
Back to Basics
Charging

Our Charges

BSUoS

Balancing Services Use of System Charges
~ £3.8bn Revenue *

TNUoS

Transmission Network Use of System Charges
~ £4.4bn TO Revenue *

AAHEDC Charges

Assistance for Areas with High Electricity Distribution Costs
*~ £110m SHEPD Revenue **

Connection Charges

Charges for connecting to the transmission network (inc one-off + cap cons)
*~ £400m TO Revenue **

* Forecasts for FY23/24, as Feb 2023

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BSUoS

What are BSUoS charges and who pays them?

What is the charge for?

- To recover the cost of balancing the system

How is it charged?

- Half hourly £/MWh applied proportionately on your portfolio share

Who pays?

- Suppliers
- Generators (until April 2023)

Recent Changes to BSUoS

Came into effect 1st April 2023

CMP308

- Removal of BSUoS charges from Generation
- Charges to be levied on final demand only

CMP361/362

- Introduction of an ex ante fixed BSUoS tariff
- No current BSUoS fund (insuring against tariffs needing to be reset in fixed period
- Over/under recovery collected through future fixed tariffs

How is BSUoS calculated?

BSUoS Charge = BSUoS tariff (£/MWh) X BM Unit Metered Energy Volume (MWh) X Transmission Loss Multiplier

Before 1 April 2023:

- Previously BSUoS tariffs were set on a half-hourly basis, changing in each settlement period
- Total balancing cost for each period was divided by total volume to give a tariff
- BSUoS is split across demand and generation

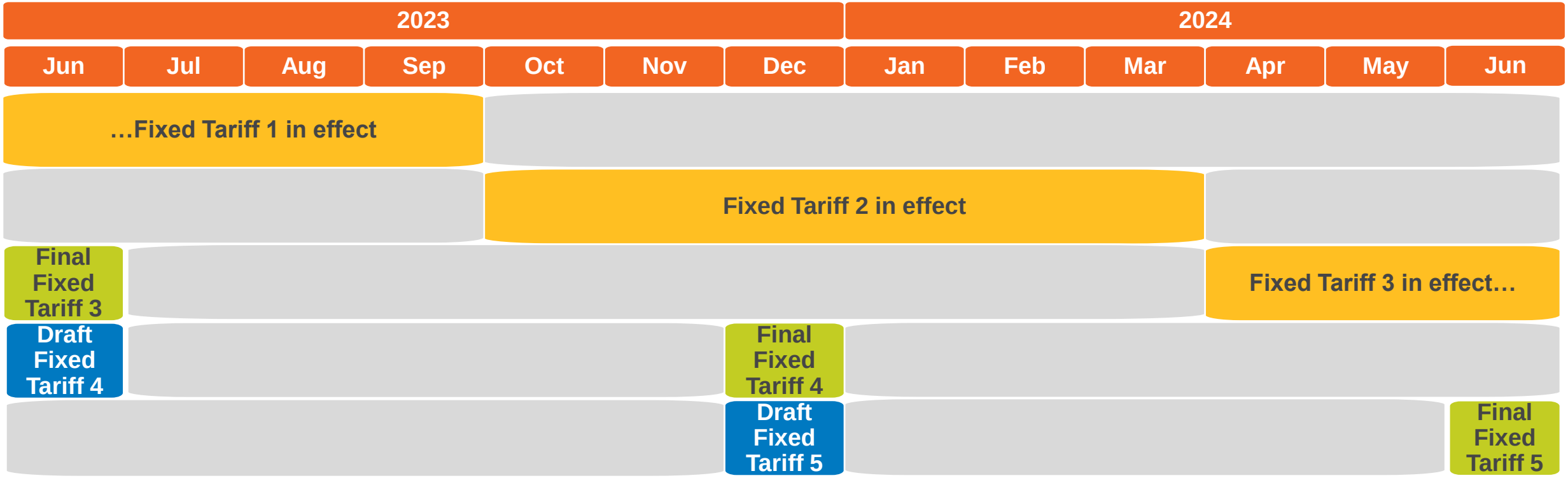
	Financial Year 2023/24 - Tariff 1	
	Description	Final Tariff
Apr - Sep	Balancing Costs (Central) £m	1387
	Internal Costs £m	215.95
	CMP395 Recovery	Included in Balancing Costs
	Winter Security of Supply £m	87.5
	Total BSUoS £m	1690.45
	Estimated BSUoS Volume TWh	126.1
	BSUoS Tariff £/MWh	**£13.41**

After 1 April 2023:

- Since the introduction of CMP361, tariffs are set 9 months in advance and fixed for 6 months, meaning that the tariffs are set on forecast data rather than actuals
- Two fixed tariffs are created per charging year
- ESO Forecast cost elements and Final Demand Volumes to set the BSUoS tariff
- Tariffs are applied using the same calculation
- BSUoS is now only split across demand
- Over/under recovery against forecast included in future fixed tariffs

BSUoS Tariff Setting Timetable

- Tariffs are set 9 months in advance
- Two tariffs are set each year Apr-Sep & Oct-Mar



What are the costs that need to be recovered by BSUoS?

