Generation Interconnection Feasibility Study Report (Revised)

For

PJM Generation Interconnection Request Queue Position V3-031

Germantown Project

March 2010
DOCS 582921v1
Web Posting Version

Introduction

In compliance with the applicable provisions of the PJM Tariff, Developer has submitted a "Form of Generation Interconnection Feasibility Study Agreement" to PJM that identifies its plan to construct a SANYO HIT 205N Solar Generation Project with a total capability of 20 MW (7.6 MW Capacity) on a property containing two separate lots which are approximately 0.3 miles northwest of the existing Germantown 115 kV substation (see Attachment 1). For purposes of this report, it has therefore been designated as the Germantown (V3-031) 115kV Project to reflect its interconnection voltage and its proximity to the Germantown substation.

This Feasibility Study report provides the documentation of an assessment that has been performed by PJM and FirstEnergy (FE) in response to a request made by Developer for the connection of an 20 MW (7.6 MW Capacity) Germantown (V3-031) Solar Generation Project to the Met Ed Transmission System. As per the PJM study process, the Germantown (V3-031) Solar Generation Project assessment by FirstEnergy was accomplished by: 1. Evaluating the reliability impact of the proposed facilities and connection on the interconnected transmission system by the performance of a power flow study; 2. Ensuring compliance with the NERC, ReliabilityFirst, PJM and FE Reliability Standards by identifying the system reinforcements that will need to be installed for an interconnection of the proposed project; 3. Coordinating and cooperating with the PJM staff and Developer by participating in project meetings and issuing this report as a part of the RTEP study process; 4. Performing a Steady State, Short-Circuit and Dynamics Study as necessary; 5. Conducting all studies in accordance with the PJM Manuals, the "FE Requirements for Transmission Connected Facilities", and the "FE Study Guide". The Developer of the V3-031 Germantown project has proposed the installation of a 20MW energy (7.6MW Capacity) photovoltaic generating facility. It is located in Pennsylvania and will connect to MetEd's (FirstEnergy Corp.) system at 115kV. The proposed in-service date for this facility is December 31, 2010.

PJM Study Results - Network Impacts

The queue V3-031 project was studied as a 20MW injection (7.6MW of which was capacity) into MetEd's system at the Germantown 115kV substation. The project was studied on a combined feasibility-impact basis which utilizes an AC analysis, and incorporates all contingency types. Project V3-031 was evaluated for compliance with reliability criteria for summer peak conditions in 2014. Potential network impacts were as follows:

Generator Deliverability
(Single or N-1 contingencies for the Capacity portion only of the interconnection)

No problems identified.

Multiple Facility Contingency
(Double Circuit Tower Line, Stuck breaker and Bus Fault contingencies for the full energy output)

No problems identified.

Contribution to Previously Identified Overloads

(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

No problems identified.

New System Reinforcements
(Upgrades required to mitigate reliability criteria violations, i.e. "Network Impacts", initially caused by the addition of this project generation)

None.

Contribution to Previously Identified System Reinforcements
(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which will be calculated and reported for the Impact Study)

None.

Short Circuit

PJM has completed the short circuit analysis of the V3-031 queue project Germantown. One option was considered during this study: the option was a direct connection to the Germantown 115kV. Our analysis found no new breakers to be over-duty in the METED transmission area.

The study also showed no significant fault current contribution to the breakers which have already been identified as over-duty. This study was performed on the 100kV and above system.

The transmission owner also performed a short circuit analysis, the results of which are included below in their portion of this report.

Potential Congestion due to Local Energy Deliverability
(PJM also studied the delivery of the energy portion of the surrounding generation. Any potential problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with Network Upgrades to eliminate the operational restriction at their discretion by submitting a Transmission Interconnection Request. Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full deliverability for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which analyzes all overload conditions associated with the identified overloaded element(s). As a result of the aggregate energy resources in the area, the following violations were identified:

No problems identified.

FirstEnergy Study Results

Connection Facilities

The direct connection of this project will be accomplished by the construction of a new 115 kV 3 breaker ring bus and the looping of the Lincoln - Germantown (998) 115 kV line to it. Procurement and construction of the 115 kV transmission line connecting the 3 breaker ring bus to the Wind Farm 115 kV export bus is the responsibility of Developer as this facility is not owned by FirstEnergy Corp. Developer will be responsible for acquiring all easements, properties and permits that may be required to construct both the project connection 3 breaker ring bus and the attachment facilities. Developer will also be responsible for the rough grade of the property and an access road to the proposed 3 breaker ring bus site. A summary of the Germantown (V3-031) 115kV Project direct connection facilities that will be required and their estimated costs are shown on Attachment 3.

Power Flow Analysis

A Power Flow study was conducted to determine the reliability impact of the proposed Germantown (V3-031) 115kV Project on the FE Transmission System. This included the performance of a contingency analysis to identify any facility overload or voltage condition that violates the FE Planning Criteria. Any such violation that is either directly attributable to this project or for which it will have a shared responsibility is included in this report with a least cost plan identified to mitigate them.

The Germantown (V3-031) 115kV Project Power Flow Analysis that was performed was completed using a 2014 summer peak load base case power flow provided by the PJM staff. This base case included a detailed representation of the MetEd transmission system in the area of the proposed Germantown 115 kV substation. A simulation of all possible contingencies within the NERC and FE Planning Standards that are impacted by the Germantown (V3-031) 115kV Project was conducted to test for criteria compliance.

The results from the study Power Flow Analysis showing a comparison of the FE and PJM contingency study results is detailed on Attachment 4. As shown, the conclusion from this analysis is that there are no new upgrades required, and no contribution to previously identified upgrades associated with other RTEP queue position generation projects.

In addition, the findings show that there are no criteria violations which will have an impact on network congestion and local energy deliverability. Hence the Germantown (V3-031) 115kV Project would be allowed to output at the full 20MW energy rating without being subject to PJM curtailment.

Short Circuit and Dynamics Analysis

A short circuit analysis has been performed by PJM on the 100kV and above system and results were confirmed by FirstEnergy. The analysis found no new breakers to be over-duty in the METED transmission area. The analysis also showed no significant fault current contribution to the breakers which have already been identified as over-duty.

System Protection Analysis

An analysis was conducted to assess the impact of Germantown (V3-031) 115kV Project on the system protection requirements in the area. The results of this review show that the following relay additions and upgrades will be required:

Relay Requirements

Lincoln

- Microprocessor based relaying utilizing a directional comparison blocking scheme over power line carrier.
- Transfer Trip equipment

V3-031

Lincoln Terminal

- Microprocessor based relaying utilizing a directional comparison blocking scheme over power line carrier. (Primary)
- Tuning equipment and wave trap
- Microprocessor based step distance relaying (Back-up)
- Transfer Trip equipment for breaker failure relaying

Germantown Terminal

- Microprocessor based relaying utilizing a line differential scheme and fiber optic communication for primary and backup. Also to be used for direct transfer trip for stuck breaker

V3-031 Tap

- Primary and backup microprocessor based bus differential protection
- Breaker failure relaying for all three breakers

Germantown

- Microprocessor based relaying utilizing a line differential scheme and fiber optic communication for primary and backup. Also to be used for direct transfer trip for stuck breaker.

  Fiber Optic Line Connection - 0.3mi from Germantown to V3-031

Connecting Party Protection:

To protect the FE sub-transmission system from customer faults and assure proper coordination with the MET-ed line relay settings, FE will review/approve protective relaying design for the 3 Breaker Ring Proposal on the 998 Line. The Connecting Party is solely responsible for protecting its own equipment from damage due to faults on the FE transmission system. The general connection requirements are described in the FE "**Requirements for Transmission Connected Facilities**" document, which is available on the FE website, http://www.firstenergycorp.com/feconnect/Retail_Operating_Company_Contacts.htm**.**

Metering

Developer will be required to comply with all FE Revenue Metering Requirements for Generation Interconnection Customers. These FE requirements are detailed on Attachment 7 of this report.

Compliance Issues

Developer will be responsible for meeting all FE criteria as defined in the FE Requirements for Transmission Connected Facilities document. While the voltage analysis is not performed for the feasibility study, any voltage criteria violations that would require the plant to provide reactive power, that determination of reactive power requirements will be determined in the system impact study, which will include the low voltage ride through analysis.

Developer must also meet all PJM, ReliabilityFirst and NERC reliability criteria and operating procedures required for standards compliance. For example, the Developer will need to properly locate and report the over and under-voltage and over and under-frequency system protection elements for its units as well as the submission of the generator model and protection data required to satisfy the PJM and ReliabilityFirst audits. Failure to comply with these requirements may result in a disconnection of service if the violation is found to compromise the reliability of the FE system.

