Summary Decision Document: TMO4+ Connections Reform Proposals – Code Modifications, Methodologies & Impact Assessment

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We[1] are making changes to the regulatory framework to implement connections reform, specifically by approving the National Energy System Operator's ('**NESO**') Target Model Option 4 ('**TMO4+**') package of reforms of the electricity connection process.

Altogether, the reform package comprises:

- industry code modifications
- Connections Methodologies, established under the NESO licence (as amended)
- electricity Standard Licence Condition changes, introduced by Ofgem

This document:

This document summarises our decisions which together approve and implement the TMO4+ reform package.[2]

[1]References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work.

[2] "TMO4+" and "TMO4+ reform package" are used interchangeably throughout this document and refers to the entire package, including the code modifications CMP434, CMP435, CM095; the electricity Standard Licence Condition changes; and the three Connections Methodologies: Gate 2 Criteria Methodology , Connections Network Design Methodology, and Project Designation Methodology.

Our decision follows our consultation on our minded-to position to approve the package, which we published on 14 February, and which closed on 14 March.[3]

Other documents:

The decision letters approving the code modifications and methodologies are presented separately and should be read alongside this document.

We have also published our decision to make changes to licence conditions in a separate decision document. This follows our statutory consultation on licence changes, published alongside our consultation on our minded-to policy position linked above.

Finally, we have also published an updated version of our Impact Assessment, which underpins our suite of decisions.

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[3] Consultation on connection reform (TM04+) enablers, including a statutory consultation on modifications to licence conditions | Ofgem

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1. Executive Summary

1.1 Waiting times in the electricity connections queue are too long, the connections rate is too slow, and the mix of generation and storage projects in the queue is misaligned with system need, and the capacity waiting in the queue is far in excess of what is needed under future demand scenarios.

1.2 This is leading to inefficient network planning. The uncertain pace of connections is also risking the confidence of existing investors. New connection offer dates for generation and demand are now extending into the 2040s, also reducing confidence amongst new investors.

1.3 Through publication of the Clean Power 2030 Action Plan (`**CP2030 Action Plan'**),[4] the Government has outlined its intention to accelerate decarbonisation of electricity generation to achieve 95% carbon-free electricity by 2030, which the Government sees as key to accelerating to a net zero UK economy by 2050. The Government has set out a clear view of the future energy mix to 2030 and 2035,[5] made clear that "fundamental reform of the connections process is critical and urgent", and been clear that, without it, the projects needed to achieve Clean Power by 2030 will not connect on time.[6]

1.4 Furthermore, Ofgem must carry out its regulatory functions in the manner it considers best calculated to further the delivery of government policy outcomes set out in the Strategic Policy Statement (`**SPS'**).[7,] One such policy outcome is the "significant and urgent reform of the electricity connections process so that new generation and demand projects critical to net zero can connect to electricity networks in a cost-effective and timely manner, meeting the needs of connection customers and the energy system as a whole."[8]

1.5 While action has been taken over the last two years to address the oversubscription of the connections queue, the influx of very large numbers of new projects seeking connections, combined with Government's Clean Power 2030 mission, means that further, fundamental reform of the connections process

[4] Clean Power 2030: Action Plan: A new era of clean electricity
[5] Clean Power 2030 Action Plan: solar capacity update - letter to NESO - GOV.UK
[6] See p. 65 of the Clean Power 2030 Action Plan, link above
[7] Strategy and policy statement for energy policy in Great Britain - GOV.UK
[8] See page 15 of the SPS (see footnote above)

is urgently needed to accelerate the rate of connections, to support cost-effective delivery of the CP2030 Action Plan, and to support growth. This is explored in more detail in section 2.

1.6 The TMO4+ reform package enables a new connections process that reforms the existing queue to prioritise those projects in a firm Gate 2 connections queue that are 1) 'ready' and 2) 'needed' (ie meeting Strategic Alignment Criteria) under the CP2030 Action Plan,[9] and deprioritises those to an indicative Gate 1 queue that do not meet those criteria. Those deprioritised projects can then reapply in future once they consider they meet the criteria. New projects applying would also need to meet Readiness Criteria and Strategic Alignment Criteria to be eligible to join the Gate 2 connections queue. This is explored in more detail in section 3.

1.7 These reforms will lead to the creation of a rationalised connections queue, aligned with the CP2030 Action Plan. There are three key features of this:

- **Viability** – by prioritising 'ready' projects, the Gate 2 queue is made up of projects that are demonstrably viable and progressed (having land rights or sufficiently progressed their planning status).
- **Need** – by aligning with the CP2030 Action Plan, and any future strategic alignment criteria set by the Government, the Gate 2 queue is made up of projects that best meet current and future system need.
- **Efficiency** – the mix of ready projects aligned with Strategic Alignment Criteria is preserved, with projects that drop out being replaced by projects with the same technology.

1.8 We consider this will deliver two key benefits (further benefits are highlighted throughout this package of documents):

- **More efficient network planning, build and connections** – Network companies[10] will have improved clarity on the projects that are 'ready' and 'needed' for the 2030 and 2035 pathways as defined in the CP2030 Action

[9] In addition to alignment with the CP2030 Action Plan capacities, NESO's proposed Gate 2 Criteria Methodology sets out Strategic Alignment Criteria that includes designation and 'protections' for certain projects.
[10] By "network companies" we mean, together, the Distribution Network Operators (DNOs) and the Transmission Owners (TOs)

Plan.[11] This will result in more focused, efficient network planning and enable the build required to more rapidly connect the projects needed for Clean Power 2030 and beyond. This will mean an estimated tens of billions of notional network build investment would be saved, of which £5 billion are costs for which liability would be shared between generators and end-consumers.

- **Increased investor confidence for ready and needed projects** – Following reform, new entrants will have a clearer signal about what technologies to invest in and where to locate. This will contribute towards economic growth; investors will be better able to focus their resources on the projects that are needed by the system, which will allow these projects to be connected sooner. Existing projects with 'Gate 2' offers will have increased confidence that the required network will be built, due to the more efficient network planning, and their project will be able to connect on time. This benefit will be realised once reforms are embedded. The positive impact on confidence will increase and endure over time; however we recognise that confidence is partially diminished in the near term due to the impacts on those moved to Gate 1, and to all projects during the implementation period.

1.9 These benefits are necessary to achieve a key outcome of the reforms: **the timely delivery of connections for projects to deliver Clean Power by 2030 and net zero by 2050**. The new connections process aligned with focused, prioritised network build will enable a faster rate of connections for the generation and storage that GB needs. Viable projects are highly likely to connect sooner, where the system needs them, without unnecessary cost to consumers. Without reform, it will be at best *extremely* challenging, likely impossible, to meet Clean Power by 2030.