Balancing Mechanism Costs

- Buying Electricity to Balance the System

Ancillary Services Costs

- Services procured to balance demand/supply and ensuring security/quality

ESO Internal Allowances

- Allowed Internal Costs recovered

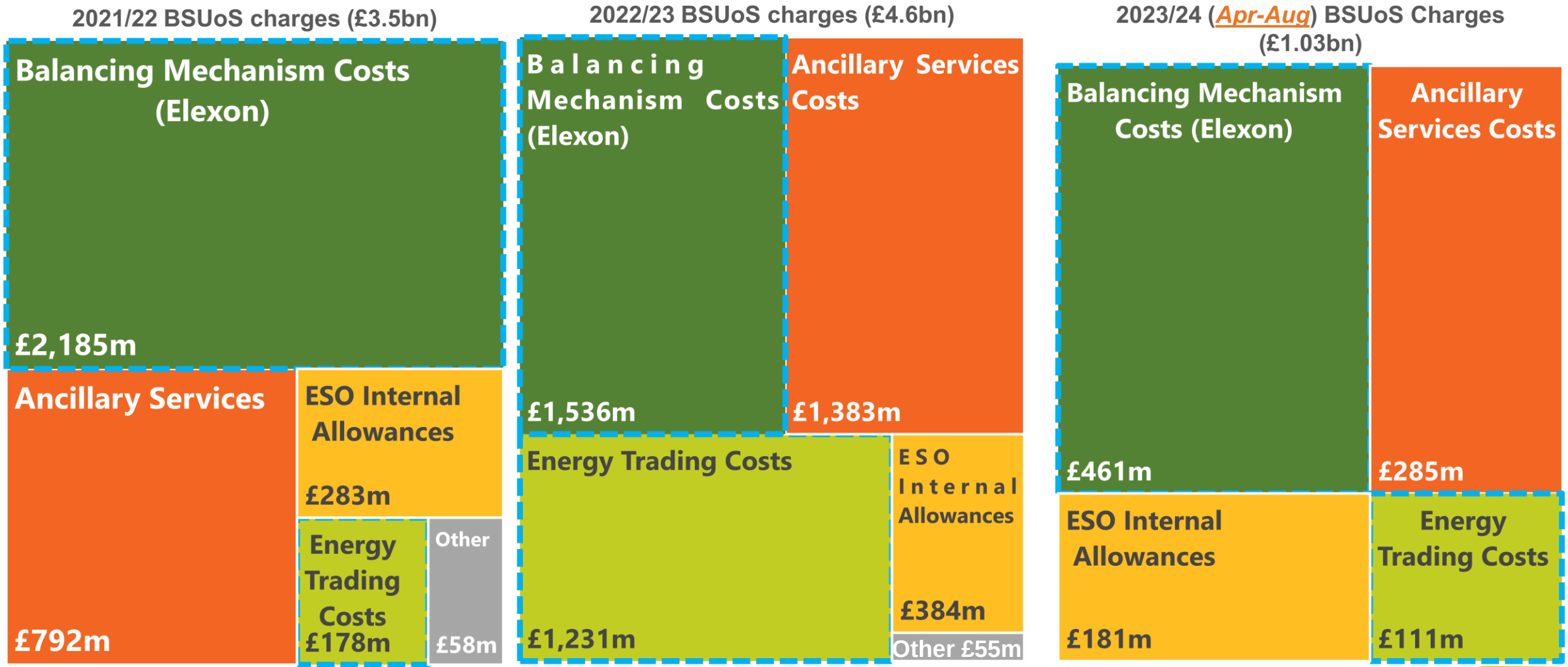
Energy Trading Costs

- Costs of trading actions taken ahead of the BM

ESO Incentive Costs

- Payment to/from ESO through incentive schemes

Cost Allocations



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TNUoS

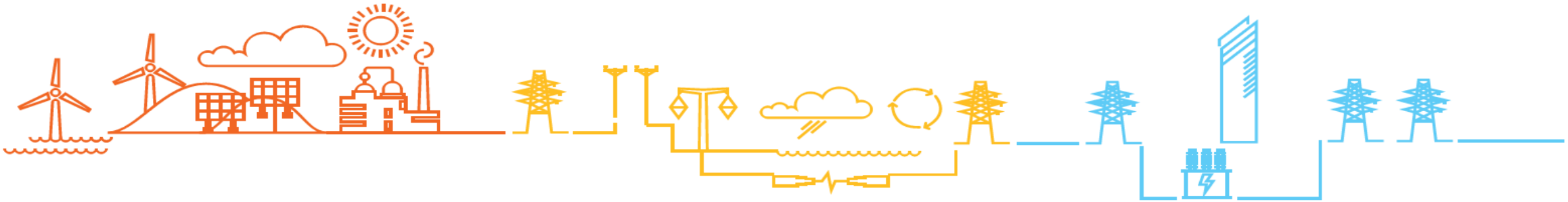
What is TNUoS?

TNUoS is the Transmission Network Use of System charge and recovers the allowed revenue for Transmission Owners for the cost of building and maintaining transmission infrastructure.

