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TNUoS in 10 Minutes

July 2025

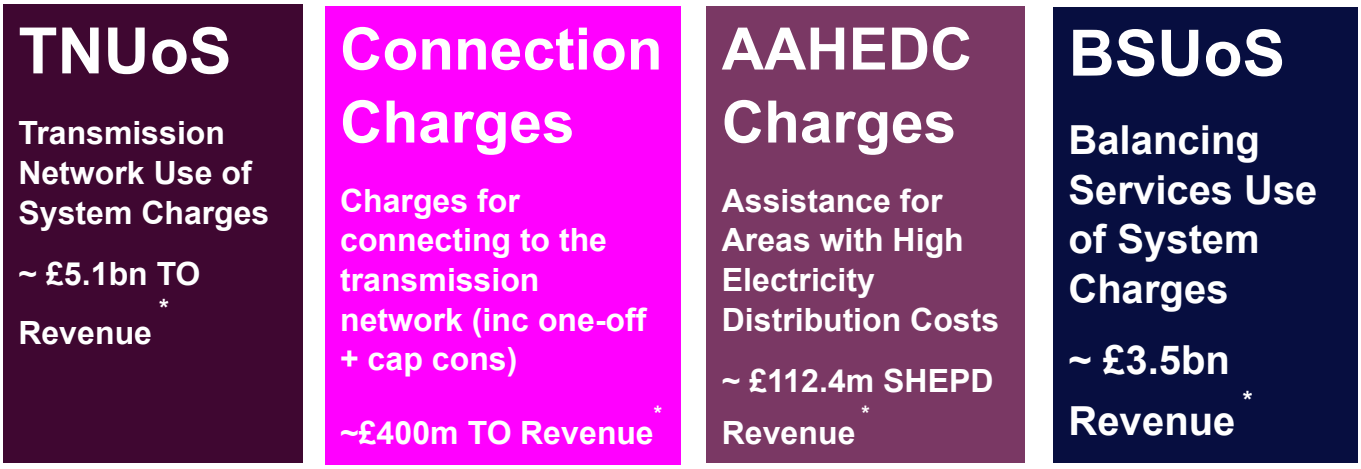
This introductory guide to Transmission Network Use of System (TNUoS) charges will cover:

- What the TNUoS charge is
- How and when generation and demand users pay these charges
- How TNUoS tariffs are calculated

Contents

What is TNUoS?

All users of the GB electricity network pay to use it in some way. Generators use the network to transport their electricity to where it is needed. Demand users use the network to consume electricity when they need it. Users of the network pay for use of the transmission system through the below charges:

