
From: Barker, Daryn
To: Freibert, Charlie; Schetzel, Doug; Depaull, Tom
Sent: 3/26/2009 2:07:23 PM
Subject: PJM TSR 1092401
Attachments: PJM Impact Study Agreement 1092401.pdf

PJM has completed the Initial Study for our 99MW PTP request from the Grand Ridge WF. Not too surprisingly, the request can not be approved and must go to the System Impact Study Phase for further evaluation. I have attached scanned document that contains the Initial Study report and the SIS agreement. The SIS agreement must be executed and returned with \$50k deposit within 30 days to keep the request active. The originals of both documents are at my desk.

<<...>>

Daryn Barker

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**FORM OF
SYSTEM IMPACT STUDY AGREEMENT
FROM ATTACHMENT N-1 OF THE PJM TARIFF**

OASIS 1092401 QUEUE V1-001

K:\pjm\Gen IC docs\Form Templates\New Templates Proposed after 3-1-07\SIS Study Agmt Form - Att N-1 (3-1-07).doc

SYSTEM IMPACT STUDY AGREEMENT

RECITALS

1. This System Impact Study Agreement, dated as of March 25, 2009, is entered into, by and between Louisville Gas & Electric Company/Kentucky Utilities ("New Service Customer") and PJM Interconnection, L.L.C. ("Transmission Provider") pursuant to Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff ("PJM Tariff").
2. The Transmission Provider has: (i) pursuant to Section 36.2 of the PJM Tariff, completed an Interconnection Feasibility Study and provided the results of that study to the New Service Customer; (ii) received a valid Upgrade Request; or (iii) pursuant to Section 19 or Section 32, as applicable, of the PJM Tariff, the Transmission Provider has completed an Initial Study and provided the results of that study to the New Service Customer.
3. Pursuant to Sections 19.1, 32.1, 37, 110.2, 111.2, 204.2, or 204.3, as applicable, of the PJM Tariff, the New Service Customer (i) requests that the Transmission Provider perform a System Impact Study, and (ii) agrees to submit a deposit to the Transmission Provider which will be applied to the New Service Customer's cost responsibility for the System Impact Study, in one of the following amounts, as applicable: (a) fifty thousand dollars (\$50,000.00) for a New Service Request other than a Generation Interconnection Request of the type described in the following clause (b), or (b) the estimated cost of the System Impact Study for a proposed interconnection of a generation facility of 20 MW or less, but greater than 2 MW.
4. Except as otherwise specifically set forth in an attachment to this agreement, New Service Customer represents and warrants that the information provided in Section OASIS # 1092401 on the PJM OASIS, queue date January 30, 2009 for the request designated Queue ID V1-001 is accurate and complete as of the date of execution of this System Impact Study Agreement. New Service Customer further provides the following information and represents and warrants that said information is true and correct:

PURPOSE OF THE SYSTEM IMPACT STUDY

5. Consistent with Section 205 of the PJM Tariff, the Transmission Provider, in consultation with the affected Transmission Owner(s), shall conduct a System Impact Study that identifies the system constraints relating to the New Service Requests being evaluated in the study and the Attachment Facilities, Local Upgrades, and Network Upgrades necessary to accommodate such New Service Requests. It is expected that the System Impact Study will be completed by **December 30, 2009**. In the event that the Transmission Provider is unable to complete the System Impact Study by that date, the Transmission Provider shall notify the New Service Customer and explain the reasons for the delay.
6. The System Impact Study conducted hereunder will provide more comprehensive estimates of the cost and length of time required to accommodate the New Service

Customer's New Service Request than those developed through the Feasibility Study or Initial Study, if applicable, performed for the New Service Customer. These estimates shall represent a good faith attempt to determine the cost of necessary facilities and upgrades to accommodate the New Service Customer's New Service Request, and the New Service Customer's cost responsibility for them, but shall not be deemed final or binding. The scope of the System Impact may include (a) an assessment of sub-area import deliverability, (b) an assessment of sub-area export deliverability, (c) an assessment of project related system stability issues, (d) an assessment of project related short circuit duty issues, (e) a contingency analysis consistent with the Applicable Regional Reliability Council's reliability criteria, (f) an assessment of regional transmission upgrades that most effectively meet identified needs, and (g) an analysis to determine cost allocation responsibility for required facilities and upgrades. Final estimates will be developed only upon execution of a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The System Impact Study necessarily will employ various assumptions regarding the New Service Request, other pending requests, and PJM's Regional Transmission Expansion Plan at the time of the study. **IN NO EVENT SHALL THE SYSTEM IMPACT STUDY IN ANY WAY BE DEEMED TO OBLIGATE THE TRANSMISSION PROVIDER OR THE TRANSMISSION OWNERS THAT MAY INTERCONNECT WITH THE NEW SERVICE CUSTOMER TO CONSTRUCT ANY FACILITIES OR UPGRADES.**

