CMP411: Introduction of Anticipatory Investment (AI) within the Section 14 charging methodologies.

23 May 2023 10am

Online Meeting via Teams

ESO

Objectives

Claire Goult – ESO Code Administrator

Timeline

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Timeline for CMP411 – Updated 19 May 2023

Milestone	Date	Milestone	Date
Modification presented to Panel	24 February 2023	Code Administrator Consultation (15 working days)	29 August 2023 to 19 September 2023
Workgroup Nominations (15 Working Days)	27 February 2023 to 20 March 2023 (5pm)	Draft Final Modification Report (DFMR) issued to Panel (5 working days)	21 September 2023
Workgroups 1 – 4 – process and mod understanding including scope, agree timeline and terms of reference (Workgroup 1) and step through terms of reference, analysis and develop Workgroup Consultation (Workgroups 3 and 4)	3 April 2023, 24 April 2023 and 23 May 2023 , 8 June (2.30-4.30pm)	Panel undertake DFMR recommendation vote	29 September 2023
Workgroup Consultation (15 working days)	16 June 2023 to 7 July 2023 (5pm)	Final Modification Report issued to Panel to check votes recorded correctly	3 October 2023
Workgroups 5 - 7 – review Workgroup Consultation responses, finalise solution(s) and legal text (including alternatives), finalise Workgroup Report and ensure Terms of reference met, hold Workgroup Vote	17 July 2023, 24 July 2023 and 11 August 2023	Final Modification Report issued to Ofgem	11 October 2023
Workgroup report issued to Panel (5 working days)	17 August 2023	Ofgem decision	Requested by 31 March 2024
Panel sign off that Workgroup Report has met its Terms of Reference	25 August 2023	Implementation Date	1 April 2025

Workgroup questions update

Nitin Prajapati - Proposer

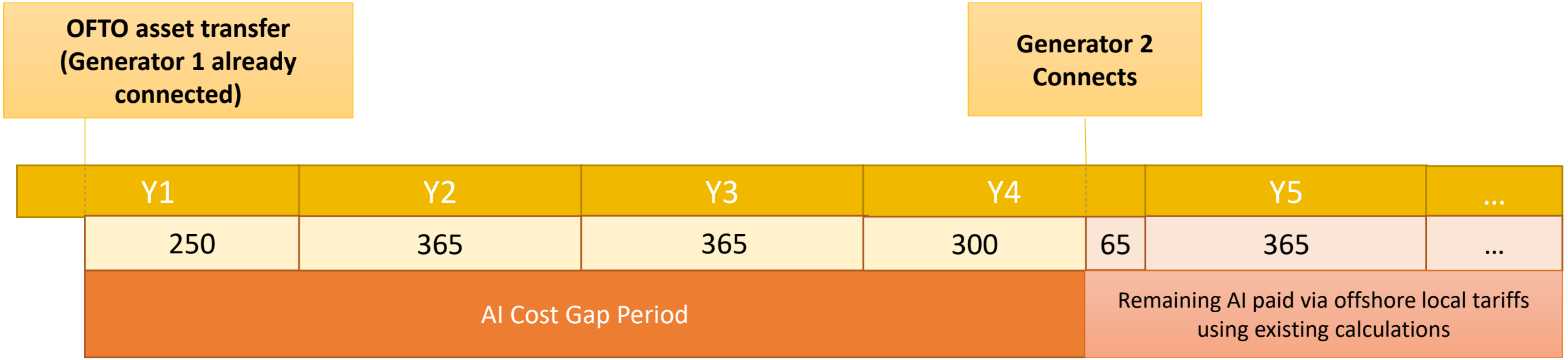
AI Cost Gap Recovery – Worked example

Sarah Chleboun – National Grid ESO

AI Cost Gap Recovery – Worked Example

Identifying the AI Cost Gap Period

- In this example there are 2 generators involved in a project and one connects after the OFTO asset transfer, meaning there was Anticipatory Investment for the 2nd generator.
- The total capital costs are £500m
- Ofgem tells us the value that forms the AI share of the capital costs is £200m, i.e. 40% of the capital costs.
- This means that 40% of any OFTO revenue to be collected is AI.



AI Cost Gap Period = 250 + 365 + 365 + 300 = 1280 days

AI Cost Gap Recovery

Identifying the value of the AI Cost Gap

- AI Cost Gap = 40% OFTO Revenue for the relevant period
- Assumption: Inflation for each year is 3%

Year	Year 1	Year 2	Year 3	Year 4
Total OFTO Revenue for Year i	£10m	£15m	£15m	£15m
AI Cost Gap (in Year i price base)	£4m	£6m	£6m	£5m
AI Cost Gap (in Year 4 price base – to 3dp)	£4m x 1.03^3	£6m x 1.03^2	£6m x 1.03^1	£5m
	£4.371m	**6.365m**	**6.180m**	**£5m**

- At the time of tariff calculation the value of the AI cost gap is:

AI Cost Gap = £4.371m + £6.365m + £6.180m + £5m = £21.916m (to 3dp)

Calculating the AI Cost Gap Tariff

Calculating the AI Cost Gap Tariff – The Theory

- The AI Cost Gap Tariff (expressed in £/kW) shall be the ratio of the AI Cost Gap that the subsequent generator/s is liable to pay in the relevant year (£) and the Transmission Entry Capacity (TEC) in kW of the subsequent generator/s:

$$AI\ Cost\ Gap\ Tariff\ for\ Generator\ i = \frac{n \times AI\ Cost\ Gap}{N\ \times\ TEC_i}$$

- Where:
  - TEC_i = Transmission Entry Capacity of generator i in kW
  - n = number of days remaining in the year over which the tariff is to be paid
  - N = total number of days over which the tariff is applicable

- This calculation shall be used for the initial partial year in which the subsequent generator connects (if applicable) and the first full charging year. For each subsequent year that the tariff is applicable for after the year of calculation, the AI Cost Gap Tariff shall be inflated in the same manner as the associated Offshore Transmission Owner Revenue.