1.10 Because these reforms enable the timely connection of projects aligned with the CP2030 Action Plan permitted capacities for 2030 and 2035, as well as aligning with future strategic energy plans to enable the realisation of net zero by 2050, they will **accelerate the reduction of our reliance on fossil fuels**, improving

[11] We intend to further complement this through our ongoing end to end review of connections incentives and obligations (Connections end-to-end review of the regulatory framework | Ofgem), and through appropriate design of the RIIO-T3 price controls, to ensure the necessary network is built to deliver the rationalised queue on time.

security of supply and protecting consumers from exposure to any future gas price spikes. This will contribute towards sustainable development.

1.11 The process will also enable the **timely connection of demand projects** (which are all automatically deemed as 'needed') in the queue. The ability to access the power system is a fundamental interest of electricity consumers, and this, coupled with the faster connection of electricity generation investment supports economic growth.

1.12 In summary, these reforms contribute to objectives in relation to decarbonisation, cost reduction, and economic growth. Additionally, we consider that these proposals will also deliver wider benefits. These benefits are explored in further detail in section 6.

1.13 We have considered whether approval is consistent with our statutory duties, including our obligations under section 6 of the Human Rights Act 1998, particularly with regard of parties potentially affected to peaceful enjoyment of possessions.

1.14 Ofgem's principal objective is to protect the interests of both current and future consumers, which includes their interests in the Secretary of State's compliance with the duties in sections 1 and 4(1)(b) of the Climate Change Act 2008 (net zero target for 2050 and five-year carbon budgets). We have concluded that approving this reform to the current connections process is consistent with our statutory duties (including under Human Rights Act) and that reform is necessary to protect consumer interests. For the reasons given in our decisions following consultation (the consultation analysis is covered in section 7), we consider that these reforms are necessary to achieve the policy outcomes set out in the SPS noted above and help deliver Clean Power 2030. We also consider that the reforms are a proportionate means of achieving our objectives, and that they strike a fair balance between the public needs pursued and the individual interests of those involved. We have had regard in reaching that conclusion to (amongst other things) the protections granted in respect of certain projects that are well-developed, and the existing flexibility in the regulatory framework as well as current arrangements and practices in relation to connections. Further details of our statutory duties are set out in section 5.

1.15 The urgency and seriousness of the problems that these reforms address, the strong public interest in addressing them, and the advantages of these proposals over other available options as an effective and timely means of doing so, as well as the relevant protections afforded within them, have satisfied us that they are proportionate; we consider that they strike a fair balance between the relevant rights and interests involved.

1.16 Finally, it is crucial that these reforms are delivered as swiftly and effectively as possible. We provide the detail of next steps in section 8.

2. Introduction / Context

Summary:

This section describes the context for connections reform. We cover:

- the current connections process and the need for reform
- the actions taken to date to address the issues and improve the outcomes of the connection process
- the policy development journey of the new connections process (TMO4+), including discussing some of the alternative policy options discounted
- the Government's Clean Power 2030 Action Plan, and why we consider aligning the connections process to it is the right approach.
- our statutory duties, which determine the matters we must take into account when deciding whether to approve the connections reform proposals.

Current electricity connections process

2.1 The current connections process operates on a first come first served basis, where users that apply to connect to the electricity system (either the high-voltage transmission system or the distribution system) are prioritised based on the date they accept their connection offer.

2.2 In November 2023, Ofgem and DESNZ published our joint Connections Action Plan (**CAP**).[12] This set out a framework of actions and further ambitions needed to tackle the growing delays customers are experiencing when seeking network connections.

2.3 We initially assessed the current connections process as presenting the following four problems, all of which have been reaffirmed by a material volume of responses to our consultation:

[12] Connections Action Plan: Speeding up connections to the electricity network across Great Britain

- **Unrealistic connections queue**: The connections queue has grown at pace. Across transmission and distribution, 444GW of new connection applications were made in the 2023/24 financial year compared to 233GW of new connection applications made in the 2019/20 financial year. The queue now contains far more generation capacity than required to achieve Clean Power by 2030 and net zero by 2050. Hundreds of GWs are not needed for Clean Power by 2030, are unlikely to progress to connection, and would likely eventually be terminated under their current contractual position through queue management milestones. There are 213GW of projects with connection offers pre-end-2030 to connect, all of which would require a connection rate over five times higher than the historical average, something we do not assess as feasible.[13]
- **Queue misaligned with Clean Power and Net Zero**: The Clean Power 2030 Action Plan laid out a specific technology mix to provide a secure, operable and cost-effective system. The current queue, assuming all projects were to connect, contains an over-supply in all technologies compared to the permitted capacities in the CP2030 Action Plan. Easier to develop technologies, such as batteries, and solar in specific regions, are significantly oversupplied. Our Impact Assessment (see Section 2 'Appraisal of Impacts') finds some technologies are at risk of being undersupplied due to insufficient projects being ready, based on data we have today. Analysis of the past few years clearly shows that not all projects with connection offers will progress to connect, but the current connections process will not effectively enable the right mix of projects to be connected in time for CP2030 and beyond.

2.4 In the current process, projects hold network capacity and queue positions, despite that fact that they are not ultimately needed. The consequence is that their place in the queue, and the large size of the queue, prevents under-supplied technologies from connecting (either existing projects advancing forwards or new projects connecting in a timely manner) within the requisite time for Clean Power by 2030. These unneeded projects in the queue also prevent the acceleration of

[13] The average annual rate of connections delivered for the six years up to April 2025 is approximately 8GW per year

specific technologies where capacity gaps emerge (for example, because a project drops out, or an operability need is identified).

Unclear network build signal

2.5 The connections queue determines the new network build that must be planned to connect projects. Under the current process, network companies must plan for all connection works (ie the network to connect new assets into the network) and those plans are not aligned with wider network planning (ie plans that map the network 'top down' to move power cost-effectively around the country). The level of build implied by the current connections queue is not feasible to deliver. Even if this level of build could be delivered, it would be inefficient and wasteful as not all projects ultimately connect.

2.6 In practice, networks recognise the risk that a proportion of projects will not ultimately connect and so make assumptions about which projects will and won't materialise to manage uncertainty. However, both the queue size and misalignment with decarbonisation targets is creating high and increasing uncertainty for network companies about what they should build and when. Managing this high level of uncertainty through assumptions alone is no longer sustainable. This lack of network build clarity is delaying the rate of connections to the network, which is far slower than the rate of growth of the queue or the rate needed to meet decarbonisation goals.

