

**Black Start Commercial Review**  
**Friday 9<sup>th</sup> November 2007**  
**National Grid House – Warwick**

**Black Start Workshop 2 Summary**

Attached is a summary of the sessions at the second Black Start Commercial Review workshop. The attendees were split into two groups to discuss and debate a set of allocated questions posed by National Grid. The questions were borne out of the outcome of the first workshop and primarily structured around National Grid's proposed options for taking the review forward. The purpose was to ensure that each group came back with a summary of the discussions around National Grid's proposals. (The background information held by each group can be found at the appendices at the back of this document)

The following questions were put forward by National Grid. A summary of the discussions can be found overleaf.

- Do the options National Grid is minded to take meet the industry expectations and also the criteria National Grid originally set?
- Is National Grid right not to progress further (for now) the “menu of values” and tender routes?
- National Grid agrees that there should be more appropriate signalling with regards Black Start requirement across next 5, 10, 15 etc year periods. It also believes that the publication of zones removes National Grid ability to flex zones to create competition. Would for example general traffic light system across 5yr periods provide adequate signalling or should it be on a year by year basis to reflect agreements expiring and coming to fruition?
- How should National Grid give earlier commitment to new stations for the provision of a Black Start service?
- National Grid believes that a contracted station should be capable of a Black Start service when called upon. To this effect, National Grid intends to apply an Event of Default to a station for failing a defined number of black start tests, for example through withholding availability/capital payments. Is National Grid right to do this? Should National Grid go one step further and have right to terminate Black Start agreement for an agreed number of test failures?
- One of the frustrations of arranging tests for National Grid and providers is not being able to agree Bid/Offer prices for the test until the day before arranged test which arises in uncertainty and a time constrained governance process for both parties in getting internal sign on and side letter agreements in place at very short notice. One possible way round this is to develop some type of indexation to be included within the Black Start agreement so only thing to be agreed is the technical test programme. Is this the right approach or should the process remain as is?

From the discussions National Grid has collated the information into the following groups.

1. Information
2. National Grid Requirements
3. Competition and Assessment
4. Contract Length
5. Black Start Testing

National Grid are now in a position to draft generic Heads of Terms/procurement guidelines with a view to getting the most appropriate model drawn up for future Black Start agreements.

## **1. Information**

Based upon the indicative pictorial representations put forward by National Grid at the workshop in the forms of a zonal map and graphical representation (see Appendix 2), there were mixed comments on their usefulness. While the information would never be the primary driver for choosing the location a new power station, it would be useful when a provider looks at potential opportunities within Balancing Services when a location is chosen and connection application and/or an offer has been made. It should be noted that while the representations give an indication on National Grid's Black Start requirements, National Grid cannot commit to using the representations without internal sanction for releasing the information.

## **2. National Grid Requirements**

There is a clear message being fed back from providers that National Grid need to be more proactive at the connection stage with regards indicating the potential requirement for Black Start at a new power station. The next 5-10 years will see a gradual phasing in and out of new and ageing plant so the connections process and dialogue needs to be adjusted to reflect this. What needs to be clear from National Grid's perspective is what level of commitment is required by the provider in the early connection stage. While National Grid can give an indication that it is interested in procuring Black Start from a new station, it is very unlikely to commit to a contract at that early stage. One reason being an assurance is required by National Grid that the Black Start plant to be installed by a provider not only meets requirements but is suitable for Black Start. National Grid may also be speaking to several providers in that area to ensure the most economic solution is chosen hence commitment can only be given when the costs are available for comparison.

There is hence a balance required between the provider receiving indication from National Grid in its interest in the service and National Grid committing too early with a provider without considering all the options available. To encourage a provider to investigate providing the service, it was proposed that National Grid may choose to fund the feasibility study/technical consultancy required to look at the incremental cost of providing Black Start at the station. This would give the provider some demonstration of commitment and also encourage them to consider providing the service without incurring costs. For avoidance of doubt, this would be covered on a case by case basis.

It was also noted that a provider may wish to know the importance of certain requirements for example dual fuel capability. National Grid noted that this has to be treated on a case by case basis when considering other providers capabilities such as fuel type, block loading etc as well as the associated incremental costs in the extra provisions. National Grid would broach this in the early dialogue with a new provider.

