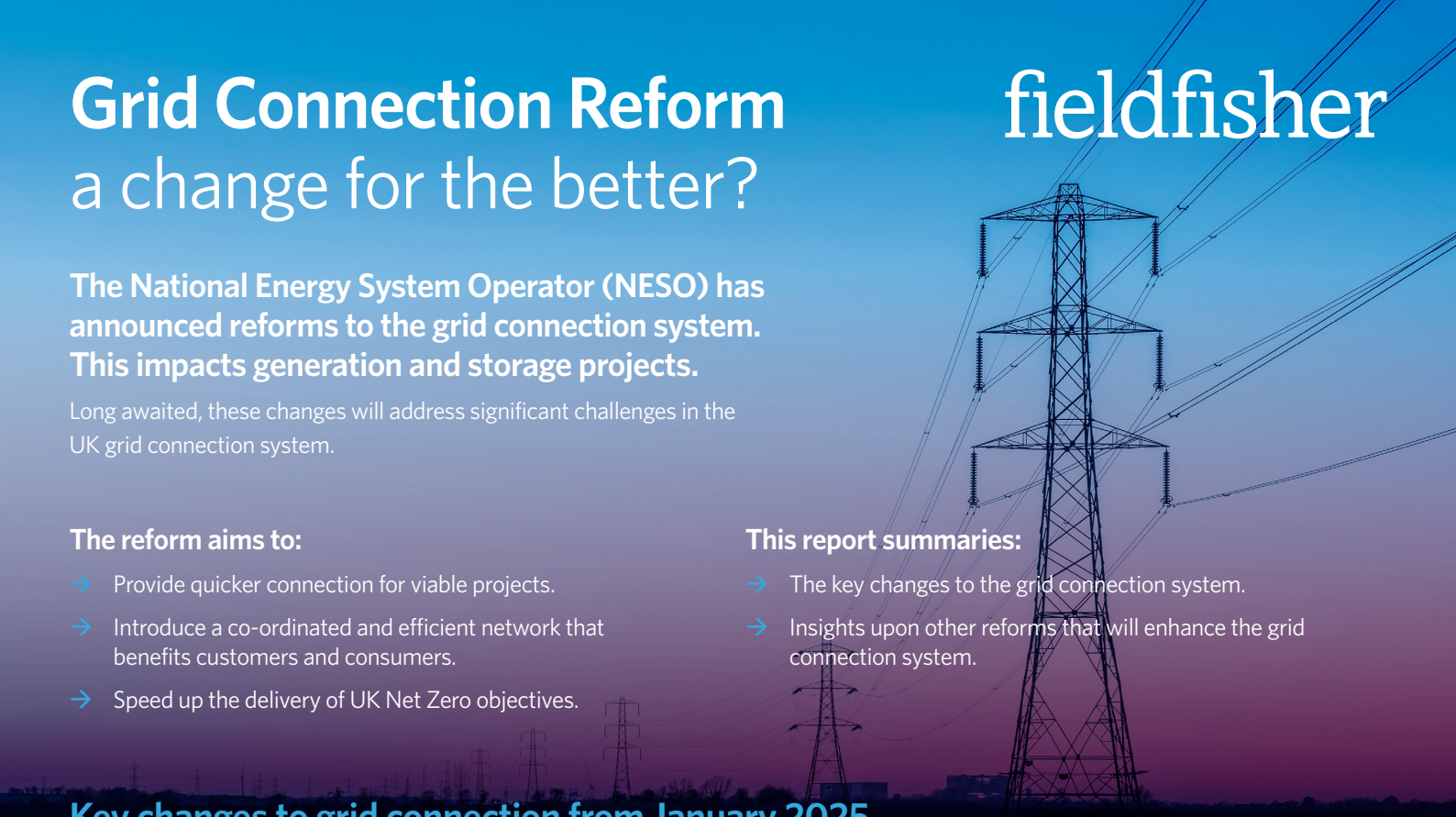
Grid Connection Reform
a change for the better?

fieldfisher

The National Energy System Operator (NESO) has announced reforms to the grid connection system. This impacts generation and storage projects.

Long awaited, these changes will address significant challenges in the UK grid connection system.



The reform aims to:

- Provide quicker connection for viable projects.
- Introduce a co-ordinated and efficient network that benefits customers and consumers.
- Speed up the delivery of UK Net Zero objectives.

