage difference between the two high-voltage buses. An area of lower voltage will naturally draw reactive support from the opposite system with no control action.

Shunt capacitors or static var compensators applied at any bus will provide voltage regulation as in a conventional ac system. The medium-voltage bus offers an economical position for reactive control equipment.



3. Load Flow and Short-Circuit Representation

3.1 Load Flow Model

For load flow analysis, the VFT is represented as a phase angle regulator. The limits of phase angle can be set as large as needed to obtain the desired power flow. The series reactances of the system, and extent of reactive compensation, limit maximum achievable power flow.

Reactive compensation can be represented as in normal load flows. Either fixed capacitors or controlled-compensation of some type can be added where appropriate to realize desired voltage control.

Figure 3-1 illustrates the power circuit to be included between two high-voltage buses. Typical parameter values are indicated in Table 3-1.

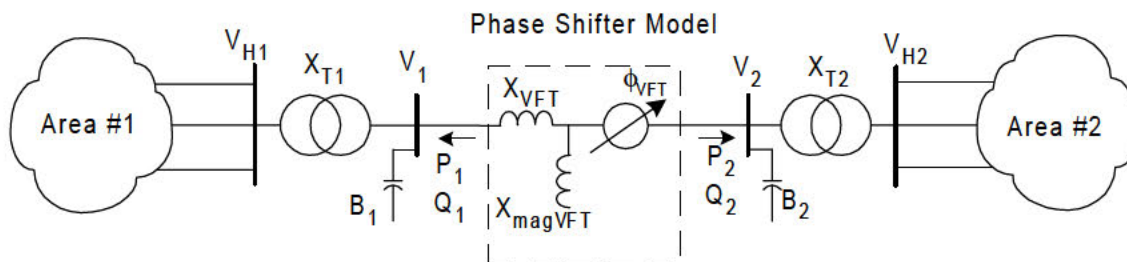


Figure 3-1. VFT Power Circuit for Loadflow Analysis

Table 3-1 Typical values for preliminary planning studies

Parameter	Typical Value (based on VFT rating)
XVFT	18%
XmagVFT	10pu (i.e. magnetizing current = 10%)
Xt1 and Xt2	10%
B1, B2	20% to 80% total, depending on transmission grid needs

3.2 Short-Circuit Calculations

For short-circuit calculations, the impedance is the only information required. The contribution to a bus will be on the order of 150% to 250% of the VFT rating, depending upon the strength of the transmission grid on the opposite side.

The model described here is suitable for studies of dynamic events. The only approximation is that frequency of the two grids remains within a few percent of nominal.

Figure 4.1-1 shows an overview of the dynamics model for the VFT installation. An overview of the control system is shown in Figure 4.1-2. The components are described in subsequent subsections.

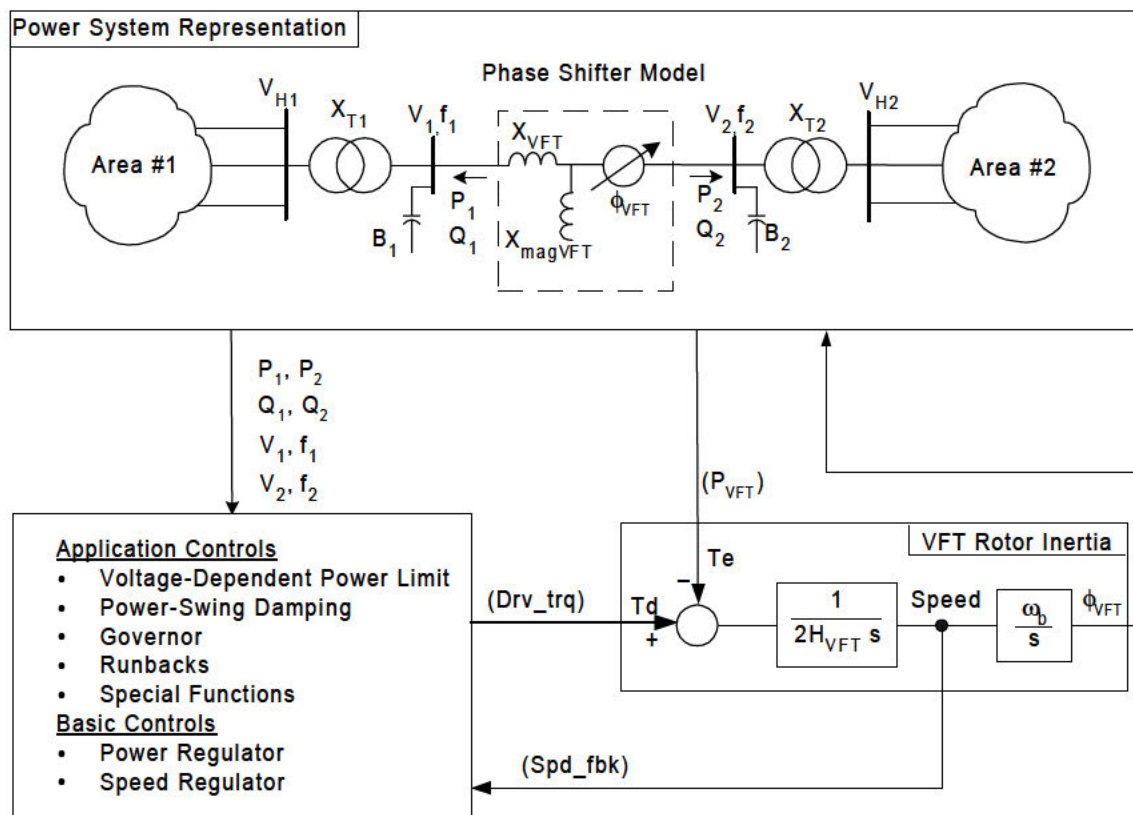
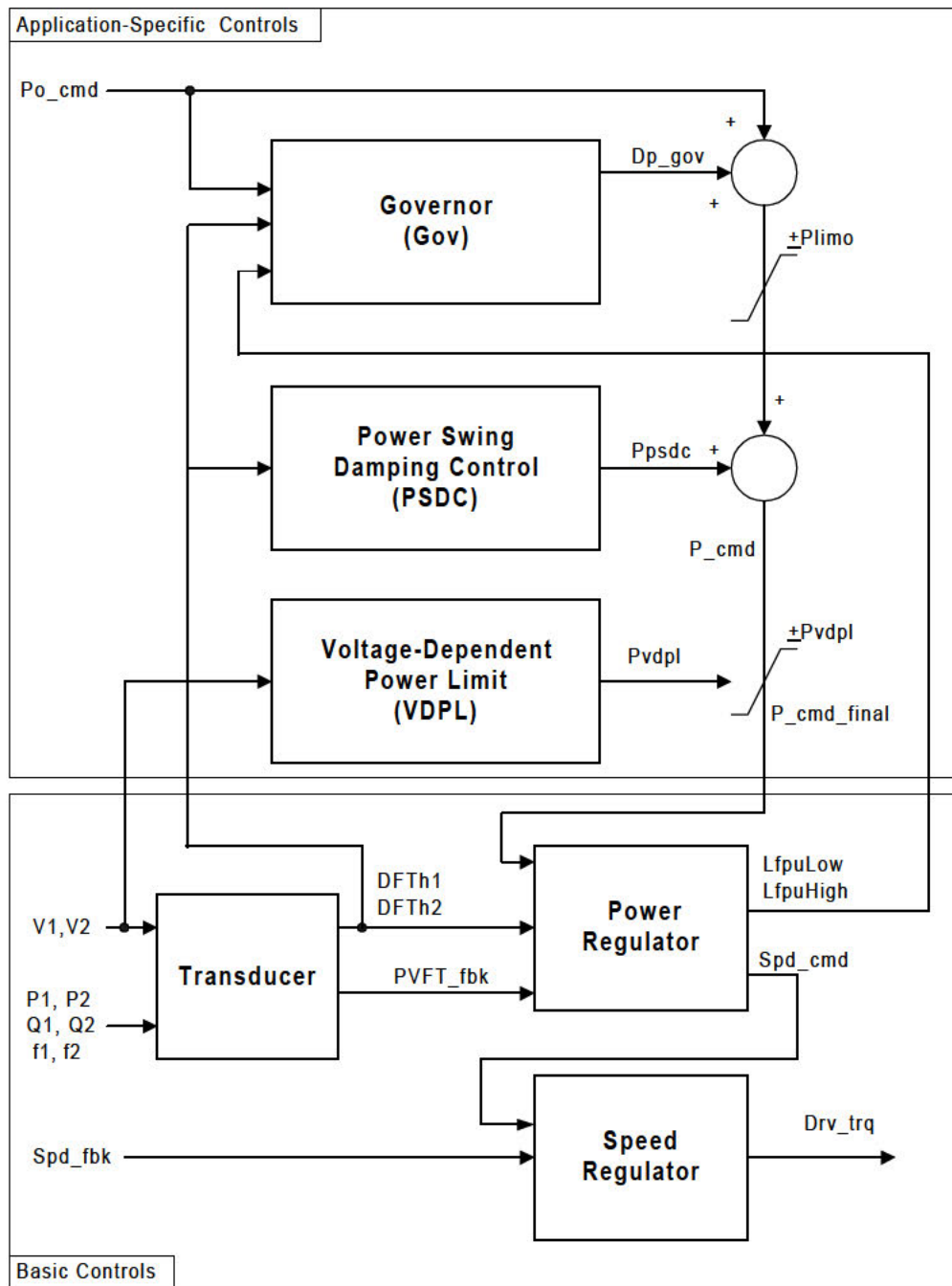


Figure 4.1-1 Overview of VFT Dynamics Model

*Figure 4.1-2 Overview of VFT Controls*



4.2 Physical Equipment

The substation, with reactive compensation, is represented as in the load flow. Should the reactive compensation include controls, these should be represented as normally done in stability simulations.

The rotary transformer is represented as a controlled phase-shifting transformer. The position is determined by the rotor inertia model, and must be implemented in a continuous manner in the network solution. Note that this angle must be able to wrap around multiple 360° rotations during the course of a simulation.

The rotor dynamics are straightforward. An inertia integrates torque difference between what the controls and drive determine and the reaction from the electrical transmission grid. For the purposes of this model, the electrical reaction torque can be approximated as being equal to the electrical power transferred through the rotary transformer, in per unit on a common base.

The angle of the phase shifting transformer is the integral of speed. In steady state operation with nominal frequency on both sides, speed is zero and the angle is constant. The value will be initially determined from the power flow.

4.3 Basic Controls

The basic controls are responsible for regulating power flow to the command from the application controls, subject to speed limits of the rotary system. Detailed block diagrams of the power and speed regulators are shown in Figures 4.3-1 and 4.3-2, respectively.

The speed regulator is a simple P-I type with limits. In a practical system the torque limits will be a function of speed, but for typical planning purposes this relationship can be ignored.

The power regulator is a P-I-D type, augmented by a predictive setting of speed order based on measured frequency on the two sides of the VFT. The limit on speed command represents the maximum allowable speed for the unit.