## **3. Contract Length**

It was generally agreed that length of the contract should be predetermined and agreed between National Grid and the provider. The important factor for the provider was the need to recover capital costs with a reasonable rate of return across the life of the asset. For National Grid it needs to fit in from a strategy perspective and the contract length needs to be sufficient enough to ensure there is sufficient firm provision of service for any committed capital expenditure. National Grid does not want to be in a position whereby a provider has received costs for the asset then walks away from Black Start to use the asset for other commercial services and/or doesn't spend the money as intended. So in effect National Grid has not received the appropriate length of service and it could be construed as cross subsidy, which should be avoided. For the avoidance of doubt, National Grid would be looking to receive an invitation from the provider so it can witness that the works have been completed and, where applicable, a re-proving Black Start test to ensure the station is still capable of providing the service. National Grid expects the works to be completed in the early part of the contract to ensure there is an appropriate

length provision of service for the expenditure. National Grid would not want to be in a position where the capital was invested in the last year of a contract with no guarantee of a future or extension to the existing agreement. This can not be deemed the right solution for the industry as a whole.

Lifetime or evergreen contracts were discussed that would run for the lifetime of the asset. It was felt that this would lead to a contract that is very open ended and hence difficult for National Grid to assess against any future requirements. The contract may also not be able to address any unforeseen issues/risks at time of signature as LCPD would have been for any agreement signed several years ago. The evergreen contract would not assist National Grid in meeting one of their criteria in facilitating competition as all other potential providers are effectively locked out.

Reopeners for refurbishment costs within an agreement were discussed and this was met with mixed reaction. The basis behind the mixed views was for example, for a 10yr agreement, at time of signature, it may be difficult for provider to identify any capital requirements beyond the 5yr period. Allowing a reopener to discuss additional work costs would potentially help to get round this. However, other attendees had opposing views on this and advised that there should be a clear idea on what refurbishment works are required over the contracted period. National Grid preference in this instance is that should a reopener be proposed, it would be preferable to agree a fixed 5yr agreement for example with a view to discussing any works beyond that period in future negotiations. Not allowing reopeners based upon mechanical risk would also make sense as any likely deterioration in the units is more likely to come from STOR than use for Black Start, although it was agreed the actual cause of deterioration would be difficult to determine.

A hybrid model was to put all the cost in availability price with no reopeners over a long term contract of say 10years. It was felt that the provider would include a risk premium within the price to cover the eventuality of the unit requiring unforeseen work. This was felt to be an inefficient model and hence was ruled out.

While still on reopeners, there was a general feeling that perhaps there should be provision for legislative changes beyond the control of National Grid and the provider that could affect the conditions of the agreement. This will be considered under the draft Heads of Terms for the service.

An item proposed by National Grid was to include a clause within the contract which sought to review an extension to the agreement 3yrs before the contract expired. National Grid felt that this would allow the provider to show their appetite to a future agreement. It would also allow National Grid reasonable time to talk to other potential providers should the existing provider not want another agreement beyond term of the existing agreement.

#### **4. Competition, Comparison and Assessment**

There is general acceptance that it is difficult to have true competition within Black Start as would be seen for example in frequency response and STOR. The difficulty comes from the fact that a provider is very unlikely to have the assets to provide Black Start unless they already are a Black Start provider. Therefore, the only way competition could perhaps be facilitated is through National Grid discussing the provision of Black Start with existing and potential new providers for the same (or a similar) period of time. This would require the timing of discussions to be quite accurate, which could be considered difficult when considering the fact that new connections can be delayed.

With regards competition it was felt that there would be peaks and troughs and no real possibility of creating continuous competition. This was a consideration of ruling out using a tender process for Black Start procurement due to the resource required in setting up the process, the complexity that would be required in the tender assessment, length of tender market period and the frequency of its use.

How National Grid would assess contracts was discussed and this was felt to be quite difficult unless they were like for like. The assessment between a new and existing provider could potentially not only be about straight economics but would also have to consider risks associated with moving to a station with potentially no experience of the Black Start service. However, as an example, National Grid felt that should they be presented with two proposals, one at fixed cost of £10m for 8 years or one for £8m for 10yrs with a reopener, then National Grid would be minded to pursue the fixed cost proposal. This was felt to be the right option when put to the workshop.