FE Facility Upgrades and Costs

The results from the FE power flow analysis (Attachment 4) show that there are no FE criteria violations that are directly attributable to the capacity of the Germantown (V3-031) 115kV Project. Furthermore, there are no violations affecting network congestion and local energy delivery that the Germantown (V3-031) 115kV Project will impact. Note that the FE and PJM study results differ somewhat due to the differences in the study process and power flow programs utilized. However, the overall conclusions reached by the FE and PJM staff are the same. In accordance with the RTEP procedures defined in the PJM Open Access Transmission Tariff and PJM Manuals, Developer is not responsible for network upgrades. The direct connection costs however are detailed in Attachment 3.

Note that all cost estimates contained in this document were produced without a detailed engineering review and are therefore subject to error. More accurate estimates will be determined as a part of the System Impact Study. The Developer will be responsible for the actual cost of the direct connection that is implemented. In addition, Developer is responsible to provide the transmission line between V3-031 interconnecting substation and the V3-031 generating substation, as Developer will own this transmission line. FE herein reserves the right to return to any issues in this document and, upon appropriate justification, request additional monies to complete any reinforcements to the transmission system.

Developer Requirements

In addition to the FE facilities, Developer will also be responsible for meeting all criteria as specified in the applicable sections of the "FE Requirements for Transmission Connected Facilities" document including:

1. The purchase and installation of the minimum required FE generation interconnection relaying and control facilities. This includes over/under voltage protection, over/under frequency protection, and zero sequence voltage protection relays.

2. The purchase and installation of a 115 kV interconnection metering instrument transformer. FE will provide the ratio and accuracy specifications based on the customer load and generation levels.

3. The purchase and installation of a revenue class meter for each unit to measure the power delivered in compliance with the FE standards.

4. The purchase and installation of supervisory control and data acquisition (SCADA) equipment to provide information in a compatible format to the FE Transmission System Control Center.

5. The establishment of dedicated communication circuits for SCADA report to the FE Transmission System Control Center.

6. A compliance with the FE and PJM generator power factor and voltage control requirements.

7. The execution of a back-up service agreement to serve the customer load supplied from the Germantown 115kV substation when the units are out-of-service. This assumes the intent of Developer is to net the generation with the load.

8. The rough grade of the property for the V3-031 Interconnection 115 kV Substation and an access road for the delivery of equipment to this site.

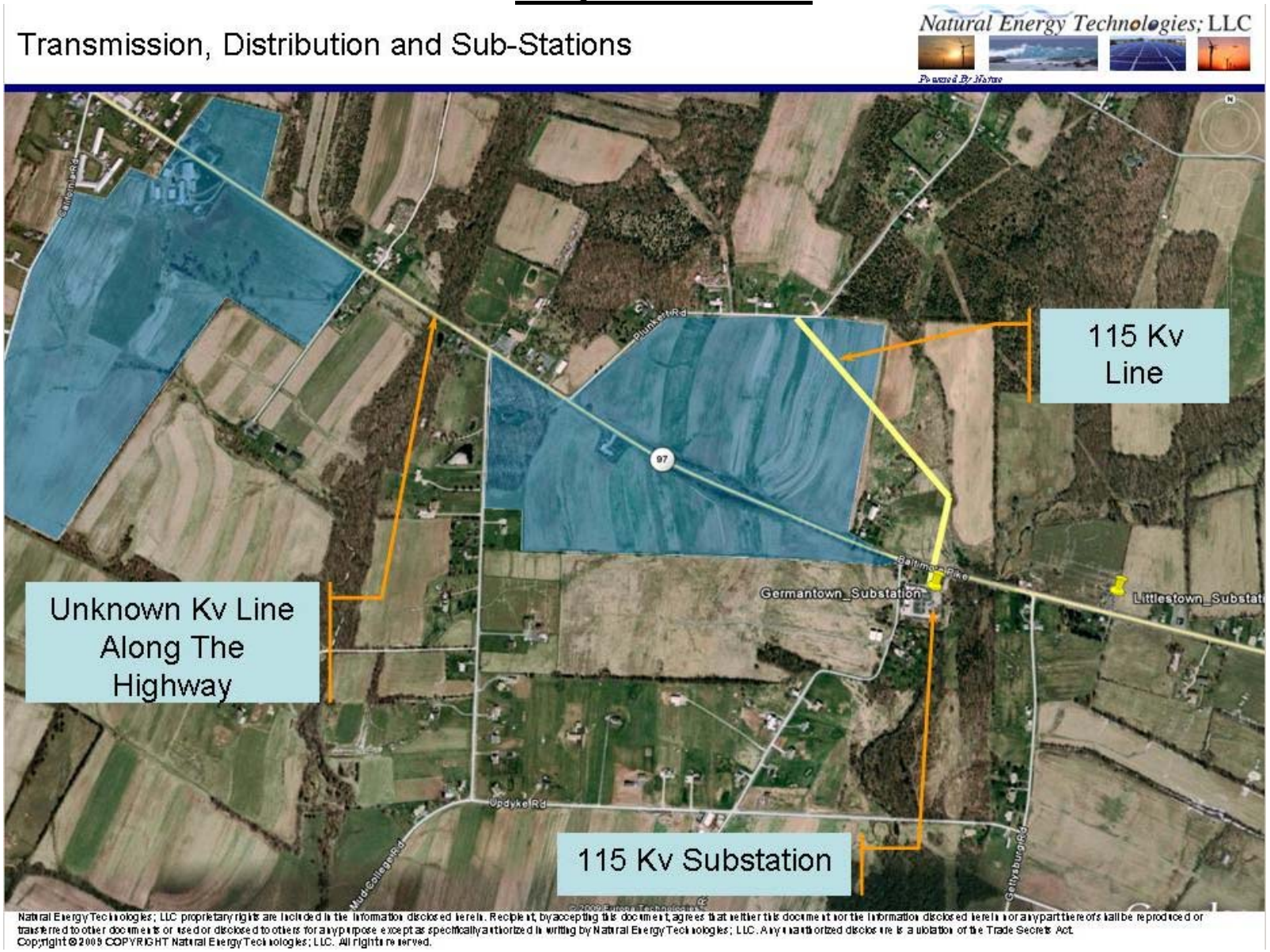
The above requirements are in addition to any metering required by PJM.

Summary

The Germantown (V3-031) 115kV Project direct connection will require the facility upgrades defined in Attachment 3. As shown, the total estimated cost of the new three breaker ring bus substation and attachment lines is $4,353,900. The Germantown (V3-031) 115kV Project does not have any network upgrades.

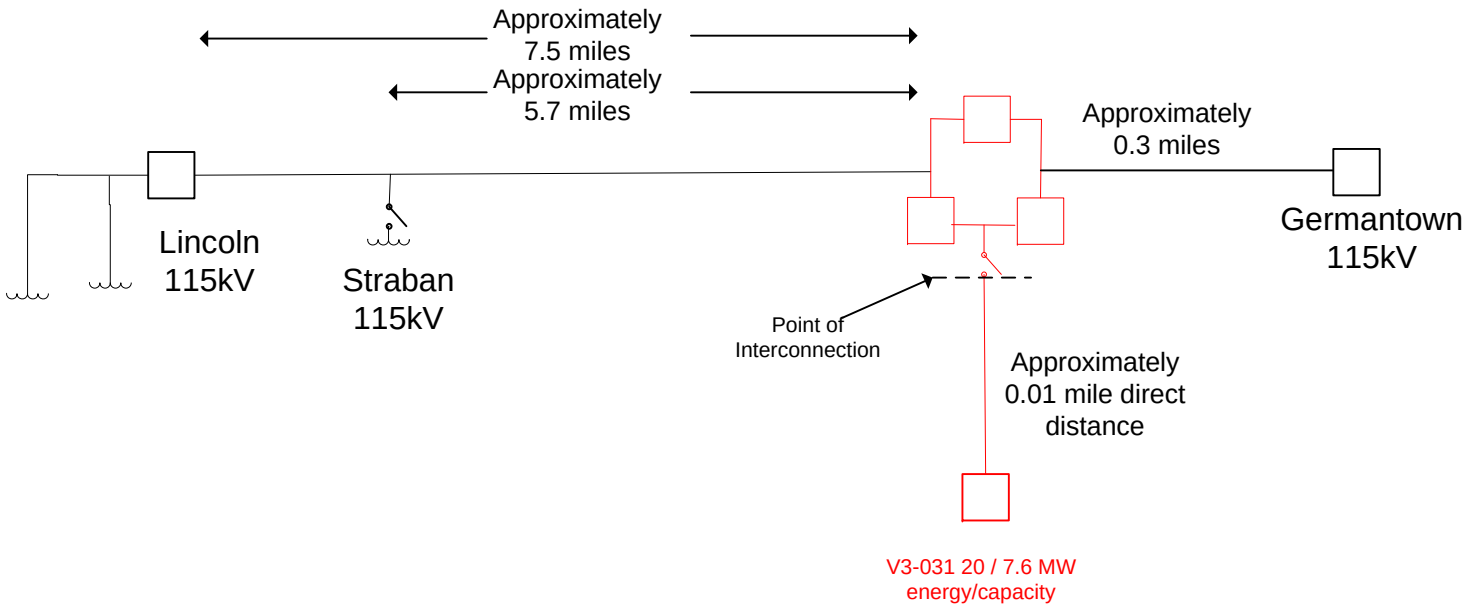
Based on the scope of the FE direct connection, it is expected to take a minimum of two (2) years from the signing of a Connection Service Agreement to complete the installation required for the Germantown (V3-031) 115kV Project. This includes a preliminary payment that compensates FE for the first three months of the engineering design work that is related to the construction of a new V3-031 Interconnecting substation and the loop of the MetEd 115 kV lines to this site. It also assumes that the Developer will provide the property for the attachment substation and all right-of-way, permits, easements, etc. that will be needed. A further assumption is that there will be no environmental issues with any of the new properties associated with this project, that there will be no delays in acquiring the necessary permits for implementing the defined direct connection and network upgrades, and that PJM will allow all transmission system outages when requested.