Reduced investor confidence

2.7 New generation and storage projects are receiving offers well into the late 2030s and 2040, materially delaying possible future investment. For projects already in the current queue and connecting sooner, the number of connection contracts is far in excess of historical network build or connection rates. There is therefore an existing, escalating risk that the dates projects hold could be delayed due to being unachievable (NESO and DNOs already have the contractual abilities to change connections dates). The size and makeup of the queue also means that a reasonable proportion of these projects would ultimately be financially unviable.

2.8 The overall result of this status quo connections approach is that all new projects, including necessary generation and storage technologies or important demand, are receiving connection dates far in the future, and an insufficient number of

projects are being connected annually. Data suggests that the current connection rate is 2-3 times slower than the rate needed to connect the permitted capacities in the CP2030 Action Plan, and five times slower than what is required to connect all projects in the current queue to 2030 in line with their current connection dates.[14] Because the connections queue provides unclear signals on what connections are genuinely required, it is assessed as unfeasible and inefficient that the network be built to connect the entirety of the current queue. In assessing this we focus primarily on the period out to 2035, but the challenges we examine will remain equally relevant beyond that to 2050.

2.9 Directly connected transmission demand, representing key energy consumers and in some cases key contributions to economic growth, face similar delays and risks in gaining access to the network, with relevant consultation respondents reaffirming the risks deterring investment in industrial and commercial sites.

2.10 In summary, we do not consider that the current connections process can credibly achieve efficient and secure Clean Power by 2030, and this risks limiting economic growth.

Actions taken to date to address issues[15]

2.11 In response to these issues, DESNZ and Ofgem published a joint Connections Action Plan ('**CAP**')[16] in November 2023. The CAP contains short-term actions as well as longer-term goals.

2.12 The short-term objectives especially relevant to the connections process reform were to:

- raise entry requirements to ensure projects applying have begun progressing their projects at point of application
- remove stalled projects
- better allocate available network capacity for new and existing capacity by moving to a first-ready, first-connected process

[14] The average annual rate of connections delivered for the six years up to April 2025 is approximately 8GW per year.
[15] Please refer to appendix 1 or our minded-to consultation for more details of actions taken to date to address the connections problem TMO4+ Connections Reform Proposals – Code Modifications, Methodologies & Impact Assessment
[16] Connections Action Plan: Speeding up connections to the electricity network across Great Britain

2.13 The CAP also laid out actions to better utilise existing capacity, and improve data and processes.

2.14 The CAP sought to ensure, in the longer-term, that the connections process will be aligned with strategic plans and market reforms, notably the Strategic Spatial Energy Plan ('**SSEP**'), which will lay out, at a high level, where generation assets should optimally be located to meet demand out to 2050.

2.15 The CAP was also accompanied by the introduction of a new Ofgem-chaired Connections Delivery Board ('**CDB**'), an industry and government wide taskforce to provide strategic direction and accountability, track progress against targets, and mandate further actions as required.

2.16 Some of the key achievements of the CAP at transmission level include:

- the introduction of Queue Management Milestones and the ability for NESO to terminate connection agreements where milestones are missed by customers, via CUSC modification CMP376, targeted at speculative and slow progressing projects (implemented 27 November 2023);[17] and
- a new requirement for connection applicants to submit a Letter of Authority with any new onshore transmission connection application, thereby raising entry requirements (implemented 28 March 2024).[18]

2.17 While these measures are having, and will continue to have, a positive impact, it is clear from the rate of new applications, the technology mix in the queue and the rate of connections, that more comprehensive improvement is needed to achieve a fit-for-purpose connections process in time to deliver the CP2030 Action Plan and net zero.

Development of a new connections process

May 2023 – Ofgem open letter

2.18 Despite the actions outlined above, and other measures outlined and progressed through NESO's 5-point plan[19] and ENA's 3-point plan[20] to speed up connections,

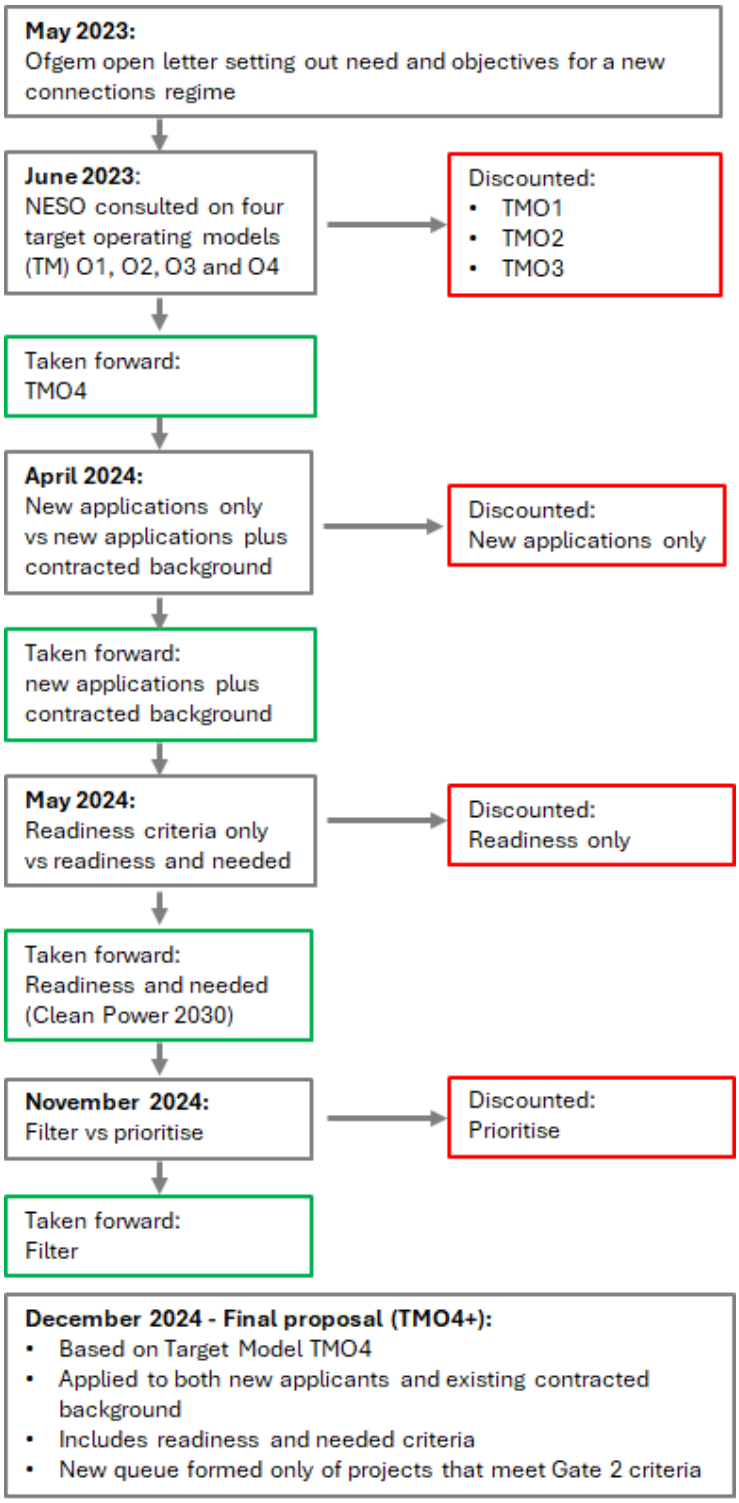
[17] CMP376: Inclusion of Queue Management process within the CUSC | Ofgem
[18] CMP427: update to the transmission connection application process for onshore applicants | Ofgem
[19] Our five-point plan | National Energy System Operator
[20] Energy networks launch action plan to accelerate grid connections – Energy Networks Association (ENA)