CONFIDENTIALITY

7. The New Service Customer agrees to provide all information requested by the Transmission Provider necessary to complete the System Impact Study. Subject to paragraph 8 of this System Impact Study Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this Section 7 shall be and remain confidential.
8. Until completion of the System Impact Study, the Transmission Provider shall keep confidential all information provided to it by the New Service Customer. Pursuant to Section 205.4 of the PJM Tariff, upon completion of the System Impact Study, the Transmission Provider shall provide a copy of the System Impact Study to all New Service Customers whose New Service Requests were evaluated in the System Impact Study along with all related work papers. Additionally, Transmission Provider shall post on Transmission Provider's OASIS (i) the existence of the System Impact Study, (ii) the New Service Customers that had New Service Requests evaluated in the System Impact Study, (iii) the location and size in megawatts of each New Service Customer's generation project, if applicable, and (iv) each New Service Customer's Queue Position. Additionally, New Service Customer acknowledges and consents to such other disclosures as may be required under the PJM Tariff or the FERC's rules and regulations.
9. New Service Customer acknowledges that, consistent with Part VI of the PJM Tariff, the Transmission Owners will participate in the System Impact Study process and that the Transmission Provider may disseminate information to the Transmission Owners and rely upon them to conduct part or all of the System Impact Study.

COST RESPONSIBILITY

10. The New Service Customer shall reimburse the Transmission Provider for the actual cost of the System Impact Study in accordance with its cost responsibility as determined under Sections 110.2, 111.2 or 203 of the PJM Tariff. The deposit described in Section 3 of this Agreement, paid by the New Service Customer pursuant to Sections 110.2, 111.2, or 204.3 of the PJM Tariff, shall be applied toward the New Service Customer's System Impact Study cost responsibility. In the event that the Transmission Provider anticipates that the New Service Customer's study cost responsibility will substantially exceed the deposit, the Transmission Provider shall provide the New Service Customer with an estimate of the study costs and the New Service Customer's cost responsibility. Within 10 days of receiving such estimate, the New Service Customer may withdraw its New Service Request by providing notice to the Transmission Provider, in which event the deposit paid to Transmission Provider shall be refunded. Unless the New Service Request is withdrawn within 10 days, the New Service Customer agrees to pay the amount of its actual System Impact Study cost responsibility.

DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY

11. In analyzing and preparing the System Impact Study, the Transmission Provider, the Transmission Owner(s), and any other subcontractors employed by the Transmission Provider shall have to rely on information provided by the New Service Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER THE TRANSMISSION PROVIDER, THE TRANSMISSION OWNER(S), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY THE TRANSMISSION PROVIDER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH REGARD TO THE ACCURACY, CONTENT, OR CONCLUSIONS OF THE SYSTEM IMPACT STUDY. The New Service Customer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representations or warranties have formed the basis of its bargain hereunder. Neither this System Impact Study Agreement nor the System Impact Study prepared hereunder is intended, nor shall either be interpreted, to constitute agreement by the Transmission Provider or the Transmission Owner(s) to provide any transmission or interconnection service to or on behalf of the New Service Customer either at this point in time or in the future.
12. In no event will the Transmission Provider, Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, whether arising under this System Impact Study Agreement or otherwise, even if the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider have been advised of the possibility of such a loss. Nor shall the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the

Transmission Provider be liable for any delay in delivery or of the non-performance or delay in performance of the Transmission Provider's obligations under this System Impact Study Agreement.

Without limitation of the foregoing, the New Service Customer further agrees that Transmission Owner(s) and other subcontractors employed by the Transmission Provider to prepare or assist in the preparation of any System Impact Study shall be deemed third party beneficiaries of this provision entitled "Disclaimer of Warranty/Limitation of Liability."

MISCELLANEOUS

13. Any notice or request made to or by either party regarding this System Impact Study Agreement shall be made to the representative of the other party as indicated below.

Transmission Provider

PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497

New Service Customer

Louisville Gas & Electric Company/Kentucky Utilities
220 West Main Street
7th Floor
Louisville, KY 40202

14. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this System Impact Study Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
15. This System Impact Study Agreement or any part thereof, may not be amended, modified, or waived other than by a writing signed by all parties hereto.
16. This System Impact Study Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.
17. Neither this System Impact Study Agreement nor the System Impact Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
18. The provisions of Part VI of the PJM Tariff are incorporated herein and made a part hereof.
19. Capitalized terms used but not otherwise defined herein shall have the meaning ascribed to them in the PJM Tariff.

20. This System Impact Study Agreement shall be effective as of the date of the New Service Customer's execution of it and shall remain in effect until the earlier of (a) the date on which the Transmission Provider tenders the completed System Impact Study and a proposed Facilities Study Agreement to New Service Customer pursuant to Section 206 of the PJM Tariff, or (b) termination and withdrawal of the New Service Request(s) to which the System Impact Study hereunder relates.

IN WITNESS WHEREOF, the Transmission Provider and the New Service Customer have caused this System Impact Study Agreement to be executed by their respective authorized officials.

Transmission Provider: PJM Interconnection, L.L.C.