Attachment 1A
Germantown ME (V3-031) RTEP Project
Project Location



Attachment 1B
Germantown ME (V3-031) RTEP Project
Nearest Tower for Loop

Attachment 2
Germantown ME (V3-031) RTEP Project
Conceptual 115 kV Interconnection Substation Configuration



Attachment 3

Germantown ME 115kV (V3-031) Feasibility / System Impact Study

Direct Connection Requirements

UpgradeID	Description	Total Cost
ME-S-255-1	V3-031 Interconnect Sub: Install 115kV three position ring bus. (ISD 6/1/2011)	$3,774,400
ME-S-255-2	Germantown Sub: Replace line relaying on 115kV line that currently goes to Lincoln (ISD 6/1/2011)	$222,600
ME-S-255-3	Lincoln Sub: Replace line relaying on 115kV line that currently goes to Germantown. (ISD 6/1/2011)	$356,900
	TOTAL	$4,353,900

Attachment 4
Germantown ME 115kV (V3-031) Feasibility / System Impact Study
FE Contingency Analysis Results

Identified New Project Upgrades

					FirstEnergy Results		PJM Results	
PJM #	FE Contingency	Outage Description	Overloaded Element	N/4-Hr Rating	MVA Flow	% Rating	MVA Flow	% Rating
	No Problems				--	--	--	--

Contributions To Previously Identified Overloads

					FirstEnergy Results		PJM Results	
PJM #	FE Contingency	Outage Description	Overloaded Element	N/4-Hr Rating	MVA Flow	% Rating	MVA Flow	% Rating
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Potential Congestion due to Local Energy Deliverability

					FirstEnergy Results		PJM Results	
PJM #	FE Contingency	Outage Description	Overloaded Element	N/4-Hr Rating	MVA Flow	% Rating	MVA Flow	% Rating
	No Problem				--	--	--	--

Attachment 5
Germantown ME (V3-031) RTEP Project
FE Network Facility Reinforcement Conceptual Cost Estimates

None Required

Attachment 6
Germantown ME (V3-031) RTEP Project
FE Network Facility Reinforcement Conceptual One Line Diagrams

None Required

Attachment 7

FirstEnergy Revenue Metering Requirements for Generation Interconnection Customer

Interconnection Customer shall install, own, operate, test and maintain the necessary revenue quality Metering Equipment. This includes current transformers, voltage transformers, mounting structures, wiring, meters, communication circuits, and associated devices. The Metering Equipment must meet the specifications listed in the FirstEnergy and regional transmission organization (RTO) connection documents. The FirstEnergy "Requirements for Transmission Connected Facilities" are located at:
http://www.firstenergycorp.com/feconnect

The Metering Equipment shall be located at the generation facility on the high voltage side of the generator step-up transformers or facility main step-up transformer and/or station service power transformers. Power flows to and from the facility shall be compensated to the Point of Interconnection.

FirstEnergy will provide revenue quality Metering Equipment for a station service power supply at a generation facility if the supply is from the local FirstEnergy distribution system.

The revenue quality Metering Equipment shall be capable of collecting and storing bidirectional billing data. The billing data shall be stored in intervals specified by FirstEnergy, typically fifteen minutes or thirty minutes. The Interconnection Customer must provide FirstEnergy with remote access to the billing data in the Metering Equipment via a dedicated voice-grade analog telephone circuit. The Interconnection Customer shall provide FirstEnergy with contact information for the person or persons responsible for meter programming and Metering Equipment maintenance.

The Interconnection Customer shall consult with FirstEnergy regarding the revenue quality metering system design and provide the following information:

- Facility one line and revenue metering installation drawings (schematics, wiring diagrams, etc.)
- Estimated power flows to and from the facility at all revenue metering points
- Current transformer and voltage transformer specifications, including manufacturer, type, nameplate drawings, and certified accuracy test reports
- Revenue meter specifications including manufacturer, type, model number, and accuracy
- Revenue meter program information including but not limited to billing data recorder channel assignments, recorder pulse weights (Ke), and read-only

password for access to interval data by the FirstEnergy billing data collection system (MV-90)
- Revenue meter telephone number
- Revenue meter loss compensation data (if applicable)

The Interconnection Customer shall provide FirstEnergy with prior notification of any modifications at the facility that will affect the revenue meter measurements, including substation reconfigurations and meter program changes.

The revenue metering system at each location shall be tested for accuracy by the Interconnection Customer once every two years. The Interconnection Customer shall give reasonable notice to FirstEnergy of the time when the testing is scheduled so that FirstEnergy may have representatives present. FirstEnergy and the RTO shall have the right to audit the revenue metering equipment and/or related documents. The Interconnection Customer shall be given a reasonable period of time to comply with any requests associated with an audit.

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V3-031

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V3-031 Tap

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- Breaker failure relaying for all three breakers

Germantown

- Microprocessor based relaying utilizing a line differential scheme and fiber optic communication for primary and backup. Also to be used for direct transfer trip for stuck breaker.

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Connecting Party Protection:

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FE Facility Upgrades and Costs

The results from the FE power flow analysis (Attachment 4) show that there are no FE criteria violations that are directly attributable to the capacity of the Germantown (V3-031) 115kV Project. Furthermore, there are no violations affecting network congestion and local energy delivery that the Germantown (V3-031) 115kV Project will impact. Note that the FE and PJM study results differ somewhat due to the differences in the study process and power flow programs utilized. However, the overall conclusions reached by the FE and PJM staff are the same. In accordance with the RTEP procedures defined in the PJM Open Access Transmission Tariff and PJM Manuals, Developer is not responsible for network upgrades. The direct connection costs however are detailed in Attachment 3.

Note that all cost estimates contained in this document were produced without a detailed engineering review and are therefore subject to error. More accurate estimates will be determined as a part of the System Impact Study. The Developer will be responsible for the actual cost of the direct connection that is implemented. In addition, Developer is responsible to provide the transmission line between V3-031 interconnecting substation and the V3-031 generating substation, as Developer will own this transmission line. FE herein reserves the right to return to any issues in this document and, upon appropriate justification, request additional monies to complete any reinforcements to the transmission system.

Developer Requirements

In addition to the FE facilities, Developer will also be responsible for meeting all criteria as specified in the applicable sections of the "FE Requirements for Transmission Connected Facilities" document including:

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2. The purchase and installation of a 115 kV interconnection metering instrument transformer. FE will provide the ratio and accuracy specifications based on the customer load and generation levels.

3. The purchase and installation of a revenue class meter for each unit to measure the power delivered in compliance with the FE standards.

4. The purchase and installation of supervisory control and data acquisition (SCADA) equipment to provide information in a compatible format to the FE Transmission System Control Center.

5. The establishment of dedicated communication circuits for SCADA report to the FE Transmission System Control Center.

6. A compliance with the FE and PJM generator power factor and voltage control requirements.

7. The execution of a back-up service agreement to serve the customer load supplied from the Germantown 115kV substation when the units are out-of-service. This assumes the intent of Developer is to net the generation with the load.

8. The rough grade of the property for the V3-031 Interconnection 115 kV Substation and an access road for the delivery of equipment to this site.