The status of the limit is used to prevent windup of the integrator within the power regulator. This limit status is also defined as two logic variables for use by other control functions. LfpuHigh is true when the upper limit is enforced, and similarly for LfpuLow for the lower limit.

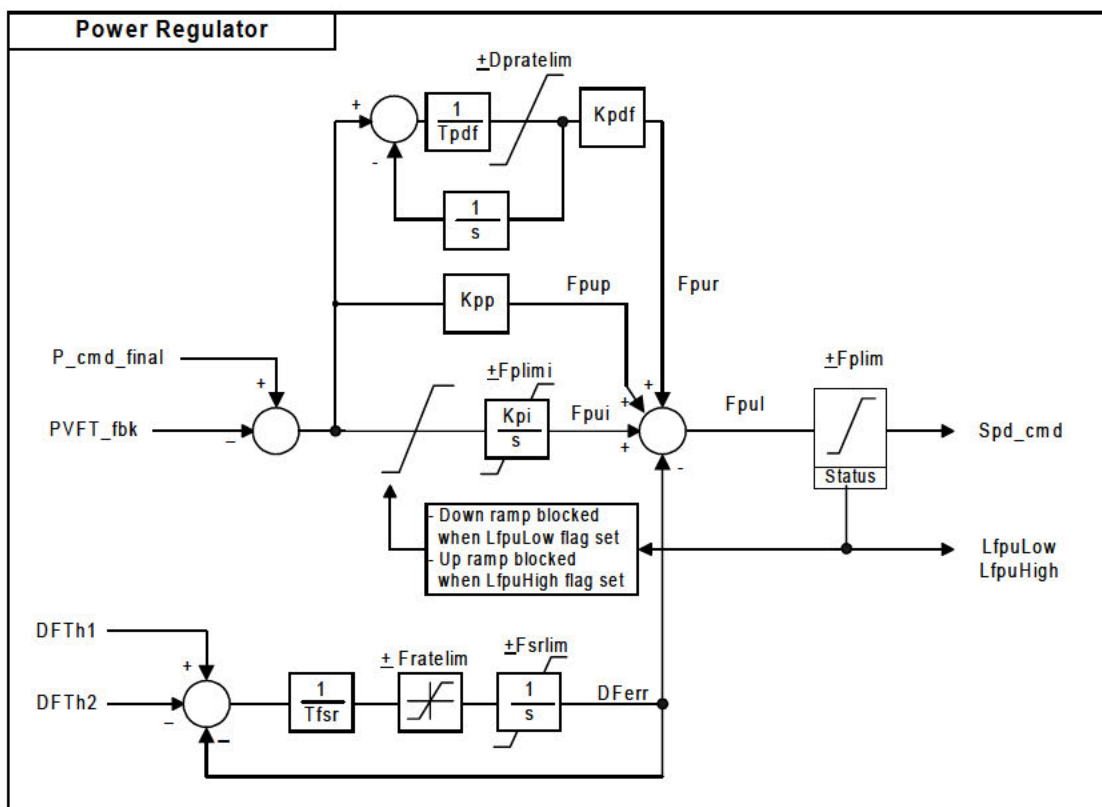


Figure 4.3-1 Power Regulator

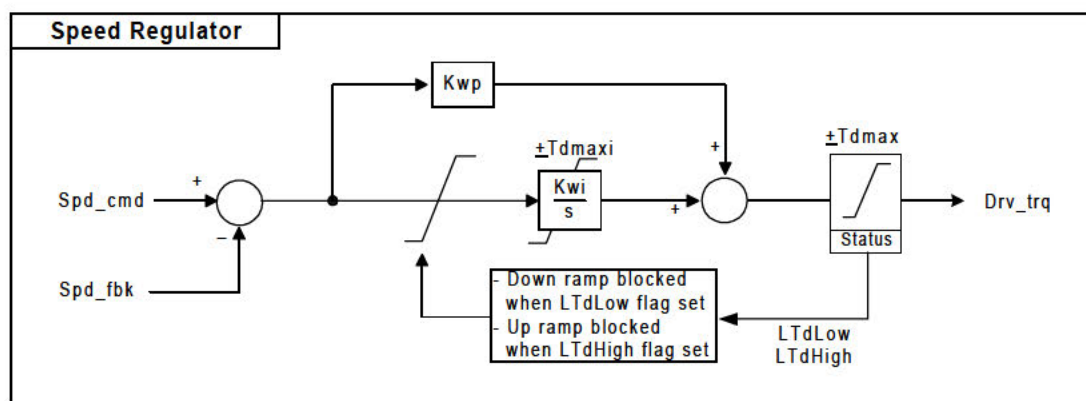


Figure 4.3-2 Speed Regulator



4.4 Transducer

4.4.1 Thevenin Equivalent

The frequency signal used for predictive setting of speed order is determined from a Thevenin equivalent looking into each transmission grid separately. The purpose of this is to decouple the measured frequency signal from the action of the regulators. This signal can also be used as feedback for other application-layer controls, e.g. power swing damping.

The value of reactance used in the Thevenin equivalent calculation (X_{th}) is not too critical to performance; it should simply be an estimate of the average short-circuit impedance from the high-voltage bus plus the transformer reactance.

Using the power conventions of Figure 3-1, and assuming the shunt capacitance is not significant, the Thevenin equivalent voltage at side 1 is:

$$\overline{V_{th1}} = \left[V_1 - \frac{Q_1 \cdot X_{th1}}{V_1} \right] - j \left[\frac{P_1 \cdot X_{th1}}{V_1} \right]$$

Thus, the Thevenin voltage and frequency are calculated as:

$$V_{th1} = \min[\text{Mag}(\overline{V_{th1}}), 0.1]$$

$$A_{th1} = \text{Ang}(\overline{V_{th1}})$$

$$F_{th1} = \frac{sA_{th1} + f_1}{1 + sT_{fx}}$$

$$DF_{th1} = F_{th1} - F_{base}$$

where F_{base} is the system frequency and T_{fx} is the transducer time constant for measuring frequency.

Note that the value of V_1 should be limited to be above a threshold, e.g. 10%, prior to using in denominator when computing the components of V_{th1} . The magnitude of V_{th1} is similarly limited to a small value prior to its use elsewhere in the control logic. Finally, should the magnitude of V_{th1} be smaller than a threshold, e.g. 10%, the angle should be set to zero to prevent windup of the filter.

The side 2 Thevenin parameters are calculated in the same manner.

4.4.2 Power Direction

The direction of power must be established in the simulation tool. Typical convention is to set “from” and “to” bus designations. The transducer then picks either P1 or P2 depending upon direction.



4.5 Application-Specific Controls

Selected application-specific controls are described here. Block diagrams are shown for basic implementations. These are expected to provide good starting points for planning studies.

4.5.1 Voltage-Dependent Power Limit (VDPL)

The VDPL function is intended to prevent voltage collapse due to sudden loss of transmission capacity. Figure 4.5.1-1 shows a simple form of the VDPL.

The power limit is adjusted as a function of the lowest voltage on either side of the VFT. Drops in power limit are followed relatively quickly while rises are followed slowly.

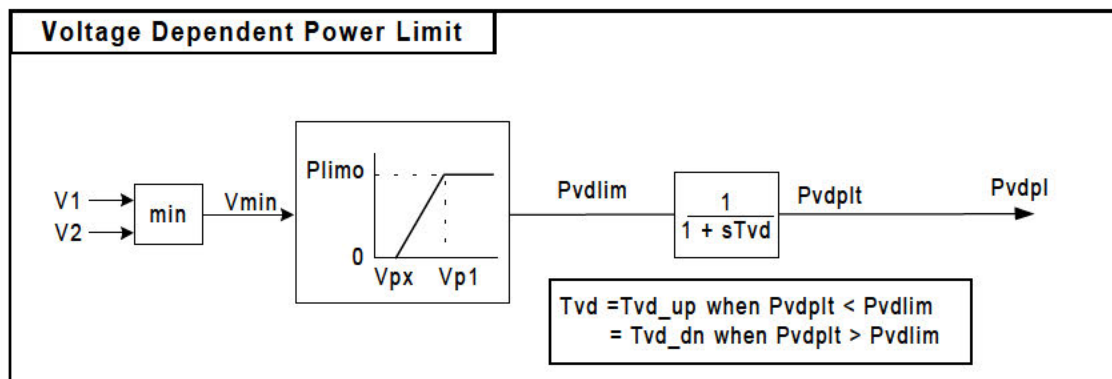


Figure 4.5.1-1 VDPL Block Diagram



4.5.2 Governor (GOV)

The governor function is intended to serve applications where security requires rapid response to limit frequency excursions on one side of the VFT. This may exist where one side may become islanded. Because the VFT can provide blackstart capability, this function can also be used to regulate frequency on the load side by setting the deadband and droop as desired for the application.

Note the governor is implemented as a modulation to operator power order, with limits that vary with operator power order. The output is rate-limited, and windup is prevented while the power regulator is in limits.

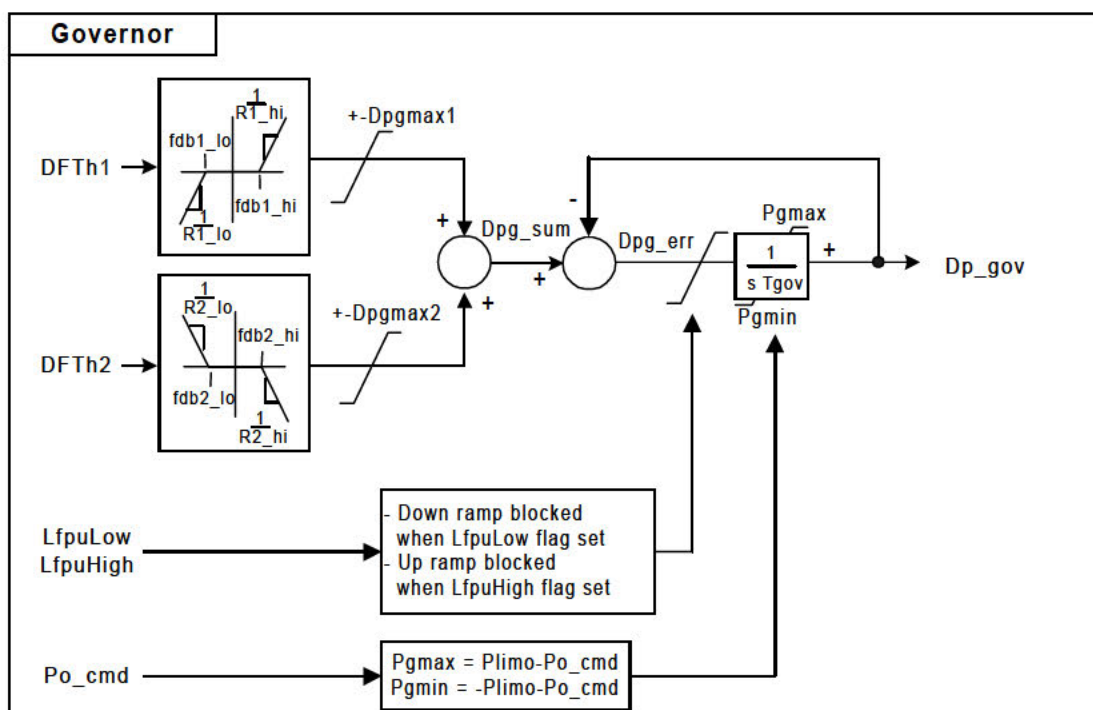


Figure 4.5.2-1 Governor Block Diagram



4.5.3 Power-Swing Damping Control (PSDC)

The power-swing damping control may take many forms. The function shown in Figure 4.5.3-1 is based on using only locally-measured variables, i.e. the frequency of an equivalent within the respective side as described in section 4.4. A washout and 2nd order transfer function should be adequate to test various modulation strategies.

