EOWG 26th July 2006 Meeting

Day Ahead / Within Day Flexibility Release Models Examples

Background

At the EOWG (12) meeting on the 12th July 2006 National Grid Gas NTS (NGG NTS) were asked to further articulate the potential framework and issues associated with "short term flexibility release" associated with OPN based processes.

Subsequent to that meeting NGG NTS met with a group of stakeholders (including Ofgem) on 19th July 2006 to discuss the potential short term release processes.

This note is a derivative (with some minor additions) to that which was tabled at the 19th July meeting. It describes three options for short term flexibility capacity release:

- Option 1 – Full auction based release

  Auction based releases, conferring rights to utilise flexibility capacity, apply for every Gas Day where users directly apply and where flexibility is available NGG NTS will allocate such capability

- Option 2 – No short term rights conferred until constraint identified and auctions invoked

  Users can access flexibility without holding short term rights. If imminent constraint identified then auctions invoked to confer incremental rights (over those long term rights held)

- Option 3 – OPN based flexibility requests

  OPNs are used to derive users implied flexibility requirements and flexibility capacity rights are automatically conferred.

The rest of this note affords further definition of how each of these models might be further defined and also includes some examples of how the approach might work to enable exploration of the associated issues.

It is intended that the various approaches will be discussed at EOWG on 26th July to seek to establish a preferred way forward for inclusion in the envisaged NTS Exit Reform UNC Modification Proposal.

High level overviews of models

<u>Option 1 (Full Auction)</u>

- Users request Flexibility Capacity via the Annual auctions ("long term flex capacity")
- Users can also request Flexibility Capacity via short term auctions
- Auctions held on D-1 and D
- National Grid NTS release any unsold baseline plus discretionary
  - Assessment made based upon system flex capability vs Flex holdings
- No direct relationship with OPN acceptance, although will look to assess whether OPN in line with holdings at a zonal level (may need a rejection process if OPN implied flex utilisation exceeds system capability)
- Pay as bid auction (reserve price probably close to 0)
- Post 12 noon D-1: Trading 1:1 within zone, no trading between zones
- System management tools (buybacks, forwards/option, flow swaps) are available, assuming Users wish to participate. System management at a Zonal level, may require development of specific tools to mange the risks.

- **Overrun charge applies on every day, initial test at a Zonal level; where an overrun has occurred then 'pro-rate' to Users based on their individual overrun.**

Option 2 (Auctions when constraint)

- Users request Flexibility Capacity via the Annual auctions ("long term flex capacity")
- Users submit OPNs
- National Grid NTS will accept based on OPN submission versus capability (i.e. does not take account of Flex holdings, "*if it looks like OPNs imply flows within capability then continue*")
- If OPNs <= capability (in a locality) then OPNs are accepted but no commercial rights are conferred.
- If OPNs > capability (in a locality) then OPNs are rejected. National Grid NTS will allow OPNs to be re-submitted (may be accepted depending if the revised implied flexibility can be accommodated). If these are still rejected then an auction is invoked and User's will be expected to buy flexibility. Potentially this will require the User to procure flexibility capacity to satisfy his requirements which are, at least partly a function of the flows that might already have occurred
- Auction rules would be the same as those detailed in Option 1
- Trading of flexibility allowed as per above
- System Management Tools as above
- No payment associated with OPN requests and any associated flexibility cap release
- Users pay for short term flexibility capacity on a "pay as bid" (and accepted) basis
- **Overrun charges ONLY apply on days where a daily auction is triggered, based on the same principle as the Option 1 overrun detailed above**

NB: Assumption that (prevailing) OPNs to be assessed on a continuous basis; if capability falls so that within day constraint reasonably anticipated then auction invoked in the envisaged constrained area.

Option 3 (OPN based capacity)

- Users can request Flexibility Capacity via the Annual auctions
- Users submit OPNs
- National Grid NTS will accept OPNs based upon assessment of capability as compared with OPN submission implied flexibility utilisations and longer term holdings
- If "OPN implied flexibility (having regard for long term flex capacity)" <= capability then OPN accepted and a flexibility capacity right conferred.
- If "OPN implied flexibility (having regard for long term flex capacity)" > capability the OPNs are rejected, but previous OPNs and implied flexibility holdings remain. National Grid NTS will allow OPNs to be re-submitted (may be accepted if revised implied flex utilisation within capability). If these are still rejected then an auction is invoked and Users will have to buy Flexibility via an auction. The User may not have to purchase any additional flexibility as their previously accepted OPN and implied flexibility rights remain in place.
- If an OPN at a site "rises" (implies additional flexibility capacity needed) but then "falls" (implying a reduction in the flexibility capacity) then the flexibility capacity holding will be based on the highest implied OPN Flexibility usage.
- Issue: How do National Grid NTS assess OPNs versus existing holdings, i.e. is it unutilised. If there was a single User at an Exit Point or some sort of attribution of flexibility to Users in place National Grid NTS would be able to make a more informed decision
- Auction rules are the same as those detailed in Option 1
- Trading of Flexibility allowed as per above
- System Management Tools as above
- Zero cost for flexibility derived from the OPN.
- Overrun charge applies on every day, initial test at a Zonal level; where an overrun has occurred then 'pro-rate' to Users based on their individual overrun.

Examples

Assume that we are detailing with 1 Zone, a part of the system

Will already have a number of “long term” flex holders in the zone

Consider the example where we have 2 incremental flexibility capacity requests from Users (these could be incremental above existing or “new” users)

The scenarios envisage that User A requires 2 units of extra flexibility and User B requires 3 units.

The first three columns indicate the assessed position immediately prior to the incremental applications.

The final three columns indicate the potential outcomes under the Model 1, Model 2 and Model 3 scenarios.

System Capability in Zone	**Commercial Release (Flex Holding) (Prior to request)**	**Utilisation (OPN), prior to User request**	**Model 1 - Full Auction Option**	**Model 2 - Auction when Constraint**	**Model 3 - OPN based Flex**
11	6	6	Users allocated their requests via Auction	OPN accepted for 5 ,no rights conferred	OPN accepted for 5, rights conferred
8	6	6	Users allocated an additional 2 (Capability – Holding)	All OPNs rejected, OPNs can be resubmitted if still > than capability then auction invoked as per full auction option to allocate 2 between User A and B	All OPN rejected, OPNs can be resubmitted if still > than capability then auction invoked as per full auction option to allocate 2 between User A and B
6	6	1	Nothing to release (Capability – holding). [System Management Tools imminent]	All OPN’s accepted no rights conferred	Nothing to release (Capability – holding). [System Management Tools imminent]
11	11	11	No release	OPNs rejected.	OPNs rejected, previously accepted OPNs conferred rights remain
11	6	11	Release 5 via auction	OPNs rejected, auction invoked, release 5, as previous OPNs don’t confer rights and Users need Flex for overrun purposes	OPNs rejected, previously accepted OPNs conferred rights remain. First come first served similar to Option 1.