

Black Start Commercial Review Workshop - Background Information

1. Introduction

This brief is intended to provide background information relating to current issues with Black Start commercially, which National Grid has identified that need to be addressed to ensure the enduring availability of Black Start as a necessary Balancing Service. National Grid internal discussions have recognised that in order for the Black Start service to move forward seamlessly, with no step change in quality or quantity of service, there are certain criteria that need to be met as listed below:

- Transparent defined procurement strategy
- Balance between economic procurement & promotion of competition in determining suitable length for service agreement
- Appropriate remuneration for funding Black Start investment
- Investment signals for new/existing Black Start service providers, taking into account
 - Large Combustion Plant Directive
 - Ageing OCGT fleet
- Promote competition i.e. attract new technologies and arrangements

While National Grid has drawn up options that may meet the required criteria, it has been noted that there is no obvious solution that meets all criteria. Therefore, National Grid's intention is to engage with the industry to further explore the options and decide on an option that closely fits the criteria.

2. Black Start Service

The Black Start service is a necessary Balancing Service for National Grid that allows the restoration of part or all of the GB transmission system following a series of low probability credible events¹ which occur simultaneously. The service is procured through bilateral contracts with specific providers on a geographic and cost basis which allows National Grid the ability to optimise their Black Start restoration strategy.

Some of the high level requirements of a contracted Black Start station include:

- the ability to synchronise and energise part of the system within 2hrs
- ability to start the main unit without external electrical supplies
- block load capability typically 30-50MW
- good voltage & frequency regulation

While the majority of stations would meet the basic requirements of Black Start, it is generally the ability to synchronise within 2hrs from an external supply that can define a station as being Black Start capable. It is this capability that will allow National Grid to implement their restoration plans and

¹ Examples – Multiple circuit faults, equipment failure, multiple generation losses etc

put together the building blocks to restore the transmission system should a Black Start event occur.

3. Issues of concern if we 'do nothing'

There are issues within the industry, such as LCPD and ageing generating units, which will have an impact upon the provision of the Black Start service. Combining these changes with the criteria above, the issues that may arise include:

- Uncertainty in provision of Black Start service over longer term from existing providers
- Insufficient investment signals for both new and existing providers
- Where investment is required, appropriate remuneration

4. Potential Solutions

Through internal discussions, National Grid has identified several options that meet some of the above criteria. However, it has been accepted there is no obvious solution that will meet all the criteria. The options considered so far include:

- Tendered Black Start service
- Highlight requirements on website – zonal shopping list
- Longer term contracts to give economic signals between refurbishment and investment in new plant
- Bundled contract with other services
- Combined Black Start and Reserve service

From the above and alternative solutions proposed at the workshop, a suitable list will be drawn up that will allow the selection of a set of solutions that best fit the criteria. It is worth noting that the above are options and not necessarily the final answers.

5. Moving Forward

From the outcome of the workshop we should be a step closer to an outcome that can be implemented early 2008. However, it should be noted, that the purpose of the workshop isn't to arrive at the solution on the day. There is scope for further workshops as required, which will ensure that all options are fully discussed such that the optimum solution can be implemented successfully.