

DUKE POWER COMPANY  
OCONEE UNIT 1

Report No.: UE-269/75-8

Report Date: October 24, 1975

Event Date: September 12, 1975

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Event: Inadequate control of the isolated 100 kV transmission line

Conditions Prior to Event: Not Applicable

Description of Event:

On September 12, 1975, it was determined that Oconee Nuclear Station does not have controls to assure that the 100 kV transmission line from Lee Steam Station to Oconee remains isolated when used as a backup source of emergency power. More specifically, a tie is connected such that the Central White transmission line (used as the isolated 100 kV transmission line) provides a backup source of power to one customer in the event its normal source of power, the Central Black line, is deenergized. The 100 kV transmission line is required to be isolated by Oconee Technical Specifications when operation is permitted in several degraded emergency power configurations.

Designation of Apparent Cause of Event:

The apparent cause of this event was that the design of the existing customer tie to the Central White line did not consider the possible need of the isolated White line during its use to feed Oconee. As soon as this was recognized, a modification was initiated to provide remote blocking of the tie from Oconee. While this modification was in progress, Oconee understood that the dispatcher would manually block the automatic feature and preventing the possible transfer to the Central White line whenever Oconee required emergency power.

Analysis of Event:

This incident resulted in the possibility of a load being switched on to the isolated 100 kV transmission line during use to supply power to Oconee should the Central Black line be deenergized. The 100 kV transmission line is required to be isolated and separated from non-safety-related loads only when Oconee operation continues with a degraded condition of available emergency power. This condition arises infrequently and the combustion turbine and transmission line would have had adequate capacity to carry all existing loads simultaneously. Therefore, it is concluded that the health and safety of the public was not affected by this incident.

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Corrective Action

The modification to enable Oconee to remotely remove loads from the Central White transmission line is being processed in an expedited manner. In the interim, the tie to the Central White line has been manually disabled. This will prevent switching on to the line when it is isolated for purposes of supplying Oconee.

In order to assure that proper review and control are exercised in the future in making transmission system modifications related to Oconee emergency power, a July 24, 1975 letter has been sent to the Vice President, Transmission and Electric Installations, and the Vice President, System Planning. This letter advises the interfacing departments of the requirements of Oconee Nuclear Station and requires that the existing and any future ties to the Central White line be capable of being removed remotely from Oconee.