By: _____
Name Title Date

Printed Name

New Service Customer: Louisville Gas & Electric Company/Kentucky Utilities

By: _____
Name Title Date

Printed Name

PJM Initial Study

Long-Term Firm Transmission Service

OASIS Assignment Reference

1092401

March 25, 2009

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Request Details

Louisville Gas & Electric/Kentucky has requested a maximum amount of 99 MW of long term firm point to point transmission service on the PJM to LGEE path, beginning January 1, 2010 and ending January 1, 2015. The Point of Receipt (POR) for this request is PJM and the Point of Delivery (POD) is LGEE. This request has been assigned PJM OASIS reference identification 1092401 and was submitted on the PJM OASIS per the PJM Open Access Transmission Tariff (PJM OATT).

OASIS ID	Start	Stop	Path	POR	POD	MW
1092401	01/01/2010	01/01/2015	PJM-LGEE	PJM	LGEE	99

General

The Initial Study aims at determining whether all or part of the request for service can be accommodated based on projected system conditions and topology. The Initial Study process includes the following three screenings: Available Transmission Capability (ATC) screening, Generator Deliverability screening and Available Share of Total Flowgate Capability (ASTFC) screening.

ATC screening is employed in this study to make the determination as described in the Initial Study Agreement (ISA). The ATC screening assesses projected available transfer capability for the requested period and beyond (but within the AFC/ATC calculations horizon) from the POR to the POD using power flow models, load forecasts, planned generation, outages and existing reservations.

The Generator Deliverability screening determines the impact of the requested transfer on the transmission system facilities using tests corresponding with the testing employed for evaluating generation interconnection requests. The screening will identify if the requested transfer prohibits any generator(s) from being deliverable in the PJM system. Generator Deliverability under the Initial Study phase is tested using linear analysis tools. If violations are observed, more detailed testing using AC tools is required under the System Impact Study (SIS) phase.

Lastly, the ASTFC screening, if within the calculation horizon, will identify potential flowgates allocation violations to comply with the PJM-Midwest ISO-TVA Baseline Congestion Management Process Agreement.

In the Initial Study phase, PJM studies requests for long term firm transmission service for unlimited rollover rights beyond the requested end date unless otherwise instructed by the customer. Limits identified in the ATC or Generator Deliverability screening will result in a need to complete a SIS before service can be accommodated. Limits identified in the ASTFC screening alone will not result in a denial of service but are contingent upon the availability of ASTFC from reciprocal entity(ies). Transactions under SIS phase will be studied using full AC network analysis and provides refined and comprehensive estimates of cost responsibility and construction lead times for new facilities and system upgrades.

ATC Results

During the requested period of January 1, 2010 to January 1, 2015 of the PJM to LGEE request, ATC is evaluated from January 1, 2010 to September 1, 2010. ATC beyond this period is not applicable since it is not within the ATC calculation horizon. During the screening, no ATC constraint is identified to inhibit the full 99-MW transfer from PJM to LGEE.

Rollover Period

- ATC following the requested termination date of January 1, 2015 of the PJM to LGEE transfer is not applicable at this time since it is beyond the AFC/ATC calculations horizon.

Deliverability Results

PJM transmission constraints listed below are impacted by the 99-MW transfer from PJM to LGEE and have been identified as potential problems. These constraints require the request to proceed to the SIS phase for additional study before service can be accommodated.

- Peach Bottom–Conastone 500 kV line Circuit 2 under normal operating conditions
- Wolf Hills–North Bristol 138 kV line for loss of Broadford 765/500 kV transformer and Broadford–Sullivan 500 kV line
- Spring Creek–Wolf Hills 138 kV line for loss of Broadford 765/500 kV transformer and Broadford–Sullivan 500 kV line
- Lackawanna–Oxbow 230 kV line under normal operating conditions
- West Millersport–Millersport 138 kV line for loss of West Millersport–Hyatt 345 kV line and West Millersport–Kirk 345 kV line

Note: If Louisville Gas & Electric/Kentucky elects to proceed to the SIS phase, it may uncover additional issues not shown in this study due to any of the following reasons:

- SIS case will be more updated (additional idevs for queued and withdrawn projects, transmission service status changes, etc.)
- Transmission Owner analysis may uncover other issues on their respective systems
- Previous customers may elect not to proceed to SIS, therefore, shifting violations to the next customer
- Full AC network analysis and all types of contingencies will be analyzed in the SIS phase

ASTFC Results

During the ASTFC screening, no constraint is identified within the ASTFC calculation horizon to inhibit the 99-MW transfer on the PJM to LGEE path.

Conclusion

While the ATC screening revealed available transfer capability during the calculation horizon, due to the Deliverability Results screening provide in this report, PJM is **unable** to accept or counteroffer your request 1092401 for a total of 99 MW of long term firm point to point transmission service on the PJM to LGEE path at this time. The next phase of study is the SIS if elected by the customer. The SIS identifies the system constraints relating to each proposed new service request included therein and the Attachment Facilities, Direct Assignment Facilities, Local Upgrades and/or Network Upgrades required to accommodate such projects. The System Impact Study provides refined and comprehensive estimates of cost responsibility and construction lead times for new facilities and system upgrades.