

# Gas Charging Review UNC0621

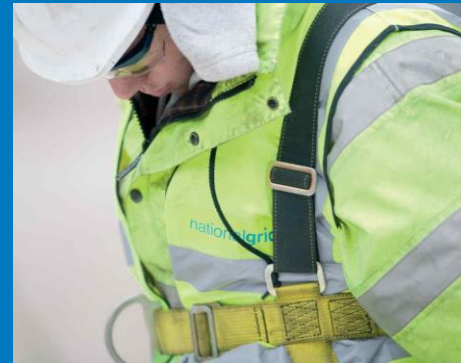


NTSCMF – 6 December  
UNC0621 Workgroup

# Agenda

Area	Detail
UNC Modification 0621 – updated draft for discussion	<ul style="list-style-type: none"> <li>• Review of latest draft</li> <li>• Including updates made post 22 November</li> </ul>
UNC Modification 0621 proposals	<ul style="list-style-type: none"> <li>• Updates on the proposals and rationale behind proposals and areas of discussion</li> <li>• Additional thinking and development on certain aspects</li> <li>• Focus on Transmission Services Revenue Recovery, Interruptible, Transition proposals, revenue recovery and application.</li> </ul>
Plan and GB/EU Consultation and change process	<ul style="list-style-type: none"> <li>• Impact Assessment – what should be included?               <ul style="list-style-type: none"> <li>• Requests received to date</li> </ul> </li> <li>• Planning and timescales</li> <li>• Licence consultation relating to EU TAR NC (2017/460)</li> </ul>
Next Steps	<ul style="list-style-type: none"> <li>• Next Steps for UNC0621</li> </ul>

## Gas Charging Review



UNC Modification 0621 –proposals  
Amendments to Gas Transmission Charging Regime

# Gas Charging Review:

## UNC0621 – Modification proposals

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- Updated draft of UNC0621 published on the 22 November workgroup pages for UNC0621 that made updates reflecting latest thinking

<https://www.gasgovernance.co.uk/0621/221117>

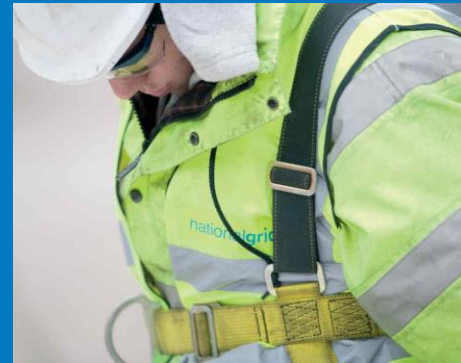
- Further updates have been made in an updated draft published on the 6 December workgroup pages for UNC0621 to advance some of the areas.

<https://www.gasgovernance.co.uk/0621/061217>

- These have been updated from the published UNC0621 available on the modifications page

<https://www.gasgovernance.co.uk/0621>

## Gas Charging Review



UNC Modification 0621 – updated draft  
Latest thinking, proposals and options for discussion

# Gas Charging Review:

## UNC0621 – Key topics and proposals

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- At recent NTSCMF meetings we have shared our updated thinking on the main aspects of the charging framework under review
- Further thoughts are provided in the following slides on the main topics including additional material for some including latest thinking ahead of final proposals in some cases
- It also focuses on certain areas that are not finalised to highlight the challenges, questions and options to address

