

Draft Modification Report

CMP353: Stabilising the Expansion Constant and non-specific Onshore Expansion Factors from 1st April 2021

Overview: To stabilise the locational signal at the start of the RIIO-2 period at the RIIO-1 value plus relevant inflation in each charging year until such time as the effect of any change in the locational signal can be better understood.

Modification process & timetable



Have 5 minutes? Read our [Executive summary](#)

Have 20 minutes? Read the full Draft Modification Report

Have 30 minutes? Read the full Draft Modification Report and annexes

Status summary: Draft Modification Report. This Report will be submitted to the CUSC Panel for them to carry out their Recommendation Vote on whether this change should happen.

This modification is expected to have a: high impact on all CUSC Users who pay TNUoS tariffs.

Governance route	The CUSC Panel unanimously agreed that this modification should proceed to Code Administrator Consultation. On 3 November 2020, the Authority approved that CMP353 should be treated as urgent .	
Who can I talk to about the change?	<p>Proposer: Grahame Neale, National Grid ESO</p> <p>grahame.neale@nationalgrideso.com</p> <p>Phone: 07787 261 242</p>	<p>Code Administrator: Paul Mullen</p> <p>Paul.i.mullen@nationalgrideso.com</p> <p>Phone: 07794 537 028</p>

Executive Summary

CMP353 seeks to stabilise the locational signal at the start of the RIIO-2 period at the RIIO-1 value plus relevant inflation in each charging year until such time as the effect of any change in the locational signal can be better understood.

What is the issue?

Unless action is taken there will be significant changes to the locational element of TNUoS tariffs as the Expansion Constant (EC) and some Expansion Factor (EF) values, which are based on investment costs in the previous price control will, because of the nature of those investments, be based on fewer and higher value projects than in previous price controls. This may not truly reflect the current drivers of network investment and will substantially change the locational costs for some Users.

What is the solution and when will it come into effect?

Proposers solution:

To change the relevant parts of Section 14 to allow the EC and non-specific Onshore EF (i.e. not HVDC or AC subsea factors) to be stabilised at the RIIO-1 value plus inflation of the EC as per the transmission licence. Further work can then take place during RIIO-2 to update the EC and relevant EF once analysis on their effects and suitability has been completed.

Implementation date:

1 April 2021. A decision is required by 2 December 2020 to allow tariff setting processes to take place ahead of 1 April 2021 Implementation.

What is the impact if this change is made?

This modification will have a high impact on all CUSC Users who pay TNUoS tariffs.

Interactions

CMP315¹

CMP315 is currently in process and being assessed by a Workgroup although it has not made significant progress in 2020 due to the prioritisation of other work. Similar subject matter is considered through this proposal and CMP315. However, we do not believe that these modifications fall within with the provisions around conflicting Modification Proposals within Section 8.16.6. This change is complimentary and could allow CMP315 or another modification proposal to consider a more enduring solution, alongside any further Modification Proposals if necessary, to the potential issues in the current calculation of the EC and EF.

Electricity Balancing Guideline (EBGL)

There is no interaction with EBGL Article 18 Terms and Conditions.

¹ <https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc-old/modifications/cmp315-tnuos>

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What is the issue?

Unless action is taken there will be significant changes to the locational element of TNUoS tariffs as the EC and some EF values which are based on investment costs in the previous price control will, because of the nature of those investments, be based on fewer and higher value projects than in previous price controls. This may not truly reflect the current drivers of network investment and will substantially change the locational costs for some Users.

Why change?

The Expansion Constant (EC) is an element of the TNUoS charging methodology that determines the £/MW/km value of 400kV Over Head Line (OHL). This then feeds into the other costs of assets within the model. The EC has a direct impact on the locational signal that Generators and Suppliers face both through establishing the cost of 400kV OHL and the corresponding Expansion Factors (EFs) that relate to other asset types. It is set at the start of each price control period where it is re-assessed based on projects built in the last ten years and then inflated each year by RPI. The EC forms an integral part of the methodology which will set draft and final TNUoS tariffs in this November and January respectively, applying to customers from April 2021.

