

NPA JPS Extreme Weather Scenarios Task Force: “2025 NPA Load & Capability Report” Options

Background: The JPS met virtually on 1/8/25 to discuss the following concern previously posed by the NPRB:

“Section 8 – A new topic in the 2023 report was to “Show system stress periods for the aggregate of the large in-state electric suppliers (LES, NPPD and OPPD, and others as applicable) for both the summer and winter peaks, and the aggregate resources that were available to meet the load requirements during those stress periods. Include historical data on stress periods, and what generating capacity was available to meet the load demand. Stress periods will be defined as the statewide summer peak hour and the statewide winter peak hour of the most recent summer and winter seasons for the aggregation of LES, NPPD and OPPD. The data provided for these two periods will include aggregated load consumption data, generator production data, and generator availability data for LES, NPPD and OPPD. Additionally, the report will include sensitivity analysis of the stress periods by evaluating the potential impact of selected extreme scenarios (e.g., extreme weather conditions, extreme localized events).” While the report showed the impact of summer and winter peaks, we would like to discuss how the stress periods could evaluate extreme event scenarios like extreme weather conditions or extreme localized events.”

The JPS met on 1/8/25 to discuss potential weather scenario options and assembled the items below to submit to the NPRB for its consideration and selection. The 2nd and 3rd options remain from last year’s list with the first option being replaced with a new one. The chosen “scenario option” will be included in the “2025 NPA Load & Capability Report.”

NEW Scenario Option 1: Heavy late spring rains in the Missouri River basin coupled with near-record snowfall in the Rocky Mountains cause the Missouri River dam system to release large amounts of water into the summer season. Downstream river flooding causes electrical generation to be out of service due to the flooding situation.

Scenario Option 2: Extreme and sustained cold temperatures in eastern Nebraska cause river icing conditions along significant portions of the Missouri River. Electrical generating stations that utilize river water are impacted and the extreme cold causes increased use of natural gas and increases in electricity consumption.

Scenario Option 3: Extreme and sustained heat and drought conditions across the majority of Nebraska cause reduced river flows and heat related complications at generating facilities.