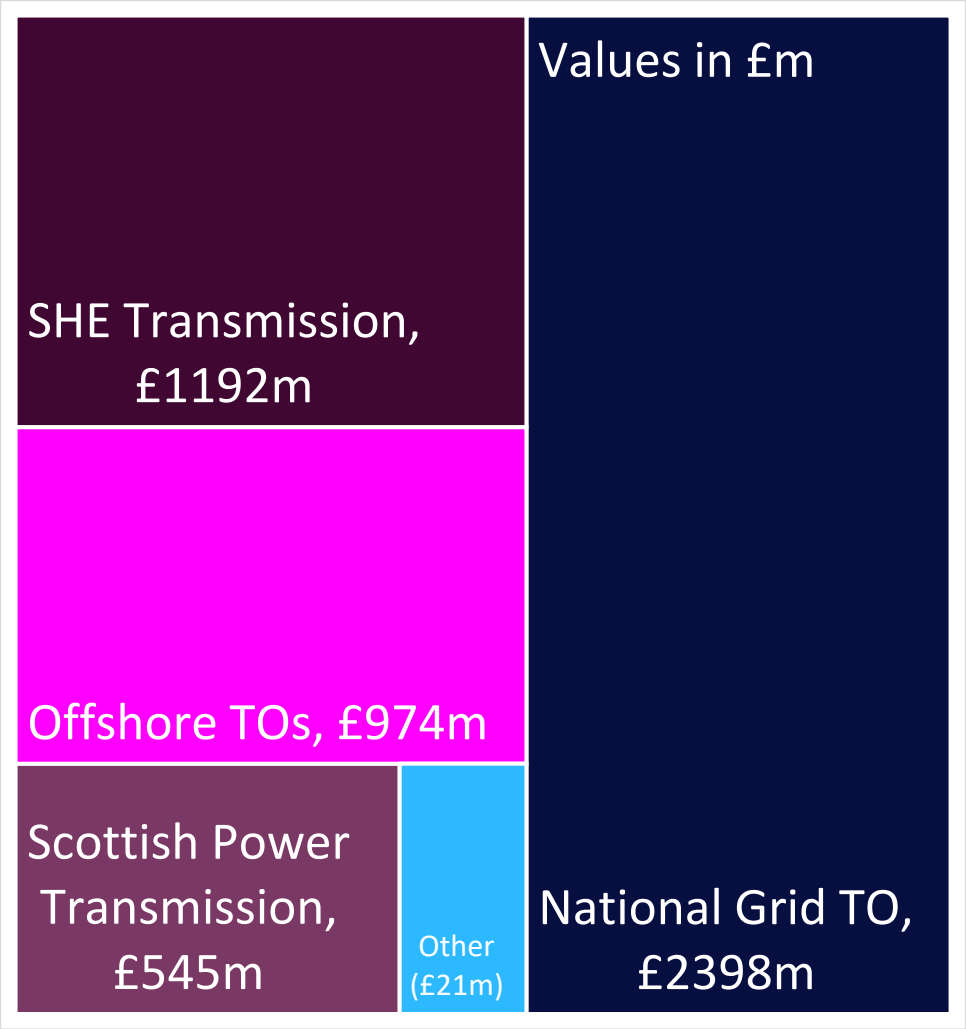


Figures from Final TNUoS Tariffs for 2025/26
* Forecast for FY25/26, may change during year.

Transmission Network Use of System (TNUoS) charges recover the cost of installing and maintaining the transmission network in England, Wales, Scotland and offshore. The charging methodology is detailed in Section 14 of the Connection Use of System Code (CUSC). National Energy System Operator (NESO) recovers the revenue on behalf of

- Onshore TOs
    - National Grid Electricity Transmission (NGET)
    - Scottish Power Transmission
    - Scottish Hydro Electricity Transmission
- Offshore transmission owners
- Other network schemes, for example Network Innovation Competition (administered by Ofgem)

The chart below shows the split in revenue between the different entities the revenue is collected on behalf of.



Figures from Final TNUoS Tariffs for 2025/26
Note: figures have been rounded to the nearest £1m

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Who pays TNUoS?

TNUoS tariffs aim to be reflective of the cost of using the network, to help network users make efficient decisions about where and when to use the network.

Tariffs are broken down in three ways:

1. The **Locational** charge (wider TNUoS) – calculated by the Transport model - this reflects the incremental cost of power being added to the system at different geographical points.

2. The **Residual** charge (wider TNUoS) – what is not recovered under the Locational charge is recovered in this charge so that the Transmission Owners recover their total allowed revenue.

3. **Adjustment** charge (ensure that the generation tariffs are compliant with EU legislation (€2.50 gen cap))

Generators who are connected to the transmission network and embedded generators with >=100MW Transmission Entry Capacity (TEC) pay Generation TNUoS charges. Generation TNUoS is charged on the basis of Transmission Entry Capacity (TEC). Generators are also liable for Demand TNUoS if they take demand over the Triad periods.

All licenced **suppliers** are liable for TNUoS for their gross demand from the transmission network. There are three categories of demand charges:

- **Half Hourly (HH)**, metered demand over the Triad periods
- **Non-Half Hourly (NHH)**, annual consumption between 4pm-7pm daily
- **Embedded Export Tariff (EET)**, a credit for embedded generation over the Triad periods. All directly connected demand sites pay HH demand charges and embedded generators (<100MW) which contracts directly with NESO can gain Embedded Export payments.[1] Any net liability for EET are only paid out to the embedded generators/suppliers during the Initial & Final Demand reconciliation.
- **Transmission demand residual** (Final demand only)

[1] Embedded generators which are not directly contracted with NESO may be paid for the generation over the Triad periods by their supplier.