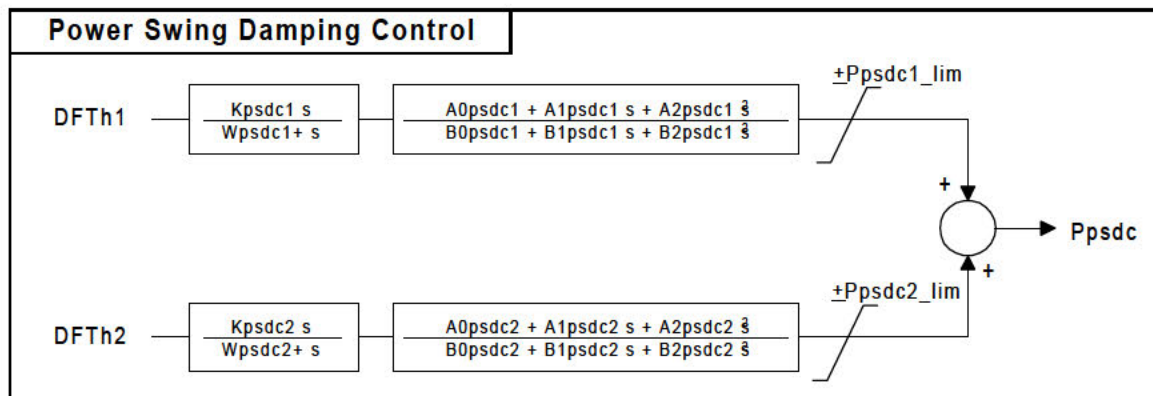


Figure 4.5.3-1 PSDC Block Diagram

4.5.4 Runbacks

“Runback” is a term used to denote an open-loop change in power order. This may involve power increases or power reversal, as well as reduction.

Such functions should be represented as open-loop changes to the operator power command (Po_cmd).

4.5.5 Special Functions

Examples of special functions are island frequency regulation and tie-line regulation. These are higher-level functions that would adjust the operator power command (Po_cmd) to meet a system regulation objective.

The test system shown in Figure 5-1 is used to illustrate performance of the VFT, and provide benchmark results for model validation. Model parameters are defined in section 5.1.





5.1 VFT Model Parameters

Tables 5.1-1 and 5.1-2 define the VFT parameters used for the example cases. The first table covers the physical system and basic controls. The second table covers the application-specific functions used in the examples. Model data for the small machine on Bus 7 is contained in Appendix A.

Table 5.1-1 VFT Model Parameters for Physical System and Basic Controls

Physical System Parameters			
<i>Parameter</i>	<i>Units</i>	<i>Value</i>	<i>Comments</i>
VFT MVA	MW rating	100	Nameplate rating of VFT System
XVFT	Pu-VFT	0.2	
XmagVFT	Pu-VFT	10	
HVFT	Pu-VFT-sec	25	
XT1	Pu-VFT	0.1	
XT2	Pu-VFT	0.1	
B1	Pu-VFT	0	
B2	Pu-VFT	0.1	Fixed capacitor
Speed Regulator			
<i>Parameter</i>	<i>Units</i>	<i>Value</i>	<i>Comments</i>
Kwp	PuT/puSpd	500	Note speed base for model is system frequency, not actual rated speed of machine
Kwi	PuT/sec/puSpd	500	
Tdmax	puT	3	Torque base is 1.0 for PVFT = 1.0
Tdmaxi	puT	1.5	
Power Regulator			
<i>Parameter</i>	<i>Units</i>	<i>Value</i>	<i>Comments</i>
Kpp	Pufreq/puP	.035	
Kpi	Pufreq/sec/puP	.003	
Kpdf	Pufreq/puP/sec	.003	
Tpdf	Sec	.025	
Dpratelim	PuP/sec	10.	
Fplimi	Pu freq	.02	
Fplim	Pu freq	.04	Maximum frequency difference
Fsrlim	Pu freq	.04	Maximum frequency difference
Fratelim	Pu freq/sec	0.06	
Tfsr	Sec	0.1	
Transducer - Thevenin Synthesis			
<i>Parameter</i>	<i>Units</i>	<i>Value</i>	<i>Comments</i>
Xth1	Pu-VFT	.15	XT1 + average short-circuit impedance at side 1 HV bus
Xth2	Pu-VFT	.3	XT2 + average short-circuit impedance at side 2 HV bus
Tfx	Sec	.05	Filter time constant on frequency measurement

*Table 5.1-2 VFT Model Parameters for Example Case Application Functions*

Voltage-Dependent Power Limit			
<i>Parameter</i>	<i>Units</i>	<i>Value</i>	<i>Comments</i>
Plimo	PuP	1.1	Maximum allowable power, or set slightly higher than operating power
Vp1	PuV	0.95	Voltage below which power limit is lowered
Vpx	puV	0.7	Voltage where Pvdlim=0
Tvd_dn	Sec	0.3	Rate for reducing power limit
Tvd_up	Sec	3.0	Rate for increasing power limit
Governor			
<i>Parameter</i>	<i>Units</i>	<i>Value</i>	<i>Comments</i>
Tgov	Sec	0.3	
fdb1_lo	PuFreq	-0.01	Deadband for underfreq
R1_lo	PuFreq for 1puP	0.01	Droop for underfreq
fdb1_hi	PuFreq	0.01	Deadband for overfreq
R1_hi	PuFreq for 1puP	0.01	Droop for overfreq
Dpgmax1	puP	1.5	Limit on power change due to freq deviation
fdb2_lo	PuFreq	-0.01	Deadband for underfreq
R2_lo	PuFreq for 1puP	0.01	Droop for underfreq
fdb2_hi	PuFreq	0.01	Deadband for overfreq
R2_hi	PuFreq for 1puP	0.01	Droop for overfreq
Dpgmax2	puP	1.5	Limit on power change due to freq deviation



5.2 Stub Fault

Figure 5.2-1 shows the results of a six-cycle three-phase stub fault applied at Bus #5. Recovery is smooth, with VFT power regulated closely to the final command within a short time after fault clearing. Note the final power command is reduced during the fault by the VDPL function, then slowly reset to the original operator setpoint. The small local generator oscillates against the receiving transmission system with very little participation through the VFT.

5.3 Line Clearing Resulting in Weak Receiving System

Figure 5.3-1 shows the results of a six-cycle three-phase fault applied at Bus #5, which is cleared by opening circuit 1 between Bus#5 and #6. The high impedance (0.6 pu) of the remaining circuit results in a very weak receiving end system. Figure 5.3-2 shows the result of simply tripping the strong line, without a fault.

In both cases, recovery is stable, with the VFT power helping to stabilize the oscillations of the local machine as the VFT ramps back to near full power via the VDPL function. At the end of these simulations, the voltage on the weak system side of the VFT (Bus 4, “V2” on plots) is below the 95% breakpoint of the VDPL. Thus, full power is not quite achievable without additional voltage support.

These examples illustrate how the VDPL operates to prevent voltage collapse.

5.4 Fault with Clearing Resulting in Islanded Receiving System

Figure 5.4-1 shows the results of a six-cycle three-phase fault applied at Bus #5, which is cleared by opening both circuits between Bus#5 and #6. This results in a local islanded system on the receiving end, consisting of the Bus#5 load and the Bus#7 generator.

In this case the VFT must rapidly reduce power, since the receiving transmission grid is removed. Only the small local load (10MW) and generator (25MW) remain, so in steady state the VFT must absorb the excess generation (approximately 15MW).

The initial fast drop of power is a consequence of the natural response of the VFT, as it acts like a transformer connecting the two systems. The power regulator sees a mismatch compared to the operator command, so acts to increase speed of the VFT. This increases the frequency on the island, and the governors of both the VFT and the small generator react to attain a new equilibrium with a small overfrequency condition. The final frequency is a function of the governor characteristics, with the VFT being the dominant factor.

This would be a situation where a special control, e.g. island frequency regulation, would be appropriate to adjust the operator power command such that the island frequency returned to normal.



5.5 Steps in Power Order

Steps to power order are shown in Figures 5.5-1 and 5.5-2. While such transients would probably not be done in practice, the simulations serve to illustrate the nature of the regulator performance as well as providing benchmarks for model validation.

Both large and small steps are shown. The large step shows a complete reversal, from full power in one direction to full power in the opposite direction. The small step shows a 20% change, selected to illustrate operation within the linear range of the regulators.

