**FEDERAL ENERGY REGULATORY COMMISSION**

**MEMORANDUM**

DATE: January 27, 2021

FROM: Steve Kartalia, Project Coordinator

 Division of Hydropower Licensing

 Office of Energy Projects

TO: Public Files for the Wilder, Bellows Falls, and Vernon projects (FERC Project Nos. 1892, 1855, and 1904)

SUBJECT: Clarification of Deficiency and Additional Information Request

 On January 22, 2021, John Ragonese, relicensing coordinator for Great River Hydro, contacted me by email to request a phone call between Great River and FERC staff for the purpose of clarifying the deficiency and additional information requests (AIRs) issued by FERC staff on January 14, 2021. Mr. Ragonese indicated that deficiency #1 and AIRs #2 and 3 were the items that Great River was seeking clarification on.

 We scheduled the call for 11:00 am Eastern time on January 27, 2021. Joining me on the call were Fred Winchell, Ken Hodge, and Brian Mattax from WSP (FERC’s NEPA support contractor) as well as John Ragonese and Jennifer Griffin for Great River.

Great River began by asking FERC staff to clarify whether actual landowner names were required for deficiency #1. FERC staff indicated that, upon further review of the filing requirements and the Exhibit G maps filed with the amended application, the actual names are not required by the regulations, the maps filed meet the requirements of the regulations, and the maps provide the information necessary to prepare the NEPA document at this time.

Great River then sought clarification on the level of detail FERC staff was expecting for the response to AIR #2. FERC staff explained that, generally, the greater the level of detail, the better, but at the very least, FERC staff needs an estimate of the effect on annual generation of the proposed minimum flow for the Bellows Falls bypassed reach. Great River indicated that the majority of any effects of their proposed operations on project generation are due to the proposal to operate such that inflow equals outflow. As such, the estimated changes in annual generation are adequately quantified in the Wilder and Vernon amended applications. For Bellows Falls, due to the minimum flow proposal for the bypassed reach, Great River states that it will separate out the effects of the minimum flow from the inflow equals outflow effects in their response to AIR #2. In addition, Great River confirmed that the proposed operations would result in some shift in generation from on-peak to off-peak periods, and vice versa. Great River states that it will provide an estimate of these shifts in megawatt-hours in their response to AIR #2.

Next, Great River explained its operation modeling methods, limits, capabilities, and intended uses, as they relate to responding to AIR #3. To start, Great River stated that they used two models in developing their applications. Their operation model is a proprietary optimization model that Great River uses to ensure the project meets regional energy load demands and operates efficiently from a business perspective. The operation model is the model that was used in Study #5, and the results of that model were utilized in a number of the resource studies. A second model consists of a spreadsheet that can simulate the effects of the proposed project operation when incorporating Great River’s proposed flexible operating hours (hours in which Great River proposed to have the flexibility to deviate from inflow equals outflow), which vary by month from a minimum of 10 hours per month to a maximum of 65 hours per month. Great River ran the simulation model for 4 representative months of the year (February – max 65 hours of flex; June – max 10 hours of flex; August – max 20 hours of flex; and November – max 42 hours of flex) for four representative water years (2009 – high water year; 2017 – high to medium; 2014 - low to medium; and 2015 – low) to illustrate to stakeholders the general effect on generation, discharge, and water surface elevation of the flexible operations, in combination with the proposed run-of-river (inflow equals outflow) operation the balance of the time. The simulation spreadsheet was not run for the other 8 months of the year so results for those months are not currently available. Therefore, because the spreadsheet results are not available for the entire year, Great River is limited in its ability to provide the data requested in AIR #3.

FERC staff suggested that, in light of the better understanding of Great River’s modeling methods and capabilities, further consideration is necessary to reevaluate the scope and content of AIR #3, which may result in revisions to AIR #3. FERC staff suggested that after additional consideration of information needs, a follow-up phone call with Great River would be helpful to discuss what, if any, revisions to AIR #3 could provide FERC staff with the information necessary to analyze project effects in the NEPA document.