Locational charge: reflects the incremental cost of power being added to/taken off the system at different geographical points

A Residual charge for demand (Transmission Demand Residual TDR) and an adjustment tariff for generation :
what is not recovered under the Locational charge is recovered in this pair of charges, which have two purposes :

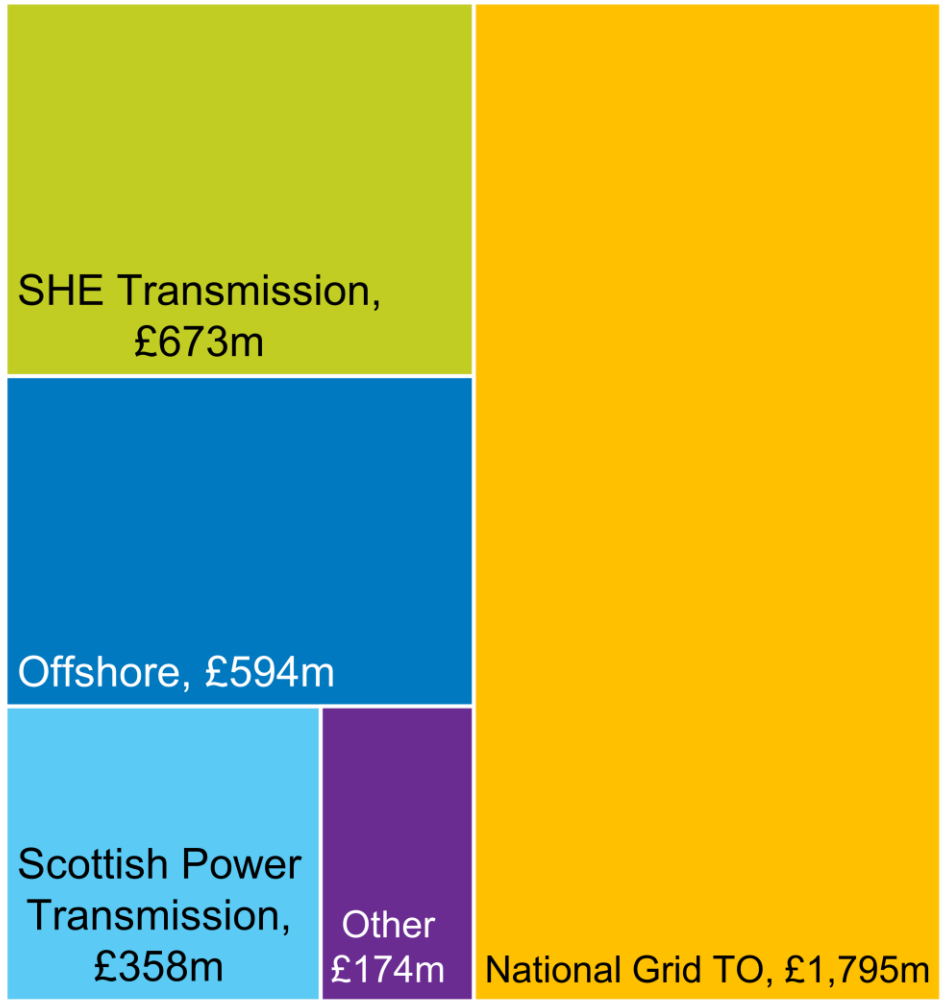
1. Ensure that that the TOs recover their total allowed revenues under price control (locational charges, unadjusted, will fall far short of that)
2. Ensure that the amount of TNUoS collected from generation as a class (with certain legal exclusions) is less than €2.50/MWh as an annual average overall (UK retained law - EC838/2010).