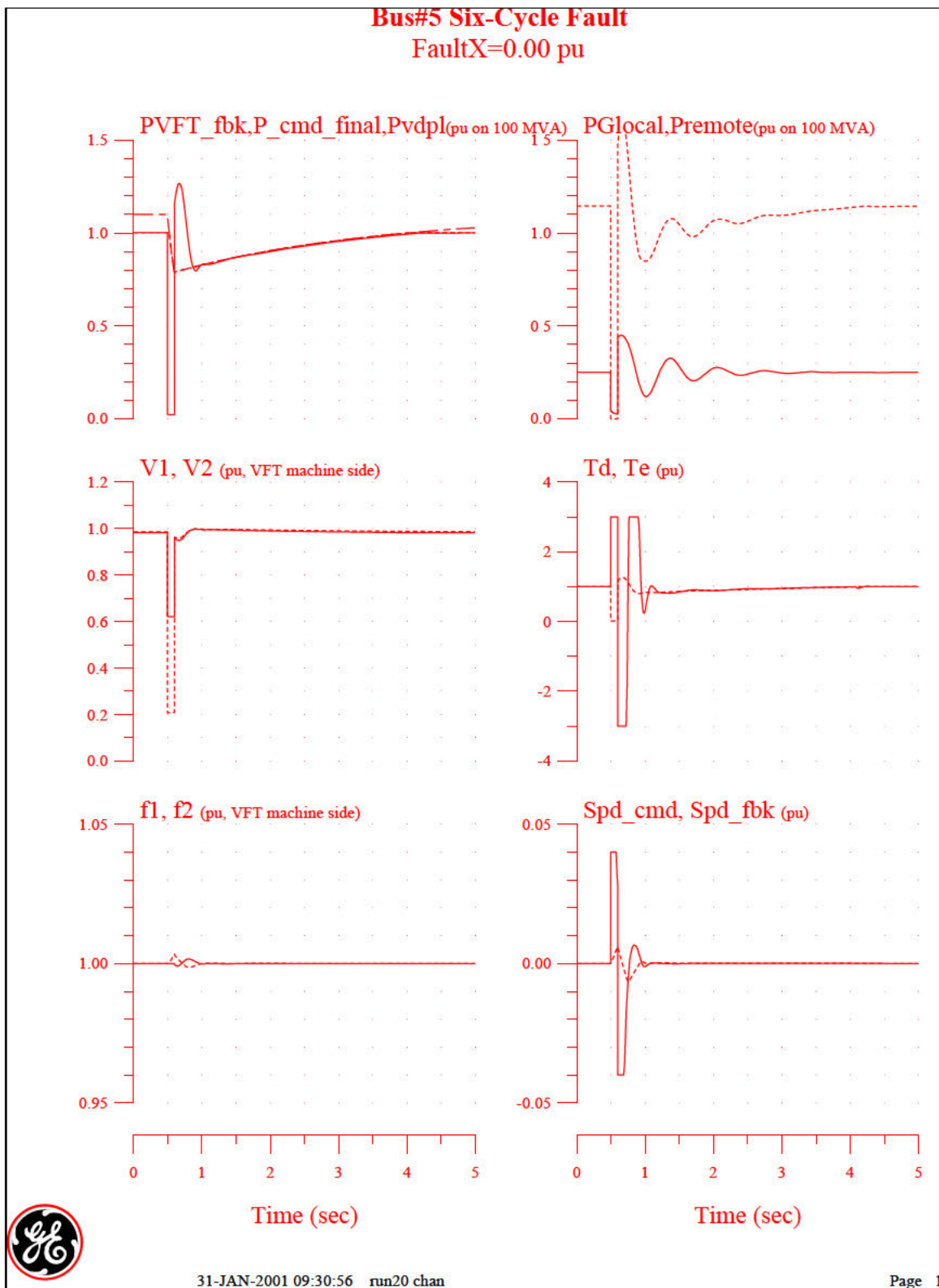


Figure 5.2-1 Six-Cycle Stub Fault

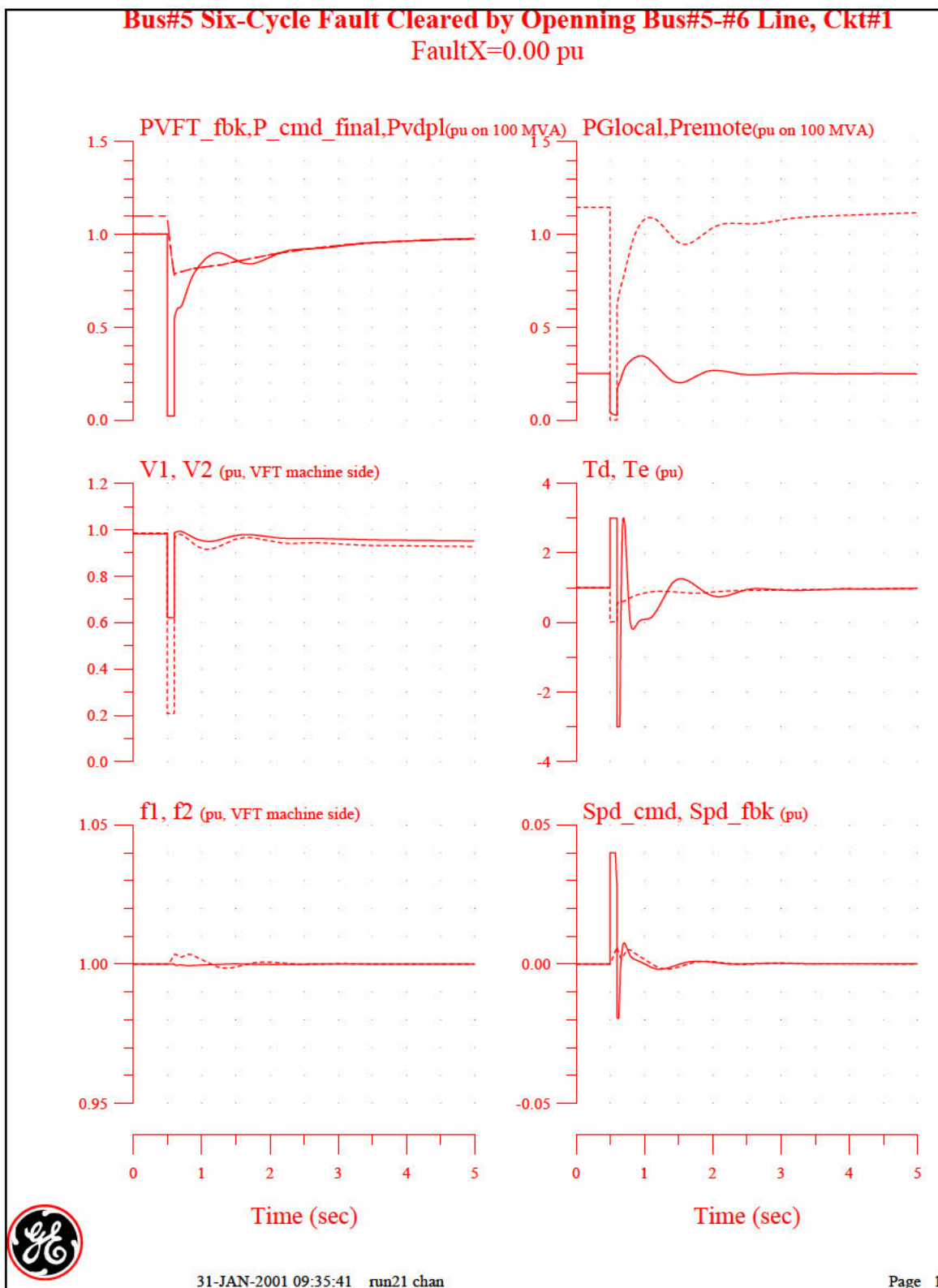


Figure 5.3-1 Six-Cycle Fault with Clearing Resulting in Weak Receiving System

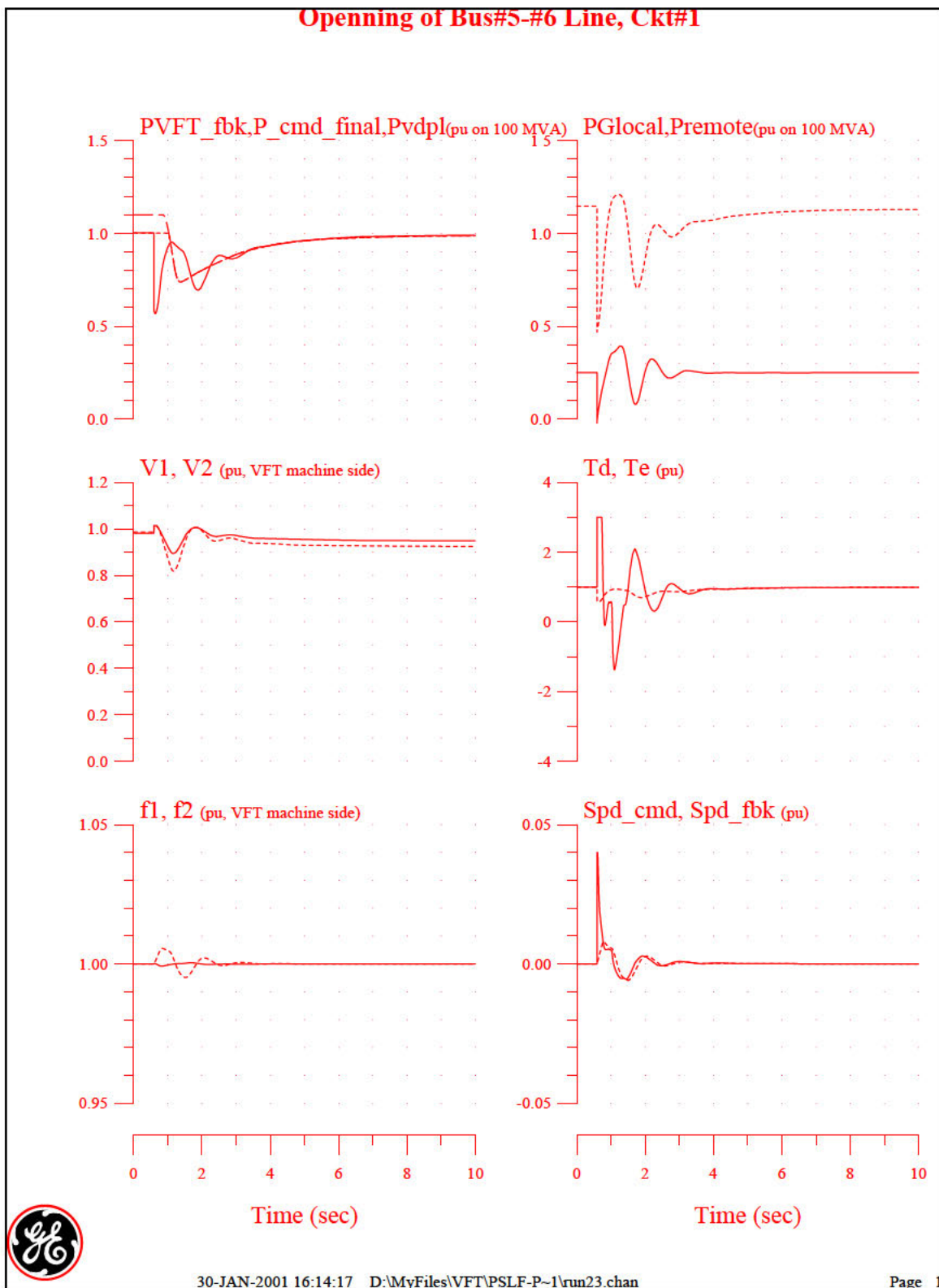


Figure 5.3-2 Line Opening Resulting in Weak Receiving System

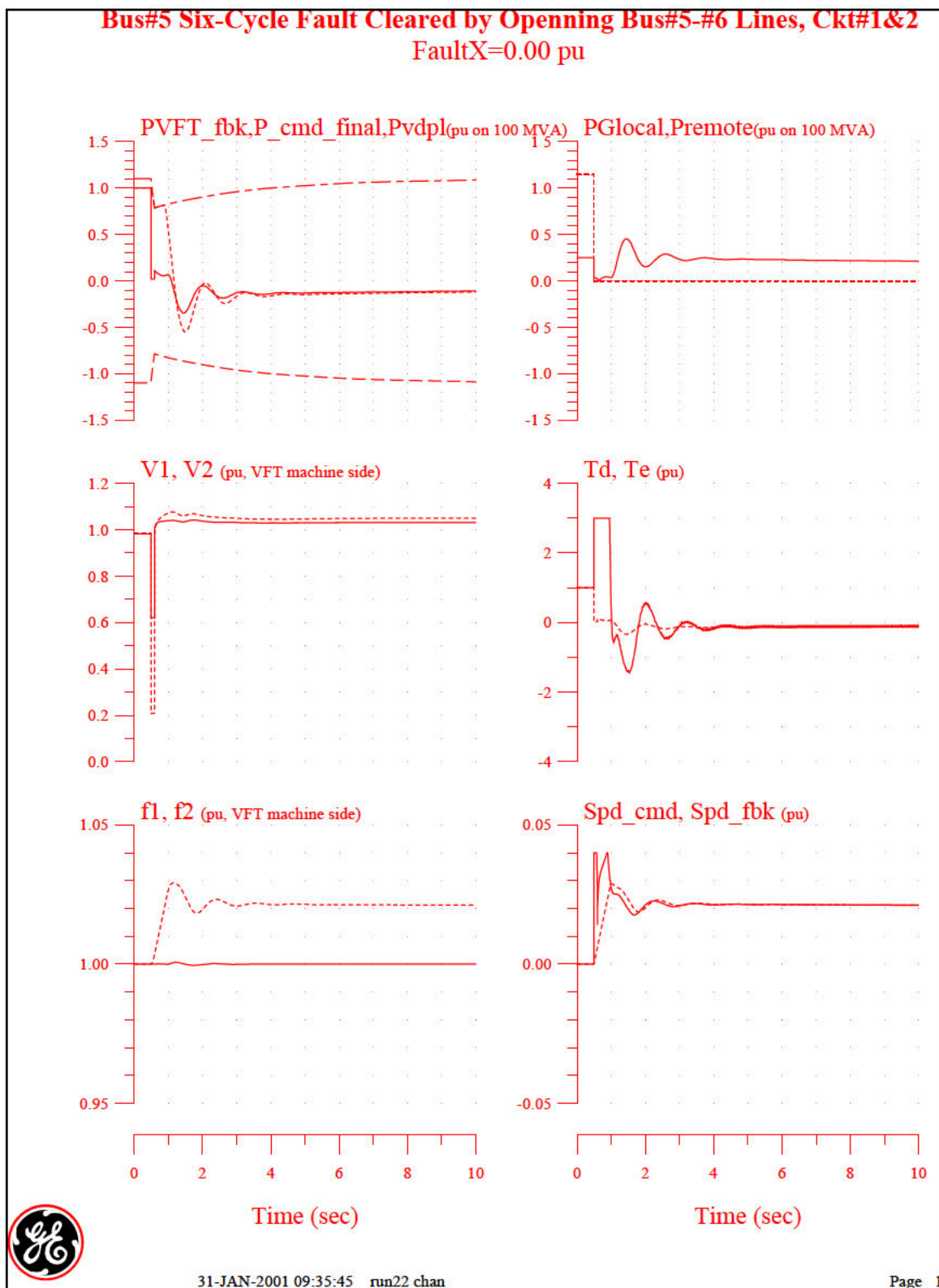


Figure 5.4-1 Six-Cycle Fault with Clearing Resulting in Islanded Receiving System