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TNUoS Demand Tariffs

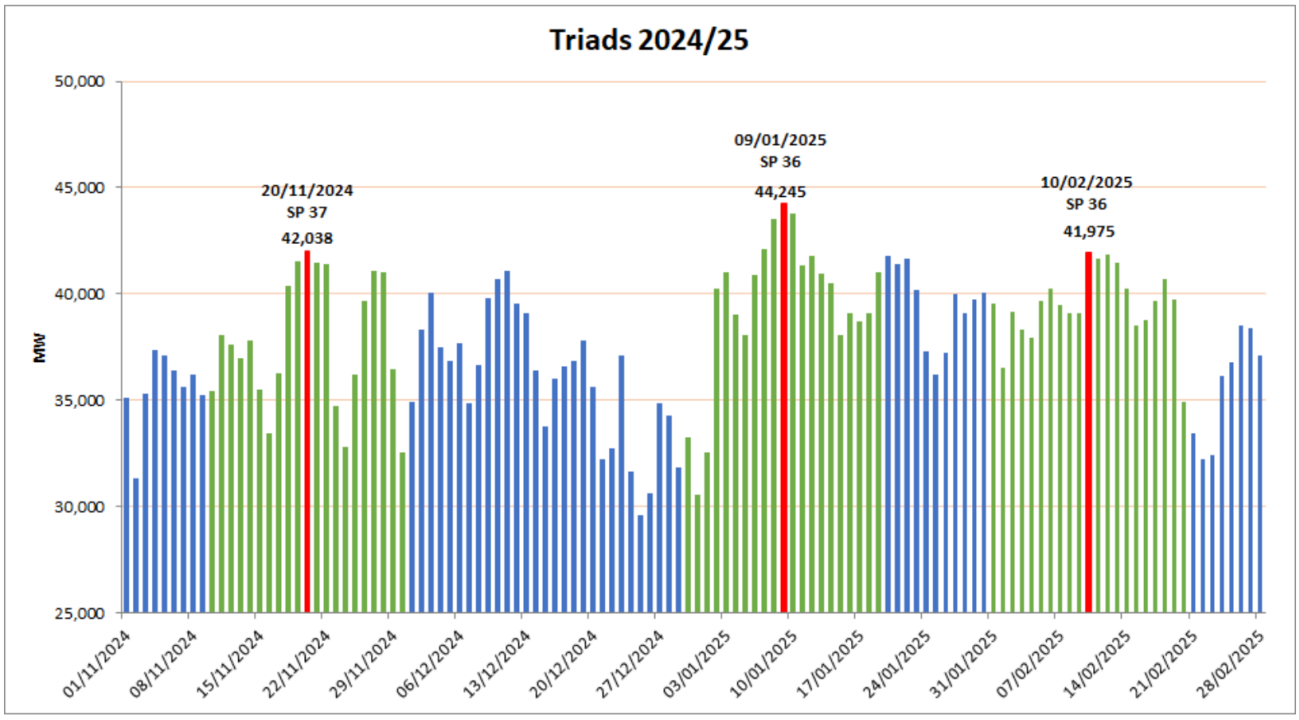
For TNUoS, there are three 'types' of demand:

- Half hourly settled (generally commercial)
- Non-half hourly (generally domestic, or smaller non-domestic premises)
- Transmission Demand Residual (£/site/day)

Half Hourly (HH)

HH customers are charged according to the demand (MW) they take over the three Triad periods each year; the charge is levied through a £/kW tariff. Triads are defined as the three half-hours with the highest net system demand, between November and February (inclusive), separated by at least ten clear days.

The below figure demonstrates the three Triads recorded for 2024/25.

