

## For NTSCMF meeting - 11 February 2020 Industry Questions for CEPA

Questions have been received from 6 Workgroup Participants:

- Alex Nield, Storengy UK
- Julie Cox, Energy UK on behalf of members
- John Costa, EDF Energy
- Kirsty Ingham, ESB
- Nick Wye, Waters Wye
- Paul Youngman, Drax

The questions have been grouped into six sections

- p. 2 - 3      **A. CEPA METHODOLOGY/APPROACH**
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## A. CEPA METHODOLOGY/APPROACH

Julie Cox, Energy UK

1. Are SO commodity charges considered? currently optional charge routes do not pay SO commodity charges?
2. How is the SQ (Status Quo) made to fit the bookings = flows assumption to enable a valid comparison with other modelled options. The reality of SQ is bookings > flows. When bookings = flows it makes no difference whether charges are capacity or commodity based.
3. How are existing contracts made to fit the bookings = flows assumption since not all existing bookings will be fully utilised by flows on all days e.g. storage, Caythorpe which does not physically exist or even on average across a year.
4. For each model run is a simple check carried out that capacity booked x price in aggregate equals allowed revenue. Can this be provided?
5. The term weighted average tariffs is used a lot what is the weighting by? capacity booked ? how do existing contracts feed into this ? Are flows assumed to flow against existing contracts first?
6. Overall there is an expectation that allowed revenue / bookings (which equal flows) would be the same in all years for all options at the highest level, whether charges are capacity or commodity related. Is there a simple explanation as to why the weighting changes this, intuitively if some are paying less others will need to pay more to ensure allowed revenue is recovered?
  - a) At entry there are existing contracts and new bookings. Currently existing contracts pay fixed capacity charges and TO commodity charge. Other bookings pay capacity charges and commodity charges. Under 0678A all the commodity paid by existing contracts will need to be recovered from 'other' bookings, so overall 'other' bookings will pay more than now in aggregate, whilst existing contracts will pay less.
7. Please explain footnote 28 on page 24 of CEPA document. Why are CEPA scenarios used for peak supply and demand rather than those in the FES scenarios.
8. How are SQ tariffs calculated for future years, beyond which NG have published values
9. 5.9 in Ofgem doc p 67 refers to convergence. Is convergence always achieved? if not is there a revenue residual? how is this reported? What behavioural impacts are assumed?
10. We note that there are separate nodes for power stations using OCC but other generation is fed into the electricity model in aggregate or even called from the electricity model what are the effects of this? How does this aggregation inform the conclusions on marginal plant, assertions on closure, statements on tariff dispersion etc.
  - a) Is this sufficiently granular to understand the impacts on individual plant? Table 2.4 of CEPA doc seems to suggest current users of off-peak capacity are not modelled in detail. This is a significant feature of the SQ that should be considered
11. Does the analysis referencing electricity charging take any consideration of the minded to or developing changes under the SCR?

12. The assumption of perfect foresight of bookings and therefore “book as flow” to commoditise the capacity charges for all but GDNs will likely show an underestimate of impacts on power generators who are running lower load factor, especially in a future environment of less predictable generation patterns and more provision of flex services from gas gen – does CEPA have views on this and an ‘overbooking’ sensitivity? An ‘overbooking sensitivity’ was suggested during a telecon between Ofgem, CEPA and Energy in September 2019. It was agreed this would be looked at.
13. CEPA doc P. 54 on closure decisions refers to the gas tariff increment as a proportion of the total cost, and that as the less efficient plant have higher costs anyway, the proportion of increase will be less material and therefore a good thing. But in terms of the merit order and bidding in a price to the electricity market, the absolute is what counts surely?
14. 5.37 page 76 commentary suggests some storage facilities do not inject gas into store over the course of the modelled year. Does this result in 0 for FCC? And hence no revenue from those facilities? Does the model link exit and entry flows so that in such years there are no entry flows either? Footnote 34 on page 29 of CEPA doc seems to suggest that only seasonal flows are modelled at storage facilities?
15. Why is most of the NOC analysis p78-82 of Ofgem doc based on 2030-31?
16. 5.54 on page 84 does the marginal supply source change under the modelled options? For the SQ how is it assumed that the currently diverse entry costs are reflected in the NBP price, it is probably an over simplification to say that it is rolled into the NBP price. Also see 3.2.1 in CEPA doc.  
  
Much of the analysis depends on a lower NBP price so understanding this is rather important, although it does acknowledge the difference is very small.
17. 2.1.2 in CEPA doc is there any consideration of associated gas production in the supply elasticities?
18. CEPA doc page 27, CWD and PS comparison thought CWD exit charges in Scotland were relatively high?