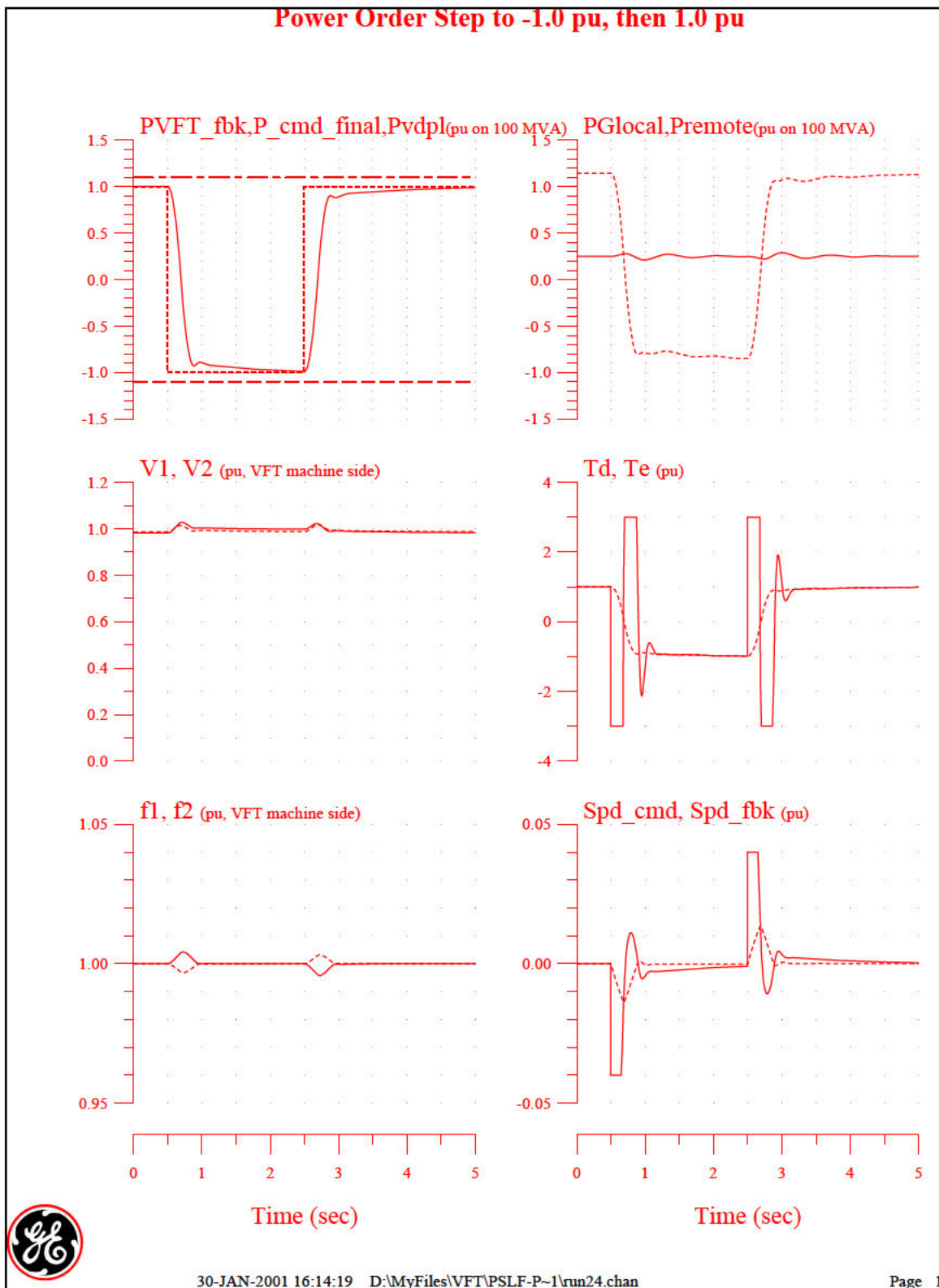


Figure 5.5-1 Large Step in Power Order

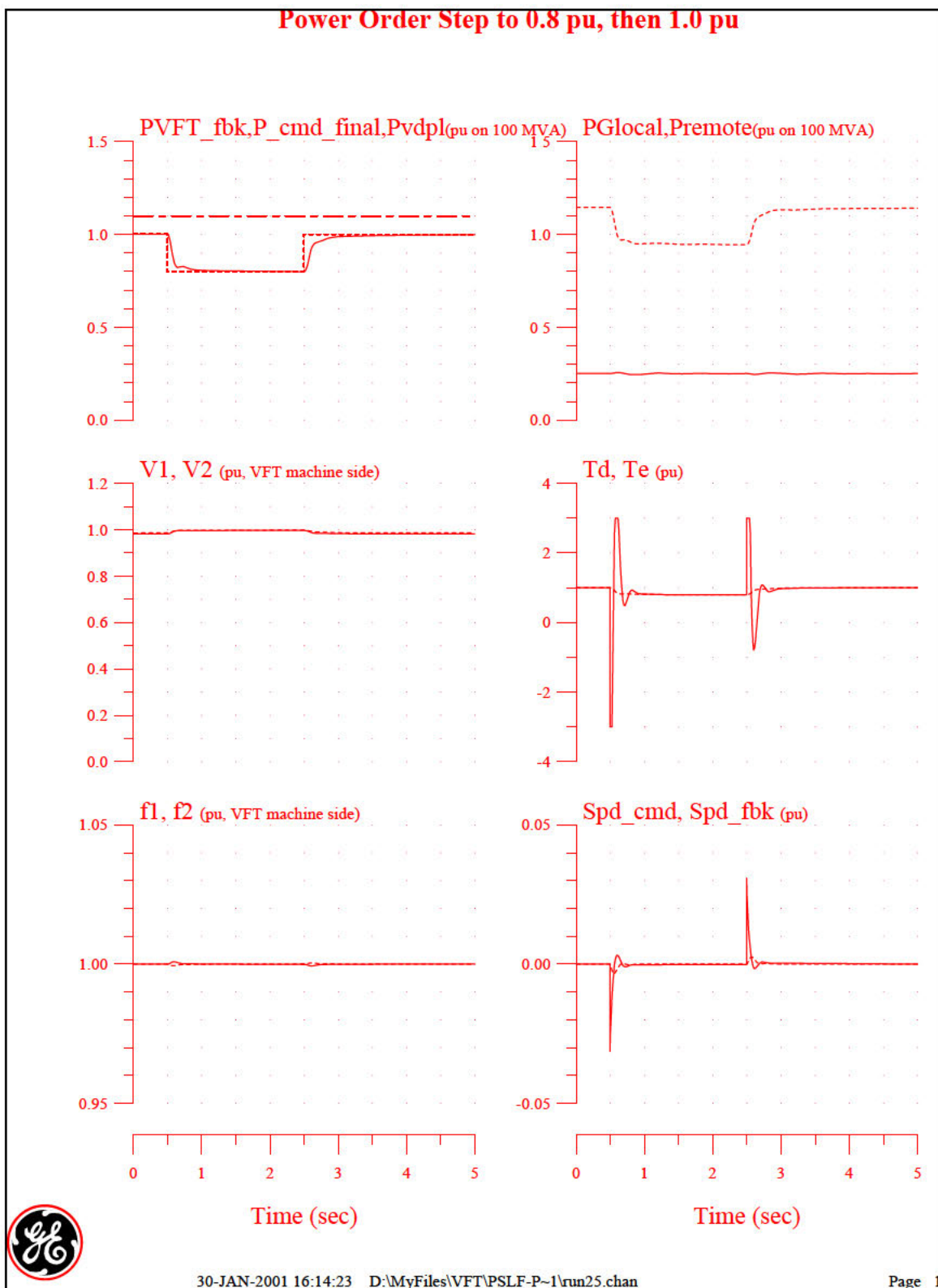


Figure 5.5-2 Small Step in Power Order



Appendix A BUS #7 MACHINE MODEL DATA

This Appendix contains the machine model data for Bus 7 generator, used in the Section 5 example cases. The following PSLF models, with data, are given:

