

Assessing the Reliability of Pennsylvania's Electric Transmission and Distribution Systems

Report Highlights

In December 1996, Pennsylvania deregulated the electric generation retail market, but continued the Public Utility Commission's (PUC) oversight of the transmission and distribution systems that bring power to customer homes and businesses. The reliability of these systems is a national and state concern, and the General Assembly directed the Commission to promulgate and enforce regulations to insure that reliability is not diminished.

Study Findings:

- *Monitoring.* Several PUC bureaus monitor reliability; but no single unit is responsible for oversight and assuring follow-up on all reliability matters. Such a unit is especially important because once a system degrades, it takes many years to restore.
- *Reliability Requirements.* In 1999, the PUC established minimum reliability performance standards for each major electric distribution company. The PUC's standards, however, allow companies to perform significantly below their historic performance levels, and as a result, do not assure that distribution system reliability will not deteriorate. Company reliability data also do not include all unscheduled service interruptions or information on what caused the interruption.
- *"Uneven Playing Field" for Companies.* The PUC's standards are more rigorous for companies whose reliability performance was stable from 1994 through 1998 than for companies whose reliability varied widely. Also, some companies have made changes to their reliability data systems, but have not provided the PUC with information to adjust their data so that the performance levels and standards remain relevant for assessing their reliability. We also found important differences in how companies reported "major events" that can be excluded from service interruption reports and in how companies define their operating areas. While these may appear to be technical nuances, they can have a major impact on a company's reliability statistics.

- *Reliability Performance Status.* Reliability appears to be diminishing for two (GPU and Allegheny Power) of the seven major companies based on information from their annual reliability reports, PEMA reports, consumer complaints, and PUC audit findings. The two companies, moreover, have not fully complied with PUC reporting requirements for extended service outages.

Recommendations. The report contains seven recommendations, including that the PUC:

- Designate a lead unit responsible for ongoing oversight and follow-up on all reliability matters, and work closely with companies whose reliability is diminishing to assure they are taking aggressive steps to prevent degradation of their transmission and distribution systems.
- Revise its reliability reporting requirements and obtain additional information whenever performance levels deviate (i.e., 20-25%) from historic levels.
- Clarify its requirements, particularly regarding major events and operating areas, to assure companies are calculating reliability performance in the same way.
- Report annually to the General Assembly and public on company reliability.
- Complete its inspection and maintenance study and establish regulations on inspection, maintenance, repair and replacement standards for distribution systems as required by state law.