we identified in our open letter of May 2023[21] that further action was needed to meet our policy objective to develop a new connections process that would result in connection offers, at both transmission and distribution, with shorter average connection dates, which better meet customers' needs, and enable a timely transition to net zero.

2.19 Figure 1 sets out a schematic flow chart describing how the final connection reform proposals were developed from that point onwards. The following sub-chapters describe that process in more detail, focussing on how the policy was developed, and which elements of the policy were ultimately not progressed (and the reasons why).

[21] Open letter on future reform to the electricity connections process | Ofgem

Figure 1 - Flow chart describing the TMO4+ policy development process



June 2023 - Initial Target Model Options

2.20 In June 2023, NESO consulted on multiple designs for a reformed connections process for new applicants to meet the policy objective outlined above.[22] The options considered were:

- **TMO1: 'Status Quo Plus'**, an updated version of the current process with a single stage gate process with application entry requirements.
- **TMO2: 'Gated Process without application windows'**, the introduction of a second gate ('Gate 2') to the current process.
- **TMO3: 'Gated Process with a mid-window'**, a gated process with an application window leading up to Gate 2 for providing firm connection offers, but only for projects which have submitted planning consents and other 'priority projects.'
- **TMO4*:* 'Gated Process with an early window'**, a gated process with an early application window leading up to Gate 1, with Gate 2 being used to determine queue position for projects within the window (and to potentially accelerate projects) which have submitted planning consents, or other priority projects.

2.21 In December 2023, NESO published their Final Recommendation Report which recommended that their initial preferred recommendation, Target Model Option 4 ('**TMO4**'), be pursued as the new model for the connections process.[23] TMO4 was, in aggregate, the preferred model of respondents to NESO's consultation, with the other models receiving only minority support.

2.22 A full analysis can be found in NESO's December 2023 Final Recommendation Report linked above. In summary, NESO's assessment concluded that TMO4 best met NESO's design criteria for a connections model, and that it represented the most beneficial model for customers and consumers as it was projected to:

[22] ESO - Connections Reform - Consultation - June 2023
[23] Connections Reform - Final Recommendation Report - December 2023

- provide the greatest opportunity for earlier connection dates for generation and demand projects across Great Britain, on a first ready first connected basis;
- lead to more efficient and coordinated future planning of the network (i.e. onshore, offshore, including interconnectors and offshore hybrid assets, and across transmission / distribution), thereby delivering savings to project developers and consumers;
- support more efficient delivery of network infrastructure, by building out the network more efficiently in anticipation of need;
- better facilitate competition, innovation, and the introduction of non-build solutions; and
- be most future-proofed and aligned to facilitate the introduction of a SSEP, and best align to (and allow synergies with) Centralised Strategic Network Planning and strategic planning of offshore networks.

2.23 As noted, TMO4 was based on a 'First Ready, First Connected' principle. It proposed two formal gates known as "Gate 1" and "Gate 2" that new applicants could apply to enter:

- **Gate 1** - would provide connection offers with indicative terms, conditional on a project demonstrating 'readiness', and would be based on a co-ordinated network design connection date.
- **Gate 2** – would provide connection offers with confirmed terms for projects that had demonstrated 'readiness'.

April 2024 - Applying the reformed process to the existing queue

2.24 NESO further developed these proposals and provided an update in April 2024.[24] NESO's updated proposals recommended that the Gate 2 Readiness Criteria also be applied to the existing queue, on the basis that the continued fast growing nature of the queue would not allow connection dates to be improved in the timescales needed to deliver on the CAP objectives if reform was only applied to

[24] ESO - GB Connections Reform - Update on implementation of reformed connections processes - April 2024

new applications going forward.[25] NESO's view was therefore that significant action was required across the whole of the current queue to enable viable, net zero aligned projects to be connected more quickly.[26] This would mean that existing projects in the queue would be required to demonstrate readiness to retain a Gate 2 contract. These proposals were worked through established cross-industry connections governance processes, including the Ofgem-chaired CDB. This updated proposal became known as Target Model Option 4+ ('**TMO4+**').

2.25 We published an open letter in April 2024 indicating our support for the development of these proposals, and setting out our expectations for how the updated proposals applied to the existing connections queue would further the CAP outcomes.[27] We also took the opportunity within the letter to invite stakeholder views on NESO's updated proposals.

2.26 We updated stakeholders in our May 2024 blog to confirm that we had published the non-confidential responses online, and that we expected NESO to consider them as part of the ongoing connections reform development process.[28]

2.27 In the meantime, NESO had raised CUSC and STC code modifications in April 2024 to begin the formal process of the development of TMO4+.

May 2024 - Introducing 'needed' criteria in addition to 'readiness'

2.28 NESO developed the readiness criteria through code modifications (CMP434 and CMP435) working groups, and consultation through other forums such as the Connections Process Advisory Group (CPAG). A range of potential readiness criteria were considered, including a requirement to have planning consent, or to have submitted a planning application.

