



RIC 2005
Session: T-C1 “Grid Reliability”

Jose Calvo
Branch Chief
Nuclear Regulatory Commission
March 8, 2005

GRID RELIABILITY

- **August 14, 2003 Blackout Event raised concerns regarding the reliability of offsite power to nuclear power plants**
- **NRC Chairman directed staff to review issues**

GRID RELIABILITY

- **Deterministic and Risk insights pointed to the following:**
 - **Long duration Loss of Offsite Power events are safety significant**
 - **Risk increases when the plant's ability to cope with an event is decreased due to online equipment outages**
 - **The potential for the Grid to be less reliable during the Summer period because of less margin**

GRID RELIABILITY

- **GDC 17, “Electric power systems”**
- **10 CFR 50.63, “Loss of all alternating current power”**
- **10 CFR 50.65, Maintenance Rule**
- **Plant Technical Specifications**

SHORT TERM ACTIONS

- **NRC staff raised awareness by issuing Regulatory Information Summary 2004-05, “Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power**
- **NRC staff monitored grid conditions and events**
- **NRC staff issued Temporary Instruction (TI) 2515/156, “Offsite Power System Operational Readiness”**

SHORT TERM ACTIONS

- **Staff completed those short-term actions discussed during the May 10, 2004, Commission Meeting and we note the following:**
 - **No safety significant issues were identified based on the TI review**
 - **Considerable inconsistency and variability of the industry's response is reflected in TI data**

NEXT STEPS

- **Staff Requirements Memorandum (SRM) M041209 has directed the NRC staff to issue a generic communication for public comment no later than April 30, 2005.**

NEXT STEPS

- **Monitor Grid conditions for offsite power operability & maintenance risk**
- **Communication protocols between the Nuclear Power Plant (NPP) – Transmission System Operator**
- **Real Time Contingency Analysis Programs to identify potential post-trip voltage problems**
- **Restoration procedures and coping duration for Station Blackout**