This report summaries:

- The key changes to the grid connection system.
- Insights upon other reforms that will enhance the grid connection system.

Key changes to grid connection from January 2025

- "First ready, first connect" method delivered by a two stage gate process. The aim is to make sure that only projects that meet the Gate 2 criteria receive a connection date and location.
- Gate 2 customers will "lose" awarded slot if milestones are not met.
- Gate 1 applications will be assessed more thoroughly and strictly.
- Gate 2 requirements will concentrate on:
  - secured land rights (option to purchase or lease agreed);
  - dates for submission of application for planning consent.
- Changes to Industry codes—aim for Ofgem approval in late 2024.
- Existing applications—a re-evaluation for projects in the current grid connection queue will be reviewed by NESO. Projects that do not meet gate 2 will be reordered with projects that meet the new gate 2 criteria.

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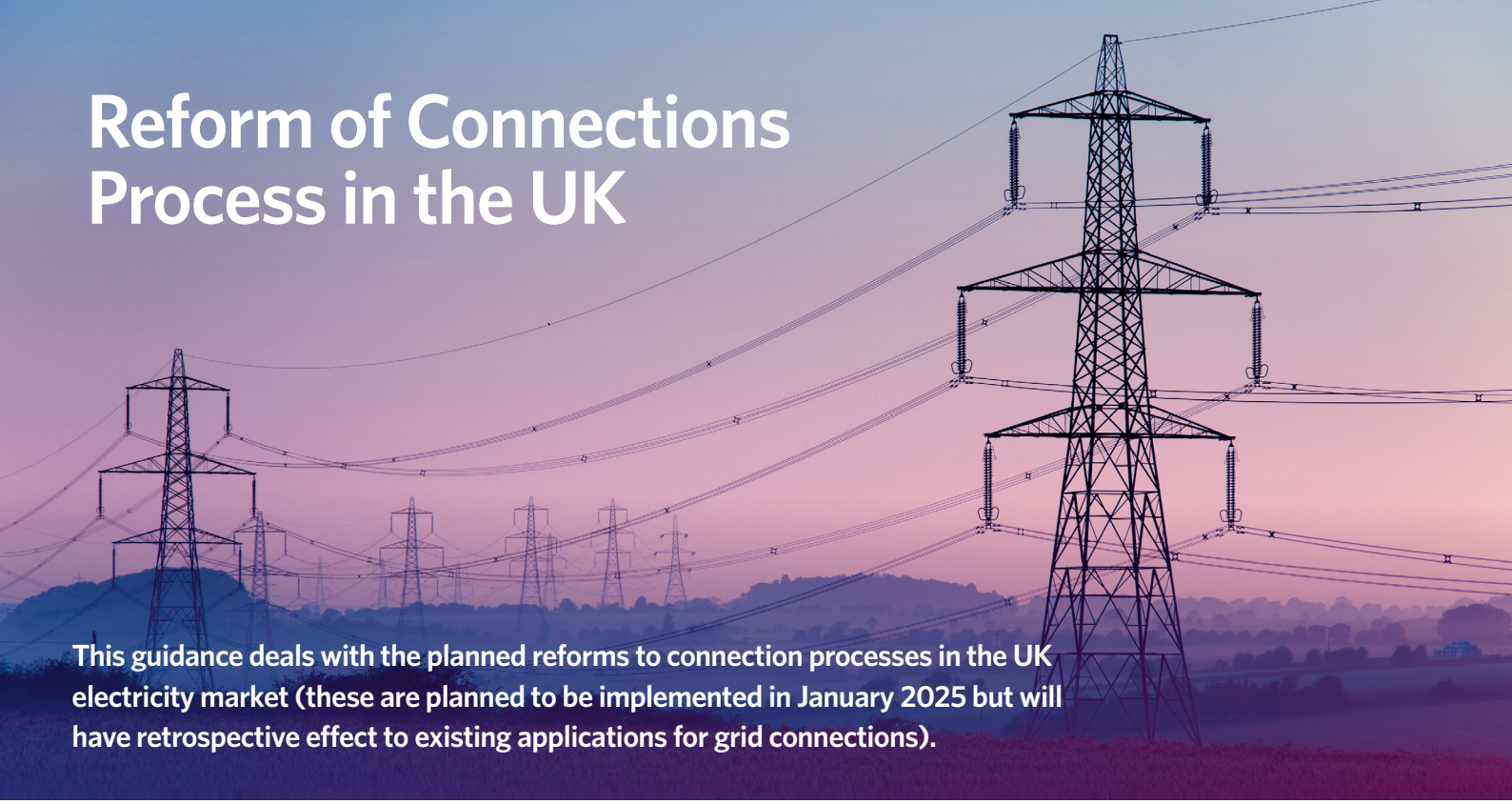
- Overall the changes a significant "step forward" for the grid connection system as the impact of "zombie" projects will be reduced significantly.
- A clear, focussed process that rewards project viability is a positive step, the proposed "gate 1" change will also help promote financially viable projects.
- The changes will focus customers on project viability, this will provide significant commercial benefits.
- Improved collaboration between NESO, Ofgem and customers will be a benefit to industry and public.
- Progress toward Net Zero will be accelerated