## B. CAPACITY METHODOLOGY

### Nick Wye, Waters Wye

1. Where you state entry and exit tariffs as weighted averages, are these the weighted average prices for capacity, not including Existing Contracts i.e. only represents the weighted average for all “new” capacity?

### John Costa, EDF Energy

2. The analysis showed Gas prices coming down from lower annual average prices due to large protection for Existing contracts (even larger discounts than today as they don't pick up Rev. Recovery charges) meaning those new purchasers of Entry Cap will pick up majority of Entry costs.

Are there any ratios in the analysis to show the revenue effects of this? E.g. [10%] of Entry shippers will pick up [70%] of costs...declining out to 2030? It would be good to see a chart similar to Ofgem's Figure 0.2 in their decision letter tracking the ration in revenue collection between existing and new entry cap holders.

### Paul Youngman, Drax

3. Figure 3.3 sets out the average tariff, weighted by the volume of capacity bookings, at each entry point. The figure also illustrates the dispersion of tariffs at entry points under each option.

It is not clear how this analysis has been completed and if it would reflect the outcome of a benefit in reducing the wholesale price of gas

- a. The charge has been 'commoditised' and is not based on booked firm capacity or the FCC but based on flows. is this the case? If it is the case then do you agree that the model is not reflective of the capacity booking or FCC applied when constructing the tariffs?

*“Given our assumption that bookings are equal to flows for all points other than GDNs, the capacity tariff represents a charge on each unit of gas flowed – i.e. it is effectively ‘commoditised’. In effect, the charts compare the tariff paid to flow one kWh of gas making use of the annual capacity product both under the status quo and under the modification options.”*

- b. Given that the same absolute value would be collected at entry under the Current or any proposed methodology can you explain how there is a disparity in the average tariff ? Is this due to any assumptions or model differences that appear in some models but not in others ? Could it be due to the scenario referred to in footnote 28 ? Can you provide details of how this scenario differs to that used to assess the different proposals?
- c. Was the SQ scenario completed with or without existing NOC in place ?
- d. Exit - fig 3.4 effectively a similar question as to entry but here it is more pronounced as the average weighted capacity tariff is different across classes of exit customer - can you explain why this there is a difference, given that under Postage Stamp all exit capacity will be paying the same charge p/kwh/day ?

- e. How do the values fig 3.10 relate to the Ave weighted tariff in fig 3.3 and 3.4 ? Given that the analysis may be flawed in not comparing the impact correctly what confidence level do you place on the wholesale price reduction benefit? to what level could there be a disbenefit ?
- f. P35 "This suggests that the reduction in the annual capacity tariff at entry points (see Figure 3.3) leads to a reduction in the costs of the marginal unit of gas on average and hence to a reduction in the wholesale gas price." - under all models the same absolute value is being collected so how can this statement be true? Is there some cross subsidy between Entry and Exit that leads to Entry paying less under particular models.

## C. OPTIONAL COMMODITY CHARGE (SHORT-HAUL)

### Nick Wye, Waters Wye

1. Your shorthaul analysis does not include the discount relating to SO commodity charges in the SQ. Please confirm that this is correct?
2. Can you provide more detail as to how you have incorporated the NOC discount into your calculations e.g. have you assumed that the discount is shared 50:50 between entry and exit points?
3. Can you confirm that you have included the “annual fee” in your NOC calculations, where the fee is set out in NOC2 proposals?

### Kirsty Ingham, ESB

#### Section 4.2 Bypass Investment (P56)

4. Does the bypass investment analysis at 4.2 incorporate adjusted assumptions to the NOC formulae in the Mod proposals (per the tables in Section 0)? If so, why do the tables in 4.2 refer to the Mod options (e.g. NOC 1, NOC 2)? Have the formula adjustments been made elsewhere in the report? If the bypass investment section uses the adjustments and the rest of the report the proposed formula in the Mods, how does this compare apples with apples?
5. Why does Section 0 mention 25 year lifetime for a pipeline but 4.2 shows results only for 5 years? Why assume build to MNEPOR but flow to load factor in the modelling? If the info is available, why not build to perfect foresight of capacity need (similar to the capacity booking assumption)?

