



CMP316: TNUoS Arrangements for Co-located Generation Sites

Thursday 14th October 2021

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Scope CMP316

Defect

- Generation sites which comprise multiple technology types within one Power Station are termed “co-located”
- The TNUoS methodology does not adequately accommodate co-located generation sites. This is especially true for sites which have a mixture of technologies that fall into different charging categories
- Section 14 needs a methodology by which such sites can be recognised and charged consistently with the cost-reflective principles underpinning the broader Generator TNUoS Charging Methodology

What

- We propose adding a new formula to the TNUoS methodology to calculate wider locational charges proportionally by technology type to the Power Station’s Transmission Entry Capacity (TEC)

Why

- This approach could be sufficiently generic to map onto other future changes in the network charging arena such that any broader developments would not be precluded by, or preclude, this CMP

CFF, call for evidence, wider TNUoS reform

- To capture out of scope issues discussed within the Workgroup
- Feed these into CFF / Call for evidence / wider TNUoS reform

Temporary TEC

- **STTEC - Short Term Transmission Entry Capacity**
 - Any customer who has already connected to the transmission network can apply for STTEC, which is a temporary increase in TEC
 - See CUSC 6.31
- **LDTEC - Limited Duration Transmission Entry Capacity**
 - Allows a generating station to procure additional access rights to the system for the balance of the Financial Year, over and above any contracted TEC
 - Any customer who has already connected to the transmission network can apply for LDTEC, this means a TEC increase or decrease for a period of up to six months
 - See CUSC 6.32
- CMP316 solution will automatically flow through to LDTEC/STTEC charges
- LDTEC/STTEC tariffs are based on the stations liability for that year. Changes made through CMP316 will feed through automatically into the LD/STTEC calculations
 - E.g. Proportions for solar/battery are based on TEC only and not including LDTEC/STTEC

Transmission / Distribution

- Transmission and Distribution connected sites paying TNUoS
- The Mod Covers any Generators liable for TNUoS Generation Charges, current and future
 - Generators which are directly connected to the transmission network and embedded generators with contracts for **≥100MW of Transmission Entry Capacity (TEC) are liable to pay generation TNUoS tariffs**. Generators are charged based on the level of their TEC and other factors specific to that generator
 - Embedded Generators <100MW do not currently pay TNUoS generation charge

Declaration (e.g. as TDR) V source from contracts

- ESO preference to source capacity by technology type from contract rather than declaration
- To refer to generation defined capacities within contracts
 - Not always captured within Bilateral Connection Agreement(s) (BCAs) App C or Connection and Use of System Code Construction Agreement (ConsAg) App O (User's Data / assumptions)
 - To make a change to the App C template to show the Connection Entry Capacity (CEC) separately for different plant types to support the change
 - Consider impact on TEC register
- Process TBC with Connections Team
 - To be documented internally
 - Implementation process
- To illustrate with examples of projects

T&T Model: 3x Wider Generation Charging Categories

- The categories reflect the impact different types of generators have on the system
- Standard condition C5 of electricity transmission licence sets out the objectives to assess cost reflectivity against. This first objective states that transmissions charges should:
“reflect, as far as is reasonably practicable, the costs.....incurred by transmission licensees in their transmission businesses...”
- For the purposes of this Mod assumption that allocation of fuel/technology types is given across the categories. The solution is flexible enough to accommodate changes of fuel types across the categories at a later date.

To Review Examples within Workgroup

| Wider Zonal Generation TNUoS Tariffs Tariffs (£/kW) delta * | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
|---|-------------------------|-----------------------------|-----|----------------|--------------------|-------------------|-------------------|------------------------------|------------------|--------|---------------|-------------------------|---------------------|---------------------|--------------------|--------------------|--------------------------------|---------------------------------------|--------------------------------|--------------------------------------|----------------------------|----------------------|---------------|-------------|----------|----------------|----------------|-------------------------------|---------------------|-------------------------|
| | | | | North Scotland | East Aberdeenshire | Western Highlands | Skye and Lochalsh | Eastern Grampian and Tayside | Central Grampian | Argyll | The Trossachs | Strirlingshire and Fife | South West Scotland | Lothian and Borders | Solway and Cheviot | North East England | North Lancashire and The Lakes | South Lancashire Yorkshire and Humber | North Midlands and North Wales | South Lincolnshire and North Norfolk | Mid Wales and The Midlands | Anglesey and Snowdon | Pembrokeshire | South Wales | Cotswold | Central London | Essex and Kent | Oxfordshire Surrey and Sussex | Somerset and Wessex | West Devon and Cornwall |
| Ex1 | conventional carbon | 65% conventional low-carbon | 35% | 6 | 5 | 6 | 6 | 5 | 5 | 7 | 4 | 4 | 4 | 3 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 |
| Ex2 | conventional carbon | 65% intermittent generation | 35% | 3 | 3 | 3 | 5 | 2 | 2 | 5 | 2 | 2 | 2 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | -1 | -2 | -3 | -1 | -3 | 0 | 1 | 0 | 1 | 1 |
| Ex3 | conventional low-carbon | 65% conventional carbon | 35% | -6 | -5 | -6 | -6 | -5 | -5 | -7 | -4 | -4 | -4 | -3 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| Ex4 | conventional low-carbon | 65% intermittent generation | 35% | -4 | -2 | -3 | -2 | -3 | -3 | -2 | -3 | -2 | -2 | -2 | -2 | -1 | -2 | -1 | -1 | -1 | -1 | -2 | -2 | 0 | -1 | 1 | 1 | 1 | 1 | 2 |
| Ex5 | intermittent generation | 65% conventional carbon | 35% | -3 | -3 | -3 | -5 | -2 | -2 | -5 | -2 | -2 | -2 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 1 | 3 | 0 | -1 | 0 | -1 | -1 |
| Ex6 | intermittent generation | 65% conventional low-carbon | 35% | 4 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 0 | 1 | -1 | -1 | -1 | -1 | -2 |
| * for local circuits/sub-station charge there will be no change | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

- To review detail in spreadsheet

| Conventional Carbon | Conventional Low Carbon | Intermittent |
|---------------------|-------------------------|--------------------|
| 40% | 75% | 45% |
| Load Factor (£/kW) | Load Factor (£/kW) | Load Factor (£/kW) |

- Reflects weighted ALF for 3x Wider Generation Charging Categories as Aug-21 forecast
- Note: analysis uses category illustrative ALFs, however station charges will use station ALFs as per today processes

Transitional Arrangements for Apr-23 Implementation

- To consider transitional arrangements for implementation
 - Impact on T&T Model and tariff setting (draft tariff to be published Nov-22)
 - The T&T up-front data manipulation to setup power stations as per CMP316
 - ESO Billing system
 - Requirements for new billing system
- To consider impact to connection agreements
 - To make a change to the App C template to show the Connection Entry Capacity (CEC) separately for different plant types to support the change
 - TEC Register
- To update impacted customers for transparency / no surprises
 - TCMF Communication following Ofgem decision

Questions

- Issues / concerns?
- Any potential alternative options?
- Analysis required?