2.29 Ultimately, these were not progressed due to practical issues, such as that fact that details of the grid connection, such as cable routing, are often required before a planning application can be submitted, and other issues such as putting

[25] We also note the negative impact on investor confidence in new projects that would arise from a two-tier system whereby existing projects in the queue and new projects were subject to different queue entry criteria.
[26] To align with the policy objective set out in Ofgem's May 2023 to ensure that the connections process enables a timely transition to net zero
[27] Open letter: update on reform to the electricity connections process following proposals from ESO | Ofgem
[28] Blog - Collaborating to improve electricity connections | Ofgem. Note, the consultation responses to our April 2024 open letter can be found here alongside the open letter - Open letter: update on reform to the electricity connections process following proposals from ESO | Ofgem

a disproportionate burden on developers to spend money on preparing a planning application at risk, without any guarantees that they would be connected.

2.30 Although there was concern that land rights would be a low barrier to entry, and was a requirement easily met by most developers of generation and energy storage projects, a suitable alternative that could obtain widespread support from industry was not identified.

2.31 We agreed that land rights combined with M2 ('planning submitted') queue management milestone strikes the right balance between evidencing sufficient commitment and progression from users seeking connection and balancing those user's needs for certainty before committing significant sums to a project's development. Our Decision on the Gate 2 Criteria Methodology provides further consideration of land rights as the most balanced readiness threshold.

2.32 In May 2024, NESO issued an RFI to developers to better understand the readiness status of projects in the queue to inform their TMO4+ proposals.[29] The RFI closed on 28 June 2024. The results showed that the TMO4+ proposals as they then stood would likely reduce the size of the queue significantly with a queue of approximately 409GW across transmission and distribution. However, the anticipated reduction would not be sufficient, with a queue size far in excess of projected system need, and would be unlikely to deliver a technology mix that aligns with what GB is forecast to need to deliver a secure, clean energy system in 2030 or even 2050 based on NESO's Future Energy Scenarios (**FES**).[30] NESO later published a summary of the RFI findings in August 2024.[31]

2.33 We agreed that the readiness criteria alone would not deliver the energy mix needed to reach net zero and interim carbon budgets (as per the NESO's Future Energy Scenarios) as set out in the Clean Power Action Plan or FES, and certain technology types may be more easily able to meet the readiness criteria.

2.34 We therefore supported discussing, and subsequently agreed, at the CDB in July 2024 that NESO would undertake further assessment and development of the

[29] Connections Reform | National Energy System Operator - see "land rights request for information analysis"
[30] Future Energy Scenarios (FES) | National Energy System Operator
[31] ESO - Summary of land rights request for information analysis

TMO4+ proposals to determine whether filtering the queue by readiness alone was enough to meet the objectives set out in the CAP.

2.35 In the meantime, the new Clean Power by 2030 Government ambition and the associated CP2030 Action Plan (see below) provided granular clarity on the technology mix that the connections regime should deliver. This introduced the possibility for the design of the TMO4+ proposals to be adapted to bring forward the long-term objective within the CAP of aligning the connections process with strategic planning (the CP2030 Action Plan in the first instance and later, the SSEP), in order to create a viable and credible queue aligned with GB's energy system needs.

2.36 Recognising this, in our open letter of September 2024, we stated that it was critical that the opportunity was taken to ensure the alignment between connections and the strategic planning of the GB energy system, and that NESO should incorporate this alignment into the TMO4+ proposals[32] through the introduction of 'strategic alignment criteria'. The aim was to achieve a connections process that focused on projects that are sufficiently ready and that are needed by the energy system, ie the concept of "**first ready and needed, first connected**".

2.37 The letter also signalled our intention to propose changes to the regulatory framework to accommodate an updated connections process comprising licence modifications which, amongst other things, would require Ofgem approval of methodologies (which were specifically intended to set out the more granular aspects of an updated connections process).

2.38 Throughout September and October 2024, NESO chaired workshops with representatives from network companies, Government, and Ofgem, to develop options for strategic alignment criteria. These options were discussed at the September and October Connections Delivery Boards, prior to NESO consultation on the proposals in November 2024.

[32] Open letter on the reformed regulatory framework on connections

November 2024 - 'Filter' vs 'Prioritise'

2.39 NESO then further consulted on the detailed design of TMO4+ in November 2024, including on draft versions of the Connections Methodologies.[33]

2.40 As well as testing stakeholder views on the specific content of the draft Methodologies, the consultation presented three 'overall designs' for alignment with Government's CP2030 Action Plan. These were as follows:

- **Overall design 1 (new applications only)** - ready projects in the current queue are offered a connection in the reformed queue, and only new applications must align with the CP2030 Action Plan (ie there is no application of 'needed' criteria to the projects in the existing queue);
- **Overall design 2 ('filter')** - the reformed queue would be limited to projects which are ready and aligned with the strategic energy plan in place at the time (initially the CP2030 Action Plan and later SSEP), or ready projects in technologies that were not known at the time of the CP2030 Action Plan or that are otherwise outside the scope of the CP2030 Action Plan. This was NESO's preferred option;
- **Overall design 3 ('prioritise')** - connections offers would be made on a prioritised basis to projects which are aligned with the CP2030 Action Plan. Other projects that are ready but not aligned with the plan would be offered a Gate 2 connection offer and a place in the new reformed queue, but deprioritised behind projects aligned with the plan.

2.41 NESO's reasons for favouring overall design option 2 were that, in NESO's view, it:

- ensures projects aligned with strategic energy plans are prioritised in the new connections queue "to deliver an efficient, secure and operable system for Clean Power by 2030."
- provides project developers and investors with clarity on the types of projects that will most efficiently deliver GB's net zero ambitions (to the

[33] Connections Reform | National Energy System Operator - see "Phase 3: Consultation documents"

period covered by the pathways in the CP2030 Plan), within a "transparent, objective, and simple end-to-end process", whilst minimising and coordinating interventions to the connections queue and process.

- ensures "network companies design and build economic and efficient coordinated networks" (to the period covered by the pathways in the CP2030 Plan), focusing on the projects most aligned to the CP2030 Plan, ensuring that those projects can connect more quickly.
- supports an efficient transition to SSEP by not allowing the new reformed connections queue to exceed the permitted capacity (by technology and location) set out in the 2035 pathway in the CP2030 Action Plan. This therefore:
    - protects consumers from the risk of projects that are needed by the SSEP being delayed by other projects in the queue that are not needed in the SSEP.
    - ensures efficient network design and build, lowering system balancing costs and appropriately managing environmental and community impact.
    - protects project developers from the risk of action to the new Gate 2 queue to remove or deprioritise projects even if they are not aligned with the SSEP, providing greater certainty for project developers that their projects will connect.

