# NTS Charging Methodology Forum (NTSCMF) Minutes
# Tuesday 03 September 2019
# at Radcliffe House, Blenheim Court, Warwick Road, Solihull B91 2AA

| Attendees | | |
|---|---|---|
| Rebecca Hailes (Chair) | (RH) | Joint Office |
| Kully Jones (Secretary) | (KJ) | Joint Office |
| Adam Bates* | (AB) | South Hook Gas |
| Alex Nield* | (AN) | Storengy |
| Andrew Sugden* | (ASu) | BOC |
| Anna Shrigley | (AS) | Eni Trading & Shipping |
| Bill Reed | (BR) | RWE Supply & Trading |
| Chris Wright* | (CWr) | ExxonMobil |
| Christiane Sykes | (CS) | Shell |
| Colin Williams | (CWi) | National Grid |
| Daniel Hisgett | (DHi) | National Grid |
| David Cox* | (DC) | London Energy Consulting |
| David Mitchell* | (DM) | Chemical Industries Association |
| David O'Neill | (DON) | Ofgem |
| Debra Hawkin | (DH) | TPA Solutions |
| Emma Buckton* | (EM) | Northern Gas Networks |
| Graham Jack | (GJ) | Centrica |
| Henk Kreuze | (HK) | Vermilion Energy |
| Jeff Chandler* | (JCh) | SSE |
| Jenny Philips | (JP) | National Grid |
| John Costa | (JCo) | EDF Energy |
| Julie Cox | (JC) | Energy UK |
| Kamila Nugumanova* | (KN) | ESB |
| Kamla Rhodes | (KR) | Conoco Phillips |
| Laura Johnson | (LJ) | National Grid |
| Lewis Heather | (LH) | CEPA (agenda item 2.0 only) |
| Nick Wye | (NW) | Waters Wye Associates |
| Nicky White | (NWh) | npower |
| Nigel Bradbury* | (NB) | EIUG |
| Richard Fairholme | (RF) | Uniper |
| Sinead Obeng | (SO) | Gazprom Marketing & Trading |
| Steve Pownall | (SP) | Xoserve |
| Terry Burke* | (TB) | Equinor (agenda item 2.0 only) |
| * via teleconference | | |

*Copies of all papers are available at: [http://www.gasgovernance.co.uk/ntscmf/030919](http://www.gasgovernance.co.uk/ntscmf/030919)*

## 1. Introduction and Status Review

Rebecca Hailes (RH) welcomed everyone to the meeting and invited introductions.

### 1.1. Approval of Minutes (30 July 2019)

The minutes from the previous meeting were approved.

### 1.2. Modifications with Ofgem

David O'Neill (DON) provided a brief update as part of agenda item 2.0

### 1.3. Pre-Modification discussions

None raised.

## 2. Impact Assessment Update – Gas Charging

RH welcomed Lewis Heather (LH) from CEPA to the meeting and invited him to provide an update on the impact assessment being undertaken in relation to gas charging for Ofgem. LH provided a walkthrough of the presentation titled *UNC 678 Quantitative Impact Analysis.* He explained that CEPA have been commissioned by Ofgem to model the impacts of Modification 0678 and 0678 alternatives as part of Ofgem's wider impact assessment which will be a combination of both quantitative and qualitative analysis.

He clarified at the outset that the presentation focuses solely on the modelling approach and results will not be discussed.

In answer to a question from Henk Kreuze (HK) he also clarified that the presentation whilst not focusing on Modification 0686, acknowledge the related impact assessment uses a similar approach and models.

LH then went on to explain the high-level modelling process which is a combination of:

a. Gas tariff modelling using an adapted version of a model from National Grid NTS
b. Gas and electricity market modelling and
c. Impact assessment modelling including market impacts such as consumer welfare.

He added that the gas tariff and gas and electricity market models work together in an iterative way to dynamically produce the final set out of output tariffs and results. A key assumption used is that bookings in the model are equal to flows. Julie Cox (JC) was concerned that this assumption is different to some of the Modifications, suggesting that comparisons cannot be made if the starting point of the modelling is divergent from the Modifications.