# Gas Charging Review: Reference Price Methodology (RPM)

Area	Detail
Proposal in draft discussed on 13 October	<ul style="list-style-type: none"> <li>Capacity Weighted Distance for the methodology to calculate reference prices and subsequent reserve prices (through any applicable adjustments)</li> <li>Introduces updated (or floating) payable price for capacity for Entry and Exit at all points.</li> </ul>
Additional thinking for 6 December	<ul style="list-style-type: none"> <li>CWD remains the approach for the proposal</li> <li>Netting off the Existing Contracts and Interim Contracts* ensures that required target revenue is recovered across the targeted capacity (subject to FCC being updated over time)</li> <li>Transition package – potential changes for 2021 to adjust CWD generated charges to minimise any Transmission Services top up charge. See further discussion.</li> </ul>
Rationale for the proposal	<ul style="list-style-type: none"> <li>Moves to a methodology that provides greater stability, reduced volatility and better predictability for capacity charges</li> <li>Reflects more the use of the network given that the NTS is not in a state of continued expansion</li> <li>Extensive work undertaken to review impacts of changing the current LRMC approach and comparisons to a CWD approach</li> <li>CWD provided a simpler framework and also improvements in line with target objectives for the charging methodology and stakeholder developed objectives.</li> </ul>
Further Discussion	<ul style="list-style-type: none"> <li>Treatment of CWD generated zero prices – reviewing magnitude of use of alternatives to assess materiality and likelihood.</li> <li>Treatment of Existing Contracts and Interim Contracts and revenue recovery approach linked to revenue reconciliation charges.</li> <li>Transition package – For 2021 adjust CWD generated charges to minimise the recovery charge to being mostly the forecast/actual variance. This means any under recovery driven by any discounts would result in an adjustment to ex ante reserve prices.</li> </ul>

\*Interim Contracts - Long Term Entry capacity allocated after 6 April 2017 but before the date of the Ofgem direction to implement this Proposal.

# Gas Charging Review: Forecasted Contracted Capacity (FCC)

Area	Detail
Proposal in draft discussed on 13 October	<ul style="list-style-type: none"> <li>To use Obligated Capacity and transition to a forecast in the short term</li> <li>Have a transition arrangement to accommodate this change</li> </ul>
Additional thinking for 6 December	<ul style="list-style-type: none"> <li>Anticipate unpredictable capacity booking behaviours given the range of changes proposed under UNC0621.</li> <li>Revenue recovery and impacts on charges a concern to mitigate</li> <li>Believe move to an updated FCC linked to some evidence of behaviours is reasonable</li> <li>More certain proposals for transitioning FCC needed. Proposal to use obligated from October 2019 and using a National Grid generated forecast from October 2021.</li> </ul>
Rationale for the proposal	<ul style="list-style-type: none"> <li>Whilst accept that Obligated may not be the most appropriate to use, that to deliver the most cost reflective prices would require it to be based on a forecast of bookings, it is a reasonable starting point to be in keeping with objectives and deliver improved cost reflectivity in the short term.</li> <li>Moving from one framework to another, especially moving away from zero capacity prices, will drive unpredictable behavioural changes.</li> <li>Believe benefit from evidence of these changes post 2019 and in the short term move to a forecast of capacity bookings linked to this evidence.</li> </ul>
Further Discussion	<ul style="list-style-type: none"> <li>Zero CWD generated prices – other options besides using the nearest non-zero priced Entry or Exit Point’s reference price</li> <li>Compliance and Transition, how the impacts of FCC selection drives balance between capacity and commodity.</li> </ul>



# Gas Charging Review: Multipliers

Area	Detail
Proposal in draft discussed on 13 October	<ul style="list-style-type: none"> <li>To have a multiplier as a default, proposal was [1] and to be updated through a subsequent consultation</li> <li>Multipliers will not be 0, Calculated ex ante</li> </ul>
Additional thinking for 6 December	<ul style="list-style-type: none"> <li>More certainty for October 2019 needed.</li> <li>An ex ante value of 1 for all products eligible for a multiplier for October 2019.</li> <li>Multipliers more linked to driving behaviours than revenue recovery</li> <li>Provide flexibility to update in future years using appropriate governance.</li> </ul>
Rationale for the proposal	<ul style="list-style-type: none"> <li>A value of 1 places no preference between incentivising Long Term or Shorter Term Capacity bookings</li> <li>Do not want to have multipliers that put too much downward pressure on the capacity charges thereby driving recovery of revenues elsewhere into the methodology</li> <li>Generally with little scarcity of capacity, incentivising either Long term bookings or short term bookings for the purposes of signals for investment less necessary</li> <li>Gives those who book the choice of booking long or short term without any cost differential given choice of when to commit, with the same liability</li> <li>Provides framework to review and update this on an annual basis</li> </ul>
Further Discussion	<ul style="list-style-type: none"> <li>Timeline and method for updates beyond 2019</li> </ul>