What makes up the TNUoS Charge?

Recover revenue for:

- Onshore TOs
  - National Grid Electricity Transmission
  - Scottish Power Transmission
  - Scottish Hydro Electricity Transmission
- Offshore TOs
- Other



Figures from Final TNUoS Tariffs for 2022/23 - only in the excel "tables" (table 15) not in the PDF which has less detail

Who pays TNUoS? – Generators

Generators that are directly connected to the transmission network & Embedded generators ≥100MW TEC are chargeable

Generation TNUoS is charged on the basis of Transmission Entry Capacity (TEC) – see later slide for detail

Generators are also liable for Demand TNUoS if they take net demand during the Triad

Who pays TNUoS? – Demand Locational

All licenced suppliers are liable for TNUoS charges, for their *gross demand* from the transmission network in one of the following 3 categories. This doesn't collect the right amount from demand overall towards the TOs' allowed revenues, bearing in mind that there is a cap on how much generators pay. So, there is also a residual charge on demand.

Half-Hourly metered demand pays demand locationals on the basis of Triads

Non Half-Hourly demand locationals, total 4pm-7pm annual consumption

Embedded Export credited for export over Triads

Residual demand charge – see later slides

Who pays TNUoS? – Demand Residuals

- Changes were directed by Ofgem to the recovery of the demand residual (the part of the total TNUOS paid by demand that is not recovered by the application of locational demand charges) after the Targeted Charging Review (TCR) Significant Code Review (SCR)
- From 1/4/23, the transmission demand residual (TDR) has no longer been recovered via triads
- Residual charges are deemed to be ‘cost recovery’ and so shouldn’t send a behavioural signal or be avoidable
- A ‘banded’ method, which results in a £/site/day charge, was directed by Ofgem for both DUoS and TNUoS

Embedded Export Tariff

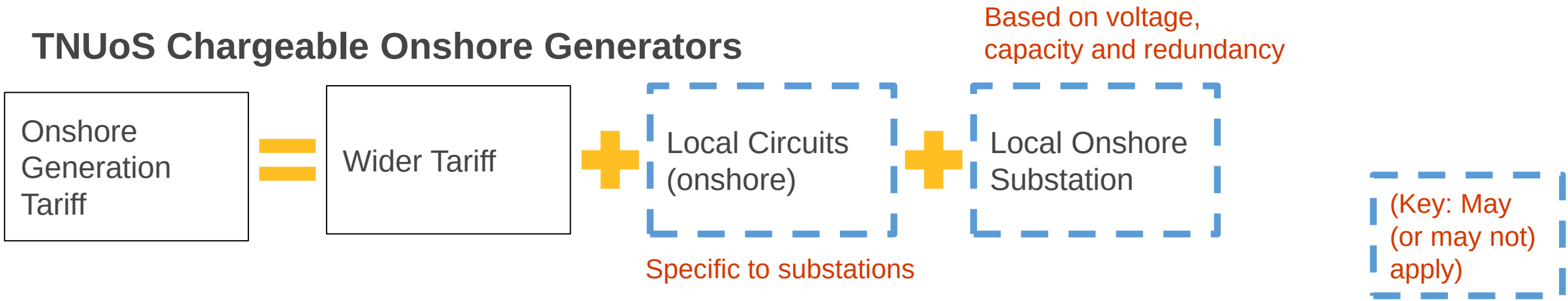
- The Embedded Export Tariff is another element of TNUoS
- The EET is paid to exporting HH demand customers and embedded generators (<100MW), based on the HH metered export volume during the triads
- The EET's value is based on an estimate of the real value to the cost of the transmission system of them being embedded

