

TSR LGE-2017-010
TSR #84884967
System Impact Study Report
Executive Summary

PROPRIETARY

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1. Executive Summary

TranServ has evaluated the Long-Term Firm Network Transmission Service Request (TSR) listed in Table 1-1. A System Impact Study (SIS) was performed to determine the impact of this TSR on the transmission network, to determine if any transmission constraints prohibit granting the requested service and to identify any limiting constraints. This report documents that SIS.

**Table 1-1
Request Details**

Assign Ref	POR	POD	MW	TS Increment	TS Type	Request Type	Start Time	Stop Time	Q-Time
84884967	LGEE	LGEE	10	Yearly	NITS Load	Original	11/30/2018	01/01/3000	05/26/2017

As shown in Table 1-1, TSR #84884967 (TSR LGE-2017-010) is a yearly network request for 10 MW.

This TSR SIS was performed using the fast track TSR methodology. No Ad Hoc Study Group was formed and no flowgate analysis was performed in accordance with the LG&E and KU TSR Study Criteria document posted on the LG&E and KU Open Access Same-Time Information System (OASIS). Also no off-peak analysis was performed as part of this fast track study.

As given in the LG&E and KU TSR Study Criteria Document, posted on the LG&E and KU OASIS, TSR SISs include both near-term and out year models. Due to the nature of the Network Integration Transmission Service (NITS) application, the subject TSR was evaluated using 2018 winter peak, 2019 summer peak, and 2027 summer and winter peak power flow models based on the LG&E and KU 2018 Transmission Expansion Plan (TEP) Base Case Study (BCS) r20170406 models.

All appropriate prior queued transactions were modeled prior to the modeling of the subject request. Representation of these earlier queued requests may also have necessitated the representation of associated planned transmission improvements. Thus, it is important to note that, if the planned improvements do not come to fruition, the subject request's impact on the transmission system as identified by this study may become invalid and a revised study may become necessary before transmission service can be granted.

Since the subject request is a NITS Load request, no Available Transfer Capability (ATC)/Available Flowgate Capability (AFC)/Available Share of Total Flowgate Capability (ASTFC) check was performed.

1.1 Summary of Power Flow Analysis Results

1.1.1 Thermal Constraints

No system intact or contingency thermal constraints, impacted by the subject request, were found.

1.1.2 Voltage Constraints

No system intact or contingency voltage constraints, impacted by the subject request, were found.

1.1.3 Flowgate Constraints

Consistent with LG&E and KU's fast track TSR methodology, no flowgate analysis was performed.

1.2 Summary of ATC/AFC/ASTFC Check Results

As indicated above, no ATC, AFC, and ASTFC check was performed, thus no constraints were found.

1.3 Conclusion

No LG&E and KU constraints have been identified for the subject TSR. Thus the granting of this request is not contingent upon LG&E and KU system upgrades. However, the Transmission Owner (TO) has determined that direct assignment facilities are required for this request. LG&E and KU has provided a good faith estimate of the cost to provide the direct assignment facilities. LG&E and KU's non-binding planning level cost estimate is **\$1,648,000 USD**. These costs are further discussed in Section 6 of the full report. It is expected that there will be no issues with completing construction by 11/30/2018, the start date of this TSR. Since this TSR was studied under the fast track process and no network constraints were identified, no Facilities Study will be performed.

No third party constraints have been identified. Thus no third party mitigation is required.

The full report is available on the LG&E and KU Critical Energy Infrastructure Information (CEII) File Transfer Protocol (FTP) site. See the study report title posting on OASIS for instructions pertaining to accessing the LG&E and KU CEII FTP site. The LG&E and KU secure CEII FTP site URL is: <https://eft.lge-ku.com/EFTClient/Account/Login.htm>.