2.42 NESO published their response to the consultation on 20 December 2024 alongside their submission of the final proposals to Ofgem (see below), which contains a detailed analysis of their findings.[34] In summary, in response to the question on overall design for strategic alignment, most respondents agreed with overall design 2, with designs 1 and 3 not receiving significant support. NESO's view was therefore that, on the basis of this support and the benefits of the approach that NESO outlined in the November 2024 consultation as above, they would continue to propose implementation of overall design 2 ('filter').

[34] Connections Reform - Report on Connections Methodologies Consultation Responses

December 2024 - Final development and submission of proposals

2.43 NESO submitted their final TMO4+ proposals[35] on 20 December 2024 to Ofgem for approval, contingent also on Ofgem deciding to make the relevant licence modifications needed to enact the reforms.[36]

2.44 Concurrently, on 27 November 2024, we had consulted on potential licence modifications that would be needed to facilitate implementation of the TMO4+ proposals in anticipation of NESO delivering their final proposals.[37] The consultation closed on 6 January 2025.

2.45 Finally, having considered the responses received and the information and documents submitted by NESO, we published our Minded-to Decision on the whole package of reforms on 14 February 2025.[38] This included:

- a policy consultation on our Minded-to Decisions to approve the code modifications (CUSC modification proposals CMP 434 and 435, and STC modification proposal CM095) and NESO's three Connections Methodologies (Gate 2 Criteria, Connections Network Design and Project Designation)
- draft decision documents on the code modifications and Connections Methodologies
- our Impact Assessment which underpinned our Minded-to Decisions
- a statutory consultation on the text of our proposed licence changes, including our response to the November 2024 policy consultation on licence changes (see above).

2.46 More details on the specifics of each element of the TMO4+ reform package are set out below in Chapter 3.

[35] Submission on Final Modification Report for CMP434, CMP435 and CM095, along with the methodologies (Gate 2 Criteria Methodology , Connections Network Design Methodology and Project Designation Methodology)
[36] Connections Reform | National Energy System Operator – see "Connections Reform Methodologies"
[37] Proposed licence changes to enable TMO4+ Connections Reform | Ofgem
[38] Consultation on connection reform (TM04+) enablers, including a statutory consultation on modifications to licence conditions | Ofgem

Clean Power 2030 Action Plan

2.47 In August 2024, DESNZ commissioned NESO to advise the Government on credible pathways to achieving Clean Power by 2030, including consideration of further criteria that could support connections reform.[39]

2.48 On 13 December 2024, after analysing the advice from NESO, the Government published their CP2030 Action Plan to achieve at least 95% of GB's electricity generation from Clean Power by 2030.[40] The CP2030 Action Plan set out capacities of generation and storage (some at the regional level) required to 2030 and permitted capacity ranges per technology to 2035.

2.49 The plan is one of the means by which the Secretary of State is to deliver his obligations under the Climate Change Act 2008 (including achieving net zero by 2050 and delivery of five-year carbon budgets).[41] Ofgem's principal objective in protecting the interests of consumers includes their interests in the Secretary of State's compliance with those obligations.

[39] This request was consistent with the recommendations of the Climate Change Committee Review June 2024. See for example the following at p 28 "*Electricity decarbonisation. The Government has committed to decarbonising electricity supply by 2035, subject to ensuring security of supply, together with ambitious targets for building new renewables and nuclear.* ***However, the Government has not yet published an overarching standalone plan or strategy for delivering a decarbonised and reliable electricity system by 2035*** *that is resilient not only to average weather, but to plausible future extreme weather and demand scenarios.* ***Doing so would facilitate a more coordinated and strategic approach to delivery and improve visibility and confidence for investors. In parallel with this, there is an immediate need for policy to move ahead with ensuring adequate network capacity and connections****, bringing forward low-carbon flexibility solutions, and reforming electricity market design" (emphasis added)*.

[40] Clean Power 2030 Action Plan - GOV.UK

[41] See pages 25, 39, 107 and 109 of Clean Power 2030 Action Plan

3. Target Model Option 4+ (TMO4+)

Summary:

This section describes the TMO4+ process. We cover the following:

- the key concepts of the readiness and needed queue entry criteria, and the new two gate application process.
- the new process at distribution level, noting that the reforms are transmission-led and that we must therefore ensure the process at distribution aligns.
- other ongoing reform processes

TMO4+ key concepts

3.1 TMO4+ seeks to introduce criteria for projects to be 'ready' and 'needed' in order to receive a firm connection date and/or retain a queue position. Under the proposals, these criteria would be applied not only to future applications but also to projects in the existing queue. Protections are available for specific categories of projects to ensure proportionality and to protect investor confidence for near-term projects.

3.2 While the reformed process focusses on projects connecting at transmission, generation and storage projects connecting at distribution that qualify for Transmission Impact Assessment (**TIA**) are also within scope. Smaller generation and storage projects, and all demand projects connecting at distribution, are out of scope. In summary, for in-scope projects:

- **'Ready'**: Projects must meet Readiness Criteria. For most projects this will mean obtaining, evidencing and maintaining exclusive land rights and being required to sufficiently progress their planning status within a defined period of time.
- **'Needed'**: Projects must meet Strategic Alignment Criteria. For most this will mean being aligned with the capacities outlined in the CP2030 Action Plan. The Action Plan articulates the permitted capacities needed out to 2035. For those technologies where regional capacities are provided in the

CP2030 Action Plan, NESO can undertake 'rebalancing' and 'substitution' of zonal capacities. This includes adjusting the capacity allocated to the same technologies in adjacent or overlaying zones (including across Transmission and Distribution) as appropriate, to balance over- and under-supply of projects. More detail of rebalancing and substitution is provided in our Decision of the Gate 2 Criteria Methodology. Demand-only projects are automatically deemed as needed.

3.3 In addition, certain projects in the existing queue will be **protected**. Projects due to commission in 2026 as well as other 'significantly progressed' projects[42] will meet the Strategic Alignment criteria, meaning they are guaranteed to receive a Gate 2 offer (so long as they have met the Readiness Criteria). Protected projects are automatically deemed as 'needed', providing clarity to these projects sooner.

3.4 Projects due to commission in 2026 will receive further protections, with these projects maintaining the same connection date and location. We also recommend, following consultation, that NESO provides addition assurance to projects eligible for Protection Clause 2a, and which have existing agreements to connect on or before 31 December 2027, that they will retain connection dates and connection points. Our Decision on the Gate 2 Criteria Methodology provides the rationale for our recommendation.