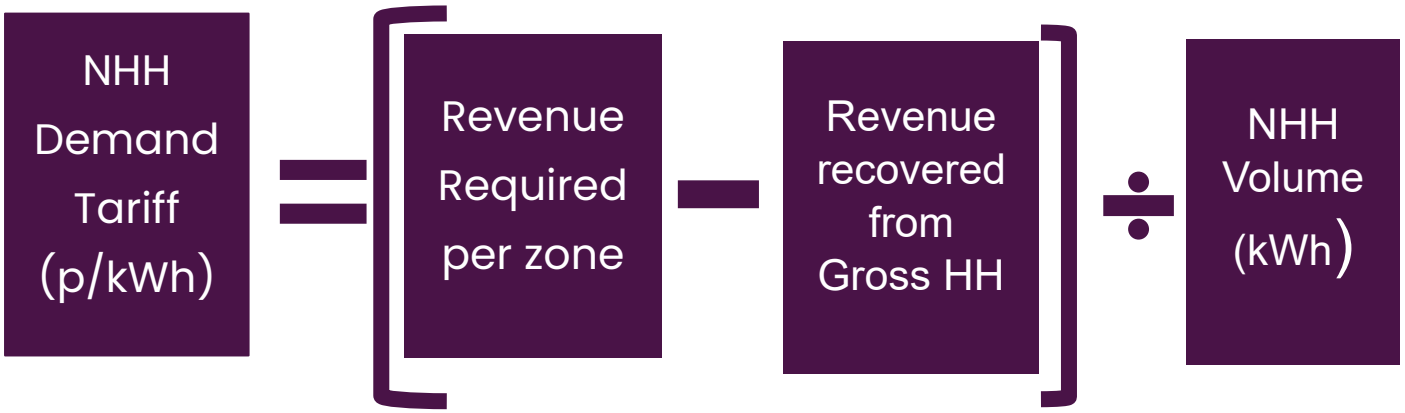


TNUoS tariffs are set a year ahead and charges are reconciled based on actual usage at the end of that financial year. Users are then billed monthly for this TNUoS charge. For all consumers, there is a locational element to the charge (across 14 demand zones) plus a residual.

Residual Charge only applicable to final demand sites

Non-half hourly (NHH)

NHH charges are based on annual consumption between 4 and 7pm (in kWh), through a pence/kWh tariff. Once the total revenue the HH Tariff will recover from demand has been calculated, the NHH Tariff is calculated to recover the remaining revenue to ensure the right amount is recovered.



Embedded Export Tariff (EET)

The EET is another element of TNUoS. It was introduced as a new tariff under code modifications CMP264/265. The tariff is paid to embedded generators based on their HH metered generation export volumes during the Triads. The tariff is payable to exporting HH demand customers and embedded generators (<100MW).

*Avoided Grid Supply Point (GSP) Infrastructure Credit. The AGIC is set at the start of the price control period and is increased by RPI each year. It will be recalculated at the start of the next price control period. The revenue paid out through the EET is recovered from the locational demand, to ensure overall revenue recovery is correct.

Transmission Demand Residual

The Targeted Charging Review (TCR) examined the 'residual charges' which recover the remainder of the total network charges needed to fund network expenditure. Changes were directed by Ofgem after the Targeted Charging Review (TCR) Significant Code Review (SCR).

Demand residual to be charged at a fixed rate meaning (CMP336 and CMP343):

- Non-domestic user charges to be banded based on capacity or consumption where relevant;
- Users to remain in band for duration of price control;
- Domestic users to be charged a single tariff

The residual element of demand charges will be calculated on a £/Site/Day methodology with sites allocated into a band. The only exception to this £/Site/Day methodology are unmetered (UMS) sites which will be charged p/kWh - this methodology is already used by Distribution Network Operators (DNO).

For the avoidance of doubt, an Unmetered Supply is any electronic equipment that draws a current and is connected to the Distribution Network without a meter recording

its energy consumption. Unmetered Supplies (UMS) exist in the half hourly and non-half hourly Supplier Volume Allocation (SVA) markets.

The bands are defined in the DCUSA and CUSC by percentiles.

At the beginning of each TO price control, NESO convert these percentiles in to 'real' values. This includes DNO bands too as per our obligations as the 'Banding Agent' in DCUSA Schedule 32. DNO bands based on Max Import Capacity (MIC) or Consumption (kWh) for sites with no MIC. All Transmission bands based on Consumption (MWh). These bands are the same across TNUoS and DUoS charges. DNO sites are subject to both DUoS and TNUoS charges.

Transmission sites are only subject to TNUoS.

