Facilitating Decarbonisation and Resilience

Energy Networks Association

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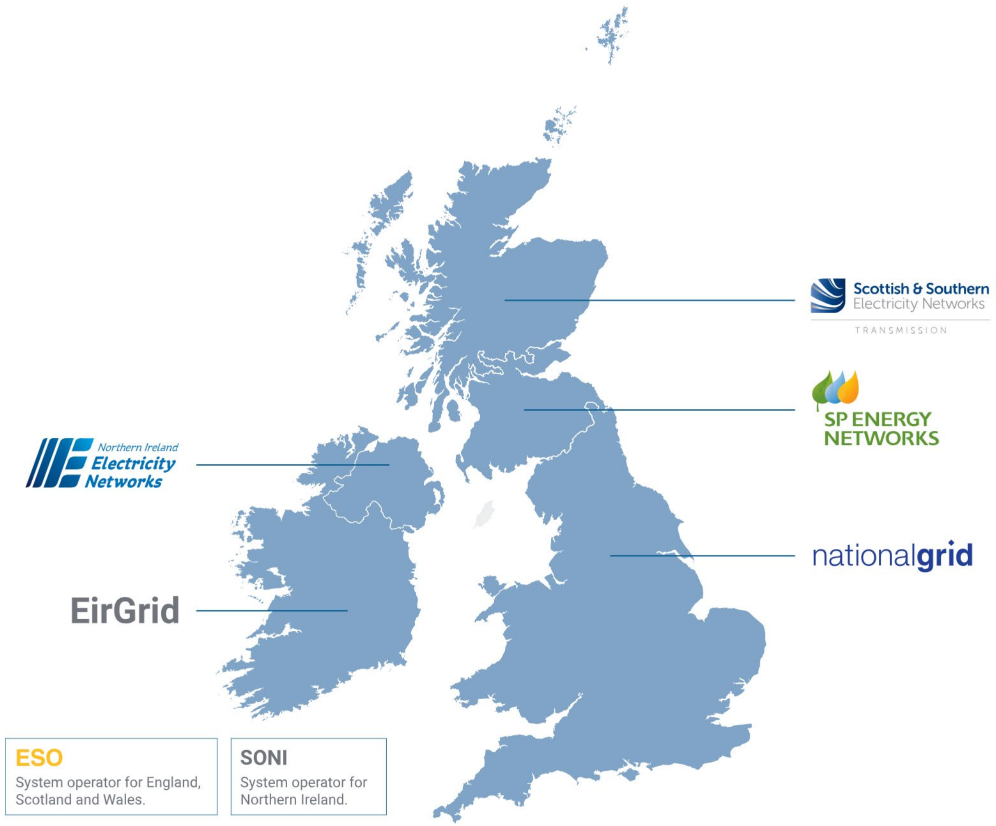
December 2024

Electricity Networks are focused on the challenge of delivering electricity to communities across the UK and Ireland safely, economically, sustainably and reliably



Focuses & Challenges for networks in supporting net zero

- Networks are investing £40bn+ in our energy infrastructure over the coming years
- Helping to unlock and develop world-leading flexibility markets via the Open Networks Programme, with nearly 4GW tendered in 2022
- Strategic Connections programme bringing the industry together to speed up connections of low-carbon technology and green generation
- Critical enablers including Data and Digital solutions and networks innovation programme

- Efficient grid connections to deliver the technologies we need… for 2030!
- Planning, Consents & wayleaves reform to address infrastructure roadblocks
- To reach net zero, UK needs to double electricity capacity by 2050 (CCC)
- Strategic investment to build future energy network capacity
- Policy consistency, in particular decarbonisation of heat
- Ensuring alignment and direction from policy to regulation

Connections is a major focus though still a challenge

The summary of the joint T&D connections Databook, data is inclusive of transmission and distribution and demand, storage, and generation projects. Data compiled September 2024. Note that the data is compiled by all network companies on a reasonable endeavours basis, and in order to be produced on a monthly frequency is not assured to the standards of regulatory submission guidance.

