

High level scope of black start service test

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Purpose of black start service test

The System Operator must be able to demonstrate the ability to recover from a total or partial shutdown of the transmission system. The black start capability is necessary to ensure the reliable operation of the national grid.

The black start service test is to confirm the black start capability of the contracted black start station. As well as proving the capability of the Ancillary Service Agent, the black start service test is also to test the System Operator's processes for managing a black start scenario in each island.

The black start service test is to improve black start processes for all parties involved and provide a framework for managing any future tests.

Key objectives of black start service test

1. Demonstrate the processes, systems and plant used for restoring supply are fit for purpose in delivering the service.
2. Increase awareness and understanding of black start.
3. Enhance the System Operator's and Ancillary Service Agent's capability to manage a black start event.
4. Enhance the System Operator's and Ancillary Service Agent's capability to recover from a black start event.

Technical requirements

In order to provide the performance required of a black start service, auxiliary generation which is to be installed to provide black start capability, together with the main generating plant, need to demonstrate certain technical criteria:

1. the ability to start up the main generating of the power station from shutdown in agreed timescales without the use of external power supplies;
2. the capability to energise part of the transmission grid system within the contracted time following instruction from the System Operator;
3. the capability to accept instantaneous loading of demand blocks, controlling frequency and voltage levels within acceptable limits during the block loading process; and
4. the reactive capability to charge the immediate transmission grid system. This capability will depend on the test system configuration.