Grid Connection Reform
a change for the better, but much more needs to be done...

- The new process may favour BESS projects over other renewable energy projects, particularly solar projects. This will need monitoring to make sure that it does not create an imbalance.
- The issue of access rights to install cables over private land needs addressing urgently. The current state that requires extensive negotiation or DCOs or CPOs is not efficient or effective.
- The introduction of legislation to improve the access to private land for connecting cabling and pipelines will improve the grid connection system.

Reform of Connections Process in the UK



This guidance deals with the planned reforms to connection processes in the UK electricity market (these are planned to be implemented in January 2025 but will have retrospective effect to existing applications for grid connections).

Part One

Retrospective application of new connection processes in the UK

- The National Energy System Operator ("NESO") has introduced far-ranging reforms to the processes for obtaining a grid connection and these reforms will affect both generation and storage projects (save that immaterial schemes at distribution level will not be affected (e.g. less than 1MW)).
- **These connection reforms are due to be implemented in January 2025 but critically the NESO has proposed retrospective application of these upcoming long-term connections reforms so that they will apply to existing applications for connections to the UK grid.**

Broad outline of the revised connection process

The grid reforms (called TMO4 +) have the following objectives:

- Quicker connections for viable projects;
- A more co-ordinated and efficient network design for connections that delivers benefits for customers and consumers; and
- A process which helps to efficiently deliver Net Zero commitments made by the UK Government.

Since 2022, the transmission connections queue alone has grown by more than 275GW and has been growing steadily at an average of over 20GW a month for the last 12 months. The distribution connections queue has also continued to grow and, at the current rate of growth, the total connections queue (across transmission and distribution) is likely to exceed 800GW by the end of 2024. This is in some senses a theoretical assessment as 800GW is approximately four times the installed capacity the UK anticipates needing by 2050!

The enduring connections reform process planned to commence in January 2025 changes the way all parties will submit applications for connections to the grid – the UK is essentially looking to change its connection policy from a "first come, first served" policy to a "first ready, first connect" method via a two-stage process (called "**Gate 1**" and "**Gate 2**"):

- At **Gate 1** a customer will receive an indicative holding offer (giving that customer a rough idea of what their connection date might be but without a firm commitment for a connection location (similar to an existing Step 1 offer for transmission)).
- Only once a customer gets to **Gate 2** and has met the readiness criteria in respect of land rights and is ready to submit planning application within a reasonable time-frame (see below) does the customer get a firm connection date and a firm connection location (e.g. a bay within a sub-station). However, once a customer is at Gate 2, if it misses milestones that application will be removed from the Gate 2 process (see Part Two of this note).

It is plausible that the new regime may provide a marginal advantage for battery storage projects if it is easier to meet the Gate 2 criteria (as it may arguably be easier for a battery storage operator to be ready to commit to submit its planning permission within a reasonable timetable than, for example, a solar farm).

Overview of Gate 1 application process

The revised connections process is based on an annual early application window leading up to Gate 1 where applications will be assessed for competency , with competent applications being included in a co-ordinated network design to inform the NESO's plans for building future network capacity. There are no milestones within Gate 1 so, in theory, applications can "sit" in Gate 1 on a more or less indefinite basis. However, NESO is considering whether to impose a "holding charge" on applications that have met the Gate 1 criteria (to effectively raise the barriers to entry).

