Workgroup 0621 Requests for analysis

0621 National Grid

0621A Storengy B.Enault and A.Nield

30 October 2017 Storengy suggested impact assessments

See xxxx (link?)

13 March 2018

Further to this we would like to request analysis with regards to the:

- Impact on the availability of flexible gas and on the operation of the NTS.
- Impact on gas balancing costs.
- Impact on the volatility and price level at the NBP.
- Impact on the volatility and price level of the electricity market.
- Impact on Security of Supply and on required network investment to pass N-1 test.

In addition (as previously discussed with Colin Williams), Storengy would be keen to see sensitivity analysis around specific entry points. Are there specific entry points that heavily distort the calculations/analysis ? This could be tested by simply removing individual entry points (or entry zones) from analysis and re-running scenarios to see if this dramatically affects results. This will also show how sensitive the pricing methodology is to market (entry point) changes, as well as pre-planning for

changes to entry points and multiplication factors going forwards which could heavily distort prices/charges from one year to the next. This analysis should help to iron out possible problems within the charging methodology, making prices more predictable for longer term business planning, and reduce price/charging volatility for industry stakeholders and ultimately end users.

The impact assessment should look at maintaining an efficient flexibility market, and ensuring the impact on the complexity of operating the NTS does not increase cost for consumers.

0621B SSE J Chandler

21 March 2018

The impact of shorthaul on tariff recovery charges. Again for all mods both enduring and transition.

19 March 2018

Please find areas for analysis to provide evidence for which modification may further the relevant objectives.

1. Full set of charges for each modification, both transition and enduring.

- 2. Locational distributional effect on following customer groups:
 - Domestic DN

- Commercial DN
- I&C NTS
- Electricity generation NTS
- Storage NTS
- Lng
- NTS
- IP

Each modification to be compared against each other and the current charges.

3. Assessment of spare capacity on the network. To determine if postage stamp appropriate.

Are there any areas of the network that are constrained? PARCAS for indication.

4. Cross subsidy test as per EU TAR requirement.

5. Impact on merit order of supply. Cost of gas supplied to GB each modification compared with status quo.

6. Impact on security of supply.

7. Impact on trade with adjacent NRAs.

I'm sure there will be other areas that arise...

0621C Centrica G Jack

19 March 2018

For each of the 2019/20 and 2020/21 Transitional Period Gas Years and the 2021/22 and 2022/23 Enduring Period Gas Years –

Full set of Transmission Services Reserve Prices Non-Transmission Services commodity charges

Transmission Services Revenue Recovery Charges (whether commodity-based or capacity based, IPs or non-IPs)

LRMC vs CWD geographical comparison of Reserve Prices and total annual transportation charge (for all entry points and by User type for exit = DN exit point; CCGT; I&C; Storage; IP)

Assessment of Optional Charges: likely "short-haul savings" compared with current full methodology if it were to continue

Expected revenue recovery from capacity bookings - entry and exit (plus assumptions on capacity booking behaviours/ forecasts)

Metrics on key outcomes: stability/ predictability/ fairness/ cost-reflectivity (e.g. very poor/ poor/ average/ good/ very good)

I'd expect there is much common ground among the analysis required for all of the competing proposals and I'm happy to discuss this further if required at workgroup.

0621D WWU R Pomroy

13 March 2018

We request that that NGG does analysis of

- 1) The CWD proposal in 0621D using the square root of the distance rather than the distance so we can see the impact compared to 0621
- 2) The effect of removing the Optional Commodity Charge (short haul tariff) compared to 0621

- a. The additional revenue recovered from those customers that no longer benefit from the short haul tariff
- b. The effect on the other charges both exit and entry which will presumably be reduced as a consequence, we are particularly interested in the effect on other exit customers both NTS direct connects and DN Exit Capacity Charges.