3.5 TMO4+ proposes that NESO will make connection offers through a **gated process** following periodic application windows, named "Gate 1" or "Gate 2":

- **Gate 1 offers (indicative) (transmission connections only)[43]** – for new applicants and existing customers. Existing projects that are either not 'ready' or not 'needed' will have their contract varied and be provided with a conditional offer, with an indicative connection date and location. They will need to reapply in a future application window, when they can

[42] Evidence of significantly progressed covers: Projects with planning consent; holders of a Contract for Difference (CfD), holders of Capacity Market agreements; LDES, Interconnector or OHA Cap and Floor agreement or Merchant Interconnector approval); live contract with NESO awarded through their 'Network Services' processes

[43] TMO4+ introduces the concept of Gate 1 only for transmission-connecting projects. DNOs have separately established an equivalent 'Gate 1' process for distribution-connecting generation projects, outside of the scope of TMO4+, in order to align with the new TMO4+ process

show they are 'ready' and 'needed', to be granted a confirmed Gate 2 offer.

- **Gate 2 offers (with confirmed details, i.e. connection date and location) (transmission and distribution generation[44])** – for new applicants and existing customers. Existing projects that meet the Readiness and Strategic Alignment criteria (including all those that are protected), which includes all 'ready' demand projects at transmission, will be offered a Gate 2 contract or, in the case of existing customers, will maintain a position in the queue or advance to fill new gaps from the removal of non-ready projects from the queue.[45]

3.6 In addition to projects meeting the 'ready' and 'needed' criteria, there are specific processes that provide some discretion for NESO to bring forward and prioritise specific connections applications. Firstly, project designation enables NESO to prioritise projects in application windows to meet specific needs as laid out within the Project Designation Methodology. Secondly, capacity reservation allows capacity to be allocated to projects at Gate 1, and also to allow projects to be brought forward, including to meet the CP2030 Action Plan permitted capacity under-supply.

TMO4+ at distribution

3.7 TMO4+ applies equally to larger distribution generation and storage projects.[46] These distribution projects, like directly connecting transmission projects, require a Gate 2 offer at transmission from NESO in order to secure capacity on the transmission system.

3.8 For connections reform to deliver the connections needed to deliver Clean Power by 2030 and subsequently net zero, it must be fully implemented at

[44] Distribution-connecting demand is out of scope of TMO4+, and remains subject to the existing connections process

[45] NESO have indicated there is a chance that a small number of projects may see dates moved back under specific circumstances. We intend to closely monitor this possibility.

[46] Only those generation and storage projects above the capacity threshold at which they must be assessed for Transmission Impact Assessment (TIA) are included. This is currently 1MW in England and Wales (note, at the time of writing there is a live code modification CMP446 that is proposing to raise this to 5MW), and 200kW in Scotland. As noted, demand projects at distribution are not in scope.

distribution level. Consequently, we expect the DNOs to implement processes at distribution alongside, and in response, to NESO's TMO4+ proposals.

3.9 We have made changes to the distribution licence as part of this process (see the separate decision document in response to our statutory consultation) to ensure that DNOs are required to follow the reformed connections process.

3.10 The DNOs have established the concept of 'Distribution Gate 1', mirroring the approach taken by NESO of Gate 1 at transmission. Distribution Gate 1 represents a status for relevant embedded projects that do not meet NESO's Gate 2 criteria and will therefore not receive or retain a firm offer for transmission access or a transmission queue position. These projects will receive an indicative offer, including indicative connection date and indicative point of connection.

3.11 In line with the NESO's approach at transmission, all liabilities and securities will be removed. This will require DNOs to ensure those not proceeding through Gate 2 do not maintain a distribution queue position, capacity held at distribution, and any Last-in, First-out (**LIFO**) stack position for constrained connections.

3.12 The process will therefore operate as follows for projects applying for a Gate 2 offer at transmission through the DNO, both through Gate 2 to whole queue for existing projects, and through the new enduring process for new projects:

- The relevant embedded project must meet NESO's readiness and needed criteria to secure a Gate 2 offer for transmission access.
- If NESO confirm that the project **does meet the criteria**, NESO will provide the DNO with the connection date, costs, point of connection and other relevant technical information. The DNO will then update the connection offers for that project accordingly. This is a Gate 2 offer.
- If NESO confirm that the project **does not meet the criteria**, NESO will provide the DNO with an indicative connection date and point of connection. The DNO will then vary the distribution connection offer for that project to indicative. This is a Distribution Gate 1 offer.

3.13 Projects will also be assigned to Distribution Gate 1 if they a) reject a Gate 2 offer, b) do not apply for Gate 2 / submit Gate 2 evidence, or c) withdraw from the Gate 2 process (for existing agreements).

3.14 Projects at Distribution Gate 1 will be able to apply for (via the DNO) and secure a Gate 2 offer at transmission at a later date, assuming they meet NESO's Gate 2 criteria at the point of application.

3.15 We recognise that distribution-connecting customers require clarity on the process at distribution as soon as possible to preserve investor confidence. To support customers through the new processes, network companies will be publishing guidance documents, FAQs and templates, as well as running a series of webinars and surgeries for distribution connecting customers.

3.16 DNOs have an important role to play in implementing TMO4+ and aligning distribution-level queues with strategic criteria. We are supportive of DNOs' implementation of connection reform, in line with the process set out above.

3.17 Finally, we acknowledge that customers have a right to determination around the terms of a connection offer, and Ofgem has a role in determining disputes about the terms (including a statutory function under the Electricity Act 1989). We consider that, provided revised connection terms are necessitated by the proper implementation of TMO4+ reforms, they will likely be "reasonable", and we expect to revise our determinations practices and procedures accordingly.

Interactivity of TMO4+ with other ongoing relevant reform processes

Code modifications

3.18 There are two ongoing code modifications that have notable interactions with the TMO4+ reforms, CMP446 and CMP448:

- CMP446 – Increasing the lower threshold in England and Wales for Evaluation of Transmission Impact Assessment (**TIA**)[47]

[47] CMP446: Increasing the lower threshold in England and Wales for Evaluation of Transmission Impact Assessment (TIA) | National Energy System Operator

3.19 This proposal, proposed by NESO on 17 January 2025, seeks to raise the lower threshold at which an evaluation of **TIA** must be undertaken in England and Wales from 1MW to 5MW. This would mean that distribution-connecting generation projects in England and Wales between 1MW and 5MW would likely connect earlier, as they would no longer be linked to Transmission system reinforcement. This could potentially benefit these projects through the Gate 2 to Whole Queue exercise.