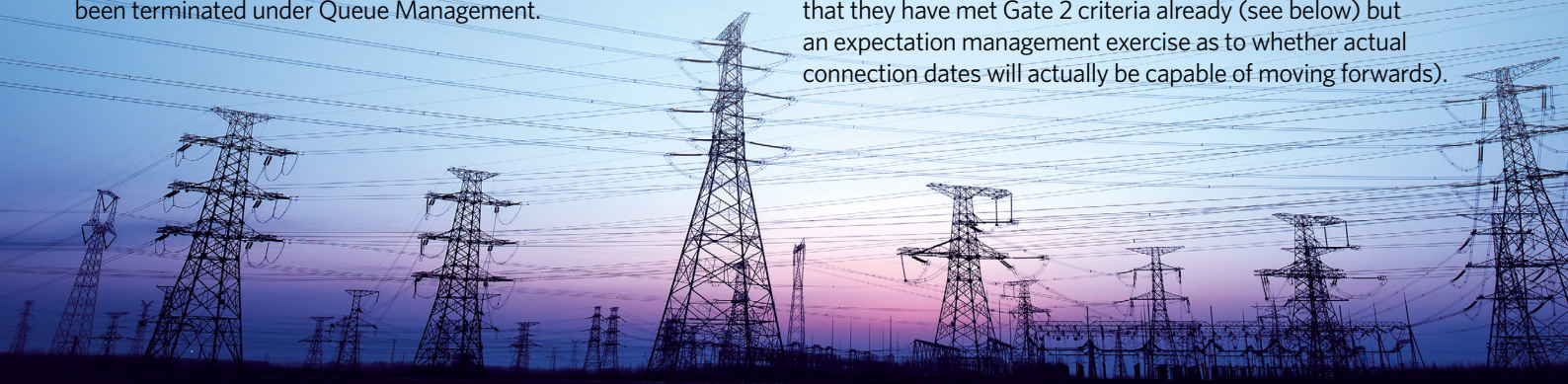
Offers will be issued at Gate 1 for the capacity and technology requested:

- With an **indicative** connection date;
- With an **indicative** connection point;
- Gate 1 projects will **not** be allocated with supporting transmission reinforcement works, user commitment liabilities and securities, or queue management milestones.

Nature of Gate 1 offer

The offer at Gate 1 stage will not require credit support from the customer in respect of early termination liabilities to be provided by the customer (unlike the current process albeit that these requirements will be "added back in" to the process at the Gate 2 stage). The revised connections process means that the indicative connection date provided at Gate 1 is subject to change and may move backwards. This may occur where other projects reach Gate 2 first and are issued with a queue position. However, it is also possible for an earlier date to be offered at Gate 2, in the situation where other projects have exited the queue or have been terminated under Queue Management.

However, one issue to be aware of this is that there will be a "one-time re-set window" for existing applications. There is planned to be a date in Q4 2024 or Q1 2025 when the UK NESO will determine/specify which projects have met the Gate 2 criteria and then this re-setting process will happen on an enduring basis. The UK industry has approximately 720 GW within existing applications and the NESO's view is that circa 200 GW will be able to meet the planned Gate 2 criteria almost straight away (which is a massive queue so there is a big advantage for existing applications being able to demonstrate that they have met Gate 2 criteria already (see below) but an expectation management exercise as to whether actual connection dates will actually be capable of moving forwards).



Meeting the Gate 2 criteria

NESO's current proposed approach for Gate 2 criteria is that they will include requirements regarding:

- **having secured land rights for the proposed location:** the customer must show it has either an option to purchase (a minimum and maximum term will be specified) or lease the land from the owner or an agreement to lease the land from the owner (an exclusivity agreement will not be sufficient); and
- **dates for submission of applications for planning consent:** submission of planning application to the relevant Statutory Authority in respect of construction of the relevant project (or a statement that a statutory consent is not required).

These criteria will continue to be developed through the code modification process (see discussion below).

Assessment intervals for Gate 2 criteria

The NESO's current intention is to group projects together for Gate 2 assessment at regular intervals throughout the year. In the Gate 2 process, projects will be assigned a queue position based on the date that they demonstrate they have met Gate 2 criteria and will be allocated a connection date and connection point for the capacity and technology applied for at Gate 1. Projects will also be allocated supporting transmission reinforcement works, User Commitment liabilities and securities, and Queue Management Milestones based on their confirmed connection date.

Following Gate 2, projects will be required to continue to demonstrate their progress via the Queue Management process. Projects not meeting their Queue Management Milestones may be removed from the queue, with capacity freed up by projects exiting the queue being used to provide more favourable dates to other projects that have met the Gate 2 criteria.