Due to the lower number of built projects in RIIO-1 and the relatively high value of these in comparison to the projects in previous price controls, the EC and EFs have increased significantly. The RIIO-1 uplifted EC value used in the calculation of the 2020/21 tariffs was set at £14.93/MW/km, whereas based on the current data received from NGET and SPT, the RIIO-2 EC value has been calculated at £27.38/MW/km for 2021/22, an increase of 83%. This data also feeds into the process that sets the EFs used to calculate the costs of other assets within the model. **Although the overall amount of revenue collected from Users will remain the same, the locational element of the charges will be significantly affected. This will present a cost shock to certain parties with little advance notice of the effects it will have on them.**

Examples of these changes based on the current forecasted RIIO-2 EC & EFs on hypothetical customers are shown below. Note that these are a guide of the potential change, as work is ongoing with the Transmission Owners (TOs) to collate the outstanding data for the calculation and to also validate the numbers provided to date by the TOs:

Generation

- 100MW generic intermittent generator in North Scotland (zone 1) would see a 62% increase in TNUoS charges from £2.7m to £4.3m
- 100MW generic conventional carbon generator in Essex and Kent (zone 24) would see a 471% increase in their TNUoS credit payment from £127k to £730k
- 30MW generic embedded generator in Eastern (zone 9) would see a 65% increase in the embedded benefit payment from £112k to £184k

Demand - *note the ratio of impact is the same across zones for Half Hourly (HH) and Non Half Hourly (NHH) tariffs*

- 10MW HH demand in Northern Scotland (zone 1) would see their charge reduce from £150k to zero
- 5MWh NHH demand in Southern (zone 13) would see their charge increase by 10% from £340 to £374

Annex 4 includes a number of hypothetical examples showing the potential impact to customers of the current RIIO-2 EC (and EFs) per zone².

The table below demonstrates the minimal change between the total TNUoS revenue recovery of generation and demand in 2021-22 highlighting that this is predominantly related to the locational signal for Users.

2021-22 Forecast Revenue (£m)	Total Demand Recovery	Total Generation Recovery
<i>RIIO-1 Uplifted</i>	2222.2	826.4
<i>Current RIIO-2*</i>	2213.9	834.7
<i>Variance</i>	(8.3)	8.3
<i>Variance %</i>	0%	1%

* Based on initial data received by TO's related to the calculation of the update EC&F as part of the RIIO-2 parameter refresh

Data received from the Transmission Owners (TOs)

In accordance with STCP (14 – 1.3.3), the ESO sent out the data request for the calculation of the EC and EF in 2019 with the intention of updating the EC and EF in the March TNUoS forecast publication for the 2021/22 tariffs.

Initial data was received from NGET and SPT in July 2019. Due to the uncertainty within a number of ongoing CUSC modifications, the timescale of RIIO-2 Draft Determinations and the lack of a full data set from the TOs, the ESO consulted the industry in January 2020 regarding the TNUoS forecast timetable for 2021/22 proposing that the RIIO-2 data items (including the EC and the EF) not be updated in the forecast until the 5 year version was produced in August 2020³.

Following this consultation, the ESO published the timetable and confirmed that the 5 year view of TNUoS tariffs for the RIIO2 period would be published in August 2020 and we confirmed the approach in our March tariff forecast⁴. During the preparation of the 5 year view, the EC and EF was re-calculated using the data from NGET and SPT which led to the significant increase from the current value. The initial data from SHETL for the EC and

² Note – series '2021/22' is base case (Existing uplifted RIIO-1 EC & F's), '2021/22 Updated EC&F' is based on the current calculation (16/10/20) of the RIIO-2 EC&F's.

³ <https://www.nationalgrideso.com/document/162406/download>

⁴ <https://www.nationalgrideso.com/document/166761/download>

EF calculation was received on the 23 October 2020. Data validation processes are still being progressed with SHETL at this time, but the initial analysis based on all three onshore TOs' data suggests a similar level or even further increase in EC and EF compared to the RIIO-1 values.

The ESO took this issue to the Transmission Charging Methodology Forum (TCMF) in September 2020⁵ where they received substantial feedback on the unwelcome volatility that using the approach to setting the current EC would create. The ESO agreed with TCMF to consider obtaining different/revised data from the TOs; however, that process has to date not led to a significant difference in the outcome of the EC and EF calculations.

Discussions with Ofgem and the industry suggest that it is not certain that this effect on the locational signal is appropriate and that more time to analyse it and determine whether to implement it would be beneficial. Therefore, the ESO considers that continuing with the current EC value whilst allowing further work to be done to review and potentially change it if necessary in RIIO-2 is an appropriate way forward. For clarity, this modification is not looking to change the intent of the EC but to provide a temporary solution until an appropriate EC for RIIO-2 can be calculated and applied.

What is the solution?

Proposer's solution:

Allow the EC and non-specific Onshore EF (i.e. not HVDC or AC subsea factors) to be stabilised at the RIIO-1 value plus inflation of the EC as per the transmission licence.

Further work can then take place during RIIO-2 to update the EC and relevant EF once analysis on their effects and suitability has been completed.