# Interruptible

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- No change proposed to existing interruptible products just to the reserve prices for those products.
- Principle: application of a non-zero reserve price.
  - Existing products:
    - GB regime
      - Entry Interruptible
      - Exit Off-peak
  - IPs
    - Entry & Exit Interruptible

## TAR - Article 16

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- TAR requires the reserve prices for interruptible products at IPs to be calculated in line with the Article, as either:
  - a discount to the firm reserve price up front (**ex-ante**),or
  - compensation in the event of interruption (3 x reserve daily firm price) (**ex-post**).

## Proposal for Interruptible/Off-peak Reserve Price

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- 0621 proposes:
  - Discount based on ex-ante approach for all points (GB & IPs).
  - Discount = probability x adjustment factor expressed as %. Applied to the firm equivalent price.
  - The discount will be calculated separately for Entry and Exit using the same methodology.
  - The methodology currently results in a 10% discount for both Entry & Exit (based on 10% bands).
  - The level of discounts will be subject to annual consultation.

## Article 16 – Ex-Ante calculation Pro factor

$$\text{Pro} = \frac{N \times D_{\text{int}}}{D} \times \frac{\text{CAP}_{\text{av.int}}}{\text{CAP}}$$

we have historic quantities that we can use

This takes the Number of interruptions and considers the effect of duration and quantity.

Where:

N is the expectation of the number of interruptions over D; (represents the basis probability e.g. 3 occurrences in a year = 3/365)

D<sub>int</sub> is the average duration of the expected interruptions expressed in hours; (assumed worst case as whole day)

D is the total duration in hours of the respective type of standard interruptible capacity product; (whole day)

CAP<sub>av.int</sub> is, for each interruption, the expected average amount of interrupted capacity related to the respective type of standard interruptible product;

CAP is the total amount of interruptible capacity for the respective type of standard capacity product for interruptible capacity.

## Probability

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- Probability calculations (Entry & Exit)
  - A range of probability calculations have been conducted using historical data to inform predictions.
    - We have looked back over ten years and calculated a probability for the most problematic sites. Taken in isolation (i.e. worst sites on the worst years) they do not support a discount above 10%
  - As previously indicated the probability for the majority of sites is very low (but not zero in our opinion).
  - Hence our banding proposal.

## Adjustment factor

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- TAR allows for the application of an adjustment factor
  - It can be chosen to reflect economic value of product – value to all parties to be considered.
  - National Grid does not support the application of a high adjustment factor.
- Results sit within the predicted range of 0 -10% hence our proposal stands at 10% discount.

# Historic Scalebacks (Interruptible)

Entry Capacity			
Year	Number of scalebacks	Most frequent site Number of scalebacks	Pro factor (for that year alone for the most frequently interrupted site)
2007/8	34	9	0.012
2008/9	1	1	0.0009
2009/10	5	4	0.009
2010/11	26	25	0.04
2011/12	40	38	0.07
2012/13	8	5	0.0059
2013/14	0	Nil	nil
2014/15	0	Nil	nil
2015/16	0	Nil	nil
2016/17	5	2	0.0036
Exit Capacity			
Year			
2013/14	12	3	0.006