2. Work out the consumption and site count per band;

3. Smear the TDR across bands based on proportion of consumption.

	Band	Tariff	Percentile	Threshold (kWh/MWh or kVA)		Consumption (GWh)	Consumption Proportion %	Site Count	January Final TDR Charge (£/site/Day)
				Lower	Upper				
	Domestic	£/Site per Annum				93,047	38.1%	29,670,891	0.135043
kWh	LVN1		≤ 40%	-	≤ 3,571	3,119	1.3%	867,477	0.154829
	LVN2		40 - 70%	> 3,571	≤ 12,553	5,504	2.3%	647,465	0.366046
	LVN3		70 - 85%	> 12,553	≤ 25,279	5,974	2.4%	338,163	0.760709
	LVN4		> 85%	> 25,279	∞	16,475	6.8%	342,973	2.068587
kVA	LV1		≤ 40%	-	≤ 80	7,159	2.9%	78,889	3.907710
	LV2		40 - 70%	> 80	≤ 150	10,633	4.4%	70,132	6.529117
	LV3		70 - 85%	> 150	≤ 231	6,647	2.7%	27,921	10.251874
	LV4		> 85%	> 231	∞	17,798	7.3%	33,704	22.739548
	HV1		≤ 40%	-	≤ 422	3,942	1.6%	7,776	21.830361
	HV2		40 - 70%	> 422	≤ 1,000	11,038	4.5%	7,569	62.799637
	HV3		70 - 85%	> 1,000	≤ 1,800	8,789	3.6%	3,107	121.795409
	HV4		> 85%	> 1,800	∞	25,152	10.3%	3,410	317.597969
	EHV1		≤ 40%	-	≤ 5,000	1,683	0.7%	451	160.765059
	EHV2		40 - 70%	> 5,000	≤ 12,000	4,543	1.9%	264	741.786430
	EHV3		70 - 85%	> 12,000	≤ 21,500	4,719	1.9%	129	1,576.232814
	EHV4		> 85%	> 21,500	∞	10,748	4.4%	119	3,882.736230
MWh	T-Demand1		≤ 40%	-	≤ 33,548	481	0.2%	32	647.798551
	T-Demand2		40 - 70%	> 33,548	≤ 73,936	956	0.4%	18	2,287.643779
	T-Demand3		70 - 93%	> 73,936	≤ 189,873	1,897	0.8%	15	5,446.380603
	T-Demand4		> 93%	> 189,873	∞	1,486	0.6%	5	12,796.715359
	Unmetered demand								
	Unmetered	p/kWh				2,267	0.9%		1.571791
							Total TDR (£m)		**3,836**

4. Divide the total band recovery (from 3) by the number of sites and days to create a £/site/day tariff.

1. Work out the total value of the TDR

Within the charging year we take actual site counts where provided. The remaining we forecast using the last day of the month site count * remaining days of the year.

For example:

Total site count days is 34 to end April.

Latest number of sites being supplied, based on actual data is 2 (based on actuals for 30th April 2024).

Date	Sites Supplied
01/04/2024	1
02/04/2024	1
03/04/2024	1
04/04/2024	1
05/04/2024	1
.....	
.....	
25/04/2024	1
26/04/2024	1
27/04/2024	2
28/04/2024	2
29/04/2024	2
30/04/2024	2
Total	34

Therefore, the forecast of total site count days is:

34 + (2 per day, for days with no actual data)

= 34 + (2 x (365-30))

= 34 + 670

= 704

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TNUoS Generation Tariffs

Generation TNUoS recovers charges from transmission connected generation and embedded generation of >=100MW. The maximum revenue that can be recovered from generators is set by EU regulation, at an average value of €2.50/MWh.

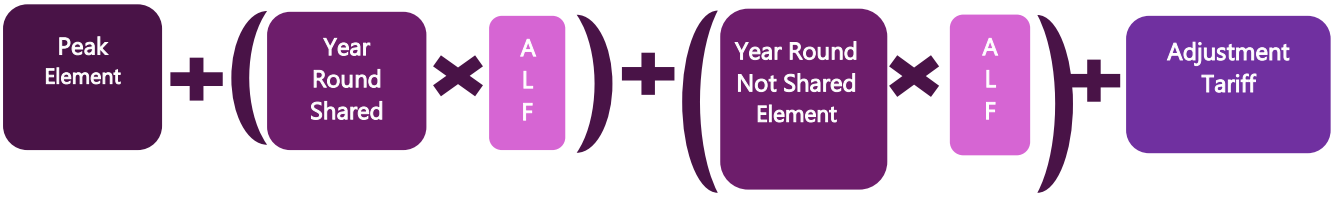
Generators are charged according to the greatest amount of Transmission Entry Capacity (TEC) they hold each year. This is the maximum amount of power they can put on the system at any one time. The wider tariff applies depending on the type of generator and their location; generator types are split by intermittent, conventional low carbon and conventional carbon. The wider tariffs are a £/kW tariff that differs between each of the 27 generation zones.