- Generator model (GENROU)
- Exciter model (EXST4B)
- Governor model (TGOV1)

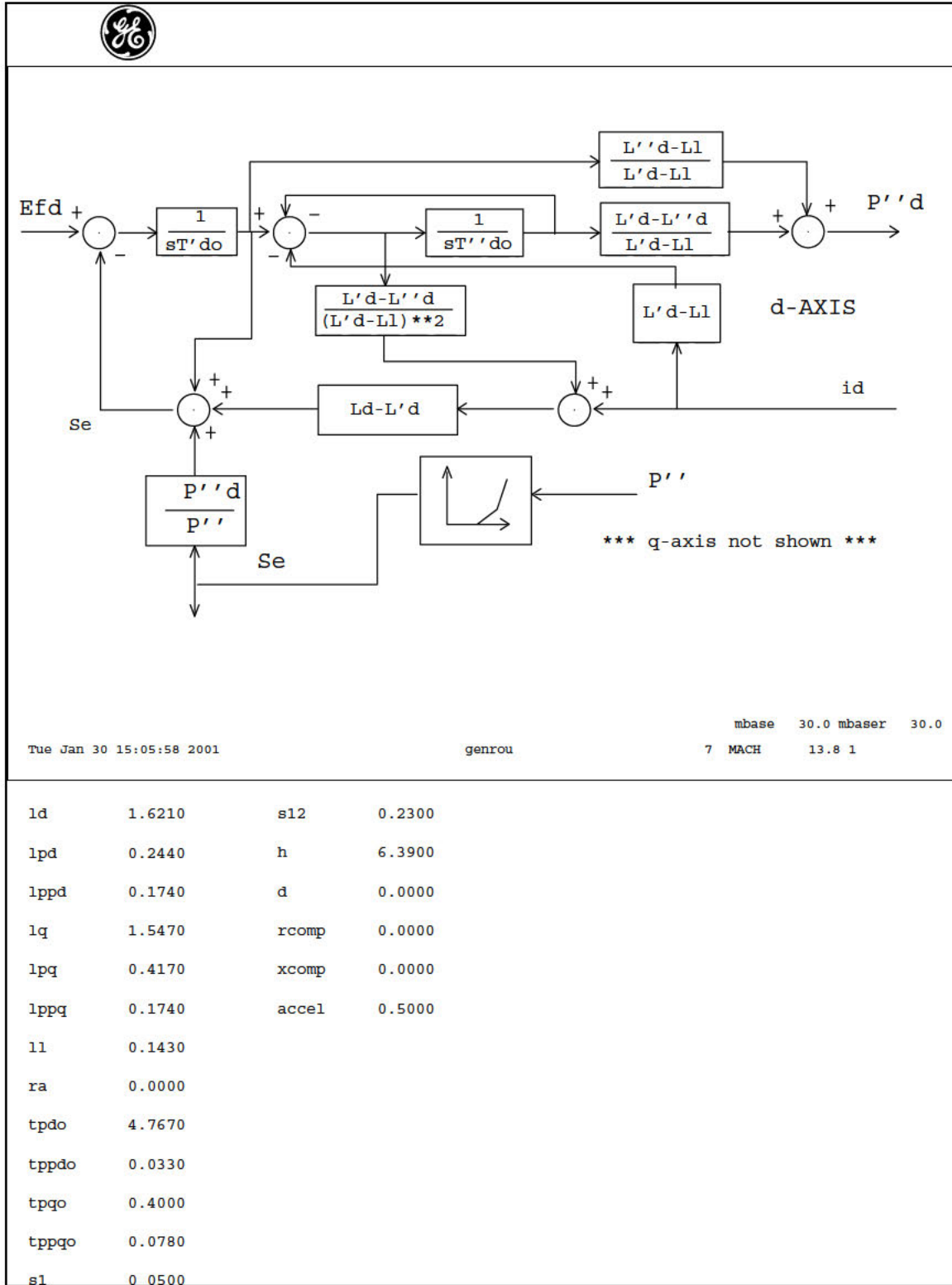


Figure A-1 Bus 7 Generator Model

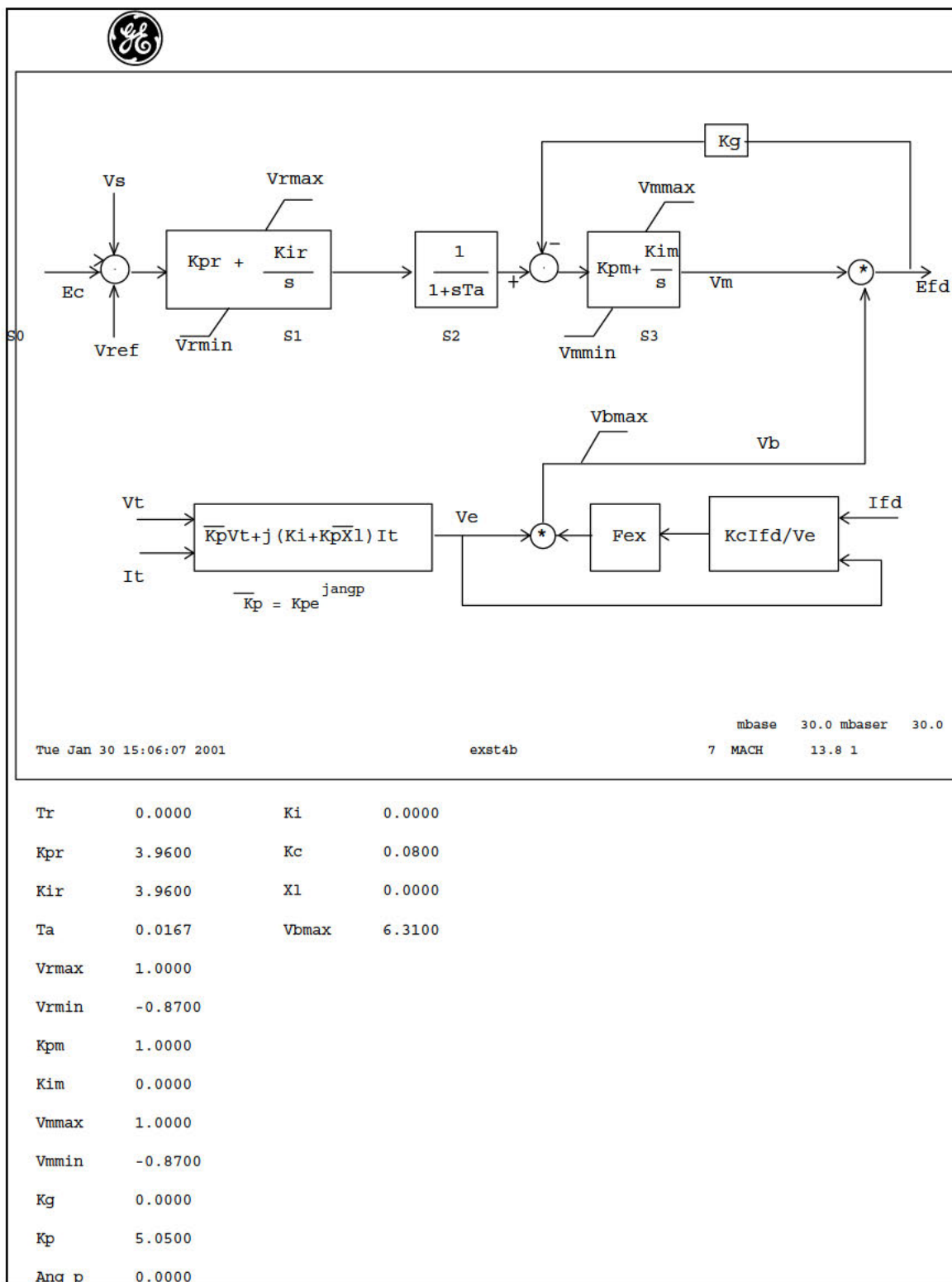


Figure A-2 Bus 7 ExciterModel

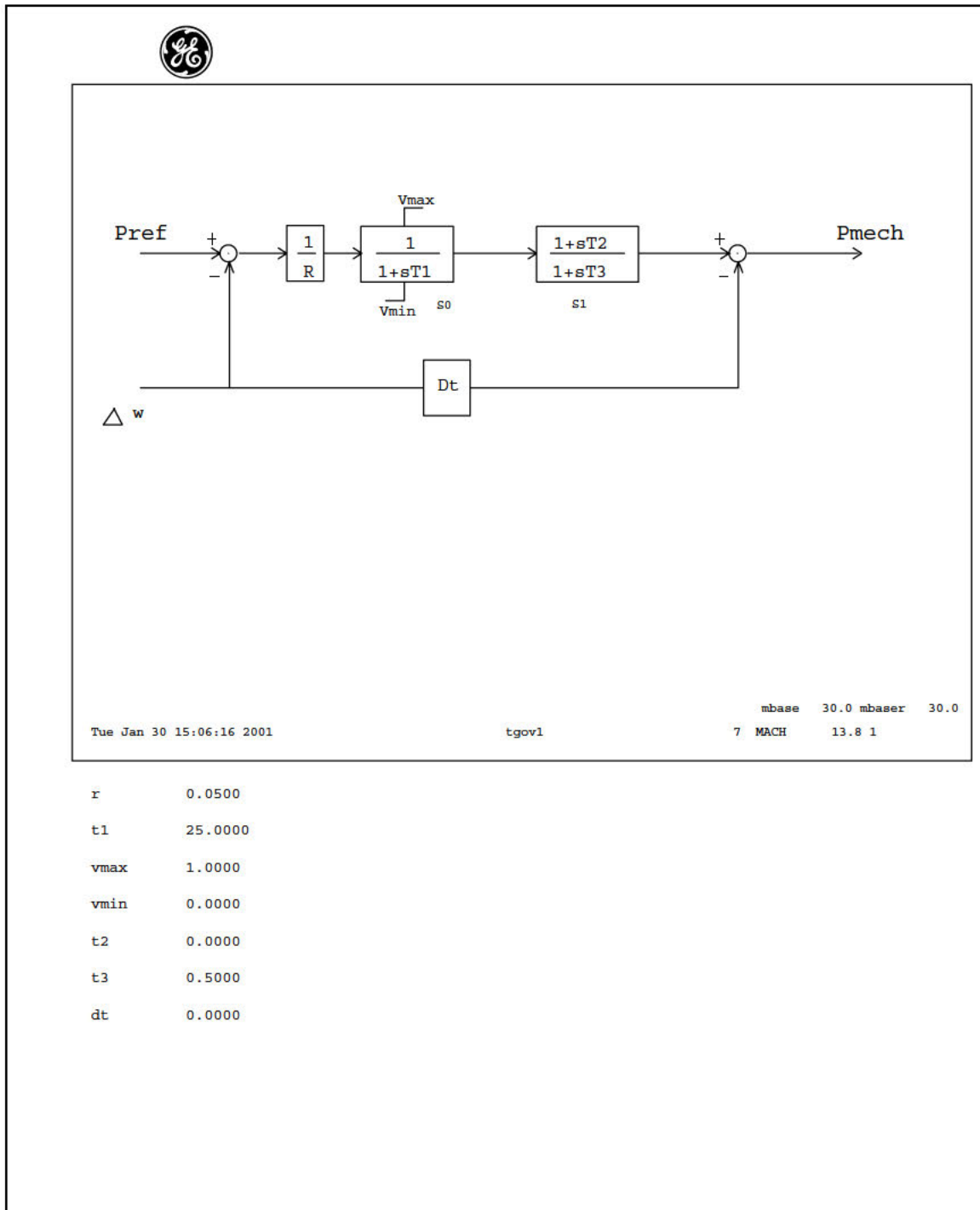
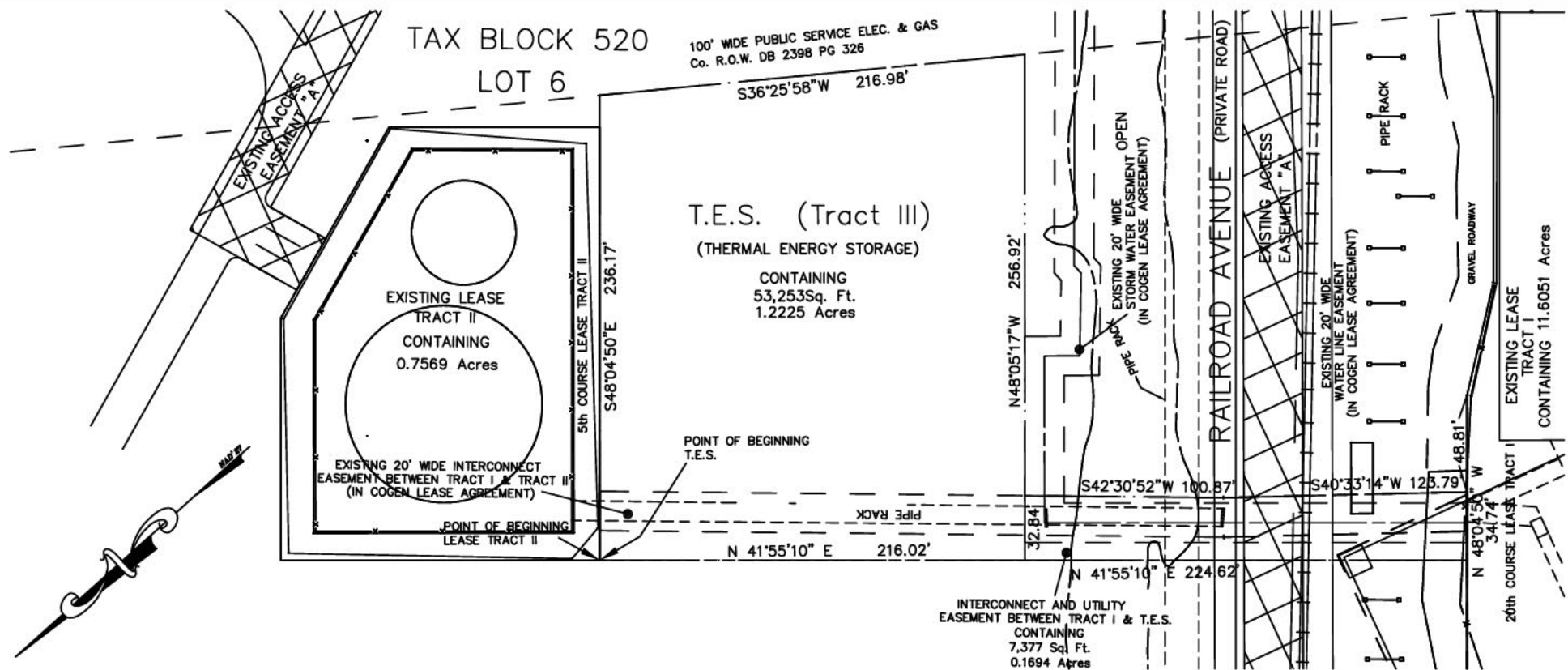


Figure A-3 Bus 7 Governor Model



MAP REFERENCES:

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THE PREMISES HEREIN LOCATED WITHIN THE "LEASE LINES" ARE LOCATED IN A 100 YEAR FLOOD PLAIN, AS DESIGNATED BY THE UNITED STATES ARMY CORPS OF ENGINEERS.

UTILITY LOCATIONS SHOWN HEREON ARE FROM ABOVE GROUND OBSERVATIONS, MAPS AND DESCRIPTIONS PROVIDED BY OTHERS. THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE USER OF THIS SURVEY IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATIONS OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY.

<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> REVISIONS </div>	6			DATE: 7/7/99	F.L.D. BK.:
	5			PROJ.: 890803	PAGE:
	4	MAP REFERENCES	01/10/00	SCALE: 1" = 50'	CHKD.:
	3	TRACT NAME / REFERENCES	12/27/99		
	2	REMOVE 150' RESTRICTION LINE	9/23/99		
1	TRACT III AND INTERCONNECT	7/9/99			

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CONSULTING ENGINEERS • LAND SURVEYORS • LANDSCAPE ARCHITECTS • PLANNERS

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MATTHEW L. MARTIN, Professional Land Surveyor, Lic. 30088

PROPOSED LEASE AREA AND EASEMENTS
T.E.S. (Tract III)
THERMAL ENERGY STORAGE
FOR
EAST COAST POWER L.L.C.
CITY OF LINDEN, UNION COUNTY, NEW JERSEY

SHEET No.
1
1
OF

Attachment 4

*Notice to Market Participants Concerning Transition to
New Interconnection Procedures* and attachment
(dated October 1, 2004)

10/01/04

Notice to Market Participants Concerning Transition to New Interconnection Procedures

As you know, the NYISO's new Large Facility Interconnection Procedures ("LFIP") became effective with FERC's order on August 6, 2004. The procedures, with few exceptions, require the NYISO and developers to transition outstanding interconnection requests to the new procedures within 60 days of the August 6 effective date, which is October 5, 2004.

Whether and how a specific project will transition to the new procedures will depend on that project's status as of the effective date of the LFIP. For clarity, we have provided the attached chart identifying the status of each project in the NYISO's queue. This chart groups projects that have reached the same milestones in the interconnection process. If you believe that your project has been listed in the wrong group, please notify the NYISO as soon as possible and provide supporting documentation.

The transition process applicable to each group of projects is described below, including any applicable deadlines.

Group A: Filed IA's Prior to August 6 and Completed NYISO Study Process, Including Cost Allocation

The interconnection agreements ("IA") filed by projects in Group A are grandfathered under Section 5.1.1.3 of the LFIP. Additionally, cost allocation for this group is complete, or nearly complete.¹ Therefore, these projects are not required to transition to the new rules, and no additional action is required.

Group B: Have Executed a Study Agreement but Have Not Completed a Facilities Study or Cost Allocation

Projects that have executed a study agreement under the old procedures have a choice as to what procedures will apply to any remaining interconnection studies (LGIP, Section 5.1.1.2). The new procedures allow projects to complete any remaining interconnection studies either under the old or new procedures, as described in detail below.

Projects choosing to remain under the old procedures will complete a two-party Facilities Study with the Transmission Owner ("TO") addressing attachment facilities. However, for cost allocation purposes, these projects will be required to participate in the applicable