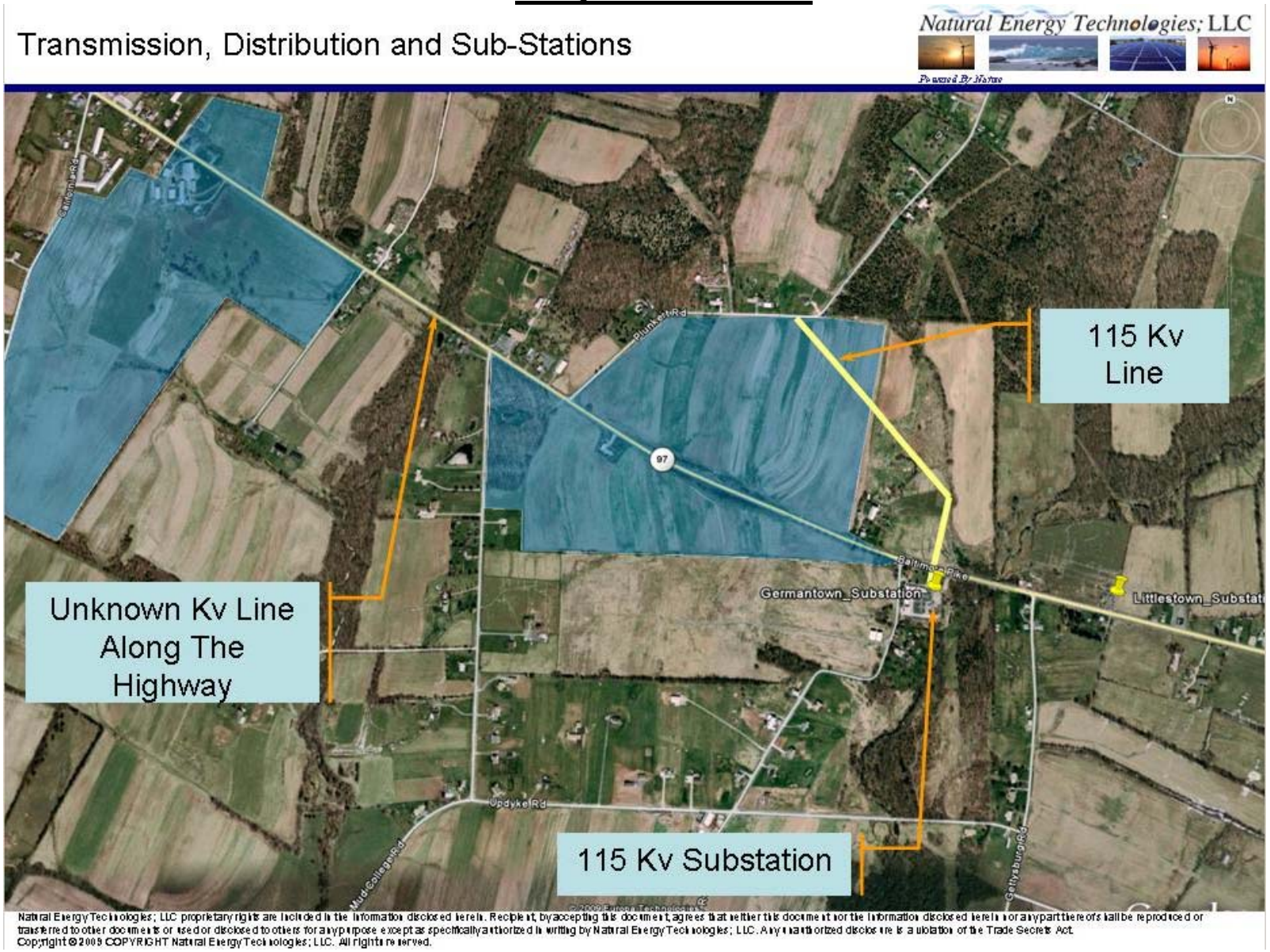
The above requirements are in addition to any metering required by PJM.

Summary

The Germantown (V3-031) 115kV Project direct connection will require the facility upgrades defined in Attachment 3. As shown, the total estimated cost of the new three breaker ring bus substation and attachment lines is $4,353,900. The Germantown (V3-031) 115kV Project does not have any network upgrades.

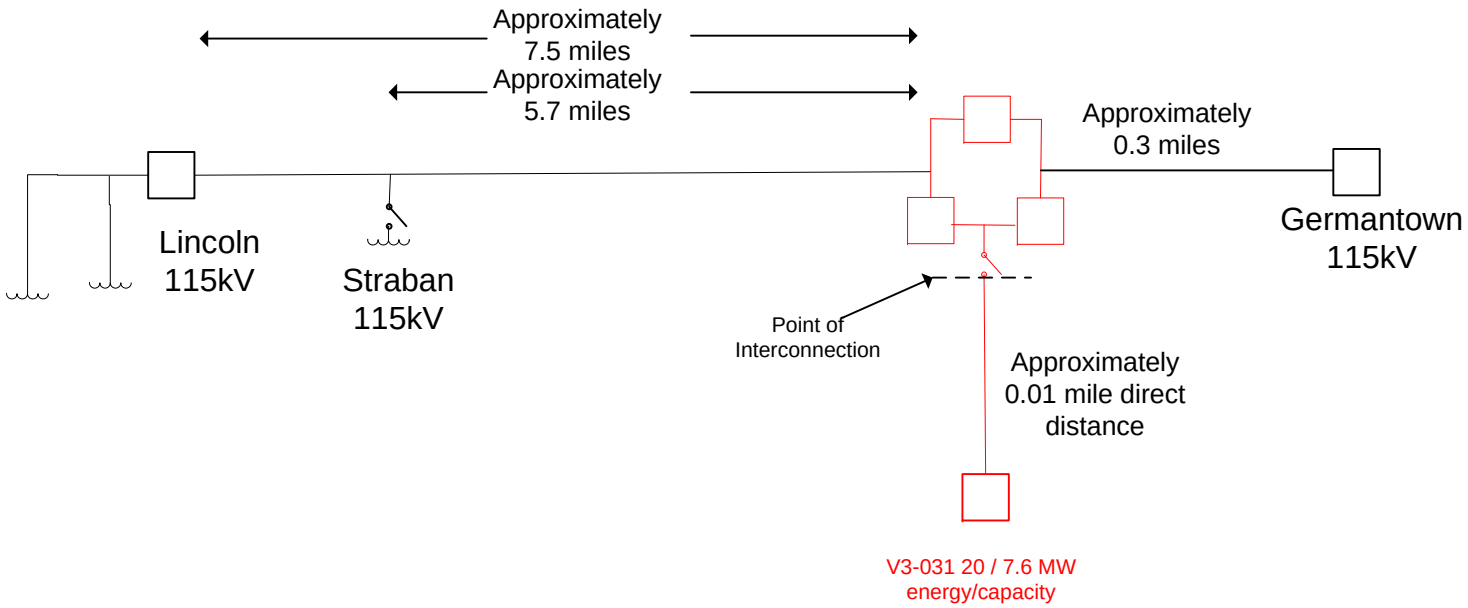
Based on the scope of the FE direct connection, it is expected to take a minimum of two (2) years from the signing of a Connection Service Agreement to complete the installation required for the Germantown (V3-031) 115kV Project. This includes a preliminary payment that compensates FE for the first three months of the engineering design work that is related to the construction of a new V3-031 Interconnecting substation and the loop of the MetEd 115 kV lines to this site. It also assumes that the Developer will provide the property for the attachment substation and all right-of-way, permits, easements, etc. that will be needed. A further assumption is that there will be no environmental issues with any of the new properties associated with this project, that there will be no delays in acquiring the necessary permits for implementing the defined direct connection and network upgrades, and that PJM will allow all transmission system outages when requested.