It may be simplest to do this work in two stage so that for (1) the analysis is done using the 621 model just replacing the distance with square root of distance and keeping the Optional Commodity Charge and then doing the analysis on the effect of removing the Optional Commodity Charge. This would mean that the result could be presented as follows

621	621 with distance replaced by sq root of distance	621D distance replaced by sq root of distance and no OCC
x	у	Z
Х	Ŷ	Z
XXX	YYY	ZZZ

0621E Uniper R Fairholme

19 March 2018

- 1. For all "existing contracts", to show the aggregate revenue:
- (a) already contributed

(b) expected to be contributed for the lifetime of the contracts under the existing LRMC model (if it remained in place)

(c) expected to be contributed for the lifetime of the contracts under the CWD model (if implemented)

2. For all NTS Direct Connect Exit Points (Power Stations), to show the difference in expected Exit charges for the Gas Year 2021 between

(i) Total Exit charges based on Full Capacity Based charges; and

(ii) Total Exit charges based on "interim" Capacity / Commodity split (assuming this still applied in 2021, as proposed under 0621E)

0621F Interconnector UK P Dhesi

For Mod 621F we've already estimated approximately the necessary redistribution of charges from applying an additional discount at physically bi-directional IPs. It's a question whether this is sufficient or whether more analysis is required to determine possible prices under different scenarios.

More broadly as noted in the past and by Ofgem in the last meeting, the relevant objectives include compliance with European Regulations. This therefore includes an assessment of the mods against criteria about impact on security of supply, market liquidity and cross border trade.

0621G N Wye for Vitol

22 March 2018

- Comparison of revenue recovery under current regime re: shorthaul and nonshorthaul Users, Mod 621 and Mod 621G
- Impacts on OCC users and non-OCC users replicating the above base methodologies (by points which qualify for OCC, notwithstanding commercial confidentiality), allowing for meaningful comparisons.
- The analysis should cover the transition and enduring periods
- Evidence to be provided by NGG that independent pipelines incur the same SO costs as a the NTS.....in order to establish cost reflectivity

0621H Eni A Shrigley

26 March 2018

Please can we have the analysis that will show the difference between modification 0621H and modification 0621 that impact the prices:

• How much revenue will be collected from existing contracts under 0621 compared with modification 0621H, assuming reserve prices are not uplifted to capture increased under-recovery (What happens if in the transition period Bacton IP pays the same uniform commodity charge as the rest of entry points = why would they pay a different price?

• What happens if you remove existing contracts from the initial calculation of charges? (the CWD model includes them)

Please show both of the above over 2 transitional Gas Years and enduring years contained in the model.

Is it possible to have a scenario with lower Allowed Revenue because the one that is set in the model now seems to be very high?

0621J RWE C Ruffell

19 March 2018

For 0621J we need an updated Postage Stamp model with the assumptions (booking profiles, default parameters, etc.) that are the same as the latest CWD model. As CWD is the counterfactual, we need to compare the Postage Stamp methodology against it on a consistent basis.

Distributional impact - we need to look at the impact on customer classes of the new charges

- level of granularity individual sites anonymised and by class
- geographic distribution to highlight anomalies at entry and exit
- impact on exits close to entry points

Consider how to assess how define and assess the level of Spare Capacity on the NTS - capability versus future demand

- Postage Stamp is a strong option especially where spare capacity means that marginal costs are close to zero
- charging methodology is then about most efficient and non-distortive method to recover allowed revenue

It is hard at this stage to think of analysis beyond the two outlined above - anything else might best fit into Ofgem's Impact Assessment against its wider statutory duties.

Other:

K Ingham ESB

22 March 2018

In general need to flex only one variable at a time.

12 March 2018

As requested, here are suggestions for analysis:

- NG base case, CWD simulate knocking off individual entry points to demonstrate robustness of model (e.g. St Fergus)
- Ditto with exit points (e.g. power plants)
- Adjust discount to storage (0%, 50%, 86%)
- As discussed at the last meeting, heat map or 'relevant points' analysis, showing CWD outputs if only using rational flows on the grid
 - o Sensitivities around heat map approach if a standard limit of km is applied, flex it up and down; if realistic flows are used, adjust the boundaries
- Postalised charges base case and
 - o flexing the entry/exit split (e.g. 50/50, 60/40, 70/30)
 - o inclusions/exclusion of existing contracts
 - o knock off individual entry/exit points
 - o adjust discount to storage (0%, 50%, 86%)

Display of results:

- View of the range of exit point fees using CWD v. current v. postalised using XY scatter chart (cloud of points)
- Stack chart showing capacity/commodity split where possible/applicable

In each case, the goal should be to flex a single variable i.e. the same pot of revenue should be recovered etc. only one type of input should change. The same transitional year and the same enduring year in each case.

The same analysis should be done for LRMC, CWD and Postalised models so they can be directly compared.

The burden of revenue recovery between types of points should be made clear for each case as well as the charges themselves. The change in burden and in charges between methodologies should be made clear.