Changes to industry codes and re-evaluation of existing applications

Implementation of these policy changes will require changes to industry codes and Licence Conditions. NESO has submitted applications to Ofgem for Code Modification Proposals (CMPs) and has requested that these are treated as urgent. Subject to the CMPs being treated as urgent, NESO hopes to receive a decision on them from Ofgem by October 2024. This will allow NESO a period from October to December 2024 to communicate guidance on the reformed connections process and prepare industry for its implementation.

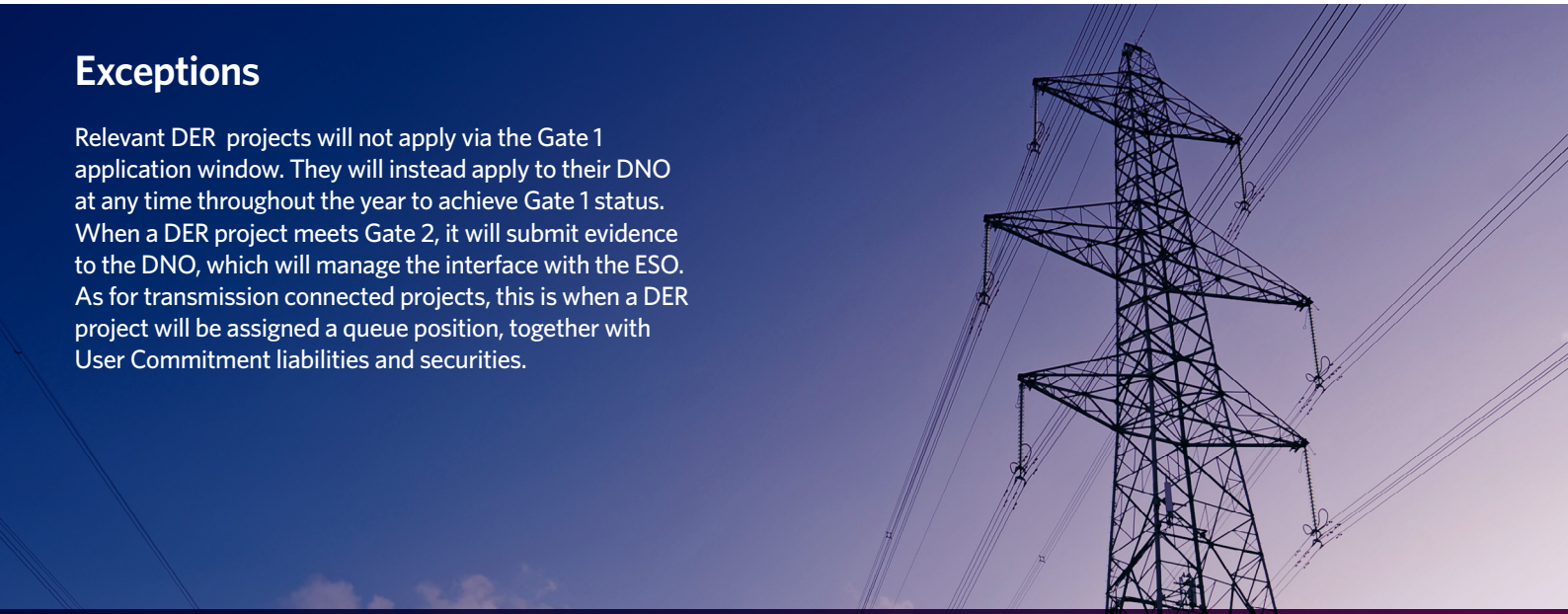
During the preparation period, NESO anticipates requesting projects in the existing queue to provide evidence where they claim to have met the Gate 2 criteria. In the early part of 2025, NESO will assess the evidence provided and existing projects not meeting Gate 2 would move to an indicative connection date and connection point. The Gate 2 queue will then be re-ordered and those Gate 2 projects wishing to request acceleration would then be considered for earlier connection dates.

Projects in the existing queue will be given a period of time, prior to the implementation of TMO4+, to demonstrate whether they have met Gate 2. Where projects in the existing queue meet the Gate 2 criteria, they will have the option to retain their existing connection date or may request an accelerated connection date based on the reformed queue.

Where projects in the existing queue do not meet the Gate 2 criteria, they will move to an indicative connection date and an indicative connection point. They will also no longer be subject to User Commitment liabilities and securities, or to Queue Management Milestones. Subsequently, these projects will be able to apply for a Gate 2 offer after they have met the Gate 2 criteria.