LH reiterated that CEPA expect bookings to be mapped to flows and, therefore, consider this to be an appropriate assumption. In response to a question from Graham Jack (GJ), LH clarified that it is not applied to distribution networks and an assumption of 1 in 20 is used.

He then provided an overview of the gas market model stating that it is an optimisation model. He added that it also uses an electricity dispatch model to model price elasticity of gas fired electricity generation.

Workgroup participants sought further clarification on what is meant by social welfare in this context. In brief, LH explained that the this is specifically consideration of consumer benefit and agreed to provide more information.

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| **New Action 0901:** CEPA (LH) to provide a description/definition of social welfare. |

In response to a further question from John Costa (JCo), LH clarified that it is a network constrained model and the relationship between bookings and flows is not tested. The model is not testing relationships it is generating flows. In terms of historical relationships, LH confirmed the model looks at constraints.

He also clarified that the flows in the gas market model are on an annual basis whilst the flows in the tariff model are daily.

Discussion then focussed on the gas market model points (slide 9). LH explained that all entry points are included. In terms of exit points there are four types of aggregated nodes:

- Gas-fired power stations,
- LDZs and industrial and commercial users
- Storage exit points
- Interconnector exit points.

For tariff calculations, LH clarified that there is a tariff for each exit point. In response to a question from Debra Hawkin (DH), he confirmed that there is an assumption that there are more aggregates in the gas market model.

Workgroup sought clarification on the flows in the gas market model in relation to power stations.

**New Action 0902:** CEPA (LH) to confirm if the flows in the gas market model are annual or daily for gas fired power stations.

In terms of shrinkage, LH clarified that the modelling assumes shrinkage is zero.

LH then briefly took Workgroup through the key elements of the modelling approach (slide 10), highlighting the three years used in the modelling (2022/23, 2026/27 and 2030/31). Sinead Obeng (SO) asked for the reasons behind the choice of these gas years. LH explained that it provides a short, medium- and longer-term view. SO suggested that there is likely to be more data available for the short term as there will be more upstream gas and BBL reverse flow so asked if this would mean that CEPA could provide more detailed analysis for the short term. LH responded to clarify that the inputs and outputs would be the same for all 3 gas years.

There was general support that these were appropriate gas years for the modelling.

Two of the Future Energy Scenarios are used – 2 degrees and Steady Progression.

GJ asked how historical entry capacity bookings are treated (i.e existing contracts), seeking clarification on whether there is an assumption that existing contracts are used first.

LH explained that this only applies in the tariff model as flows in the gas market model would use flows already netted off so whether an existing contract is held would not be relevant.

Nick Wye (NW) gave the example of Bacton where there is a lot of capacity contracts. LH reaffirmed that where there are existing contracts in place regardless of whether the holder releases the gas to market, the model takes this into account as netted off.

NW suggested that within the tariff model total flows would need to be netted off against total bookings on a point specific basis. JC added that in some scenarios like Bacton existing contracts exceed flows.

In response to a question from Graham Jack (GJ) about whether the allowed revenue is constant, LH confirmed that the allowed revenue set out in the business plans for RIIO-2 is followed for 2022/23 and then after this period it remains constant.

LH then explained the grouping of the Modifications for the purposes of the modelling, stating that CEPA have, where possible, looked for opportunities to consolidate the analysis. In summary the majority of the modifications will be considered independently with the exception of those with storage and CWD elements and also the surrender option (0678F).

- Modifications assessed independently – 0678, 0678A, 0678B, 0678C and 0678I
- Modifications grouped – 0678E and 0679F
- Modifications grouped – 0678D and 0678G
- Modifications grouped – 0678J and 0678H
- 0678G is assessed qualitatively against 0678D
- 0678H is assessed qualitatively against 0678J

A brief discussion then took place on how the short-haul tariff would be considered. LH clarified that CEPA are considering whether the short-haul tariffs would be cheaper for certain routes. CEPA are developing the gas and electricity models to take account of short-haul routes. They have been provided with the currently used routes by National Grid.