## Historic Buybacks (Firm)

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- Buybacks - since 2006 there have been none on Entry.
  - 2006 Aberdeen compressor issue
- Exit (since exit reform 2012) - 3 daily buybacks and 2 buyback contracts executed (2013) .
- All Information published in accordance with Licence condition: Procurement Guidelines Report.
  - <https://www.nationalgrid.com/uk/about-grid/how-we-are-regulated/gas-industry-compliance>

# Gas Charging Review: Interruptible/Off-peak

Area	Detail
<p>Proposal in draft discussed on 13 October</p>	<ul style="list-style-type: none"> <li>• Interruptible will be a discount from corresponding firm capacity product</li> <li>• To have an adjustment calculated through subsequent consultation</li> <li>• Interruptible adjustment will not allow zero reserve prices</li> <li>• Calculated ex ante, Single approach for all points</li> </ul>
<p>Additional thinking for 6 December</p>	<ul style="list-style-type: none"> <li>• To have an ex ante value in the proposal for October 2019 of 10% for Entry and Exit.</li> <li>• Beyond 2019, propose ranges (e.g. 10% bands) for adjustments linked to the outcome of the Interruptible calculation. Value linked to a probability of interruption and the 'A' factor. Likelihood of interruption is very low.</li> <li>• Banding provides stability in interruptible discount assuming interruption stays low providing certainty going forward.</li> </ul>
<p>Rationale for the proposal</p>	<ul style="list-style-type: none"> <li>• Acknowledge there is a probability of interruption even though it would likely be small. Would be subject to National Grid's forward view of interruption probability taking into account interruption to date. Therefore not zero for probability.</li> <li>• Can use the EU TAR NC framework for interruptible which would use a combination of the probability and an 'A' factor linked to the economic value associated to the interruptible capacity.</li> <li>• Use of ranges helps manage variances of resulting calculations.</li> </ul>
<p>Further Discussion</p>	<ul style="list-style-type: none"> <li>• Timeline and method for updates beyond 2019.</li> </ul>

# Gas Charging Review: Specific Capacity Discounts

Area	Detail
<p>Proposal in draft discussed on 13 October</p>	<ul style="list-style-type: none"> <li>Storage to receive 50% discount from the CWD generated capacity charge</li> <li>No other specific capacity discounts proposed</li> </ul>
<p>Additional thinking for 6 December</p>	<ul style="list-style-type: none"> <li>No change to proposed values for storage.</li> <li>Include other qualifying categories under TAR NC even if the proposed values would be zero (under this proposal) to allow for future changes as needed or beneficial to do so. (i.e. LNG introduced with 0% discount)</li> </ul>
<p>Rationale for the proposal</p>	<ul style="list-style-type: none"> <li>We have considered the positions put forward. On some areas we do not agree with the “value” attributed to certain categories and other aspects we understand the desire to consider in making a decision for a proposal however we do not believe we can address all of these as they are subject to the views of other industry participants.</li> <li>We have yet to hear many views in support of any discounts beyond our proposals for Storage and Interconnection (those parties who have formally provided representation to date).</li> <li>Mindful that any discounts have the potential to drive recovery of revenues elsewhere into the methodology</li> <li>Some criteria assessed against are better suited to consideration under an Impact Assessment</li> <li>Aligns with the minimum proposed under the TAR NC therefore ensuring compliance with the TAR NC</li> </ul>
<p>Further Discussion</p>	<ul style="list-style-type: none"> <li>Timeline and method for updates beyond 2019</li> </ul>

