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The ATIS Network Reliability Steering Committee (NRSC) recently completed a detailed study of the major network outages reported to the Federal Communications Commission (FCC) as a result of the 2003 Northeast Blackout. The NRSC examined eight outage reports, one of which covered eleven switches in two buildings where each switch experienced different failure conditions. While most of the outages were due to the extended nature of the commercial power failure, a number of contributing causes that may have prevented or mitigated the impact of these outages were identified. These causes included:

- Lack of routine maintenance and testing
- Inadequate site-specific power contingency plans
- Overloaded or undersized power equipment
- Inadequate response to power alarm(s); inadequate or missing power alarm(s)

As a result of its review, **the NRSC urges service providers and network operators to review the following three best practices for application in their operations:**

6-6-1028 Routine Maintenance/Testing

Service Providers and Network Operators should engage in preventative maintenance programs for network site support systems including emergency generators, UPS, DC plant, HVAC, and fire suppression systems.

6-5-0662 Full Load Testing Needs Emphasis

Service providers should run engines for a period of at least 1 hour on a monthly basis and at least 5 hours, with all available loads, annually. Perform annual evaluation/maintenance of all power equipment. Maintain the power alarms by testing the alarms on a scheduled basis.

6-5-0658 Redundant Fuel Systems Need Emphasis

Maintain adequate fuel on-site and have a well defined re-supply plan. Improve fuel systems reliability by providing redundant pumps for day tanks and a manual-priming pump. Whenever possible, use dual-source generators with direct line natural gas as the primary and liquid fuel (normally diesel) as a backup to provide a long-term fuel source in times of power outages.

*The NRSC has also identified the following **new Best Practice**:*

6-P-5280 Generator Independence

Service Providers, Network Operators and Property Managers with buildings serviced by more than one emergency generator, should design, install, and maintain each generator as a stand alone unit that is not dependent on the operation of another generator for proper functioning, including fuel source.

A complete copy of the Northeast Blackout Power Outages Study Group Report may be found at www.atis.org/atis/nrsc/nrschome.htm. All industry Best Practices may be found at www.nric.org.