HK raised a concern that the impact assessment could potentially be skewed if new short-haul routes are not considered. LH responded to say that while they are not incorporated in the modelling at the moment that if it was considered necessary and there was evidence of how they might be used and why, then they could be considered separately. He reiterated that short-haul routes considered are limited to those currently utilised for transparency.

JC asked if there was the potential to assess by-pass for those modification without a shorthau tariff. LH said that this would be subject to appropriate data being available and this is something CEPA would like to explore. A brief discussion took place on how data may be acquired. David O'Neill (DON) indicated that some qualitative data has been provided by stakeholders and shared with CEPA. JC reiterated that according to Energy UK's calculations, up to 10% allowed revenue could be lost.

GJ also asked if there will be a broader consideration of by-pass particularly in relation to flows to the continent rather than the GB market. For example, if Norwegian gas does not flow to the UK because the cost of entry is deemed too high but rather flows to the rest of Europe. LH suggested that short-haul routes in the gas market model will be able to address this.

Bill Reed (BR) asked if the impact on GB electricity capacity market clearing prices will be considered. LH confirmed that this is not included in the modelling. DON suggested that the qualitative assessment could look at this.

In terms of consumer welfare consideration, GJ asked if this was limited to GB and suggested that consideration of consumer welfare in Ireland might also be measured.

LH confirmed that the tariff impacts for storage and interconnector groups would be considered individually and together and the distribution impacts on a broader basis.

A discussion then took place on the key assumptions used for the modelling. HK challenged whether the assumption in relation to Shippers maintaining the proportion of interruptible capacity bookings is appropriate given that under the new Modifications the discount for interruptible is almost completely removed. He suggested that it is debatable to keep the weighted proportion of interruptible and firm product capacity bookings to reflect existing proportion when it is currently free. LH agreed that it is not the perfect assumption but considered it to be the most defensible.

Nick Wye suggested using for example 10% for interruptible across all scenarios but LH challenged this saying that CEPA would then have to have a rationale for why 10% was used and not a different percentage.

LH suggested that non-zero priced interruptible figures are being used and agreed to confirm this following the meeting.

**New Action 0903:** CEPA (LH) to confirm that non-zero price interruptible figures are being used in the modelling.

In response to a question from GJ, LH confirmed that there is no intention to undertake sensitivity analysis on disruptors (e.g. the need to compensate for forecast errors becoming apparent halfway through the year) in terms of impact on markets and charges.

NW asked what the key differences are between the CEPA modelling and that undertaken by Baringa previously for Modification 0621. LH explained that one key difference is endogenous calculation of power station demand and the assumption of power station demand bookings being equal to flows applied to the status quo.

Chris Wright (CWr) asked what the qualitative analysis will cover and where the emphasis will be placed. LH suggested that the qualitative analysis will be used to support the quantitative analysis and provide additional information of trends, for example, in relation to security of supply data. Another aspect might be the two modifications mot specifically modelled. He added that Ofgem would also undertake their own qualitative analysis. DON echoed the importance of qualitative analysis confirming that the decision is unlikely to be made solely on the basis of quantitative analysis.

JC asked if there were any plans to model the effect on electricity capacity market clearing prices. LH suggested that this would be worthwhile but challenging to do. He added that the robustness and reliability of the modelling needs to be taken into account. DON added that there may be some qualitative consideration of that.

LH concluded his presentation by confirming the modelling for Modification 0686. He said that it uses the same assumptions, inputs and models with the incorporation of short-haul in the market model.

In terms of the timetable, DON confirmed that Ofgem will publish the 0678 and alternative modifications impact assessment for consultation together with a ‘minded to’ decision by end December 2019. The consultation duration will be 2 months as required by Article 26 of EU TAR NC.

He also indicated that the Legal analysis for Modification 0686 currently appears to be relatively straightforward which may mean that Ofgem are in a position to make a determination on 0686 earlier than Modification 0678 and its alternatives but there is no guarantee of this.