# Gas Charging Review: Avoiding Inefficient Bypass of the NTS

Area	Detail
Proposal in draft discussed on 13 October	<ul style="list-style-type: none"> <li>• Transmission Services only charge (no link to Non Transmission)</li> <li>• Methodology can be in the UNC, any formula can be outside to allow efficient update over time allowing components to be updated each year.</li> <li>• Use of a distance cap for use of the charge (initial value of [50km] placed in draft)</li> <li>• Recognise this must work with the overall methodology and framework both from October 2019 and with the Transition approach.</li> </ul>
Additional thinking for 6 December	<ul style="list-style-type: none"> <li>• As per 13 October plus some further work required to fully explore the options.</li> <li>• Exploring capacity or commodity as options to ensure can work with overall methodology, incorporating transition.</li> <li>• Use of distance cap still relevant to maintain the “short” nature. Reviewing what the distance cap should be.</li> </ul>
Rationale for the proposal	<ul style="list-style-type: none"> <li>• Given the size of the current charges not paid by shorthaul users and paid by non shorthaul users this is something in need of material change</li> <li>• Should be reviewed along with the rest of the methodology given the interaction with other charges</li> <li>• To be in keeping with the objectives of the charge being for “short” distances and not have a material influence on other charges</li> <li>• Should be a genuine alternative to investment.</li> </ul>
Further Discussion	<ul style="list-style-type: none"> <li>• Further development needed, based on the overall charge calculation framework.</li> <li>• There are issues with use of capacity or commodity and these need further development as the solution must work with the overall charging framework including links to transition arrangements and the timing of changes.</li> <li>• Consider changes for 2019 and 2021 and managing change whilst delivering 621.</li> </ul>

# Gas Charging Review: Transmission Services Revenue Recovery

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- The application of the Transmission Services Revenue Recovery charge is to help manage the anticipated under or over recovery for any given year.
- It should help mitigate the risk of carrying over significant under or over recoveries into subsequent years impacting charges.
- The size of the revenue to recover via this charge should reduce as the FCC is updated as per the Transition arrangements.
- There are a number of areas that need to be considered in the calculation and application of this charge for Transmission Services.

# General approach to Transmission Services Revenue Recovery

- Current UNC rules – reconciliation is received through the commodity charge.
- Mod 621 transition rule – reconciliation will continue to be through a commodity charge.
- Mod 621 enduring rule – reconciliation will be replaced with a commodity charge.
- General arrangements shown below. Specific applications to be discussed further in following slides.

	Current rules → Oct 2019	Mod 621 transition rule → Oct 2021	Mod 621 enduring rule →
Reconciliation	Commodity	Commodity	Capacity top up
Flow (entry & exit)	✓	✓	-
Historic* Entry Capacity	-	-	✓
New Capacity (entry & exit)	-	-	✓

*#Historic Capacity - Long Term capacity allocated before the date of the Ofgem direction to implement this Proposal. (this includes but is not limited to Existing Contracts as defined under TAR)*

## Application at Storage

- What is unique about storage under the current rules? Storage is the only type of site that currently has a TO reconciliation charge of zero.
- A continuation of this principle could continue for any capacity bought under the current (pre mod 621) rules, however for capacity bought under new (post mod 621) arrangements then reconciliation element could be applied.
- An alternative option for storage is summarized below.

	Current rules → Oct 2019	Mod 621 transition rule → Oct 2021	Mod 621 enduring rule →
Reconciliation	Commodity	Commodity	Capacity top up
Flow	0	0	-
Historic Entry Capacity	-	-	0
New Capacity (entry & exit)	-	-	✓

## Application at IPs (1 of 2)

- Art. 4 of TAR prevents the application of a commodity charge at IPs.
  - However this may not be relevant for existing capacity as article 35 creates an exemption from article 4.

	Current rules → Oct 2019	Mod 621 transition rule → Oct 2021	Mod 621 enduring rule →
Reconciliation	Commodity	Commodity	Capacity top up
Flow vs. Existing Capacity	✓	✓ (?)	-
Flow vs. all other capacity	✓	0	-
Historic Entry Capacity	-	-	✓
New Capacity (entry & exit)	-	-	✓

- A transition where flow is determined to be against a certain type of capacity is not a simple matter. Capacity tracking is required for any ‘secondary’ transaction (trading, surrenders, etc.) to determine the capacity affected. This becomes complicated both for commercial rules and for systems.