Further to ease potential complexities of assessment, National Grid preferred option is to go for fixed up front costs of capital at the start of the agreement, with payment to be made at agreed milestones. This was felt to be the most economic solution across the term of the contract (albeit marginally). It would also allow comparison of cost proposals from providers with the same pricing structure. It would also provide transparency in pricing structure as it would be visible how the payments were structured across the term of the contract based upon capability, ongoing maintenance and one off capital costs.

Finally on assessment, it was noted that assessment should be based purely in the economics of Black Start and was felt that STOR/Fast Start etc should not be considered. While this would keep the assessment process straightforward National Grid is conscious that it is providing funding on an asset that could be considered at a competitive advantage to non Black Start providers. National Grid needs to consider this further.

## **5. Black Start Tests**

One of the options National Grid is minded to pursue is for a station to incur an event of default and hence a withholding of availability payments should a station fail a Black Start test. On discussion it was felt that the generator already has sufficient incentive to get the test passed and any harsh penalty would potentially stop the openness between the station and National Grid Black Start team. This would have an adverse effect when the open communication to resolve issues is essential in ensuring the Black Start capability of a station. As an alternative to the proposal National Grid is minded to consider a penalty only on a second test failure.

One of the issues surrounding assessment is how National Grid can compare the value and economics between a new provider with a new asset and an existing with older assets requiring refurbishment. National Grid believes therefore that existing assets, if refurbished using capital contributions, should undergo a Black Start test to ensure the work has been carried out successfully and the station is still capable of a Black Start test. As would occur for new stations, should a station fail 2 or more consecutive Black Start tests then comparable penalties should be put in place.

National Grid proposed that Bid/Offer price for a Black Start test should somehow be included within the CSA. The current methodology of agreeing these prices in some instances can bring uncertainty to a test going ahead as both companies need to sanction the preliminary costs before a side letter agreement is signed off by both parties. This last minute uncertainty could potentially undo a lot of the necessary pre-technical work carried out between the station and National Grid in agreeing the Black Start test parameters (i.e. test time, test profile, programme etc). There was a mixed view surrounding this and it was felt that an indexation of some sort could potentially work but it would be difficult for National Grid to determine the indexation function. National Grid is to pursue this further.

## **6. Black Start Menu of Values and Tender**

As ways forward for the procurement of Black Start, these two options have been considered as part of the review. National Grid is minded not to pursue these options at current time as while there are benefits to both, neither can be easily implemented.

The menu of values is akin to the Irish Black Start procurement model in that a set value of a basic Black Start unit is derived and then payment is increased or decreased based

upon key technical requirement of the station such as reactive range, ramp rate and location etc. While this would give an indication of the value of Black Start it would be difficult to impose under the current framework. If Black Start were to be implemented as a new service, this model was felt to be an option that should be considered fully. While National Grid is pursuing this option at this time, it may review this decision should the circumstances change.

The tender route was an option that was given much thought and would address some of the criteria National Grid has set for the Black Start review. However, it was felt that the overall process would be resource intensive to set up, the tender assessment process would be complex, which could remove some transparency and providers felt they would have to put considerable resource into designing the tender with no guarantee of service. The general view that as an enduring procurement option the tender process was currently not the right way forward but should be perhaps considered for one-off scenarios for example where there will be a sudden step change in available providers within an area.

### **Next Steps**

From the outcome of the workshop and feedback from attendees, National Grid believe it is now in a position to start the next steps involving drafting generic Heads of Terms/procurement guideline to define the service, payment terms, contract durations etc. Once National Grid has drafted these they will be circulated for comment, preferably by end of December 2007. National Grid has a preferred timeline of publishing the final model by March 2008 so it can be implemented for all Black Start agreements from 1<sup>st</sup> April 2008 onwards.

## APPENDIX 1

### BREAKOUT SESSION 1

Do the options National Grid is minded to take meet the industry expectations and also the criteria National Grid originally set?

Is National Grid right to not to progress further (for now) the “menu of values” and tender routes?