Attachment 1A
Germantown ME (V3-031) RTEP Project
Project Location



Attachment 1B
Germantown ME (V3-031) RTEP Project
Nearest Tower for Loop

Attachment 2
Germantown ME (V3-031) RTEP Project
Conceptual 115 kV Interconnection Substation Configuration



Attachment 3

Germantown ME 115kV (V3-031) Feasibility / System Impact Study

Direct Connection Requirements

UpgradeID	Description	Total Cost
ME-S-255-1	V3-031 Interconnect Sub: Install 115kV three position ring bus. (ISD 6/1/2011)	$3,774,400
ME-S-255-2	Germantown Sub: Replace line relaying on 115kV line that currently goes to Lincoln (ISD 6/1/2011)	$222,600
ME-S-255-3	Lincoln Sub: Replace line relaying on 115kV line that currently goes to Germantown. (ISD 6/1/2011)	$356,900
	TOTAL	$4,353,900

Attachment 4
Germantown ME 115kV (V3-031) Feasibility / System Impact Study
FE Contingency Analysis Results

Identified New Project Upgrades

					FirstEnergy Results		PJM Results	
PJM #	FE Contingency	Outage Description	Overloaded Element	N/4-Hr Rating	MVA Flow	% Rating	MVA Flow	% Rating
	No Problems				--	--	--	--

Contributions To Previously Identified Overloads

					FirstEnergy Results		PJM Results	
PJM #	FE Contingency	Outage Description	Overloaded Element	N/4-Hr Rating	MVA Flow	% Rating	MVA Flow	% Rating
	No Problems				--	--	--	--

Potential Congestion due to Local Energy Deliverability

					FirstEnergy Results		PJM Results	
PJM #	FE Contingency	Outage Description	Overloaded Element	N/4-Hr Rating	MVA Flow	% Rating	MVA Flow	% Rating
	No Problem				--	--	--	--

Attachment 5
Germantown ME (V3-031) RTEP Project
FE Network Facility Reinforcement Conceptual Cost Estimates

None Required

Attachment 6
Germantown ME (V3-031) RTEP Project
FE Network Facility Reinforcement Conceptual One Line Diagrams

None Required

Attachment 7

FirstEnergy Revenue Metering Requirements for Generation Interconnection Customer

Interconnection Customer shall install, own, operate, test and maintain the necessary revenue quality Metering Equipment. This includes current transformers, voltage transformers, mounting structures, wiring, meters, communication circuits, and associated devices. The Metering Equipment must meet the specifications listed in the FirstEnergy and regional transmission organization (RTO) connection documents. The FirstEnergy "Requirements for Transmission Connected Facilities" are located at:
http://www.firstenergycorp.com/feconnect

The Metering Equipment shall be located at the generation facility on the high voltage side of the generator step-up transformers or facility main step-up transformer and/or station service power transformers. Power flows to and from the facility shall be compensated to the Point of Interconnection.

FirstEnergy will provide revenue quality Metering Equipment for a station service power supply at a generation facility if the supply is from the local FirstEnergy distribution system.

The revenue quality Metering Equipment shall be capable of collecting and storing bidirectional billing data. The billing data shall be stored in intervals specified by FirstEnergy, typically fifteen minutes or thirty minutes. The Interconnection Customer must provide FirstEnergy with remote access to the billing data in the Metering Equipment via a dedicated voice-grade analog telephone circuit. The Interconnection Customer shall provide FirstEnergy with contact information for the person or persons responsible for meter programming and Metering Equipment maintenance.

The Interconnection Customer shall consult with FirstEnergy regarding the revenue quality metering system design and provide the following information:

- Facility one line and revenue metering installation drawings (schematics, wiring diagrams, etc.)
- Estimated power flows to and from the facility at all revenue metering points
- Current transformer and voltage transformer specifications, including manufacturer, type, nameplate drawings, and certified accuracy test reports
- Revenue meter specifications including manufacturer, type, model number, and accuracy
- Revenue meter program information including but not limited to billing data recorder channel assignments, recorder pulse weights (Ke), and read-only

password for access to interval data by the FirstEnergy billing data collection system (MV-90)
- Revenue meter telephone number
- Revenue meter loss compensation data (if applicable)

The Interconnection Customer shall provide FirstEnergy with prior notification of any modifications at the facility that will affect the revenue meter measurements, including substation reconfigurations and meter program changes.

The revenue metering system at each location shall be tested for accuracy by the Interconnection Customer once every two years. The Interconnection Customer shall give reasonable notice to FirstEnergy of the time when the testing is scheduled so that FirstEnergy may have representatives present. FirstEnergy and the RTO shall have the right to audit the revenue metering equipment and/or related documents. The Interconnection Customer shall be given a reasonable period of time to comply with any requests associated with an audit.

955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497

VIA FEDEX
Confidential
Revised 3/8/2010

March 9, 2010

Mr. Chirag Barot
Natural Energy Technologies, LLC
2850 Pilgrim Road
York, PA 17420

Dear Mr. Barot:

V3-031 Germantown 115 kV - 20 MW Energy and 7.6 MW Capacity Feasibility Study and System Impact Study Agreement

Attached is a revised and complete Feasibility study report for the V3-031 Germantown 115kV project. It includes the results of both the PJM and the FirstEnergy analysis and review, and it therefore supersedes the version sent in January of 2010.

The intent of the Feasibility Study is to determine a plan, with preliminary cost estimates and construction times, to connect the subject generation to the PJM network at a location specified by the Interconnection Customer. The results of this Feasibility Study are predicated on a year 2014 transmission system based upon PJM's best assumptions at the present time for load growth and connection of proposed new generation additions. The projects were evaluated for system normal conditions and single contingency outage conditions. In addition, tower line outages, which are anticipated to have a significant cost or timing impact on the interconnection of the project, were assessed. Short circuit analysis was performed. Stability analysis will be performed in the System Impact Study at which time reactive capability analysis may also be performed.

Feasibility studies are performed to provide the generation developer with preliminarily estimated reinforcement costs and approximated timing information concerning both direct connection facilities and potential transmission network upgrades. The analysis inherently has to include assumptions regarding existing uncertainties; therefore, the results should be used in this context.

As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing: (1) Direct Connections, which are new facilities and/or facilities upgrades needed to connect the generator to the PJM network, and (2) Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system. In some instances a generator interconnection may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g., another generation interconnection, may also contribute to the need for the same network reinforcement. The possibility of sharing the reinforcement costs with other projects may be identified in the feasibility study, but the actual allocation will be deferred until the impact study is performed.

The Feasibility Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The project developer is responsible for the right of way, real estate, and construction permit issues. In addition, the Feasibility Study estimates do not include any the costs associated with engineering and constructing the equipment and facilities on the developer's side of the point of interconnection. These costs are the responsibility of the project developer.

Pursuant to Section 204.3 of the PJM Tariff, enclosed is a copy of a System Impact Study Agreement for your consideration. The agreement must be executed within thirty days (by close of business on Friday, April 9, 2010) to maintain the project's position in the queue. Please sign and return two copies of the signature page to PJM. In order to expedite initiation of the System Impact Study, please provide the information requested at this web link, http://www.pjm.com/planning/form-impact-study-data.html, and submit it electronically. We will need this information with the signed agreement. Also required with the signed agreement, per Section 3 of the enclosed System Impact Study Agreement is a deposit of $10,000, all of which is non-refundable. The deposit will be applied to the cost of the System Impact Study for the project. Please send the paper copies and check to:

Jeannette Mittan
PJM Interconnection, LLC
Valley Forge Corporate Center
955 Jefferson Avenue
Norristown, PA 19403

The costs associated with the Feasibility Study are being tabulated and you will receive a statement / invoice electronically from PJM identifying your balance.

If you wish to discuss the results of the Feasibility Study with me, please let me know. My office telephone number is 610-666-4306 and my email address is ManciK@pjm.com.

The following information is provided for wire transfers: Bank: PNC Bank, NA, New Jersey; ABA Number: 031-207-607; Account Number: 8013589826. Please e-mail Jeannette Mittan at MittaJ@pjm.com with the project name, queue number, date and amount of wire.

Sincerely,

Kenneth B. Mancini
Sr. Engineer
Interconnection Planning Department

KBM #582949 Attachments
(w/attachment):
Dave Cardy, FirstEnrgy Corp
Joyce Toth, FirstEnergy Corp
Susan Smith, FirstEnergy Corp.
Bill Patzin, PJM
File

955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497

VIA FEDEX
Confidential

March 8, 2010

Mr. Chirag Barot
Natural Energy Technologies, LLC
2850 Pilgrim Road
York, PA 17420

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V3-031 Germantown 115 kV - 20 MW Energy and 7.6 MW Capacity Feasibility Study and System Impact Study Agreement

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Kenneth B. Mancini
Sr. Engineer
Interconnection Planning Department

KBM #582949 Attachments
(w/attachment):
Dave Cardy, FirstEnrgy Corp
Joyce Toth, FirstEnergy Corp
Susan Smith, FirstEnergy Corp.
Bill Patzin, PJM
File

Generation Interconnection Feasibility Study Report (Revised)

For

PJM Generation Interconnection Request Queue Position V3-031

Germantown Project

March 2010
DOCS 582802v1

Introduction

In compliance with the applicable provisions of the PJM Tariff, Natural Energy Technologies, LLC has submitted a "Form of Generation Interconnection Feasibility Study Agreement" to PJM that identifies its plan to construct a SANYO HIT 205N Solar Generation Project with a total capability of 20 MW (7.6 MW Capacity) on a property containing two separate lots which are approximately 0.3 miles northwest of the existing Germantown 115 kV substation (see Attachment 1). For purposes of this report, it has therefore been designated as the Germantown (V3-031) 115kV Project to reflect its interconnection voltage and its proximity to the Germantown substation.