# Application for IPs (2 of 2)

■ Other options:

a) No commodity for transition

	Current rules → Oct 2019	Mod 621 transition rule → Oct 2021	Mod 621 enduring rule →
Reconciliation	Commodity	Commodity	Capacity top up
Flow	✓	0	-
Historic Entry Capacity	-	-	✓
New Capacity (entry & exit)	-	-	✓

b) Bring forward capacity top up for IPs only

	→ Oct 2019	→ Oct 2021	→
Reconciliation	Commodity	Commodity Cap. top up	Capacity top up
Flow vs. Existing Capacity	✓	✓	-
Historic Entry Capacity	-	-	✓
New Capacity (entry & exit)	-	-	✓

# Gas Charging Review: Transmission Services Revenue Recovery

Area	Detail
Proposal in draft discussed on 13 October	<ul style="list-style-type: none"> <li>Primarily managing Revenue Recovery through a flow based recovery charge</li> <li>Recovered across flows excluding storage flows (as flow based charges are currently)</li> </ul>
Conclusion from 22 November	<ul style="list-style-type: none"> <li>As part of the transition, we are supportive of transmission charges being wholly capacity based after a short period to manage the impacts of unpredictable behaviour changes for capacity bookings.</li> <li>Commodity from October 2019 with capacity as revenue recovery charge from October 2021.</li> <li>Expect to reduce in line with the transition for FCC under the CWD approach</li> </ul>
Additional thinking for 6 December	<ul style="list-style-type: none"> <li>Enduring rule to be applied includes the general application of a capacity top up charge on historic bookings.</li> <li>The application of a reconciliation charge at storage site should be mindful of the existing arrangements whereby the commodity charge is zero.</li> <li>The application of a commodity charge at IPs should be mindful of the restrictions under TAR article 4 and alternative arrangements should be considered.</li> </ul>
Rationale for the proposal	<ul style="list-style-type: none"> <li>Commodity provides an established way for managing revenue recovery compared to the expected unpredictable changes in capacity bookings</li> <li>Storage exemption avoids double counting flows</li> <li>Proposal must be TAR compliant.</li> </ul>
Further Discussion	<ul style="list-style-type: none"> <li>Options available for general rule; storage sites and IPs. Firm proposals to be brought in 2 weeks. Feedback on principles to be applied welcome.</li> <li>Application of commodity from 2019 and capacity from 2021 - Materiality of options to be assessed.</li> </ul>