#### Further Information

##### **National Grid Criteria for Black Start Review**

- 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

##### **National Grid Options it is minded to pursue**

- National Grid internal lines of responsibility under review
- National Grid Black Start requirements to be published
  - Either zonal map or generic requirements across 3year periods
- Long term contracts (circa10yrs)
  - New and existing providers where capital costs requested
  - Allows recovery of capital and firm service for National Grid
  - 3yr termination notice/extension review
  - Appropriate termination penalties
  - RPI Indexation of availability prices across term
- Medium term contracts (c3-10 yrs)
  - Where it is efficient to do so for both parties
- Look into service tenders for >2yrs for 2009/10 onwards
  - Tender before connection
  - Conditional on Black Start terms being agreed
  - Fixed known costs for tender comparison
  - Available to all so no discrimination
- Flexibility in Black Start arrangements
- Rights to Test
  - Fail test – availability payment Event of Default
- Bid/Offer price for test agreed within CSA

##### **National Grid Options it is minded not to pursue**

- Menu of values (akin to Irish model)
  - Defines value of Black Start
  - Unsure if providers want this
  - How would it be imposed?
  - Could be a route to follow down the line if...
    - Proposed strategy doesn't work with step change in providers available
    - Black Start becomes a connection condition (extreme)
    - Administered payments seen as appropriate
- Tender route
  - Complex
  - Would have to be on 3yr plus lead time to requirement

**Note to Delegates**

- Should there be up front capital costs or tapered cost provision across term of contract?
- What is appropriate termination penalty for National Grid and provider respectively?
- For longer term contracts is RPI indexation on Availability prices appropriate?
- National Grid recognises there could be requirement in the future for bespoke black start arrangements (e.g. tripartite). Would providers be welcome of such an arrangement?

## **BREAKOUT SESSION 2**

National Grid agrees that there should be more appropriate signalling with regards Black Start requirement across next 5, 10, 15 etc year periods. It also believes that the publication of zones removes National Grid ability to flex zones to create competition. Would for example general traffic light system across 5yr periods provide adequate signalling or should it be on a year by year basis to reflect agreements expiring and coming to fruition?

How should National Grid give earlier commitment to new stations for the provision of A Black Start service?

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One of the frustrations of arranging tests for National Grid and providers is not being able to agree Bid/Offer prices for the test until day before arranged test which arises in uncertainty and a rushed process of getting National Grid management sign on and side letter agreements in place between the companies at very short notice. One possible way round this is to develop some type of indexation to be included within the Black Start agreement so only thing to be agreed is the technical test programme. Is this the right approach or should the process remain as is?

### **National Grid Criteria for Black Start Review**

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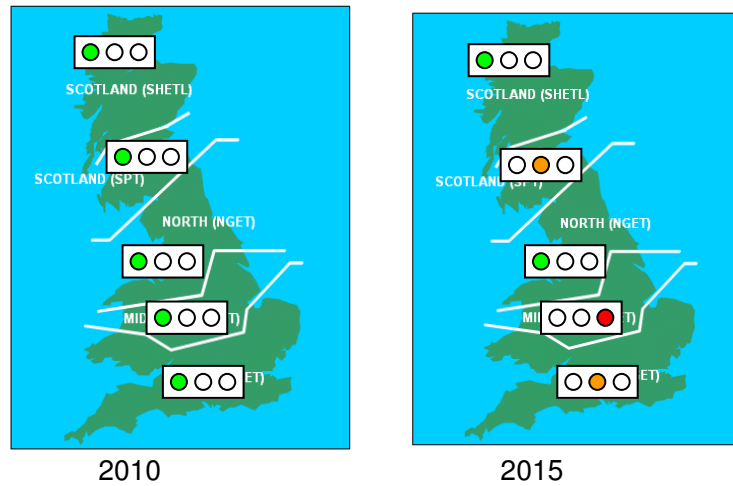
### **Notes to Delegates**

- Where should National Grid provider National Grid requirements? SYS, Balancing Services website, through connection discussions etc
- Is zonal information important to providers? Does releasing zonal requirement remove National Grid ability to flex boundaries to create competition within Black Start?
- How much information does industry require above indication of requirements?
- Should a station fail to Black Start under a real unplanned situation an Event of Default is applicable. Therefore for a planned test there should be a reduce risk of the plant failing the test so is National Grid right to apply an Event of Default as it is paying for a service that was not achieved under test conditions?
- What methodology should National Grid work out Bid/Offer prices within a CSA for testing? If this is used what prices should Generators submit within Balancing Mechanism?

## APPENDIX 2

Note the pictorial representation of provision of Black Start over the forthcoming period is purely indicative and does not represent the current Black Start contracted position of National Grid. National Grid also reserves the right for the any final indication of Black Start requirements for future years to vary from that depicted below.

### Example 1 – Zonal Map



### Example 2 – projected annual contracted position

