



**Department of Energy**  
Western Area Power Administration  
Upper Great Plains Customer Service Region  
P.O. Box 35800  
Billings, MT 59107-5800

DEC 16 2008

B6100.BL

Mr. Lawrence Cieslik, Chief  
Missouri River Basin Water Management Division  
US Army Corps of Engineers  
1616 Capitol Ave., Suite 365  
Omaha, NE 68102-4909

Dear Mr. Cieslik:

Thank you for allowing Western Area Power Administration (Western) to respond to the Fort Randall peaking operational issues raised in the August 15, 2008, MoRAST letter to the Army Corps of Engineers (Corps).

In order to adequately address hydro peaking at Fort Randall, it is first necessary to understand some of the operations and regulations pertaining to electric power and the transmission system. Western operates two Balancing Authorities (BA) in the Upper Great Plains Region. As an operator of the BA, Western is charged with operating the BA in accordance with North American Reliability Council (NERC) criteria. The NERC standards include more than 50 reliability requirements relating to such topics as Operating Reserves; Automatic Generation Control; Frequency Response; Real Power Balancing Control Performance; Emergency Operations; Capacity and Energy Emergencies; System Restoration; Control Area Interchange Information; Verification of Generator Gross and Net Real Power Capability; Generator Gross and Net Reactive Power Capability; and Voltage and Reactive Capacity. Western must adhere to each of these NERC standards in the operation of its BA or possibly face the potential of sanctions and/or daily fines of up to one million dollars.

As an operator of two BAs, Western must provide the regulation reserve for all the loads in the BA. The Fort Randall generation is located in the Eastern Electrical Interconnection (EEI) BA. The EEI includes loads from a portion of Montana, North Dakota, South Dakota, and some of Nebraska. The loads may be served by entities such as Basin Electric Power Cooperative, Heartland Consumers Power District, Northwestern Public Service, Missouri River Energy Services, Montana Dakota Utilities, Xcel Energy, Ottertail Power Company, as well as a power allocation from Western. The only resources available for Western to provide the intra hour changes in the electricity used for the EEI BA are the Corps power plants on the Missouri River. Specifically, only three of these power plants are able to provide regulation in the EEI (Garrison, Oahe, and Fort Randall). Both Garrison and Fort Randall have restricted releases during the summer to accommodate the Least Tern and the Piping Plover nesting habits. Noting these

restrictions, it is not possible to release the total capacity of these plants 24 hours per day. Plant releases are shaped to match customer load patterns. Typical load patterns provide more energy used during the day than at night. There are generally two peaks during the day, with the first peak in the morning and the second in the evening. Western's varying energy requirement can not be met by a constant release from these three power plant dams (Garrison, Oahe, and Fort Randall).

The NERC Contingency Reserve Requirement necessitates having extra reserves available in the event of an emergency situation that occurs within the Reserve Sharing Group (a group of utilities that band together to provide for the loss of the largest generator in the group). Western is also required to have offline generation that can be available online within ten minutes. All of these requirements are necessary to ensure electric reliability in the region. Operating restrictions placed on the generating plants, like peaking bird releases or constant releases, impedes the ability to adhere to the NERC standards.

In addition, required maintenance in power plants impacts the releases. The Corps normally tries to schedule this maintenance during spring and fall when loads are lighter. However, when units are removed from service for maintenance, Western needs the flexibility to call on any of the three generating plants, (Garrison, Oahe, and Fort Randall), to accommodate regulation in the BA.

Operational flexibility of the dams is also required to mitigate the effects of events not controllable by Western. Examples of these events are a log stuck in a wicket gate, a boat too close to the dam, a drowning or a transmission issue, all of which are certain to require the flexibility of changing a plant to regulation control.

Further complications of constraining the hydropower peaking from Fort Randall are that the regional drought requires some unique operating restrictions and the continuing development of wind power in the region. Bringing wind power generation into the BA electrical systems increases the need for flexible regulating resources available to Western. Constraining releases from Fort Randall to constant levels inhibits Western's ability to comply with NERC standards and ultimately may jeopardize Western's ability to market and transmit reliable Federal hydroelectric power.

Sincerely,



Jody S. Sundsted  
Power Marketing Manager