

# Entergy Open Phase Update

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NRC / Industry Update Meeting

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- Completed study for WF3 standby offsite power source which exhibited imperceptible voltage change due to loss of transformer high side phase. WF3 was selected as it had the typical configuration used in field.
- Entergy/PCS2000 have developed a conceptual open phase detection solution for offsite source transformers.
- The protective relaying open phase solution senses open phase, open phase with ground and two open phases from no load through transformer excitation to full load.
- This solution has proven reliable in the lab and field tests (CTs were shorted to simulate loss of phase in the field tests). The solution was subjected to ambient and induced noise with no resulting false operation.

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- Several utilities have witnessed the solution lab demonstrations and/or provided questions, comments and input.
- Entergy is in the process of closing out the initial research and development contract.
- Individual site contracts are being used to implement the open phase solution due to site specific details (configuration and outage schedules).
- Entergy is piloting the open phase solution at RBS for the Entergy fleet with installation scheduled 1st quarter, 2015.

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