Finally, DON confirmed that the implementation date will not be October 2019. He added that the ‘minded to’ decision will confirm the implementation date. He also confirmed that Article 26 does not apply to Modification 0686 so compliance checks are not necessary.

RH thanked LH for attending the meeting and providing an overview of the modelling to be undertaken as part of the impact assessment. As CEPA would not be attending a further meeting, LH agreed to provide a post-meeting summary to provide responses to the actions raised during discussion of this agenda item.

**Post Meeting Update**

**Action 0901:** CEPA (LH) to provide a description/definition of social welfare.

**CEPA Update:** The objective of the market model is to meet daily gas demand at minimum cost. Under our assumption that markets are perfectly competitive and costs are non-decreasing while demand curves are downward sloping, the existence of this solution maximises social welfare. I.e. demand is met at minimum cost.

**Action 0902:** CEPA (LH) to confirm if the flows in the gas market model are annual or daily for gas fired power stations.

**CEPA Update:** The market model calculates flows at daily granularity.

**Action 0903:** CEPA (LH) to confirm that non-zero price interruptible figures are being used in the modelling.

**CEPA Update:** We assume a continuing proportion of interruptible to firm contracts (including both zero and non-zero priced bookings). A summary of our rationale is presented below.

We need to make an assumption regarding the proportion of interruptible to firm bookings going forward under the status quo and the mod alternatives. On the one hand, the reduction of the discount for interruptible contracts would suggest lower use of interruptible bookings under the alternatives relative to the status quo. On the other hand, given that the daily product will no longer include a discount, a proportion of shippers may shift bookings from the daily to interruptible product to benefit from the discount (particularly with steady/declining demand). In addition, under the status quo, auctions for interruptible contracts may result in zero-priced bookings even under relatively high demand for the product. A (potentially substantial) proportion of these interruptible bookings may continue to be made, even if a smaller discount is introduced.

The trend is difficult to forecast and is likely to be different at each entry and exit point. On balance, we therefore consider the most appropriate and transparent assumption to be a continuation of the existing proportion of interruptible contracts (including zero and non-zero priced).

This assumption will be applied consistently to all mod alternatives and to the status quo. Where potential effects on booking behaviour resulting from the change to interruptible contract pricing may be relevant to the impact assessment of the mods, we will comment on these effects qualitatively.

**3. RIIO-T2 Business Plan proposals, including potential incentive and tariff impacts (incl. Action 0704)**

Jenny Phillips (JP) provided a walkthrough of the presentation provided for the meeting which also addresses Action 0704. The purpose of the presentation was to give an indication of how tariffs may change in RIIO-2 based on the July draft business plan.

JP described the engagement exercise undertaken by National Grid to create a stakeholder led draft business plan taking into account consumer and stakeholder priorities. She highlighted that it has been the largest ever engagement exercise undertaken by National Grid with over 500 stakeholders, over 3000 domestic consumers and over 1000 major energy users. She added that feedback has also been provided from an Ofgem challenge group.

She stated that the first draft business plan was published in July 2019 and includes 3 key priorities:

- Maintaining a safe and resilient network
- Delivering an environmentally sustainable network
- Meeting the needs of consumers and network users.

GJ asked if there were any tensions in the context of priorities within gas and electricity in developing the plan. JP indicated that there was broad agreement with recognition that gas sector has a part to play to deliver Net Zero carbon emissions by 2050. GJ expressed concern that there could be marginalisation of gas in a potential solution.

In terms of the third priority, meeting the needs of consumers and network users, JP indicated that National Grid have responded to the challenge from Ofgem. She added that these groups are difficult to reach, and National Grid have engaged consultants to help and the October draft business plan will include feedback from engagement with these groups.

JP then showed slide 6 illustrating a summary of the total spend (£3bn) to meet stakeholder requirements, highlighting that the key cost driver is managing an ageing network with many assets at the end of their design life, protecting the transmission system from cyber threats and timely delivery of emissions legislation compliance. She clarified that the costs are total expenditure (TOTEX).