This Feasibility Study report provides the documentation of an assessment that has been performed by PJM and FirstEnergy (FE) in response to a request made by Natural Energy Technologies, LLC for the connection of an 20 MW (7.6 MW Capacity) Germantown (V3-031) Solar Generation Project to the Met Ed Transmission System. As per the PJM study process, the Germantown (V3-031) Solar Generation Project assessment by FirstEnergy was accomplished by: 1. Evaluating the reliability impact of the proposed facilities and connection on the interconnected transmission system by the performance of a power flow study; 2. Ensuring compliance with the NERC, ReliabilityFirst, PJM and FE Reliability Standards by identifying the system reinforcements that will need to be installed for an interconnection of the proposed project; 3. Coordinating and cooperating with the PJM staff and Natural Energy Technologies, LLC by participating in project meetings and issuing this report as a part of the RTEP study process; 4. Performing a Steady State, Short-Circuit and Dynamics Study as necessary; 5. Conducting all studies in accordance with the PJM Manuals, the "FE Requirements for Transmission Connected Facilities", and the "FE Study Guide". The Developer of the V3-031 Germantown project has proposed the installation of a 20MW energy (7.6MW Capacity) photovoltaic generating facility. It is located in Pennsylvania and will connect to MetEd's (FirstEnergy Corp.) system at 115kV. The proposed in-service date for this facility is December 31, 2010.

PJM Study Results - Network Impacts

The queue V3-031 project was studied as a 20MW injection (7.6MW of which was capacity) into MetEd's system at the Germantown 115kV substation. The project was studied on a combined feasibility-impact basis which utilizes an AC analysis, and incorporates all contingency types. Project V3-031 was evaluated for compliance with reliability criteria for summer peak conditions in 2014. Potential network impacts were as follows:

Generator Deliverability
(Single or N-1 contingencies for the Capacity portion only of the interconnection)

No problems identified.

Multiple Facility Contingency
(Double Circuit Tower Line, Stuck breaker and Bus Fault contingencies for the full energy output)

No problems identified.

Contribution to Previously Identified Overloads
(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

No problems identified.

New System Reinforcements
(Upgrades required to mitigate reliability criteria violations, i.e. "Network Impacts", initially caused by the addition of this project generation)

None.

Contribution to Previously Identified System Reinforcements
(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which will be calculated and reported for the Impact Study)

None.

Short Circuit

PJM has completed the short circuit analysis of the V3-031 queue project Germantown. One option was considered during this study: the option was a direct connection to the Germantown 115kV. Our analysis found no new breakers to be over-duty in the METED transmission area.

The study also showed no significant fault current contribution to the breakers which have already been identified as over-duty. This study was performed on the 100kV and above system.

The transmission owner also performed a short circuit analysis, the results of which are included below in their portion of this report.

Potential Congestion due to Local Energy Deliverability
(PJM also studied the delivery of the energy portion of the surrounding generation. Any potential problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with Network Upgrades to eliminate the operational restriction at their discretion by submitting a Transmission Interconnection Request. Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full deliverability for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which analyzes all overload conditions associated with the identified overloaded element(s). As a result of the aggregate energy resources in the area, the following violations were identified:

No problems identified.

FirstEnergy Study Results

Connection Facilities

The direct connection of this project will be accomplished by the construction of a new 115 kV 3 breaker ring bus and the looping of the Lincoln - Germantown (998) 115 kV line to it. Procurement and construction of the 115 kV transmission line connecting the 3 breaker ring bus to the Wind Farm 115 kV export bus is the responsibility of Natural Energy Technologies, LLC as this facility is not owned by FirstEnergy Corp. Natural Energy Technologies, LLC will be responsible for acquiring all easements, properties and permits that may be required to construct both the project connection 3 breaker ring bus and the attachment facilities. Natural Energy Technologies, LLC will also be responsible for the rough grade of the property and an access road to the proposed 3 breaker ring bus site. A summary of the Germantown (V3-031) 115kV Project direct connection facilities that will be required and their estimated costs are shown on Attachment 3.

Power Flow Analysis

A Power Flow study was conducted to determine the reliability impact of the proposed Germantown (V3-031) 115kV Project on the FE Transmission System. This included the performance of a contingency analysis to identify any facility overload or voltage condition that violates the FE Planning Criteria. Any such violation that is either directly attributable to this project or for which it will have a shared responsibility is included in this report with a least cost plan identified to mitigate them.

The Germantown (V3-031) 115kV Project Power Flow Analysis that was performed was completed using a 2014 summer peak load base case power flow provided by the PJM staff. This base case included a detailed representation of the MetEd transmission system in the area of the proposed Germantown 115 kV substation. A simulation of all possible contingencies within the NERC and FE Planning Standards that are impacted by the Germantown (V3-031) 115kV Project was conducted to test for criteria compliance.

The results from the study Power Flow Analysis showing a comparison of the FE and PJM contingency study results is detailed on Attachment 4. As shown, the conclusion from this analysis is that there are no new upgrades required, and no contribution to previously identified upgrades associated with other RTEP queue position generation projects.

In addition, the findings show that there are no criteria violations which will have an impact on network congestion and local energy deliverability. Hence the Germantown (V3-031) 115kV Project would be allowed to output at the full 20MW energy rating without being subject to PJM curtailment.

Short Circuit and Dynamics Analysis

A short circuit analysis has been performed by PJM on the 100kV and above system and results were confirmed by FirstEnergy. The analysis found no new breakers to be over-duty in the

METED transmission area. The analysis also showed no significant fault current contribution to the breakers which have already been identified as over-duty.

System Protection Analysis

An analysis was conducted to assess the impact of Germantown (V3-031) 115kV Project on the system protection requirements in the area. The results of this review show that the following relay additions and upgrades will be required:

Relay Requirements

Lincoln

- Microprocessor based relaying utilizing a directional comparison blocking scheme over power line carrier.
- Transfer Trip equipment

V3-031

Lincoln Terminal

- Microprocessor based relaying utilizing a directional comparison blocking scheme over power line carrier. (Primary)
- Tuning equipment and wave trap
- Microprocessor based step distance relaying (Back-up)
- Transfer Trip equipment for breaker failure relaying

Germantown Terminal

- Microprocessor based relaying utilizing a line differential scheme and fiber optic communication for primary and backup. Also to be used for direct transfer trip for stuck breaker

V3-031 Tap

- Primary and backup microprocessor based bus differential protection
- Breaker failure relaying for all three breakers

Germantown

- Microprocessor based relaying utilizing a line differential scheme and fiber optic communication for primary and backup. Also to be used for direct transfer trip for stuck breaker.

  Fiber Optic Line Connection - 0.3mi from Germantown to V3-031

Connecting Party Protection:

To protect the FE sub-transmission system from customer faults and assure proper coordination with the MET-ed line relay settings, FE will review/approve protective relaying design for the 3 Breaker Ring Proposal on the 998 Line. The Connecting Party is solely responsible for

protecting its own equipment from damage due to faults on the FE transmission system. The general connection requirements are described in the FE "**Requirements for Transmission Connected Facilities**" document, which is available on the FE website, http://www.firstenergycorp.com/feconnect/Retail_Operating_Company_Contacts.htm**.**

Metering

Natural Energy Technologies, LLC will be required to comply with all FE Revenue Metering Requirements for Generation Interconnection Customers. These FE requirements are detailed on Attachment 7 of this report.

Compliance Issues

Natural Energy Technologies, LLC will be responsible for meeting all FE criteria as defined in the FE Requirements for Transmission Connected Facilities document. While the voltage analysis is not performed for the feasibility study, any voltage criteria violations that would require the plant to provide reactive power, that determination of reactive power requirements will be determined in the system impact study, which will include the low voltage ride through analysis.

Natural Energy Technologies, LLC must also meet all PJM, ReliabilityFirst and NERC reliability criteria and operating procedures required for standards compliance. For example, the Developer will need to properly locate and report the over and under-voltage and over and under-frequency system protection elements for its units as well as the submission of the generator model and protection data required to satisfy the PJM and ReliabilityFirst audits. Failure to comply with these requirements may result in a disconnection of service if the violation is found to compromise the reliability of the FE system.

FE Facility Upgrades and Costs

The results from the FE power flow analysis (Attachment 4) show that there are no FE criteria violations that are directly attributable to the capacity of the Germantown (V3-031) 115kV Project. Furthermore, there are no violations affecting network congestion and local energy delivery that the Germantown (V3-031) 115kV Project will impact. Note that the FE and PJM study results differ somewhat due to the differences in the study process and power flow programs utilized. However, the overall conclusions reached by the FE and PJM staff are the same. In accordance with the RTEP procedures defined in the PJM Open Access Transmission Tariff and PJM Manuals, Natural Energy Technologies, LLC is not responsible for network upgrades. The direct connection costs however are detailed in Attachment 3.