Calculating the AI Cost Gap Tariff

For this example:

- AI Cost Gap Period = 1280 days
- Length of initial part year of payment = 65 days
- Total Length of period to pay over = 1525 days (this is 65 days + 4 whole years)
- Generator 2's TEC = 400MW

$$Initial\ part\ year\ AI\ Cost\ Gap\ Tariff\ for\ G2 = \frac{65 \times 21{,}916{,}308}{1525 \times 400 \times 1000} = £2.34/kW$$

$$Full\ year\ AI\ Cost\ Gap\ Tariff\ for\ G2 = \frac{365 \times 21{,}916{,}308}{1525 \times 400 \times 1000} = £13.11/kW$$

- For each year that the tariff is applicable, the full year AI Cost Gap Tariff shall be inflated in the same manner as the associated OFTO's Revenue - or we could recalculate each year if the generators TEC changes during this period.

Year	Year 4	Year 5	Year 6	Year 7	Year 8
AI Cost Gap Tariff (in Year 4 price base, £/kW)	2.34	13.11	13.11	13.11	13.11
AI Cost Gap Tariff (in Year i price base, £/kW to 3dp) – Assuming inflation = 3%	2.34 x 1	13.11 x 1.03	13.11 x 1.03^2	13.11 x 1.03^3	13.11 x 1.03^4
	£2.34/kW	**£13.51/kW**	**£13.91/kW**	**£14.33/kW**	**£14.76/kW**

- Generator 2 will also have offshore local tariffs set at the point of connection to cover the remaining AI quantity for each year – these shall be calculated as the usual offshore local tariffs, using generator 2's share of the OFTO revenue in the calculation.

Workgroup considerations

Claire Goult – ESO Code Administrator

Questions for Workgroup consideration	Workgroup 2 Comments
Calculative Approach Considerations	
Prior to the subsequent generator connecting, the AI Cost Gap will be recovered by consumers via the Transmission Demand Residual (TDR). Is this an appropriate charge/method to recover the AI Cost Gap from consumers?	The current view is it is the most appropriate because it incentivises projects/organisations that want to take on the rsik of AI with a certainity that the cost can be recovered even if the later User delays or cancels.
Once the subsequent generator/s connects should the AI Cost Gap be recovered by one of the existing local charges or should a new charge type be created?	
Is it appropriate to use TEC to form part of the calculation of the tariff?	
Once the subsequent generator(s) connects they will repay the total accrued 'AI Cost Gap' value (taking into consideration inflation) already previously met by demand customers. How should inflation be applied to the AI Cost Gap e.g. should it be applied both when consumers are covering the risk and/or when the subsequent generator (s) connects and pays for the AI Cost Gap?	
The AI Cost Gap value will be repaid over a period of time equal to the number of days for which the subsequent generator(s) share of the AI Cost Gap value was accrued, rounded up to a whole number of years. Is this a fair recovery time period for the AI Cost Gap?	Need to consider scenarios of where subsequent generators are connecting 15/20 years later. The Proposer has looked at AI as a future project of a known connection. Are we looking for a back stop date? Is there spare capacity to be connected through?
The AI value will be recovered from the subsequent generator (s) and the non-AI value will be recovered from the Initial generation. Do you agree with this approach (keeping in mind how AI will be calculated)?	Only if the AI does not include assets used by a TO. If a TO connects to a non-radial asset then the cost (Capex) element that enables the TO to connect to the asset should go to consumers? It is important to determine how AI and non AI are calculated and this is detailed in the Proposal. Look at the HNDI Boostrap type assets. Could these be shared across - need to be considered in the calculation.

Considerations if the initial or subsequent generator fails to connect or connects at a later point in time	
Consider the impact on consumers including if subsequent generator(s) don't connect to the National Electricity Transmission System.	Bootstrap type assets can be reused by Onshore. The current understanding is this reduced impact on consumers. If a subsequent Offshore generator fails to connect then the assets could potentially be reused and the cost can still be recovered. It is still consumer cost but reduces the cost. If the asset is being starnded then the risk is more but only when the subsequent generator fails to connect. Links back to User commitments in CMP402.
What is the consideration if Initial User Fails to complete or go ahead?	Lots of focus on is subsequent User fails to connect but no consideration if initial user fails to connect. Another link to CMP402.
Consider scenarios of where subsequent generators are connecting 15/20 years later. The Proposer has looked at AI as a future project of a known connection. Is there a requirement for a back stop date? Is there spare capacity to be connected through?	
If a TO connects to a non-radial asset then the cost (Capex) element that enables the TO to connect to the asset should go to consumers? It is important to determine how AI and non AI are calculated and this is detailed in the Proposal. Could HNDI Boostrap type assets be shared across?	

Workgroup consultation

Claire Goult – ESO Code Administrator

Any Other Business

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Next Steps

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