Exceptions

Relevant DER projects will not apply via the Gate 1 application window. They will instead apply to their DNO at any time throughout the year to achieve Gate 1 status. When a DER project meets Gate 2, it will submit evidence to the DNO, which will manage the interface with the ESO. As for transmission connected projects, this is when a DER project will be assigned a queue position, together with User Commitment liabilities and securities.



Connections Reform and clean power by 2030

The UK Government's clean power goal for 2030 aims to decarbonize the electricity grid, ensuring that 95% of electricity is generated from low-carbon sources.[1] This will involve accelerating the deployment of new clean energy projects (CPPs) and significant reforms to the grid connection process in Great Britain to facilitate timely and efficient integration of new CPPs and low-carbon flexibility methods such as electricity storage.[2] NESO has offered guidance to the UK Government on how it can reform the grid connection process to achieve clean power efficiently by 2030.[3] Broadly this includes a move from the current 'first come first served' process towards 'first ready, first connected approach'.[4]

NESO's connection reform proposals have simultaneously been produced in a consultation which details how NESO proposes to align the reformed connections process with the UK Government's plan for clean power by 2030.[5] NESO's proposed reforms cover all projects in Great Britain connecting at transmission level and any generation and storage projects connecting to the distribution networks that impact upon the transmission system.[6] NESO propose that the reformed connections queue aligns with the technology capacity and regional requirements for clean power and they have proposed that this occurs via an extension of the Gate 2 criteria as detailed below.

[1] <https://www.gov.uk/government/news/major-acceleration-of-homegrown-power-in-britains-plan-for-greater-energy-independence>

[2] Aligning grid connections with strategic plans <https://www.gov.uk/government/news/major-acceleration-of-homegrown-power-in-britains-plan-for-greater-energy-independence>

[3] Clean Power 2030, NESO <https://www.neso.energy/document/346651/download>

[4] Our new approach to long-term connections reform, NESO <https://www.neso.energy/news/our-new-approach-long-term-connections-reform>

[5] Connections Reform, NESO <https://www.neso.energy/industry-information/connections/connections-reform>

[6] Clean Power 2030 Report, NESO (5 November 2024) <https://www.neso.energy/document/346651/download>

Extension of the Gate 2 criteria

In addition to the readiness Gate 2 criteria detailed at section 5 above, NESO propose that the project must also meet the **Gate 2 Strategic Alignment Criteria**, which is as follows: [7]

9.1 The project is aligned with the pathways within the Government's Clean Power 2030 Action Plan (CP30 Plan); or

NESO's Clean Power 2030 report recommends that the CP30 Plan sets out a pathway from now to 2030 and then a separate pathway from 2031 to 2035 (each a Pathway and together the Pathways).

A project will be aligned with a particular Pathway (and Users can decide to accelerate their project to a particular Pathway) if Users can indicate that the project has a connection data to the grid in either 2030 or earlier (Phase 1) or in 2035 or earlier (Phase 2) and that the project meets the megawatt or gigawatt capacity needed for that technology type in a particular location. [8]

NESO proposes that the UK is split up into locational zones for distribution and transmission areas. Each zone will have a specific megawatt or gigawatt capacity that is needed from a specific technology type in each Pathway. An example of how the country might be split up into zones by technology type for distribution customers is below. [9]

[7] <Gate 2 Criteria Methodology, NESO (November 2024) <https://www.neso.energy/document/346656/download>

[8] See above.

[9] Draft – NESO Connections Reform Data Impact Assessment v0.02 <https://www.neso.energy/document/346821/download>

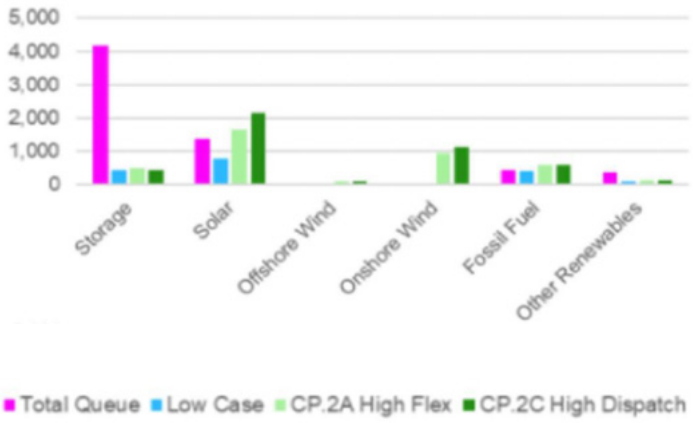


Figure 38: Split of the full queue and low readiness case (GW) split by technology for each of the DNO licence area (1/3) (taken from the ***Draft – NESO Connections Reform Data Impact Assessment v.0.02***, *NESO (November 2024))*

The light and dark green bars above indicate the type of technology that NESO suggests is necessary for that region to achieve the CP30 Plan (this forms indicative guidance to the UK Government only).