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- **Overall, the contracted queue continues to increase, with the rate of new applications and acceptances continue to be high**, with 732GW currently in the queue; 43GW being demand and 688GW from export and storage. In September 16.63GW of new connections offers were accepted.
- **The queue continues to be dominated by renewables** (363GW, 50% of the queue) **and storage** (237GW, 32% of the queue) **far exceeding GB energy needs for net zero.**
- **Networks are connecting customers at a significant pace, connecting more last regulatory year than ever before**
- **There remains significant capacity that networks can accommodate without delay**, including over 51.25GW of distribution connecting customers that have no dependency on transmission works, and 60.19GW of transmission connecting projects that have been offered connection dates in the next three years. Actual connection of these projects will be subject to customer timelines, milestone management, attrition rates and other factors (e.g. supply chain).
- **However, the significant (and growing) queue continues to result in connection delays for customers**:
  - 51% of transmission offers in September met the requested connection date, with an average difference between offered and requested connection date at transmission of 37 months for the month of September.
  - 70% of distribution capacity contracted is dependent on or being assessed for transmission reinforcements.

Connections queue summary – September 2024

	September		Transmission		Distribution	August
Total Contracted Connections Offer (GW)	732 GW	=	559 GW	+	172 GW	722 GW
Total Contracted Connections Offer (GW) - (Export & Storage)	688 GW	=	540 GW	+	149 GW	675 GW
Total Contracted Connections Offer (GW) - Demand	43 GW	=	20 GW	+	23 GW	47 GW

	September		Transmission		Distribution	August
New Applications Received	23 GW	=	6 GW	+	17 GW	29 GW

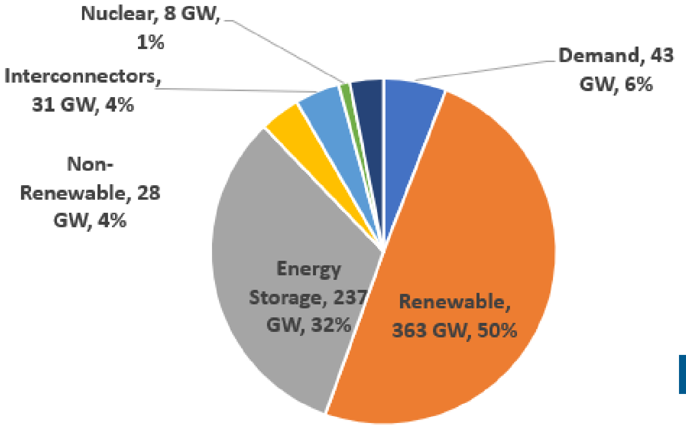
	September		Transmission		Distribution	August
New Connections Offers Accepted	16.63 GW	=	12.33 GW	+	4.3 GW	16.76 GW

	September		Transmission		Distribution	August
Total Connections Delivered	0.89 GW	=	0.62 GW	+	0.27 GW	0.35 GW

Distribution queue by network works

	September	September % of total
No Reinforcement Dependencies & Distribution Reinforcement only (No Transmission Reinforcement)	51.25 GW	30%
Transmission Reinforcement only & Distribution and Transmission Reinforcement	64.81 GW	38%
Pending Decision on Reinforcement Dependency	56.08 GW	33%
Total	172.14 GW	100%

T&D queue by customer/ technology type



Through the ENAs Strategic Connections Group – all of Britain's networks are delivering reforms and significant benefits improving connections outcomes for customers

Connections Delivered	Connections Delivered
9.69 GW Apr 23 to Mar 24	**3.36 GW** Since April 24

Connections Delivered - All DNOs and TOs have connected nearly **9.7GW** of capacity within April 23 to March 24. With **3.36GW** already connected this year since April 24.

*All connections recorded are >/= 1MVA/MW, connections made below this threshold are not included in this total.

Connections Accelerated

9.8 GW
By 6 Years

Offered: 22.08 GW

Potential of live solutions: 40 GW Initial

Connections Accelerated - Through actions set out in the Connections Action Plan, connections are being accelerated to connect to the networks this includes; Technical Limits, Non-firm interim offers for Storage at Transmission.

Capacity Released (Enabler)

23.6 GW

Live solution target: 3GW + 2/3 GW p.a.

Capacity released - Through Distribution modelling assumptions for storage connections, capacity which would have previously been utilised by Battery Storage is now able to be utilised for other connections due to a change in access rights. This has seen over **50GW** released through offers being sent out and **23.6GW** of accepted offers.