# Gas Charging Review: Non Transmission Services Charging

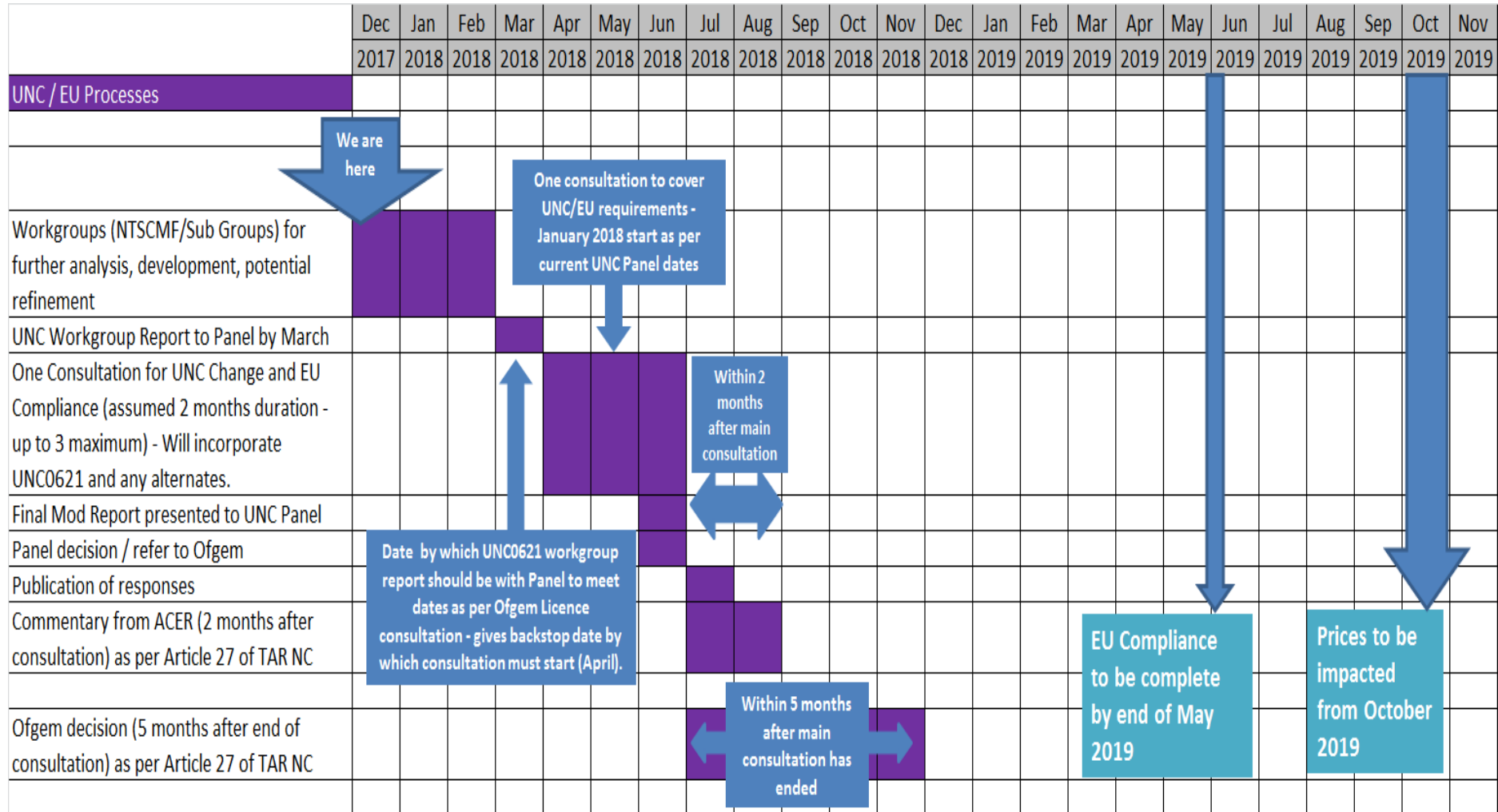
Area	Detail
Proposal in draft discussed on 13 October	<ul style="list-style-type: none"><li>• Primarily levied through a flow based recovery charge to recover revenues not anticipated to be collected from St Fergus Compression, DN Pensions and NTS Metering charges.</li><li>• Recovered across flows excluding storage flows (as flow based charges are currently)</li></ul>
Additional thinking for 6 December	<ul style="list-style-type: none"><li>• No change.</li></ul>
Rationale for the proposal	<ul style="list-style-type: none"><li>• Provides an established way for managing revenue recovery compared to the expected unpredictable changes in capacity bookings</li><li>• Storage exemption avoids double counting flows</li></ul>
Further Discussion	<ul style="list-style-type: none"><li>• Are there any further questions for Non Transmission Charging?</li></ul>

## Gas Charging Review



Plan and change process

# Gas Charging Review: Overview of potential Plan Timescales



# Gas Charging Review: Plan and Change process

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- UNC0621 and the EU requirements for consultation
- Discussed one consultation to be used for both based on the UNC0621 workgroup report incorporating any alternates
- Ofgem issued “Consultation on proposals to implement aspects of Regulation (EU) 2017/4601, the European Network Code on harmonised transmission tariff structures for gas (TAR NC)” on 4 October 2017, 7 responses received.
- Decisions on proposals and statutory consultation