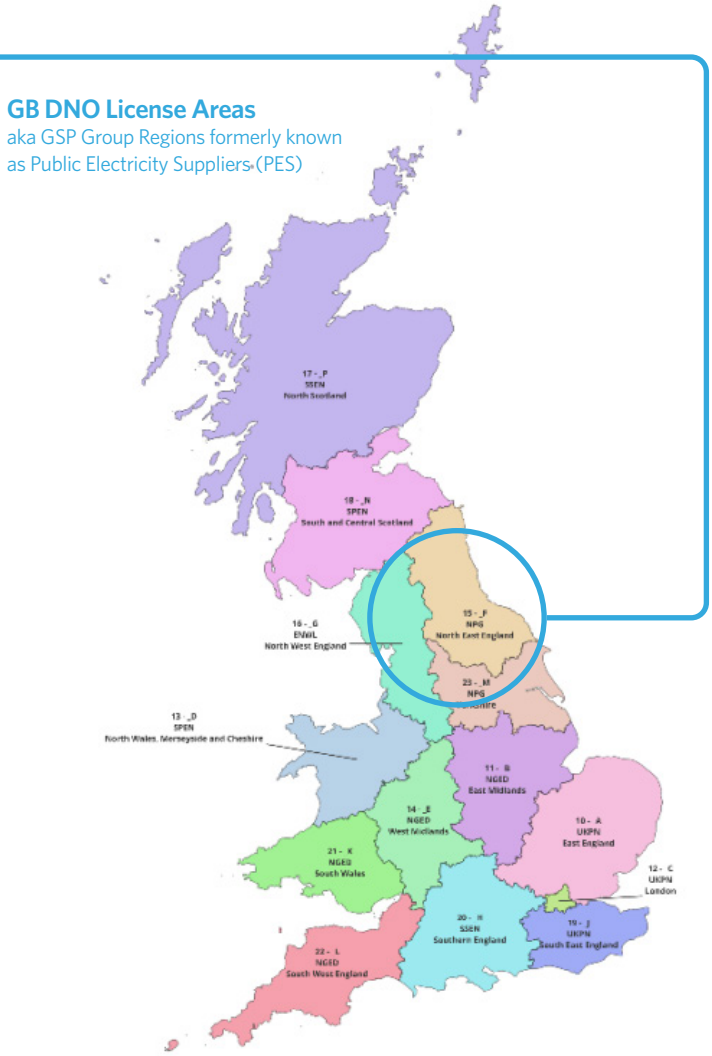


Figure 30: GB DNO License Areas (taken from the ***Draft – NESO Connections Reform Data Impact Assessment v.0.02***, *NESO (November 2024))*

9.2 Be a designated project under the Project Designation Methodology; or

These will be projects that are most likely to provide significant additional consumer, Net Zero and/or wider economic or societal benefits and will include: [10]

- Projects that are critical to Security of Supply;
- Projects that are critical to System Operation;
- Projects that materially reduce system and/or network constraints;
- Projects that are new technologies and/or highly innovative, that are not included within the scope of the pathways in Government's CP30 Plan; and/or;
- Projects with very long lead times (i.e. long design, consenting and construction periods) that may be needed beyond the 2031 to 2035 pathway within the CP30 Plan.

9.3 Be a transmission connected demand project not in the scope of the Pathways within the CP30 Plan.

These will be transmission connected demand projects not in scope of the Pathways within the CP30 Plan such as electrolysers.[11]

NESO will confirm to the User if they meet one of the criteria above by the end of the Gated Application Window after which detailed checks will be carried out on that User's Gate 2 Readiness Criteria Evidence.