In terms of the timeline she reiterated that the draft business plan was submitted in July with a further draft iteration to be provided in October. The final business plan will be submitted on 09 December 2019.

JC asked how the Ofgem consultation on St Fergus and Hatton Needs Case[1] fits in with the business plan. JP explained that the outcome of the Ofgem decision on RIIO-1 price control reopeners (May 2018) provided no allowance for St Fergus and in the case of Hatton, Ofgem recognised the need but considered the solution to be uneconomic. JC also asked what type of input are Ofgem seeking from industry. DON suggested that the best contact would be the RIIO team within Ofgem and contact details will be within the consultation document.

<u>Allowed revenue and tariffs</u>

JP explained that TOTEX funding is not directly translatable to allowed revenue. Slide 9 provides an illustration of the constituent parts of allowed revenue as:

- Cost of running and operating the network and investment in network capability (50%)
- Funding the network (20%)
- Past investments in the network (20%)
- Rates and licence fees (10%).

She added that there is no decision yet on the charging revenue.

HK asked if the proposal to change the depreciation period from 40 to 25 years is in relation to new investment or also past investment.

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| **New Action 0904:** National Grid (JP) to provide more information in relation to the proposal to change the depreciation period from 40 to 25 years. In particular, to confirm the background to the decision and whether it applies to new or past investment. |

[1] https://www.ofgem.gov.uk/publications-and-updates/st-fergus-and-hatton-needs-case-consultation

The following comments were made in discussion:

a. Workgroup participants were keen to understand the drive to accelerate depreciation of gas assets and also the implications for knock-on costs to Suppliers and Shippers.
b. Would a move to a Hydrogen only network lead to more hydraulic use?
c. One Workgroup participant suggested that if tariffs go up this could disincentivise the future use of the network.
d. There was a suggestion that power stations may close as they would be too costly to run.
e. One Workgroup participant suggested that National Grid are not confident in the future use of the National Grid network.

A brief discussion took place on slide 10 illustrating the potential changes to tariffs due to RIIO-2. The allowed revenue stream forecast is broadly flat from the RIIO-1 average to 2025/26. The total revenue average at RIIO-1 is 1.05 and at 2025/26 it is 1.04.

BR asked what the cost is per User/customer.  CWi explained that the costs will vary depending on a number of factors including access requirements, interruptible and short-haul. BR suggested it would be helpful to understand the present data in terms of the interaction of charges against the number of customers. BR also suggested it would helpful to understand the impact on user costs when demand is falling.

LJ reported that some work has been done to consider RIIO-T2 revenues and tariffs in the context of 0678 Modifications and allowed revenue to understand the impact on charges.  The assumptions and details of the capacity calculation are set out in slides 11 and 12.

Indicative Capacity Reserve Prices – Entry and Exit

JP then provided a quick overview of slide 15 showing the illustrated entry capacity prices under T2 base revenues at beach terminals before considering slide 16 showing the percentage difference in entry charges.

A brief Workgroup discussion took place to understand the change from 2020/21 to 2021/22 as the drop was equivalent to 14%.

**New Action 0905:**  National Grid (JP) to provide an explanation of why there is a 14% drop in entry charges between RIIO-1 and the 1st year of RIIO-2.

A similar discussion took place in relation to exit charges (slide 18). LJ highlighted that entry charges include the treatment of existing contracts which have both a revenue and a volume impact in the calculation of tariffs whilst exit charges do not include existing contracts.

JP summed-up her presentation by stating that she had provided an indication of how tariffs might changes in the context of RIIO-2.  She added that there is no data on the risk of constraints but acknowledged that this is a question that National Grid needs to consider.

## 4. Forecasted Contracted Capacity (FCC) Review Update

CWi confirmed that there was no update for the meeting.  A brief discussion was had on the status of the FCC Methodology Issues log which is available here: ( http://www.gasgovernance.co.uk/ntscmf/300719).  JC asked for an update on the list of issues she had previously provided. CWi explained that responses had been included in the status summary (Column H) of the spreadsheet.  It was agreed that discussion of the issues log should be included with future agendas. In the meantime, Workgroup participants were asked to forward any further questions in relation to the issues log for discussion at the next meeting.

