

From: Hantz Pr sum , VELCO  
Sent: Thursday, November 2, 2017 11:38 AM  
To: Kirby, Lawrence <Rip.Kirby@greenmountainpower.com>  
Subject: Sheldon Springs reactive power capability and its effect on SHEI export limits

Rip,

Similar to previous written communication regarding the SHEI study, this email will be posted on the VSPC SHEI page.

We note that GMP has reviewed the Sheldon Springs NX12 form on its own initiative, and is inquiring why the power flow cases have modeled a lower MVar capability, and whether ISO-NE can be persuaded to recognize the larger MVar capability when the plant output is lower than its maximum MW capability.

Because the NX12 form is a protected document located on ISO-NE's Operations controlled site, I cannot discuss the details on that form, but to answer your question, there may be several protection settings or other constraints that may limit the amount of reactive power that the plant can inject into the system. Not knowing what those constraints are, we decided to model a slightly lower MVar capability.

If the plant does provide more support than the amount we modeled, that will be good news. If the plant actually provides less than we modeled, we are hoping that we won't be too far off. We do not want to be in the situation where our predictions are higher than actual. We would rather the plant provide more reactive power, not less, than our predictions.

With respect to ISO-NE giving credit to Sheldon Springs for a larger MVar capability when the plant is running at lower MW levels, I cannot respond with any certainty as this would be an ISO-NE decision. However, one could envision ISO-NE determining various SHEI export limits based on the status of the Sheldon Springs AVR status and the expected MVar capability that would correspond to the plant's MW output. During real time conditions, there could be an operating regime where the MW level and associated MVar capability could be recognized in the SHEI real time limit calculation. This is similar to ISO-NE taking notice of an AVR being in or out, or an equipment being half or fully available.

Thank you.

Hantz.