

TSR LGE-2016-011 System Impact Study Report (TSR #83536880)

PROPRIETARY

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TranServ International, Inc.
3660 Technology Drive NE
Minneapolis, MN 55418
Phone: 763.205.7080

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1. Study Summary

TranServ has evaluated Monthly Firm Network Transmission Service Request (TSR) listed in Table 1-1. A System Impact Study (SIS) was performed only to determine the direct assignment facility needs and cost for this TSR.

Table 1-1 Request Details

Assign Ref	POR	POD	MW	TS Increment	TS Type	Request Type	Start Time	Stop Time	Q-Time
83536880	LGEE	LGEE	1	Monthly	Network	Original	2017-01-01 00:00:00 ES	2017-05-01 00:00:00 ES	2016-10-04 09:23:21 ES

For reliability purposes, a substation will be added by the customer. The new substation will normally supply only 1 MW of load. According to the LG&E and KU TSR Study Criteria, posted on LG&E and KU’s Open Access Same Time Information System (OASIS), impacts to the transmission system of less than 2 MVA, even though due to the new TSR, are not considered constraints which require mitigation prior to accepting that TSR. Since the TSR MW level is less than 2 MVA, a powerflow analysis would not result in the identification of any constraints which would be required to be mitigated prior to accepting this TSR. Thus no powerflow analysis was performed as part of the SIS by the Independent Transmission Operator (ITO). However, an Available Transfer Capability (ATC)/ Available Flowgate Capability (AFC)/ Available Share of Total Flowgate Capability (ASTFC) check was required and a study was required by the Transmission Owner (TO) to determine the direct assignment facilities that are necessary for this TSR.

Because this is fast track TSR, no Ad Hoc Study Group was formed.

The TO has determined that a substation is required to be in place prior to commencement of this service, but that the construction period for this required substation is expected to extend beyond the stop date of this request. Thus no service can be granted during the term of this request.

1.1 OASIS Posted Flowgate Analysis Results

As defined in the LG&E and KU TSR Study Criteria document posted on the LG&E and KU OASIS, this TSR is subject to an ATC, AFC, and ASTFC analysis. No ATC, AFC, and ASTFC constraints due to the subject request were found.

1.1.1. ASTFC Analysis

The OASIS request evaluation was used to perform the OASIS ASTFC check on December 08, 2016 of the OASIS ASTFC posted horizon, December 01, 2016 to January 01, 2018. The OASIS ASTFC check indicated that the subject request passed for the period of the OASIS ASFTC posted horizon. Beyond that period, the ASTFC check was not performed.

1.1.2. ATC Analysis

The OASIS request evaluation was used to perform the OASIS ATC check on December 08, 2016 of the OASIS ATC posted horizon, December 01, 2016 to June 01, 2018. The OASIS ATC check indicated that the subject request passed for the period of the OASIS ATC posted horizon.

1.1.3. AFC Analysis

The OASIS request evaluation was used to perform the OASIS AFC check on December 08, 2016 of the OASIS AFC posted horizon, December 01, 2016 to June 01, 2018. The OASIS AFC check indicated that the subject request passed for the period of the OASIS AFC posted horizon.

1.2 Cost Estimate

The granting of this request is not contingent upon any system upgrades or advancements. There are however direct assignment facilities required. The direct assignment facilities include the following:

- The installation of a new 4-way custom steel pole end on anchor bolt foundations, in place of existing 3-way dead end structure that borders the purposed substation location. The new pole will provide a tap location for the customer to build to.

The conceptual cost estimate for the direct assignment facilities is \$500,000 USD. The TO has determined that a substation is required to be in place prior to commencement of this service, but that the construction period for this required substation is expected to extend beyond the stop date of this request. Thus no service can be granted during the term of this request.

1.3 Conclusion

No powerflow analysis was performed as part of the SIS by the ITO. However, a study was performed by the TO and direct assignment facilities were identified. The total cost estimate for direct assignment facilities is \$500,000 USD. Because this study was performed under the SIS fast track procedure in accordance with LG&E and KU business practices, no Facility Study will be required due to the direct assignment facilities.