Embedded Export

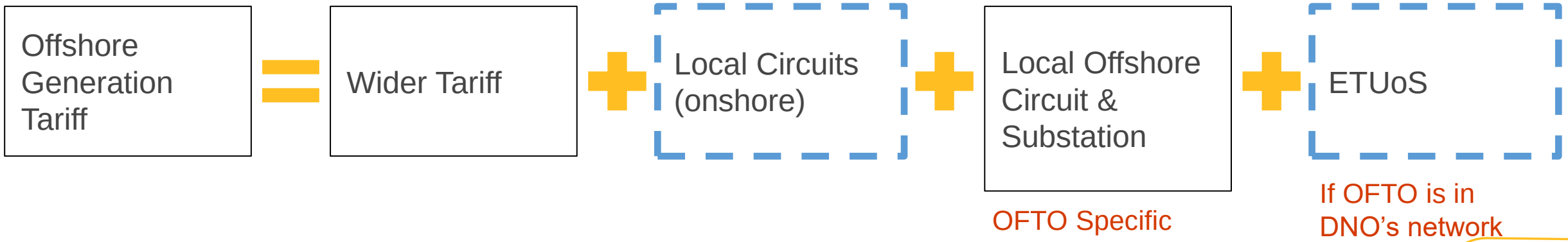
Credited a £/kW tariff for average export over the Triads

Final Generation Tariff

TNUoS Chargeable Onshore Generators



Directly connected offshore generators



Triads – What are they?

- Three half hour settlement periods of highest GB net demand
- Separated by a minimum of 10 clear days
- Determined after the event using settlement metering data reported in March
- Excludes interconnector demand but includes pumping and station demand

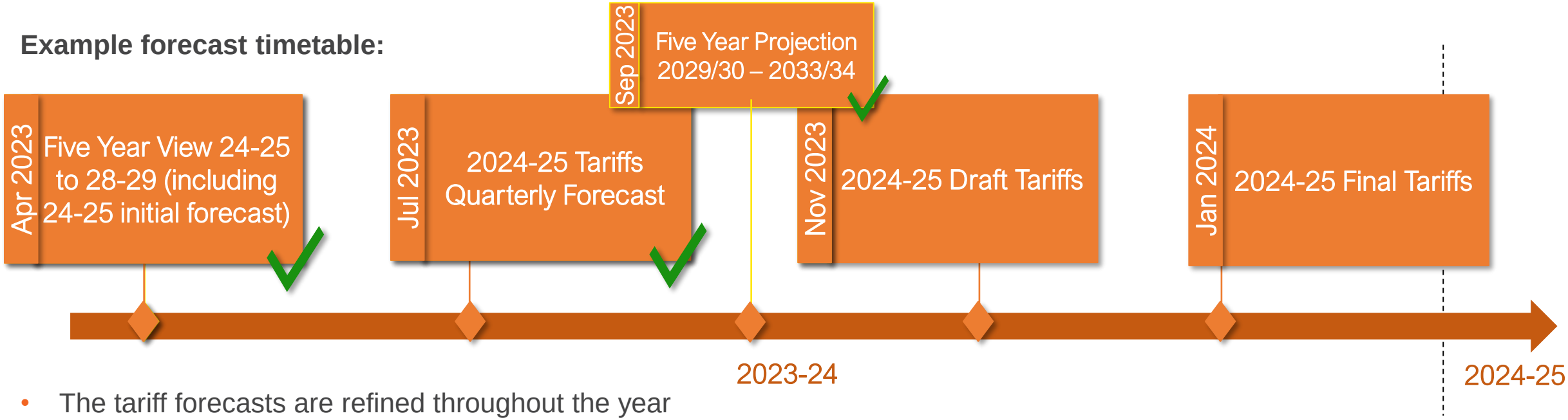
November

February

Tariff Timetable

ESO has a licence and Connection and Use of System Code (CUSC) obligation to publish quarterly TNUoS forecasts and a 5 year review annually, to enable market participants to make efficient operational and investment decisions.

Example forecast timetable:



- The tariff forecasts are refined throughout the year
- The 5 year projection (2029/30 – 2033/24) is in addition to quarterly publications as detailed above
- The Final Tariffs are published by 31st January and take effect from the following 1st April
- The forecast timetable for each year is published by the end of the preceding January

How to Track, and try to Change, Charging

- Charging is defined in section 14 of the CUSC. Any CUSC party can raise a CUSC change proposal ("mod"); so, can anyone else if they get Ofgem's permission
- Ideas for new mods are commonly brought first to the monthly Transmission Charging Methodology Forum (TCMF) typically first Thursday of the month - Further details can be found on the ESO website
- Longer term reforms to TNUoS are being considered by a charging "task force"; more on reform later in the day. It has its own website
- Charging queries to: TNUoS.Queries@nationalgrideso.com / BSUoS.Queries@nationalgrideso.com
- Mod/change governance queries to: cusc.team@nationalgrideso.com
- Subscribe to our Charging mailing list: here

Thanks for Listening!

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