¹ Some of the projects listed in Group A are currently in the Class Year 2002 for cost allocation. The Class Year 2002 cost allocation is near completion, but needs to go through review, approval, and Developer decision. Any projects that drop out of Class Year 2002 will be required to undergo a Facilities Study in a subsequent Class Year, to the extent necessary to complete the cost allocation process.

Class Year Facilities Study under the new procedures, only to the extent such study is necessary under Attachment S to identify system upgrade facilities (“SUF”) and allocate costs among Class Year Projects and TOs. The projects choosing the old procedures will, therefore, also enter into a three-party agreement with the TO and the NYISO to complete the required portion of the Class Year Facility Study, which will exclude the evaluation of attachment facilities.

In contrast, projects choosing to transition to the new procedures will enter into a three-party agreement with the TO and the NYISO to complete a full Class Year Facility Study under the new procedures, which will include an evaluation of both attachment facilities and SUFs.

Almost all projects in this group are required to execute three-party IAs under the new procedures. The only projects that are not required to execute three-party IAs are those with IAs filed with FERC prior to August 6, 2004. Those IAs are grandfathered under the new procedures.

Therefore, projects in this group have the following choice:

- (1) Stay under the old procedures: (a) Complete a two-party agreement for a partial Facilities Study with the TO addressing attachment facilities (not SUFs), and (b) complete a three-party agreement to participate in the Class Year Facilities Study under the new procedures for the limited purpose of determining SUFs for cost allocation among Class Year members and TOs; or
- (2) Transition to the new procedures: Complete a three-party agreement to participate in the Class Year Facilities Study as set out in the new procedures.

Projects in this group must notify the NYISO of their choice or request an extension of time by October 15, 2004. Project representatives should contact Steven L. Corey (see contact information below). **A project’s failure to inform the NYISO of its choice or to request an extension of time in timely manner will trigger the withdrawal procedures under Section 3.6 of the LFIP, which may ultimately result in a project’s removal from the interconnection request queue.**

Once the NYISO is informed of a project’s choice, the NYISO will forward the relevant agreement to the project contact.

Group C: Have Not Executed a Study Agreement

The projects in Group C must complete all studies and enter into a three-party IA under the new procedures. So that the NYISO has the information needed to move forward under the new procedures, these projects must complete the Interconnection Request form attached to the LFIP. Subject to the requirements of the LFIP, the queue position of

these projects will be maintained. Each project will continue the interconnection process under the new procedures beginning with the requirement that reasonably follows the last requirement satisfied under the old procedures. The NYISO's goal in transitioning this group of projects is to avoid duplication of any steps already completed while ensuring that adequate information is available to complete the interconnection process as required under the new procedures.

Each project in this group must complete the attached Interconnection Request form and return it to the NYISO by October 15, 2004. Completed forms should be submitted to Steven L. Corey (see contact information below). Alternatively, projects may request an extension of time to complete the form but must do so by the same date. **A project's failure to submit the completed Interconnection Request form or to request an extension of time in timely manner will trigger the withdrawal procedures under Section 3.6 of the LFIP, which may ultimately result in a project's removal from the interconnection request queue.**

Once the NYISO receives the completed Interconnection Request form, the NYISO will contact the project regarding the next step applicable to the project under the new procedures.