Note that all cost estimates contained in this document were produced without a detailed engineering review and are therefore subject to error. More accurate estimates will be determined as a part of the System Impact Study. Natural Energy Technologies, LLC will be responsible for the actual cost of the direct connection that is implemented. In addition, Natural Energy Technologies, LLC is responsible to provide the transmission line between V3-031

interconnecting substation and the V3-031 generating substation, as Natural Energy Technologies, LLC will own this transmission line. FE herein reserves the right to return to any issues in this document and, upon appropriate justification, request additional monies to complete any reinforcements to the transmission system.

Natural Energy Technologies, LLC Requirements

In addition to the FE facilities, Natural Energy Technologies, LLC will also be responsible for meeting all criteria as specified in the applicable sections of the "FE Requirements for Transmission Connected Facilities" document including:

1. The purchase and installation of the minimum required FE generation interconnection relaying and control facilities. This includes over/under voltage protection, over/under frequency protection, and zero sequence voltage protection relays.

2. The purchase and installation of a 115 kV interconnection metering instrument transformer. FE will provide the ratio and accuracy specifications based on the customer load and generation levels.

3. The purchase and installation of a revenue class meter for each unit to measure the power delivered in compliance with the FE standards.

4. The purchase and installation of supervisory control and data acquisition (SCADA) equipment to provide information in a compatible format to the FE Transmission System Control Center.

5. The establishment of dedicated communication circuits for SCADA report to the FE Transmission System Control Center.

6. A compliance with the FE and PJM generator power factor and voltage control requirements.

7. The execution of a back-up service agreement to serve the customer load supplied from the Germantown 115kV substation when the units are out-of-service. This assumes the intent of Natural Energy Technologies, LLC is to net the generation with the load.

8. The rough grade of the property for the V3-031 Interconnection 115 kV Substation and an access road for the delivery of equipment to this site.

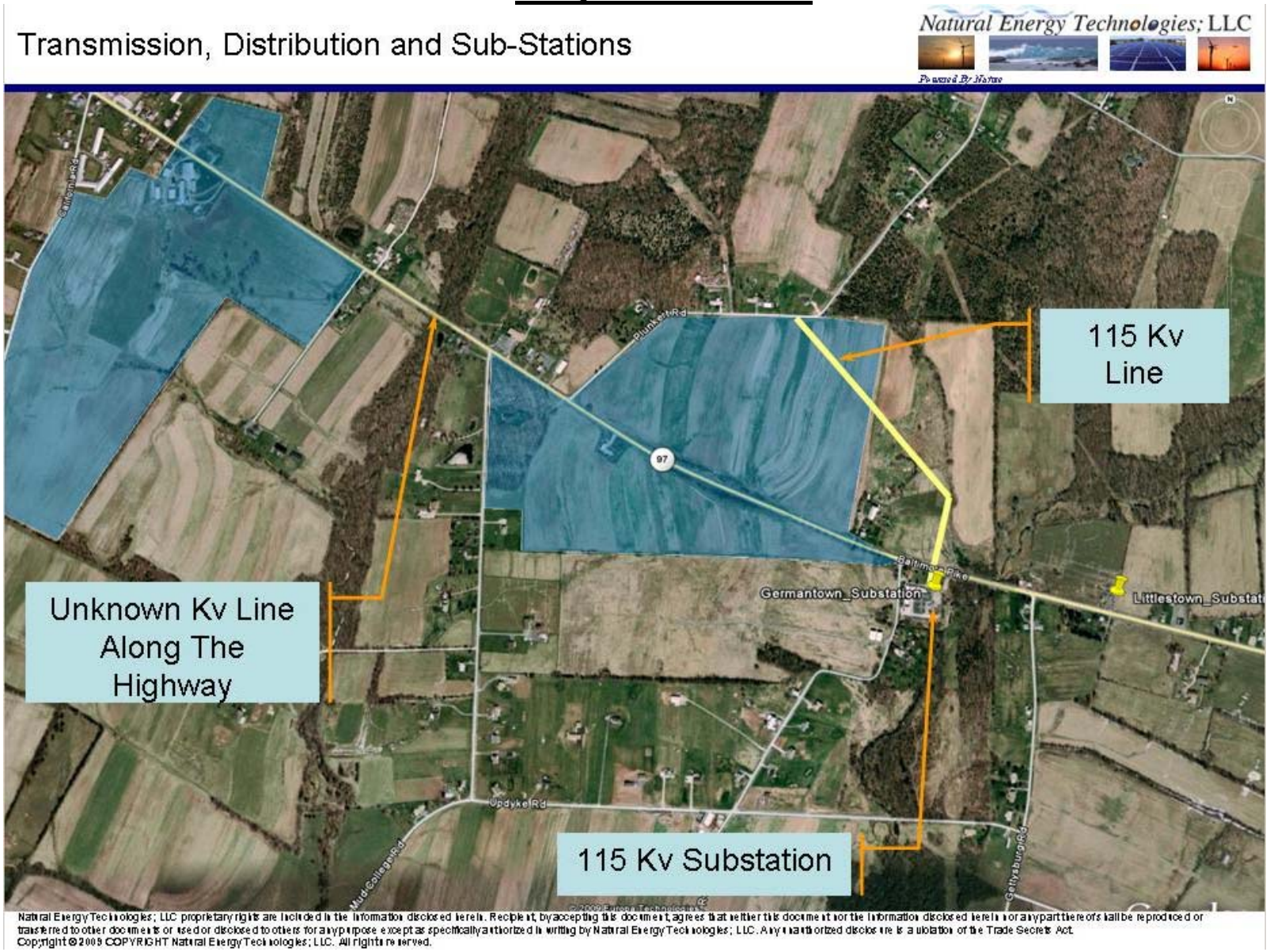
The above requirements are in addition to any metering required by PJM.

Summary

The Germantown (V3-031) 115kV Project direct connection will require the facility upgrades defined in Attachment 3. As shown, the total estimated cost of the new three breaker ring bus substation and attachment lines is $4,353,900. The Germantown (V3-031) 115kV Project does not have any network upgrades.

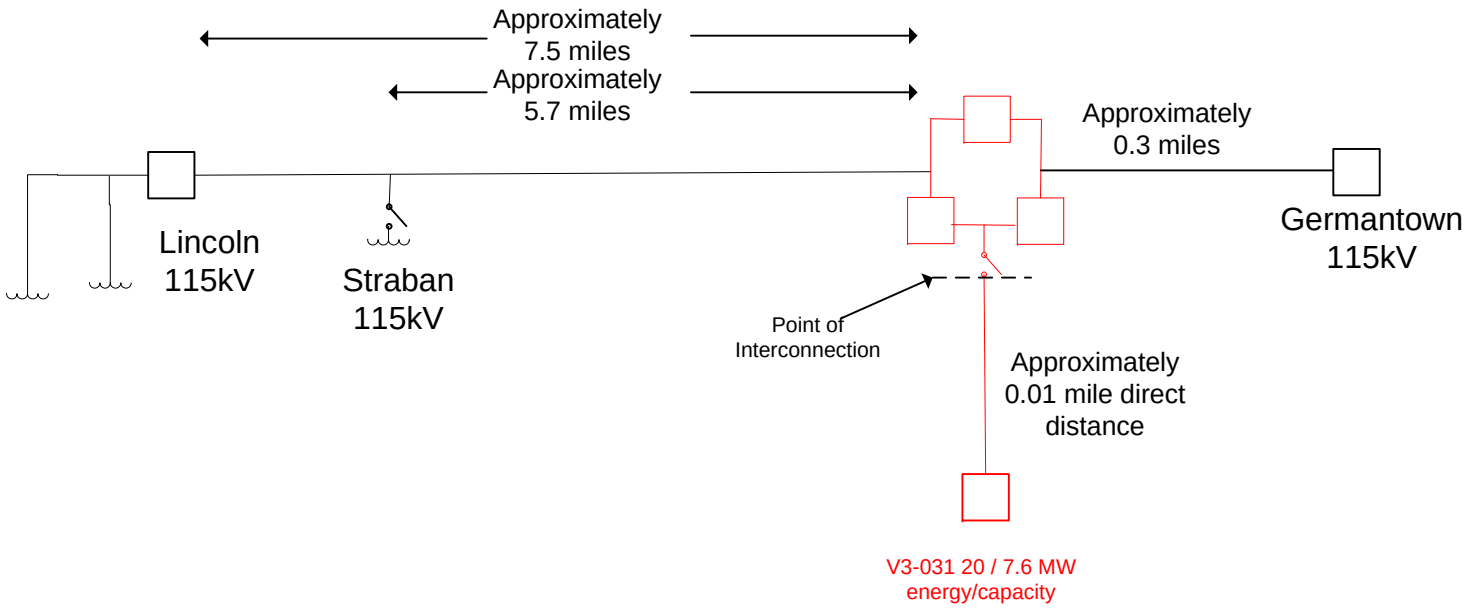
Based on the scope of the FE direct connection, it is expected to take a minimum of two (2) years from the signing of a Connection Service Agreement to complete the installation required for the Germantown (V3-031) 115kV Project. This includes a preliminary payment that compensates FE for the first three months of the engineering design work that is related to the construction of a new V3-031 Interconnecting substation and the loop of the MetEd 115 kV lines to this site. It also assumes that Natural Energy Technologies, LLC will provide the property for the attachment substation and all right-of-way, permits, easements, etc. that will be needed. A further assumption is that there will be no environmental issues with any of the new properties associated with this project, that there will be no delays in acquiring the necessary permits for implementing the defined direct connection and network upgrades, and that PJM will allow all transmission system outages when requested.