[https://www.ofgem.gov.uk/system/files/docs/2017/12/decisions\\_and\\_statutory\\_consultation.pdf](https://www.ofgem.gov.uk/system/files/docs/2017/12/decisions_and_statutory_consultation.pdf)

- Responses due by 4 January 2018

# Gas Charging Review: Impact Assessment Questions (1)

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- At September, October and November NTSCMFs discussed providing input to help shape any impact assessment
- For any impact assessment, beneficial to capture thoughts on:
  - What should an Impact Assessment contain?
  - What impacts or analysis would parties like to see in an Impact Assessment?
  - What could be covered in UNC0621, if appropriate, that can support an impact assessment?

# Gas Charging Review: Impact Assessment Questions (2)

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- This is to help shape the Ofgem impact assessment
- Suggestions can be collated and shared to NTSCMF and to Ofgem with any relevant parts potentially included into UNC0621 analysis where appropriate
- Suggestions or requests should be sent to:  
[box.transmissioncapacityandcharging@nationalgrid.com](mailto:box.transmissioncapacityandcharging@nationalgrid.com)
- A summary of the requests to date are shown in the following slide

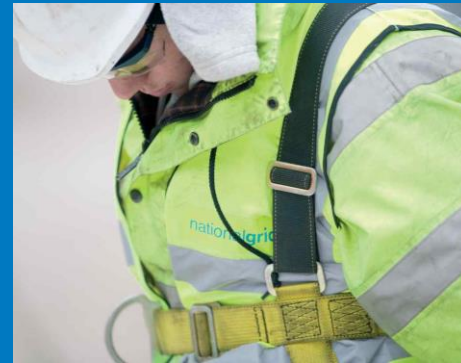


# Gas Charging Review: Impact Assessment - Requests to date

Impact Assessment – requests for what it could contain – some may fit within UNC0621 assessments, others will fit more with Ofgem’s impact assessment

- The Impact of Mod 621 and any alternates need to be assessed against the counterfactual of the current methodology.
- Intended and unintended consequences need to be identified
- Wherever possible the impacts should be quantified as transparently as possible
- The impact on the GB gas market in terms of:
  - NBP liquidity; including in relation to other hubs in NW Europe, especially TTF
  - GB competitiveness in relation to NW European markets
  - Wholesale prices, including volatility and risk of extreme prices
  - Wholesale market competition
  - Competition in supply
  - Attractiveness of GB as a destination for gas, within EU and globally
  - Security of Supply / price
- 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 and electricity market
- Impact on the SoS and on required network investment to pass N-1 test
- The impact on stakeholders by type, existing and new
- Cross market impacts with electricity; impact on electricity wholesale prices, capacity mechanism, balancing costs and any issues arising from different approaches to charging
- Cost allocation in context of cost reflectivity, and cost reflectivity in the context of Article 8 relevant flow scenarios
- Environmental impacts, if any?
- Regional impact of the cost re-distribution on customer bills
- The ability to accurately forecast costs
- Cost reflectivity
- The impacts of the level of K.

## Gas Charging Review



UNC0621 Modification  
Next Steps

# Gas Charging Review: UNC0621 Next Steps

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- Further development and refinement of UNC0621 with updates applied to future draft
- Updated draft to be shared ahead of, and discussed at, future workgroups for UNC0621
- Development and publication of updated charging models

## Contact us:

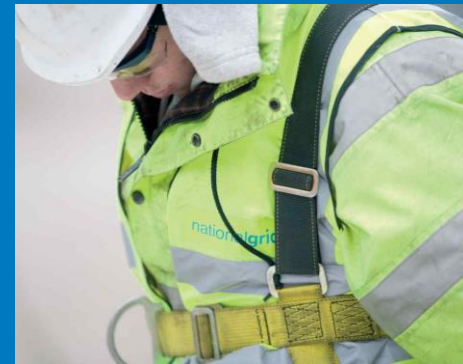
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