DP&L’s transmission system consists of 345 kV, 138 kV, and 69 kV transmission networks. The 69 kV system is fed from existing internal generation on the 69 kV system, other wholly-owned and commonly-owned generation (via the 345 kV and 138 kV systems), and various interconnections to other utility systems. There are no transmission constraints and critical contingencies on DP&L’s system due to power transfers on neighboring systems.

DP&L joined PJM RTO in October 2004, and as such, PJM is responsible for planning the regional bulk electric system [BES—generally 100 kV and above, per the North American Electric Reliability Corporation (NERC) definition], including evaluating transmission interconnection requests. PJM and DP&L ensure meeting the NERC reliability standards in designing the power system. Below are the links to the current NERC transmission planning reliability standards.


NERC has revised and combined these four standards into one. Below is the link to the new standard, which will become effective January 1, 2015.


DP&L plans the local transmission system (non-BES) in coordination with PJM using DP&L’s design guideline, which is outlined below. This guideline is not absolute. Each potential violation is evaluated with respect to the probability of occurrence, the consequences of the risk, availability and cost of remedial operating procedures, and the cost required to mitigate the risk.

Normal System

During day-to-day operation with all transmission elements in service, the Company should be able to take into the system its share of the energy from commonly-owned generating units plus any contracted external purchases, as well as any contractually obligated power transfers to Buckeye (the electric cooperative located within DP&L’s service territory) and to AMP-O and Piqua (the municipal customers within DP&L’s
service territory), without exceeding the normal rating of any transmission element. Transmission bus voltages should generally be at 95% of nominal or more.

**Single Contingency**

While following the normal daily operating procedures, the loss of a single generator, transmission circuit, transformer, or shunt device should not cause:

1. Any transmission element to exceed its emergency rating (normal rating for generator contingencies), or

2. Any transmission bus voltage to drop more than 5% to 10% below its normal value, depending on its location.