

ETRR-2 OFFSITE POWER SUPPLY RELIABILITY WITH CONSEQUENCES OF MOMENTARY FAILURE

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This article propose a simple technique to include the momentary failure of Offsite Power Supply (OSPS) in electrical system basic reliability indices for critical electrical loads. Since the sensitive loads are relatively critical for plant to persevere operation, the temporary and momentary failure rate constitute an important parameter in characterizing the system reliability indices. This makes the proposed method active and realistic when dealing with electrical sensitive loads or safety related systems in nuclear reactors. The main cause of momentary failure of electrical supply is the bad power quality of electrical utility itself as results of electrical supply transient or voltage dips. the paper had offered the most practical alternative to improve the offsite power supply reliability indices as achieved from technical cooperation between site electrical engineers and electrical utility company. The main objective of the cooperation with the electrical utility company is to enhance the Bulk Supply Point Reliability (BSPR) which depends on the grid reliability and includes generation, transmission and sub-transmission and sub-station reliability. An improvement in bulk supply point reliability, directly impacts the load point reliability that are connected to this BSPR. Improving OSPS reliability in ETRR-2 improves the reactor operation plan availability as a results of reduction of unscheduled operation shutdown due to sustained or momentary interruption of electrical power supplying the sensitive loads or safety related systems.