Steven L. Corey
Manager Transmission Planning
New York Independent System Operator
290 Washington Avenue Ext.
Albany, New York 12203
Phone No. (518) 356-6134
Fax No. (518) 356-6208
E-mail Addr: scorey@nyiso.com

PUBLIC VERSION--CRITICAL ENERGY INFRASTRUCTURE INFORMATION REMOVED.
 Status of Pre-August 6, 2004 Interconnection Requests (as of 10/1/04) Page 1 of 3

Developer	Project	CTO	Date of Appl or Int Req	NYISO Queue Pos	Feasibility Study		Sys Rel Impact Study		Fac Study / Cost Alloc		Interconnection Agreement Filed
					SA Exec	Study Completed	SA Exec	Study Completed	SA Exec	Study Completed	
Group A – Projects That Have Completed the Interconnection Study Process and Filed an Interconnection Agreement (IA) by 8/6/04.											
PG&E/Athens	Athens	NM-NG	4/27/98	2	-	-	-	Yes	-	Yes	Yes
PSEG Power	Bethlehem EC	NM-NG	4/27/98	3	-	-	-	Yes	Yes	Yes	Yes
TransEnergieUS	CT-LI DC	LIPA	7/20/98	4	-	-	-	Yes	-	Yes	Yes
NYPA	Poletti	ConEd	4/30/99	18	-	-	-	Yes		Yes	Yes
Con Edison	East River Repowering	ConEd	8/10/99	25	-	-	-	Yes		Yes	N/A
SCS Energy	Astoria Energy	ConEd	11/16/99	31	-	-	-	Yes		Yes	Yes
NYPA	NYC GTs	ConEd	12/5/00	79-84	-	-	-	Yes	-	Yes	Yes
KeySpan	Ravenswood	ConEd	4/21/99	17	-	-	-	Yes		Yes ¹	Yes
Canastota Wind	Fenner Wind Energy	NM-NG	3/14/00	55	-	-	-	Yes		Yes ¹	Yes
Fortistar-LMA	Lockport II	NYSEG	5/15/00	65	-	-	-	Yes	No	Yes ¹	Yes
PSEG Power	Cross Hudson Project	ConEd	5/11/01	93	-	-	-	Yes		Yes ¹	Yes
Group B – Projects That Have Completed an SRIS and/or Executed an Interconnection Study Agreement (ISA) by 8/6/04, but Have Not Completed a Facilities Study or Cost Allocation.											
ABB	Oak Point Yard	ConEd	4/15/99	16	-	-	-	Yes		No	No
NYC Energy	NYC Energy-Kent Ave	ConEd	5/7/99	19	-	-	-	Yes		No	No
KeySpan	Spagnoli Rd CC	LIPA	5/17/99	20	-	-	-	Yes		No	No
Calpine	Wawayanda	NYPA	6/10/99	22	-	-	-	Yes		No	No
Reliant	Astoria RP Phase 1	ConEd	7/13/99	24	-	-	-	Yes		No	No
Mirant	Bowline Point 3	ConEd	10/13/99	29	-	-	-	Yes		No	No
ANP	Brookhaven	LIPA	11/22/99	32	-	-	-	Yes		No	No
Glenville Energy	Glenville Energy Park	NM-NG	11/30/99	33	-	-	-	Yes		No	No
PP&L	Kings Park	LIPA	2/1/00	43	-	-	-	Yes		No	No
GenPower	NYC DC Tie	ConEd	2/9/00	47	-	-	-	Yes		No	No
Besicorp	Empire State Newsprint	NM-NG	7/14/00	69	-	-	-	Yes		No	Yes
Reliant	Astoria RP Phase 2	ConEd	8/18/00	70	-	-	-	Yes		No	No
Fortistar	VP	ConEd	3/20/01	90	-	-	-	Yes		No	No
Fortistar	VAN	ConEd	3/20/01	91	-	-	-	Yes		No	No
Atlantic Energy	Neptune PJM-LI DC	LIPA	5/22/01	94	-	-	-	Yes		No	No
Calpine	CPN 3 rd Turbine (JFK)	ConEd	5/29/01	96	-	-	-	Yes		No	No
Entergy	Indian Point EC	ConEd	7/23/01	102	-	-	-	Yes		No	No
TransGas Energy	TransGas Energy	ConEd	10/5/01	106	-	-	-	Yes		No	No
PG&E/Liberty	Liberty Gen 400 MW	ConEd	2/4/02	110	-	-	-	Yes		No	No
TransEnergieUS	PJM-Rainey DC	ConEd	4/9/02	112	-	-	-	Yes		No	No

¹ These projects are in Class Year 2002 for cost allocation, which is near completion, but needs to go through review, approval, and Developer decision. Any projects that drop out of Class 2002 will be required to participate in a Facilities Study in a subsequent Class Year, to the extent necessary to complete the cost allocation process.

Developer	Project	CTO	Date of Appl or Int Req	NYISO Queue Pos	Feasibility Study		Sys Rel Impact Study		Fac Study / Cost Alloc		Interconnection Agreement Filed
					SA Exec	Study Completed	SA Exec	Study Completed	SA Exec	Study Completed	
Global Winds Harvest	Prattsburgh Wind Park	NYSEG	4/22/02	113	-	-	-	Yes		No	Yes
Chautauqua Wind	Chautauqua WP	NM-NG	5/14/02	117			Yes	Yes		No	No
ECOGEN	Prattsburgh Wind Farm	NYSEG	5/20/02	119	-	-	-	Yes		No	No
Bay Energy	Bay Energy	ConEd	7/1/02	124	-	-	-	Yes		No	No
TransEnergieUS	PJM-Newbridge Rd DC	LIPA	9/10/02	126	-	-	-	Yes		No	No
Conjunction	Empire Connection	NM/CE	6/16/03	137	-	-	-	Yes		No	No
Entergy	Indian Point 2 Uprate	ConEd	7/23/03	138	-	-	-	Yes		No	No
Entergy	Indian Point 3 Uprate	ConEd	7/23/03	139	-	-	-	Yes		No	No
Flat Rock Windpower	Flat Rock 300 MW	NM-NG	8/27/03	141	-	-	-	Yes		No	Yes
Constellation	Ginna Uprate	RG&E	1/30/04	143			N/A	Yes		No	Yes
Calpine	Sullivan County	NYPA	6/25/99	23			Yes	No			No
Twin Tier Power	Twin Tier Power	NYSEG	8/20/99	26			Yes	No			No
1 st Rochdale	Gotham Power-Bronx I	ConEd	1/12/00	35			Yes	No			No
Calpine	Waterford	NM-NG	10/30/00	76			Yes	No			No
TransEnergieUS	PJM-NYC 990MW DC	ConEd	6/22/01	98			Yes	No			No
Calpine	Titan Smith St	ConEd	10/5/01	105			Yes	No			No
Caithness Bellport	Caithness Bellport	LIPA	10/9/01	107			Yes	No			No
River Hill	River Hill Project	NYSEG	2/5/02	111			Yes	No ²			No
Invenergy	Sheldon Windfarm	NYSEG	2/18/04	144			Yes	No ²			No
LIPA	Mobile Generators	LIPA	3/2/04	145			N/A	No ²			N/A
Group C – Projects That Neither Completed an SRIS, Nor Executed an ISA by 8/6/04.											
Millennium	Millennium 1	ConEd	2/23/99	9			No	No			No
Millennium	Millennium 2	ConEd	2/23/99	10			No	No			No
East Coast Power	Linden 7	ConEd	3/25/99	13	-	-	No	No ²			No
East Coast Power	Linden Plant Improve'ts	ConEd	3/25/99	14	-	-	No	No ²			No
KeySpan	Shoreham	LIPA	5/17/99	21			No	No			No
KeySpan	Spagnoli Rd GT	LIPA	9/8/99	28			No	No			No
KeySpan	Far Rockaway	LIPA	2/1/00	38			No	No			No
KeySpan	Barrett	LIPA	2/1/00	39			No	No			No
KeySpan	Riverhead	LIPA	2/1/00	40			No	No			No
KeySpan	Southampton	LIPA	2/1/00	41			No	No			No
PP&L	Holbrook	LIPA	2/1/00	42			No	No			No
PP&L	Ruland Energy	LIPA	2/1/00	44			No	No			No
PP&L	Brookhaven	LIPA	2/3/00	46			No	No			No
PP&L	Brookhaven 2	LIPA	2/10/00	49			No	No			No
KeySpan	Wading River	LIPA	2/15/00	51			No	No			No
Mirant	Lovett 3	ConEd	3/23/00	58			No	No			No

Status of Pre-August 6, 2004 Interconnection Requests (as of 10/1/04) Page 3 of 3

Developer	Project	CTO	Date of Appl or Int Req	NYISO Queue Pos	Feasibility Study		Sys Rel Impact Study		Fac Study / Cost Alloc		Interconnection Agreement Filed
					SA Exec	Study Completed	SA Exec	Study Completed	SA Exec	Study Completed	
Mirant	Hillburn Unit #2	ConEd	3/23/00	59			No	No			No
Mirant	Hillburn #2 Conv	ConEd	3/23/00	60			No	No			No
Lewis Staley Assoc	Station A	NYSEG	5/11/00	63			No	No			No
Lewis Staley Assoc	Station B	NM-NG	5/11/00	64			No	No			No
PP&L	Ruland Energy 2	LIPA	6/23/00	68			No	No			No
Fortistar	Island Gen Station	ConEd	9/8/00	72			No	No			No
Fortistar	Island Gen Station #2	ConEd	9/8/00	73			No	No			No
FPL Energy	Oceanside EC	LIPA	10/10/00	74			No	No			No
KeySpan	Ravenswood RP Ph1	ConEd	12/4/00	78			No	No			No
NRG/Berrians	Berrians GT Repl.	ConEd	1/15/01	86			No	No			No
Amerada Hess	Redhook Energy	ConEd	5/1/01	92			No	No			No
Northeast Utilities	CT-LI HVDC Cable	LIPA	7/13/01	101			No	No			No
Pegasus Trans Co	Niagara Reinforcement	NM/PA/CE	8/15/01	103			No	No			No
PG&E	Jupiter PJM-NYC DC	ConEd	8/24/01	104			No	No			No
Sempra Energy	Long Island	LIPA	11/29/01	108			No	No			No
Calpine	Maspeth	ConEd	1/25/02	109			No	No			No
PG&E/Liberty	Liberty Gen 600 MW	ConEd	4/29/02	116			No	No			No
Global Winds Harvest	Prattsburgh WindPark II	NYSEG	5/15/02	118			No	No			No
East Coast Power	Linden VFT Inter-Tie	ConEd	7/18/02	125			No	No ²			No
Electrotek Concepts	Grace Corona Gen	ConEd	1/14/03	130			No	No			No
Green Power Energy	Cody Rd Wind Farm	NM-NG	3/5/03	131			No	No			No
Canandaigua Power	Canandaigua WF	NYSEG	5/30/03	135			No	No			No
Airtricity	Hartsville Wind Farm	NYSEG	10/30/03	142			No	No ²			No
NY Windpower	West Hill Windfarm	NM-NG	4/16/04	147			No	No			No
Trigen-Nassau	Trigen-Nassau	LIPA	5/18/04	148			No	No			No
Reunion Power	Cherry Val Wind Park	NYSEG	6/17/04	150			No	No			No
Invenergy	Stamford Wind Project	NYSEG	7/23/04	152			No	No ²			No

² These projects have a recently approved SRIS scope (i.e. the scope was approved in 2004).