Attachment 1A
Germantown ME (V3-031) RTEP Project
Project Location



Attachment 1B
Germantown ME (V3-031) RTEP Project
Nearest Tower for Loop

Attachment 2
Germantown ME (V3-031) RTEP Project
Conceptual 115 kV Interconnection Substation Configuration



Attachment 3

Germantown ME 115kV (V3-031) Feasibility / System Impact Study

Direct Connection Requirements

UpgradeID	Description	Total Cost
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	TOTAL	$4,353,900

Attachment 4
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FE Contingency Analysis Results

Identified New Project Upgrades

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Contributions To Previously Identified Overloads

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PJM #	FE Contingency	Outage Description	Overloaded Element	N/4-Hr Rating	MVA Flow	% Rating	MVA Flow	% Rating
	No Problems				--	--	--	--

Potential Congestion due to Local Energy Deliverability

					FirstEnergy Results		PJM Results	
PJM #	FE Contingency	Outage Description	Overloaded Element	N/4-Hr Rating	MVA Flow	% Rating	MVA Flow	% Rating
	No Problem				--	--	--	--

Attachment 5
Germantown ME (V3-031) RTEP Project
FE Network Facility Reinforcement Conceptual Cost Estimates

None Required

Attachment 6
Germantown ME (V3-031) RTEP Project
FE Network Facility Reinforcement Conceptual One Line Diagrams

None Required

Attachment 7

FirstEnergy Revenue Metering Requirements for Generation Interconnection Customer

Interconnection Customer shall install, own, operate, test and maintain the necessary revenue quality Metering Equipment. This includes current transformers, voltage transformers, mounting structures, wiring, meters, communication circuits, and associated devices. The Metering Equipment must meet the specifications listed in the FirstEnergy and regional transmission organization (RTO) connection documents. The FirstEnergy "Requirements for Transmission Connected Facilities" are located at:
http://www.firstenergycorp.com/feconnect

The Metering Equipment shall be located at the generation facility on the high voltage side of the generator step-up transformers or facility main step-up transformer and/or station service power transformers. Power flows to and from the facility shall be compensated to the Point of Interconnection.

FirstEnergy will provide revenue quality Metering Equipment for a station service power supply at a generation facility if the supply is from the local FirstEnergy distribution system.

The revenue quality Metering Equipment shall be capable of collecting and storing bidirectional billing data. The billing data shall be stored in intervals specified by FirstEnergy, typically fifteen minutes or thirty minutes. The Interconnection Customer must provide FirstEnergy with remote access to the billing data in the Metering Equipment via a dedicated voice-grade analog telephone circuit. The Interconnection Customer shall provide FirstEnergy with contact information for the person or persons responsible for meter programming and Metering Equipment maintenance.

The Interconnection Customer shall consult with FirstEnergy regarding the revenue quality metering system design and provide the following information:

- Facility one line and revenue metering installation drawings (schematics, wiring diagrams, etc.)
- Estimated power flows to and from the facility at all revenue metering points
- Current transformer and voltage transformer specifications, including manufacturer, type, nameplate drawings, and certified accuracy test reports
- Revenue meter specifications including manufacturer, type, model number, and accuracy
- Revenue meter program information including but not limited to billing data recorder channel assignments, recorder pulse weights (Ke), and read-only

password for access to interval data by the FirstEnergy billing data collection system (MV-90)
- Revenue meter telephone number
- Revenue meter loss compensation data (if applicable)

The Interconnection Customer shall provide FirstEnergy with prior notification of any modifications at the facility that will affect the revenue meter measurements, including substation reconfigurations and meter program changes.

The revenue metering system at each location shall be tested for accuracy by the Interconnection Customer once every two years. The Interconnection Customer shall give reasonable notice to FirstEnergy of the time when the testing is scheduled so that FirstEnergy may have representatives present. FirstEnergy and the RTO shall have the right to audit the revenue metering equipment and/or related documents. The Interconnection Customer shall be given a reasonable period of time to comply with any requests associated with an audit.

955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497

FEDEX DELIVERY
Confidential

January 29, 2010

Mr. Chirag Barot
Natural Energy Technologies; LLC
2850 Pilgrim Road
York, PA 17402

Dear Mr. Barot:

V3-031 Germantown - FEASIBILITY STUDY REPORT

Attached is a report documenting the results of PJM's Feasibility Study analysis. The intent of the Feasibility Study is to determine a plan, with preliminary cost estimates and approximated construction times, to connect the subject generation to the PJM network at a location specified by the Interconnection Customer. The results of this Feasibility Study are predicated on a year 2014 transmission system based upon PJM's best assumptions at the present time for load growth and connection of proposed new generation additions.

At the time of issuing this report, the Transmission Owner was continuing to work on its analysis of this project and had yet to identify any violations that required system upgrades. Similarly, the exact scope, cost, and schedule of the attachment facilities, direct connections and protective relay requirements had not been determined. Therefore, this report does not contain detailed information at that level. This analysis is underway and, depending upon those results, we will send to you a revised Feasibility Study Report or a Combined Feasibility/Impact Study Report. Whichever of the forgoing reports is sent, it will be accompanied by an agreement that will enable you to proceed with the next phase of the interconnection process.

We appreciate your patience as we work to complete the analysis and hope the enclosed report provides you with information you find useful determining the future of your project.

Sincerely,

Kenneth B. Mancini
Sr. Engineer
Interconnection Projects Department

KBM\jm #577131-v1
Attachments

PJM (w/attachment):
Dave Cardy, FirstEnrgy Corp
Joyce Toth, FirstEnergy Corp
Susan Smith, FirstEnergy Corp.
Rob Price, PJM
File

Generation Interconnection Feasibility Study Report

For

PJM Generation Interconnection Request Queue Position V3-031

Germantown Project

January 2010
DOCS 577619v1

General

The Developer of the V3-031 Germantown project has proposed the installation of a 20MW energy (7.6MW Capacity) photovoltaic generating facility. It is located in Pennsylvania and will connect to MetEd's (FirstEnergy Corp.) system at 115kV. THe proposed in-service date for this facility is December 31, 2010.

Network Impacts

The queue V3-031 project was studied as a 20MW injection (7.6MW of which was capacity) into MetEd's system at the Germantown 115kV substation. The project was studied on a combined feasibility-impact basis which utilizes an AC analysis, and incorporates all contingency types. Project V3-031 was evaluated for compliance with reliability criteria for summer peak conditions in 2014. Potential network impacts were as follows:

Generator Deliverability
(Single or N-1 contingencies for the Capacity portion only of the interconnection)

No problems identified.

Multiple Facility Contingency
(Double Circuit Tower Line, Stuck breaker and Bus Fault contingencies for the full energy output)

No problems identified.

Contribution to Previously Identified Overloads
(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

No problems identified.

New System Reinforcements
(Upgrades required to mitigate reliability criteria violations, i.e. "Network Impacts", initially caused by the addition of this project generation)

None.

Contribution to Previously Identified System Reinforcements
(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which will be calculated and reported for the Impact Study)

None.

Short Circuit

PJM has completed the short circuit analysis of the V3-031 queue project Germantown. One option was considered during this study: the option was a direct connection to the Germantown 115kV. Our analysis found no new breakers to be over-duty in the METED transmission area.

The study also showed no significant fault current contribution to the breakers which have already been identified as over-duty. This study was performed on the 100kV and above system.

The transmission owner will review the forgoing results and may also perform a short circuit analysis.

Potential Congestion due to Local Energy Deliverability

(PJM also studied the delivery of the energy portion of the surrounding generation. Any potential problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with Network Upgrades to eliminate the operational restriction at their discretion by submitting a Transmission Interconnection Request. Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full deliverability for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which analyzes all overload conditions associated with the identified overloaded element(s). As a result of the aggregate energy resources in the area, the following violations were identified:

No problems identified.