

**United States of America
Federal Energy Regulatory Commission**

**2009 FERC Form 715
Annual Transmission Planning and Evaluation Report
Part 4: Transmission Planning Reliability Criteria**

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 subscribes to both the North American Electric Reliability Corporation (NERC) and ReliabilityFirst Corporation (RFC) reliability guidelines in designing its power system, in conjunction with PJM. DP&L joined PJM in October 2004, and as such, PJM is responsible for planning the regional transmission system, including evaluating transmission interconnection requests. Regarding the latter, whether such interconnection requests are relative to the regional or local transmission system, PJM coordinates the evaluation in conjunction with DP&L, and DP&L adheres to PJM criteria. DP&L plans the local transmission system 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 Daily Operation

During day-to-day operation with all transmission lines 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 device. Transmission bus voltages should generally be at 95% of nominal or more.

Generation Outages

While following the normal daily operating procedures, the loss of a single internal generating unit should not cause:

1. any transmission device to exceed its normal rating, or
2. any transmission bus voltage to drop more than 5% to 10% below its normal value, depending on its location.

Transmission Outages

While following normal daily operating procedures, the loss of any single transmission element should not cause:

1. any transmission device to exceed its emergency rating, or
2. any transmission bus voltage to drop more than 5% to 10% below its normal value, depending on its location.

Stability

1. With all transmission system facilities in-service, the system is to be operated in such a manner as to maintain stable operation of all generating units should a three-phase fault and single-pole breaker failure occur and be cleared by back-up circuit breakers.
2. With one transmission system facility out of service, the system is to be operated in such a manner as to maintain stable operation of all generating units should a subsequent single-phase-to-ground fault occur accompanied by normal clearing.
3. With two or more transmission facilities simultaneously out of service, the system is to be operated in such a manner so as to observe emergency thermal overload and voltage limits.
4. The generating units are to be operated in such a manner so as to enhance stable operation by maximizing reactive output of all units consistent with acceptable system voltages.