The peak element of the tariff looks at network investment to secure peak demand. Intermittent generators such as onshore and offshore wind do not pay this element.

The below figure details how the three wider tariffs are calculated

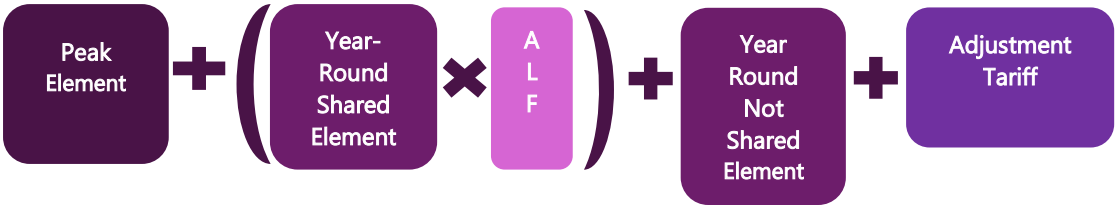
Conventional Carbon Generators

(e.g. Biomass, CHP, Coal, Gas, Pumped Storage, Battery)



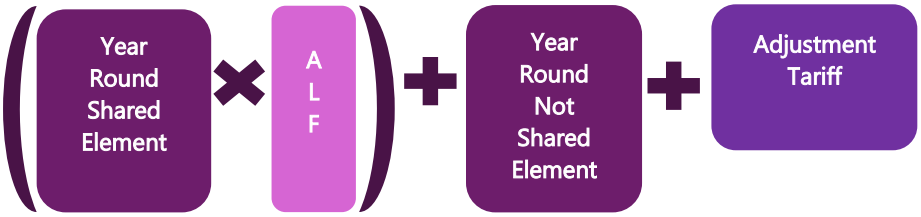
Conventional Low Carbon Generators

(e.g. Hydro, Nuclear)



Intermittent Generators

(e.g. Wind, Wave, Tidal, Solar)



Annual Load Factors (ALFs) are calculated at power station level and give an average measure (over five years) of a generator's output compared to TEC using:

- TEC
- Metered Flows
- Final Physical Notifications.

As part of generation tariffs, there are also local substation and circuit tariffs for onshore and offshore generators.

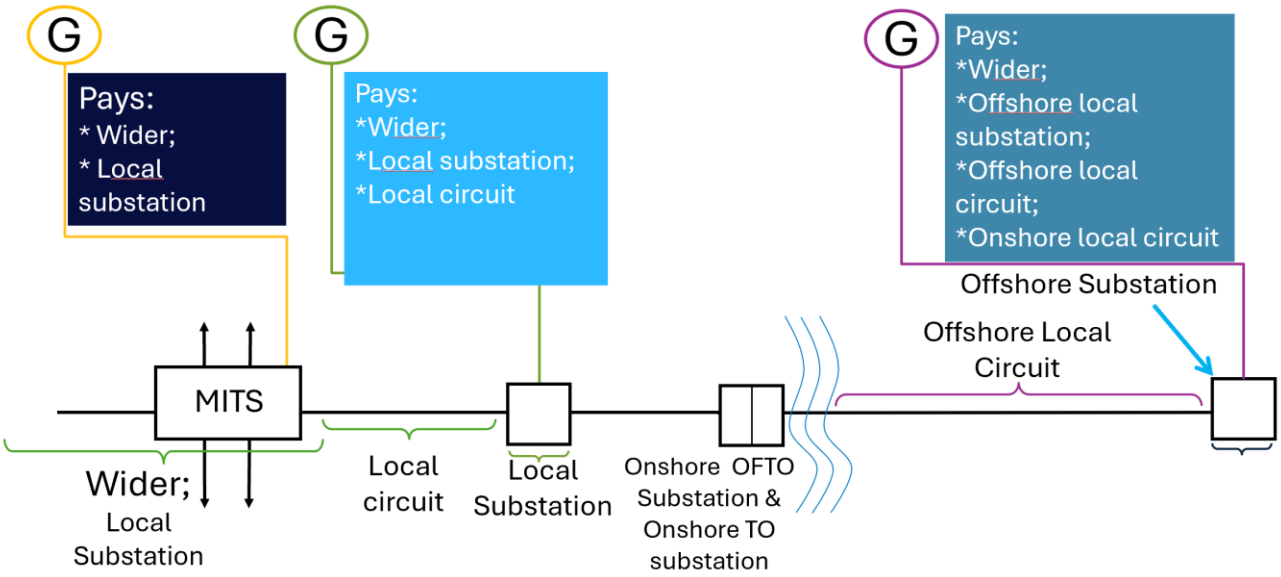
If a transmission-connected generator is directly connected to a substation defined as a Main Interconnected Transmission System (MITS) node, then they will only need to pay the **onshore local substation tariff** and will usually not have a local circuit tariff, depending on their connection agreement.

