



GEN-2016-022
Impact Restudy for
Generator Modification

March 2018
Generator Interconnection



Revision History

Date	Author	Change Description
3/21/2018	SPP	GEN-2016-022 Impact Restudy for Generator Modification Report Issued

Executive Summary

The GEN-2016-022 Interconnection Customer has requested a modification to its Generator Interconnection Request to modify its generator lead to the Point of Interconnection (POI) which is the Oklahoma Gas and Electric (OKGE) Ranch Road 345kV substation. The proposed change is to share the GEN-2015-034 (owned by the Interconnection Customer) generator lead which is also interconnected to the OKGE Ranch Road 345kV substation. Additionally, the Interconnection Customer is requesting to change wind turbine generators from Vestas V126 3.45MW to Vestas V136 3.45MW.

GEN-2016-022 was initially studied in the DISIS-2016-001 Group 8 impact study. In that study GEN-2016-022 had its own separate generator lead to the POI. The results of that study can be found on the SPP website¹. GEN-2016-022 was restudied in the DISIS-2016-001-1 Group 8 impact study. In this study GEN-2016-022 shared the GEN-2015-034 generator lead. The results of the restudy can also be found on the SPP website².

In both the initial study and in the restudy the wind turbines studied were Vestas V126 3.45MW. Information from the wind turbine manufacturer indicated that the same PSSE model and parameters are used to represent both the Vestas V126 3.45MW and the Vestas V136 3.45MW wind turbine generators. Therefore, the results of the restudy is valid for both the Vestas V126 3.45MW and the Vestas V136 3.45MW wind turbine generators, and the Interconnection Customer may use either one in the generating facility.

With the assumptions outlined in the DISIS-2016-001-1 report and with all the required network upgrades in place, GEN-2016-022 using the Vestas V126 or V136 3.45MW wind turbine generators and sharing the generator lead of GEN-2015-034 to the POI should be able to interconnect reliably to the SPP transmission grid. The proposed changes do not constitute a Material Modification.

This study analyzed many of the most probable contingencies, but it is not an all-inclusive list and cannot account for every operational situation. It is likely that the customer may be required to reduce its generation output to 0 MW, also known as curtailment, under certain system conditions to allow system operators to maintain the reliability of the transmission network.

Nothing in the study should be construed as a guarantee of delivery or transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

¹ See Appendix J8: Group 8 Dynamic Stability Analysis Report in DISIS-2016-001 Definitive Interconnection System Impact Study Report, posted 2/28/2017
http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2016_Generation_Studies/DISIS%202016-001%20v3_FINAL.pdf

² See Appendix J8: Group 8 Dynamic Stability Analysis Report in DISIS-2016-001-1 Definitive Interconnection System Impact Study Report, posted 12/22/2017
http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2016_Generation_Studies/DISIS%202016-001-1_FINAL-R1.pdf