Draft ICS work product
V4

MARS Wind Shape Scope of Work

GEMARS version 3.20 introduced the ability to input multiple wind shapes for each wind unit into the LOLE analysis. Prior to incorporating this new feature into the analysis, the usage of multiple wind shapes will be benchmarked against the current database and reviewed for any anomalies and appropriateness for incorporation into the IRM study. This scope details the work plan to introduce multiple wind shapes into the GE-MARS model and verify that the feature performs as expected. If any of the features fail to perform as expected, contact GE to rectify the issues.

1) Start with the current IRM Base Case (2016) and verify starting results are consistent with the approved IRM.
2) Introduce the multiple wind shape feature by using the same wind shape for all wind shape years. It is expected that this should produce the same result as the starting base case as the random variable will always choose the same data.
3) Add the actual wind shape data shapes to the model. Run the model without using the randomization feature, and take the following steps:
    a. Set the default wind shapes as the same as the IRM Base Case. This should give the same result as in 1 and 2 as no data changes have been made.
    b. Change the default year to the other three shapes one at a time; and
    c. Plot the LOLEs for all four shapes.
4) Now run the model using the randomization feature. Analyze the results for anomalies and appropriateness of results. If results are appropriate, then:
    a. Add this result to the above LOLE plot, and
    b. Calculate the new IRM (using the tan 45 method).