

**Black Start Commercial Review
Thursday 30th August 2007
National Grid House – Warwick**

Black Start Workshop 1 – Breakout Session Summary

Attached is a summary of the breakout sessions at the recent Black Start Commercial Review workshop. The attendees were split into three groups to discuss and debate a set of allocated questions posed by National Grid as listed below. The purpose was to ensure each group came back with a summary of their discussions, that weren't necessarily owned or put forward by National Grid. (The background information held by each group can be found at the appendices at the back of this document)

The intention now is for National Grid to consider the feedback from the session and consider which options are worth exploring further. The results of which will then provide the focal point for a second workshop (to be arranged).

Question 1 – Future Viability & Procurement

What are the current and future issues that National Grid needs to consider that ensures stations are available for providing a Black Start service?

How should National Grid procure Black Start services?

Question 2 – Payment & Suitable Length of Service Agreement

How should National Grid structure the payments for a Black Start service?

Taking into account National Grid's criteria, what would be a suitable length of service agreement?

Question 3 – Criteria & Possible Options

How well does National Grid's criteria for Black Start service commercially (as below) meet with those of the service provider?

What other criteria is there that National Grid should try to meet?

How well do National Grid's proposed options meet the criteria?

What other options should be explored that may fit more closely the desired criteria?

Summary notes from the group discussing Question 1 on “Future Viability and Procurement”

The first issue identified by the group was the lack of any plant investment incentive, with current payments (including those from other services) not covering the cost of actually having on OCGT. The need for an incentive being key with a number of issues on the horizon including an ageing OCGT fleet, (increasingly difficult to maintain and keep reliable), and the impact of the Large Combustion Plant Directive (LCPD).

Two options for covering capital costs were discussed, either a single upfront payment or a contract which allowed for recovery of capital costs within a five year period (in order for generators to gain internal sanction for the initial expenditure) but recognising that the contracted service period maybe longer than 5 years.

One way of spreading these costs would be to go for bundled contracts. However a few downsides of bundled contracts were discussed, including:

- how the commercial STOR service would/could be valued for an extended period (potential for some price indexation?)
- the impact on non bundled providers who could only currently tender for 2 years under STOR
- the removal of any investment incentives in the STOR service itself
- any impacts on plant life with an increased number of starts.

A question was raised that why would a provider invest in new plant if the service only ever allowed for cost recovery (cost reflective principles)?

Another key area highlighted by the group was improving the communication by National Grid of its requirements for Black Start. This ranged from clarity from National Grid on the number of years a service is required for, the publication of a Zonal Requirement Map (some discussion about whether this was open to exploitation or was part of making a market work) to improving the mechanism by which providers could offer new Black Start capabilities and get timely (or any) responses back from National Grid. Providers highlighted their need to know as early as possible of the need for installation of Black Start, with lead times of 2yrs+ (more likely 3-4 years) quoted. An alternative to the zonal map was a general system (for example a traffic light system) to indicate NGET perceived shortfall or excess in service provision. This could be extended to show different indications across 5, 10, 15 year periods indicating where potential opportunities may be developing.

Discussion was held on whether a Black Start could be procured via a tender process. There appeared little appetite from providers to go down this route with ‘product definition’, ‘the requirement for a large amount of quality information before being able to tender’ and ‘needing to understand National Grid’s requirements for other services’ quoted as reasons why this would be difficult.

There was a short discussion about whether tripping to house load could be useful. It was highlighted that tripping to house load maybe helpful in some circumstances but in others could actually cause the Black Start situation to occur. It was suggested that this could be a service but not Black Start.

Summary notes from the group discussing Question 2 on “Payment & Suitable Length of Service Agreement”

The group quickly identified that they believed the only viable option of payment structure was via Availability Payments.

Options considered included:

- 1 The Irish mechanism – where Ireland pay their black start stations akin to CAP076 where there is a set rate/value, albeit enhanced dependent on location, capability, reactive and ramp rates, etc.
- 2 Group liked the idea of same rate for same service but were keen to recognise that there needed to be enough reward to make providing the service attractive.
- 3 Regulated cost basis plus premium or a tender, then possibility of competition in zone? How could competition in zone be facilitated by NGET? Could NGET supply signals of future Black Start shortfalls? Where are the holes in the future?
- 4 Long Term vs Short Term. It was felt that a tendered route may better fit the shorter term option, providing competition in a zone. However, longer term solutions with new Power Stations and Refurbishments would need the long term contracts to ensure capital investment payback. These could still be rewarded as a result of a tender
- 5 Earlier signalling of service requirement/shortfall/indicative values would allow new build or refurbishments to see investment signals and make investment decisions in a timely fashion.
- 6 It was believed that a pricing option based on bilaterally negotiated costs plus premium or a tender approach favours longer term investment needs from new build or refurbishment, whereas a menu of values could more readily work with established Providers.
- 7 Believed that NGET could be more proactive in publishing the “need” and “value” for Black Start.
- 8 If the Contracts went down the bi-laterally negotiated (as opposed to tender) route the group thought there could be two pricing options: that of the menu value based or cost plus base.
- 9 Bundling of Black Start with Reserve was also discussed, the group as a whole didn't think this would work, due to transparency issues and the length of contracts involved. I.e. is it acceptable having a 10 year reserve contract? A bundled approach may fit for OCGTs but this skews the playing field for both the Black Start Service and Reserve. Bearing in mind there are Providers that can provide either/or and some can provide both, would bundling create unfair discrimination? However, if bundling was acceptable would this mean that the pricing would be done as cost base approach?
- 10 Due to the nature of the Black Start and the costs involved the group thought that a ten year contract would be suitable duration.
- 11 Although most favoured greater transparency the group felt this could be accomplished by when (gaps would appear in zones), where (which zones) and annual spend per area rather than station specific details.