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| **New Action 0906:** Workgroup to forward to National Grid any further issues related to the FCC methodology for inclusion on the issues log and discussion at the October meeting. |

BR raised a concern about the review process for FCC and asked whether it will be formalised as well as what process will be followed to resolve the questions/issues identified in the issues log as the current process appears to be dormant. He also questioned why the topic was included for discussion on the agenda for the meeting.

In response, CWi briefly explained the background as to why FCC is included on the agenda. In addition, RH clarified that until there is a formal change to the charging methodology, discussions are on a theoretical basis. At the point when the methodology is confirmed, National Grid will be expected to put in place a more formal review process.

She reiterated that agenda items 4.0 and 5.0 are standing agenda items.

## 5. Update on Long Term Revenue Forecasts

CWi explained that this was covered as part of agenda item 3.0. The next forecast update will be available in either November or December. In the meantime, any questions related to long term revenue forecasts can be sent to either the team that produces the forecasts (box.transmissioncapacityandcharging@nationalgrid.com) or to Laura Johnson and/or Dan Hisgett.

## 6. Workgroups

### 6.1. 0670R - Review of the charging methodology to avoid the inefficient bypass of the NTS

(Report to Panel 15 August 2019)
http://www.gasgovernance.co.uk/0670

## 7. Issues

None.

## 8. Review of Outstanding Action(s)

**Action 0704:** National Grid (CWi) to provide an update on the potential tariff implications based on the RIIO-2 business plan at the 03 September meeting.
**Update:** This action was addressed as part of agenda item 3.0. **Closed**

## 9. Any Other Business

None.

## 10. Diary Planning

*Further details of planned meetings are available at: https://www.gasgovernance.co.uk/events-calendar/month*

**Post Meeting Update**

Due to the predicted lack of discussion material it has been decided to conduct the next meeting on 01 October via teleconference.

| Time / Date | Venue | Workgroup Programme |
|---|---|---|
| 10:00 Tuesday 01 October 2019 | Teleconference | Standard Workgroup Agenda |
| 10:00 Tuesday 05 November 2019 | Radcliffe House, Blenheim Court Warwick Road | Standard Workgroup Agenda |

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| | Solihull<br>B91 2AA | |
| 10:00 Tuesday<br>03 December 2019 | Elexon, 350 Euston Road,<br>London NW1 3AW | Standard Workgroup Agenda |

**Action Table as at 03 September 2019**

| Action Ref | Meeting Date(s) | Minute Ref | Action | Owner | Status Update |
|---|---|---|---|---|---|
| 0704 | 30/07/19 | 3.0 | National Grid (CWi) to provide an update on the potential tariff implications based on the RIIO-2 business plan at the 03 September meeting. | National Grid (CWi) | **Closed** |
| 0901 | 0309/19 | 2.0 | CEPA (LH) to provide a description/definition of social welfare. | CEPA (LH) | **Pending** |
| 0902 | 0309/19 | 2.0 | CEPA (LH) to confirm if the flows in the gas market model are annual or daily for gas fired power stations. | CEPA (LH) | **Pending** |
| 0903 | 0309/19 | 2.0 | CEPA (LH) to confirm that non-zero price interruptible figures are being used in the modelling. | CEPA (LH) | **Pending** |
| 0904 | 0309/19 | 3.0 | National Grid (JP) to provide more information in relation to the proposal to change the depreciation period from 40 to 25 years. In particular, to confirm the background to the decision and whether it applies to new or past investment. | National Grid (JP) | **Pending** |
| 0905 | 0309/19 | 3.0 | National Grid (JP) to provide an explanation of why there is a 14% drop in entry charges between RIIO-1 and the 1st year of RIIO-2. | National Grid (JP) | **Pending** |
| 0906 | 0309/19 | 4.0 | Workgroup to forward to National Grid any further issues related to the FCC methodology for inclusion on the issues log and discussion at the October meeting. | ALL | **Pending** |