Local substation tariffs are charged on a £/kW basis. All generators connected to the transmission network will pay a local substation tariff. Embedded generators do not pay an onshore local substation tariff.

Where a transmission-connected generator is **not** directly connected to a MITS substation, the **onshore local circuit tariffs** reflect the cost and flows on circuits between its connection and the MITS. Local circuit tariffs are charged by £/kW and can change as a result of system flows and RPI. Embedded generators do not pay an onshore local circuit tariff.

Local offshore tariffs (substation, circuit and ETUoS[2] if applicable) reflect the cost of offshore networks connecting offshore generation. They are calculated at the beginning of the price control period or upon the transfer of the ownership of the offshore transmission assets from the generator to the offshore transmission owner (OFTO). The local offshore tariffs are charged on a £/kW basis and are indexed by RPI each year.

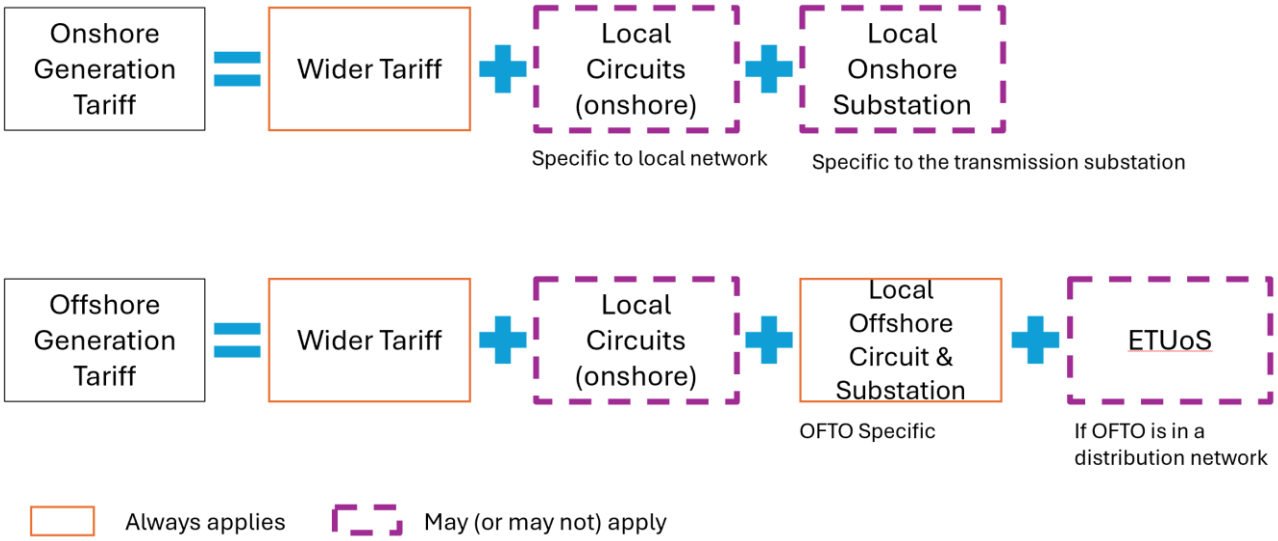
The below diagram shows what is included in the local circuit charge for onshore and offshore generators.[3]



Once the wider tariffs and the local substation and circuit tariffs have been calculated, if all components have positive values, the sum of each of these components gives the final tariffs, as shown below for offshore and onshore generators. The final tariffs used to charge generators are usually specific to each individual generator.

[2] Embedded Transmission Use of System charges. These apply only when an offshore generator connects into the local distribution network to access the transmission network.

[3] Please note: an OFTO network may connect directly to a MITS substation, rather than to a local substation/local circuit.



This concludes the TNUoS in 10 minutes guide. If you would like further information, please contact us by emailing TNUoS.Queries@neso.energy