### John Costa, EDF Energy

6. What is the impact on electricity prices from the £533m extra transportation costs CCGTs pick up in the analysis? CEPA state these costs are likely to be recovered from the Cap. Market (but do not model this) or electricity wholesale however “the effect likely to be limited”. Why is this?
7. Given the stark figures in CEPA report below (NOC worth £1.10/Mwh and £533m of extra CCGT tariff costs) a large proportion would be expected to be from wholesale mkt for the reasons below. What is CEPA’s view on this?
  - a. The report states that CCGTs relying on Shorthaul is worth £1.10/Mwh so by the same token we would expect to see power prices go up by this amount for the following reasons:
    - i. 80% of CCGTs were using NOC,
    - ii. Ofgem’s view is that CCGTs will still profile day-ahead as today (given the increase in p/kwh capacity costs and the 10% discount benefit)
    - iii. plus CEPAs view that CCGTs will become even more marginal going forward.
  - b. CEPA state that electricity prices would increase if there a NOC was reintroduced. Given that 80% use NOC currently this must mean the 20% not using NOC are

marginal plant whose transportation costs would increase to make up the remaining Allowed Revenue recovery. Is this correct?

8. Does your analysis assume all CCGTs not utilising shorthaul are currently paying full TO and SO Exit Commodity charges?
9. Is it possible to have the Revenue breakdown B.2.4 for the 3 time points CEPA calculate CCGT tariffs for (2022, 2026 and 2030)? This would highlight revenue distribution trends across this 10 year period – e.g. the SQ CCGT price discrepancy to PS is largest in 2030 (0.030188p/Kwh compared to 0.023490p/kwh) implying increasing trend / greatest consumer welfare in 2030. Why is this, due to lower running hours from CCGTs or other?

Julie Cox, Energy UK

10. 5.47 Comments on NOC 2 methodology suggest a maximum route distance of 25km and average of 10.2 km but this is considered to include routes which are not credible, is it correct to assume any new approach needs to reduce these numbers?
11. Can you explain how you came to the conclusion that Power Stations in aggregate would have lower charges under the Postage Stamp model? Specifically:
  - a. What assumptions have you made about the utilisation of shorthaul for the approx. 50 CCGTs in the UK? (i.e. specifically how many are currently benefitting from shorthaul?)
  - b. Does your analysis assume all CCGTs not utilising shorthaul are currently paying full TO and SO Exit Commodity charges?
  - c. What is your assumption of the split between firm and off-peak bookings?
  - d. Page 26 of CEPA doc seems to suggest that SQ and mod comparison only considers annual tariffs so does not consider shorthaul, but also recognises that many power stations and industrial sites use the OCC which provides a discount to the annual tariffs so the comparison and charts are not very informative? This also seems to contradict CEPA's initial assumptions that seem to incorporate off-peak and OCC.

## D. CONSUMER IMPACT

Kirsty Ingham, ESB

### 12. Section 3.5.2 Impacts on gas interconnectors - Moffat Revenues

- e. 3.5.2, p.48: CEPA states that its modelling suggests that the Irish gas price is lower than the GB gas price by the amount of the shorthaul discount. Does CEPA's model not take into account the GNI Entry price to access the IBP at Moffat?
- f. What was CEPA's reasoning not to treat Moffat as demand with an attached elasticity rather than treating it similarly to the bi-directional merchant interconnectors?
- g. What consideration was given to Northern Ireland?

Nick Wye, Waters Wye

- 13. Can you provide more info concerning the marginal source of supply used to determine gas prices? It would be helpful to provide some commentary on any changes to the source across the periods modelled



## E. STORAGE

Alex Nield, Storengy UK

1. What assumptions and prices have been used in the modelling of price spreads for driving flow behaviour at storage sites?
2. On page 29 of the CEPA analytical support document (section 3.2.4), you say that there are “no exit flows at several storage facilities within the year modelled”. Are you able to provide further details and clarification on this?
3. What provision has been made in the analysis for the benefit of within day flexibility provided by storage?
4. What assumptions have been used on the levels of cycling each year for different storage facilities?
5. What assumptions have been made in assessing the increase in variable (eg injection and withdrawal) costs to storage?
6. Figure 3.27 on page 51 of the CEPA analytical support document, appears to show a large increase in storage revenues from wholesale gas prices combined with an increase in operational costs, that results in a profit for storage:
  - a) Please can you further explain what is shown by this graph.
  - b) Please can you provide further detail on the assumptions and data used for this analysis.
7. What scenarios have been modelled when considering the potential long term impacts on investment and closure?
8. What share of the customer billing is attributed to the management of price/market volatility, and for NTS system balancing?
9. On page 29 of the CEPA analytical support document, you talk about short-range, medium-range, and long-range storage sites. Please can you clarify your definition of these terms and which sites are included under each category.

## **F. ASSUMPTIONS OVERALL**

Kirsty Ingham, ESB

1. Pages 12-13 and 15 state that recent product booking proportions are taken into account in the modelling (e.g. offpeak, shorthaul), yet the commentary around the charts through the text appears to show the status quo as the full charges prior to discounts. What exactly is meant by status quo? How has Offpeak been incorporated into status quo when comparing to the other options?