[10] Project Designation Methodology, NESO <https://www.neso.energy/document/346661/download>

[11] Connections Network Design Methodology, NESO <https://www.neso.energy/document/346666/download>

9.4 Aligning the queue to the CP30 Pathway(s)

The project will align with either CP30 Pathway as follows:

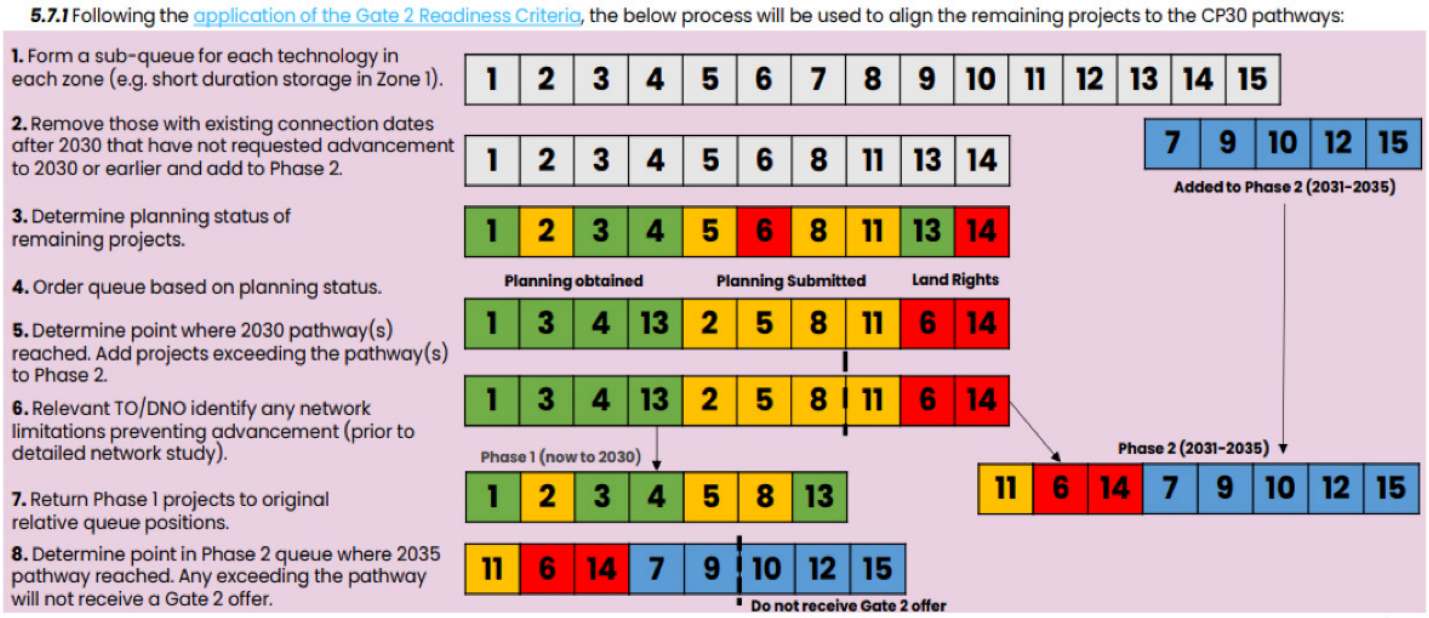


Figure 8: Aligning the queue to the CP30 pathways (taken from the ***Connections Network Design Methodology***, *NESO (November 2024)*)

Step 1

A sub-queue for each technology type, e.g. storage, will be formed in a particular zone. The grey squares depict 15 example projects.

Step 2

Any projects with a connection date after 2030 that have not requested advancement onto the 2030 Pathway (Phase 1) will be removed temporarily from the queue (forming Phase 2). These are the five projects highlighted blue above.

Step 3

The remaining projects are then assessed based on their progress with obtaining planning consent.

Step 4

The queue is reordered with projects that have received planning consent coming first, followed by those projects which have submitted planning consent and lastly the projects that have the land rights but have yet to progress planning applications.

Step 5

The projects are then assessed to establish those which exceed the queue capacity limit. Those that exceed the queue capacity limit are pushed into Phase 2.

Step 6

There may also be network limitations that prevent the advancement of projects in Phase 1, which the relevant Transmission Operator and Distribution Network Operator will identify. Projects may be shifted into Phase 2 as a result.

Step 7

Projects in Phase 1 will then be shifted into their original queue position (as seen in step 1 above).

Step 8

Projects in Phase 2 will then be assessed to see which of them meet the capacity requirements of that zone. Any that exceed the queue capacity limit will not receive a Gate 2 offer.

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