



GEN-2017-005

DEFINITIVE

INTERCONNECTION IMPACT

STUDY SENSITIVITY

SPP GENERATOR INTERCONNECTION

September 29, 2021

Version 1

REVISION HISTORY

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION	COMMENTS
VERSION 1	SPP Generator Interconnection	9/29/2021	INITIAL POSTING

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INTRODUCTION

Per customer request, SPP has conducted a sensitivity to determine the appropriate group assignment for Generator Interconnection Request # GEN-2017-005, as well determine any material impact caused by moving the request under analysis an adjacent group. The Jayhawk project is a 190 MW wind generator request, ERIIS only, point of interconnection is a new substation tapping the Marmaton to Litchfield 161 kV line. The original group assignment for the project was group eight (8), however, upon review, appropriate group assignment should have been group twelve (12). This request is part of the 2017-001 Definitive Interconnection System Impact Study (DISIS).

DISIS SENSITIVITY ANALYSIS RESULTS

EXECUTIVE SUMMARY RESULTS

SPP performed power flow analysis using the 2019 ITP series models: Winter 2019, 2020; Summer 2020, 2024, 2029; Light 2024 & Spring 2020. DISIS-2017-001 Phase 2 Group 12 models. All analyses performed use the PTI PSS/E version 33 software and results summary are below.

A group re-evaluation was requested by the customer, considering this project is located approximately 25 miles away from Interconnection Request GEN-2017-082, equally queued, located two stations away electrically, same voltage level. The GEN-2017-082 group assignment is group 12.

SPP performed a power flow and cost allocation sensitivity to determine the impacts associated with changing groups for GEN-2017-005 as well as other requests' impacts in groups 8 and 12.

SPP observed no negative impacts for group 12. At the time when sensitivity analysis was performed, considering the requests under study in group 8, no negative impacts were verified. Please note, at present time, the group 8 requests are in DISIS-2017-001-1 Restudy, the driver for a re-study was triggered due to withdraws that happened related to group 8, DISIS 2016-002 study, and it is not associated with the 2017-005 move to group 12. For both groups, 8 and 12, the new flows and counter-flows do not have any material impact on the DISIS-2017-001 cluster requests.

In the future, if additional withdraws occur in groups 8 and 12 (DISIS-2017-001 and DISIS-2016-002), and re-studies are triggered, the current cost allocation can be impacted, changing the upgrade costs assigned to projects placed in both groups.

The models used for the sensitivity analysis are available upon request.

SUMMARY OF RESULTS

The results of the analysis identified that there were no incremental impacts for any of the evaluated PSSE models to the planning events that require network upgrades as mitigation (i.e. P-1, P-4 events). Additionally, GEN-2017-005 will be included with group 12 in the DISIS-2017-001-1 Restudy Report posting.

Please note, for DISIS-2017-002 studies and forward cluster groups have been reduced. Group 12 will now reflect 03 CENTRAL in the GI queue. This mapping is for future studies after DISIS-2017-001.

APPENDIX A

Memorandum_GEN-2017-005_GroupChange.docx, Provided 7/27/2021