Capacity Removed

10.1 GW

Live / Complete solution target: 9 GW

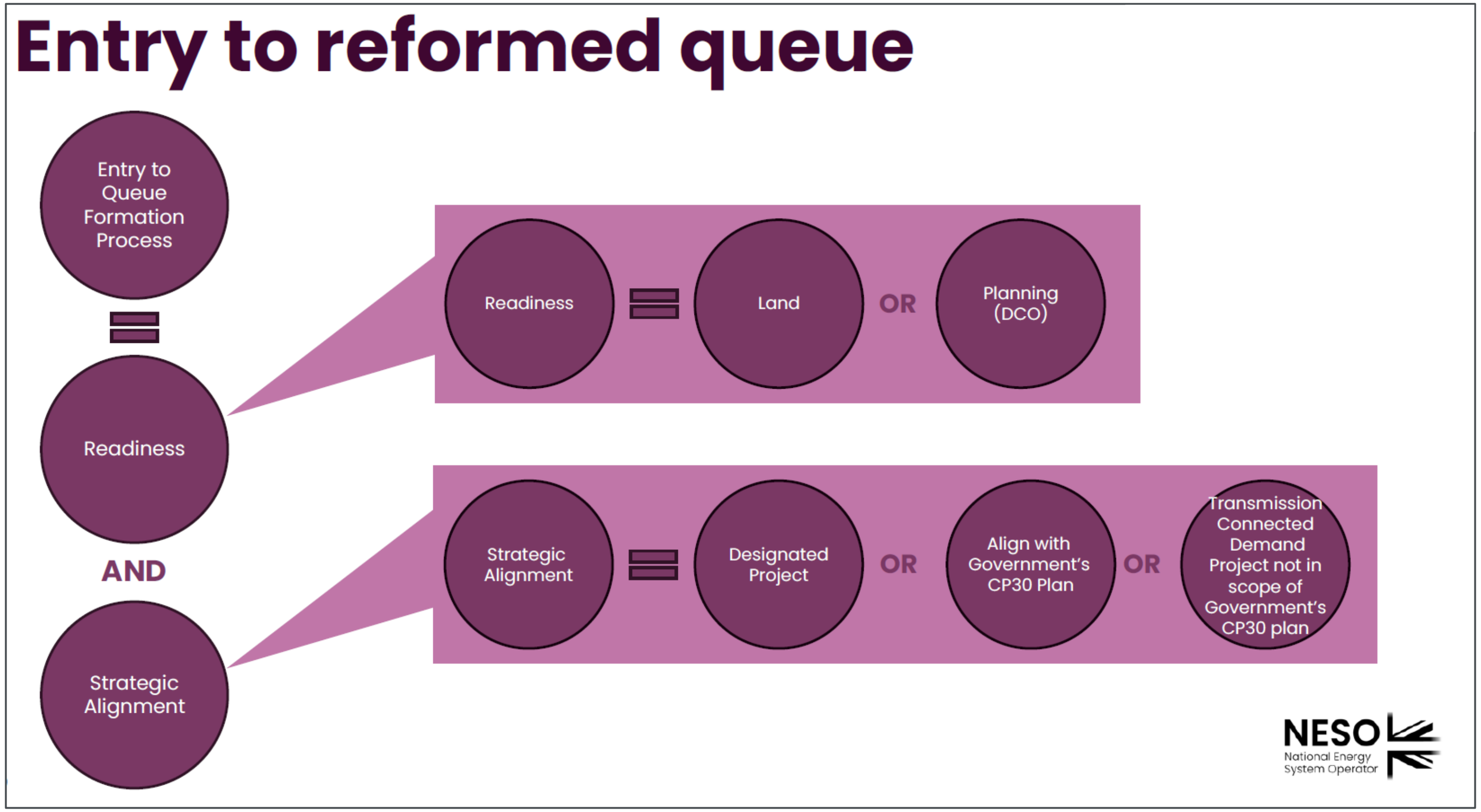
Capacity Removed - Through ongoing robust queue management at both Transmission and Distribution, we have removed over **10GW** of "Zombie projects" from the queue.

(Transmission) Connections Reform

Will implement in 2025 a 'once in a generation' reform for connections

Will move to 'First ready, first needed, first connected' framework

Enabling accelerating clean power to 2030



Key takeaways for grid connection

Know what you need

Engage with networks early

Be ready to progress

Keep aware of a changing world

Contribute & shape

System need & location matters

Thank you