Summary notes from the group discussing Question 3 on “Criteria & Possible Options”

How well does National Grid’s criteria for Black Start service commercially meet with those of the service provider?

The group focused around the issue of transparency and felt this criteria was the most important. The issue of security was discussed and whilst this was recognised as an issue it was felt there were ways around this, such as giving high level data or access to data via security clearance.

The length of contract was felt an important criteria. The debate moved to whether this was a more important criteria for existing providers or new providers, with a view that a longer-term contract was the only way a new provider was likely to be able to compete with existing providers.

It was questioned what was meant by appropriate remuneration for funding Black Start investment. The group defined the important criteria as value for money, sharing cost between services and ability to provide payback on investment.

Investment signals are important criteria but rely on transparency of need.

The group felt that whilst promoting competition was important, there was uncertainty if attracting new technologies and arrangements was important. A point was made that a provider is unlikely to try a new technology for Black Start due to the risk of failing to meet minimum Black Start criteria.

What other criteria is there that National Grid should try to meet?

No other criteria were highlighted.

How well do National Grid’s proposed options meet the criteria?

On tendered black start services there was confusion over whether this meant a short term tender or long term tender. Long-term tenders were felt the only viable way forward.

The view of tenders is that this would be better than now but there was uncertainty how well this would work. It was felt the timescales for which the tender would need to be open would need to be fairly long (6 months) to allow parties to complete their studies and submission.

A zonal shopping list was felt to increase transparency and therefore fit well with the criteria.

Longer-terms contracts are likely to suit new stations better than existing providers.

Concern was placed over bundled services as this may take away the need for STOR or at least undermine the service. A question was asked over how much capacity would be taken away from STOR if all black start services were bundled. There was a feeling that it would be better to keep services separate.

What other options should be explored that may fit more closely the desired criteria?

A matrix of percentages was identified as a way of allowing providers to offer black start only or a bundled service. For example if bundled they get 100% payments, if they chose to move to Black Start only they get 50%.

It was felt having multiple parties providing a black start service was an interesting option. It was felt the applications of this in reality to be fairly limited.

Other issues identified

It was commented that new stations are likely to be single shaft increasing the impact of outages (if they are black start providers) on the unavailability of black start in zones.

APPENDIX 1

Future Viability and Procurement – Flipchart Notes

Investment Incentive (lack of)

- OCGT stations will fail to provide service / quality of service
- Present payments do not provide for investment. Doesn't cover the cost of having an OCGT (costs of having an OCGT not covered through all of the services)
- Current kit is difficult to maintain / reliability issues
- Short term contracts require either an upfront payment to cover costs or a contract which allows recovery of capital costs within 5 years
- Bundled products/contracts would help spread these capital costs
 - Risk of commercial value of STOR in long term
 - Indexing prices to share risk
 - Impact on price signals for STOR investment

Joined up thinking between Contracts/Connections on the need for Black Start

What do National Grid want in terms of number of years service?

Zonal requirements map would be useful?

- Could it be exploited?

Bundled Services

- Need other contracts (STOR) to help fund
- Extras starts may reduce life

LCPD – limited running

- Short term – stations may be unavailable (could the 2 hour requirement be relaxed, 5hours more realistic?, sliding scale payments?)
- Long term – stations shut

Mechanism for providers to offer Black Start (previous lack of response from National Grid)

2yrs+ (more likely 3-4yrs) for new build

- Generators would prefer to know as early as possible (cheaper)

Trip to load

- Would need to be guaranteed
- New service?

Tender (later renamed Invitation to Prices)

- Need quality information
- Product definition
- Need to know about National Grid's requirements for other services

Why build if only get costs back (cost reflective)

APPENDIX 2

BREAKOUT SESSION

Question 1 – Future Viability & Procurement

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How should National Grid procure Black Start services?

National Grid Criteria

- 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

Possible Options

- 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

Note to Delegates

- National Grid requires an enduring economic Black Start service
- Black Start currently procured bilaterally
- Existing stations may close by end of 2015 (LCPD)
- What should National Grid do to ensure Black Start is considered by potential provider at new or existing stations?

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Notes to Delegates

- Does current cost structure work through availability payments work?
- What factors make up availability payment?
- Black Start auxiliary units can be used in other services. National Grid does provide capital costs towards these units. What is potential effect on other services? What should National Grid consider to ensure appropriate remuneration is provided for these capital costs?
- Long term agreements, say 8-10 years, would ensure guaranteed income on assets for provider and guaranteed long term service for National Grid. Does locking in providers for long periods counteract National Grid criteria of 'creating competition'? What could National Grid do to prevent this counteraction?

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Notes to Delegates on Criteria

- Does National Grid criteria fit closely with provider expectations?
- Which work well and which don't quite work?
- Has National Grid missed anything fundamental?
- Has this criteria always been there but not addressed?
- Do they meet all future expectations, say beyond 2015?

Notes to Delegates on Possible Options

- These options are considerations and not final. There are many others possible not listed here
- What issues could there be with National Grid exposing its requirements on a zonal basis? (e.g. commercial and potentially system security wise)
- How can National Grid be assured that refurbishment and/or investment in new plant is right solution?
- What issues does bundling services bring to the industry?
- Would combining Black Start and Reserve have an impact on the tendered Reserve service?
- Given effort that went into reviewing Reserve and then design and implementing STOR, is it appropriate to play around with it now? Is the service mature enough to be merged with Black Start?