Legal text

The legal text for this change can be found below. 2 new paragraphs will be inserted:

- 14.15.69A Notwithstanding Paragraph 14.15.69 from the first year of (and during) the T2 price control (which starts on 1st April 2021), until a further change is made, the EC will be that used in the 2020/21 charging year inflated in accordance with RPI as per paragraph 14.15.69 and plus inflation as defined in the Transmission Licence for each subsequent year of the T2 price control.
- **Onshore Expansion Factors in RIIO-T2**
14.15.79A Notwithstanding Paragraph 14.15.69, the previous paragraphs and following the same intent as adopted at Paragraph 14.15.69A, from the first year of (and during) the T2 price control (which starts on 1st April 2021), until a further change is made, the Onshore expansion factors (being the Onshore local circuit factors and the Onshore wider circuit expansion factors, except those used for HVDC circuits and sub-sea AC cable) will be the value used in the 2020/21 charging

⁵ <https://www.nationalgrideso.com/document/176141/download>

year. For clarity HVDC circuits and sub-sea AC cable will continue to be calculated in accordance with 14.15.75.

2 changes were proposed to the legal text as part of the responses to the Code Administrator Consultation. These are set out in the “Code Administrator Consultation Summary”. These will be presented to the CUSC Panel on 24 November 2020 for their consideration.

What is the impact of this change?

Impact of the modification on the stakeholder / consumer benefit categories	
Proposer’s assessment:	
Stakeholder / consumer benefit categories	Identified impact
Improved safety and reliability of the system	Positive: Cost shocks to certain Generators may lead to closure reducing margin and potentially affecting system operation.
Lower bills than would otherwise be the case	Positive: Uncertainty in TNUoS tariffs may cause Generators to apply risk premia in their contracts with Suppliers. Reducing this should lead to lower costs to consumers.
Benefits for society as a whole	None
Reduced environmental damage	None
Improved quality of service	None

Code Administrator Consultation Summary

The Code Administrator Consultation was issued on the 5 November 2020 and closed at 2pm on 19 November 2020. 25 responses were received with all of these being non-confidential. A summary of these responses can be found in Annex 5 and the full responses can be found in Annex 6. In summary:

- 23 out of 25 respondents are supportive of CMP353.
- There were concerns expressed on the amount of change to TNUoS and the piecemeal nature of such change and a general plea for a wider review of the methodology.
- Respondents noted concerns with the current Transmission Owner to ESO data provision process (content and timing) and the short notice to industry of the outcome following application of these processes.
- Respondents highlighted a general concern on the detrimental impact on renewable developers particularly in Scotland (and the resulting impact on net zero) if CMP353 is not approved and the wider methodology reviewed.
- 2 respondents proposed changes to the legal text. These are:

- There is a minor typographical error within the legal text where EC was used in the proposal instead of the full Expansion Constant term that will be needed for the legal text to be inserted into the CUSC (**ESO**); and
- Believe that the “inflation wording in 14.15.69 could be made clearer” and current wording “suggests a double inflation adjustment (**Statkraft**). The respondent suggested wording to provide this clarity.

CUSC Panel on 24 November 2020 will be asked to consider these changes and agree next steps. The Code Administrator consider that these changes are typographical. Options for CUSC Panel are to:

- Agree that these changes are typographical and ask that legal text be amended prior to sending the Final Modification Report to Ofgem; or
- Agree that some or all of these changes are not needed; or
- Instruct the Code Administrator to issue a further Code Administrator Consultation focusing specifically on these legal text changes.

When will this change take place?

Implementation date:

1 April 2021

Date decision required by:

2 December 2020 to allow tariff setting processes to take place.

Implementation approach:

Tariff setting processes will need to change and potentially be updated.

Acronyms, key terms and reference material

Acronym / key term	Meaning
Baseline	The code/standard as it is currently
EBGL	Electricity Balancing Guideline
EC	Expansion Constant
EET	Embedded Export Tariffs (Embedded Generation)
EF	Expansion Factor
EFs	Expansion Factors
HH	Half Hourly
NHH	Non Half Hourly
OHL	Overhead Line
RIO-1	The first RIO price control period (2013-2021)
RIO-2	The second RIO price control period (2021-2026)
RPI	Retail Price Index
TNUoS	Transmission Network Use of System

Reference material:

None

Annexes

Annex	Information
Annex 1	CMP353 Proposal Form
Annex 2	CMP353 Urgency Letter to Ofgem
Annex 3	CMP353 Ofgem decision on Urgency
Annex 4	Hypothetical examples showing the potential impact to customers of the current RIO-2 EC (and EFs) per zone
Annex 5	Code Administrator Consultation Summary
Annex 6	Code Administrator Consultation Responses