3.20 At the time of writing, the Final Modification Report (**FMR**) is with Ofgem for decision. We expect to take a decision on it very shortly.

- CMP448 – Introducing a Progression Commitment Fee to the Gate 2 Connections Queue[48]

3.21 This proposal, raised by NESO on 6 February 2025, seeks to establish a framework to introduce an additional financial requirement on developers, that can be activated if required, to incentivise the timely removal of unviable projects from the connections queue and facilitate the more timely and efficient connection of viable projects.

3.22 The intention of the proposer is that this proposal is implemented in advance of Gate 2 Offers being issued by NESO (subject to the approval of CMP434 and CMP435 (both of which we are approving as part of our decision package published today), which would allow the new provisions to be written into the offers made to developers.

3.23 At the time of writing CMP446 continues to be developed through the CUSC working groups. According to the modification process timetable we expect to receive the FMR for decision on 04 July 2025.

[48] CMP448: Introducing a Progression Commitment Fee to the Gate 2 Connections Queue | National Energy System Operator

Connections End to End Review of the regulatory framework [49]

3.24 The connections end to end review is an Ofgem-led wide ranging review of the regulatory framework underpinning the connections process, encompassing industry codes, licences, price control frameworks and Guaranteed Standards of Performance (**GSOPs**). This review, which we committed to undertaking in the CAP, seeks to strengthen the regulatory framework for DNOs, TOs and NESO to ensure both improved quality of service and more timely connection outcomes for connecting customers. We regard this review as complementary to connections process reform, which is the subject of our decision package today.

3.25 We published our phase 1 consultation / call for input in November 2024 (see footnote). The consultation period closed on 13 February 2025. We expect to respond with next steps in summer 2025.

[49] Connections end-to-end review of the regulatory framework | Ofgem

4. Regulatory framework design – Ofgem decisions

Summary:

This section describes the decisions we are taking across the regulatory framework in order to enact the TMO4+ reforms.

We also describe our Impact Assessment, which underpins our decisions.

For a summary of the responses we received to our Minded-to Decision consultation and separate statutory consultation on licence changes, please see section 7. For a fuller analysis of our response to that consultation, and for our rationale behind our decisions, please refer to this document and the various decision documents published alongside this document.

Licence changes

4.1 To implement the proposed changes, modifications of the conditions in the Electricity System Operator Licence, and Standard Licence Conditions across transmission and distribution, are required. Our decisions to modify these licences are set out in our separate decision document published alongside this decision.

4.2 We are making licence changes to the following licences:

- Electricity System Operator Licence (the 'NESO licence');
- Transmission Standard Licence; and
- Distribution Standard Licence.

4.3 These proposed licence changes have been subject to policy consultation between November 2024 and January 2025.[53] The statutory consultation document set out details of the responses received to the policy consultation, and explains how we reflected those views in our final proposals in the statutory consultation. Finally, our decision document in response to the

statutory consultation, published alongside this document, sets out the details of the responses received and the final decisions we are taking.

4.4 **Our decision**: As set out in the separate decision document in response to our statutory consultation, we are making changes to the above licences.

Code Modifications

4.5 We are also approving modifications to relevant industry codes. These are:

- Connection and Use of System Code ('**CUSC**') modification proposal ('**CMP**') "CMP434: Implementing Connections Reform"
- CMP435: Application of Gate 2 Criteria to existing contracted background
- System Operator - Transmission Owner Code ('**STC**') modification CM095: Implementing Connections Reform.[49]

CUSC Modification Proposal CMP 434

4.6 This proposal introduces a new CUSC process and definitions to enable projects that are ready and needed to connect more efficiently.

4.7 The introduction of a 'Gated' process for new connection applications would introduce two formal gates, known as "Gate 1" and "Gate 2". Users meeting Gate 2 Criteria would receive a confirmed connection date and location.

4.8 In-scope project developers would no longer be able to submit new applications, or applications to modify existing contracts, at any time. Instead, they would only be able to do so in specific application periods that would take place at set intervals each year.

4.9 During the workgroup stage, several Workgroup Alternative Code Modifications (**WACMs**) were raised (WACM1 – WACM7).

4.10 **Our minded-to position** was to approve WACM7. This WACM contained all the core features of the Original Proposal that we deemed positive against the Applicable Code Objectives (**ACOs**), with the addition of a Pause to allow Users to self-regulate following publication of a Gate 2 Register.

4.11 **Our decision**: Following review of the consultation responses, **our decision is to approve WACM2 for CMP434**. This WACM contains all the core features of

the Original Proposal that we deemed positive against the ACOs, with the addition of firmer obligations on DNOs/iDNOs with regard to submitting project information to NESO, which will help to secure adherence to the timescales specified in the Gated Application and Offer Process.

4.12 Further details can be found in the separate decision letter published alongside this document - "Connection and Use of System Code (CUSC) CMP434: Implementing Connections Reform".

CUSC Modification Proposal CMP 435

4.13 This proposal outlines how the approach explained above via CMP434 would apply to those with existing connection agreements. It would mean that existing customers would be held to the same standard as new customers, that is, in order to obtain a gate 2 contract with a firm connection date they would be required to meet both the readiness and strategic alignment criteria.

4.14 During the workshop stage, one alternative solution was raised (WACM1).

4.15 **Our minded-to position** was to approve WACM1. This WACM contained all of the core features of the Original Proposal that we deem positive against the ACOs, with the addition of a pause to allow Users to self-regulate following publication of the Existing Agreements (EA) Register. Our view was that this feature would have introduced greater transparency and potentially competition when compared to the status quo.

4.16 **Our decision**: Following review of the consultation responses, **our decision is to approve the Original Proposal for CMP435**.

4.17 Further details can be found in the separate decision letter published alongside this document - "Connection and Use of System Code (CUSC) CMP435: Application of Gate 2 Criteria to existing contracted background".

STC Modification Proposal 095

4.18 The introduction of CM095 is a consequential modification which would establish new processes to facilitate the changes needed in the System Operator Transmission Owner Code, enabling the implementation of CMP434.

4.19 **Our minded-to position** was to approve the Original Proposal.

4.20 **Our decision**: Following review of the consultation responses, **our decision is to approve the Original Proposal for CM095**.

4.21 Further details can be found in the separate decision letter published alongside this document - "Connection and Use of System Code (CUSC) CMP435: Application of Gate 2 Criteria to existing contracted background".

Connections Methodologies

4.22 Amongst other key changes, modifications to the licence conditions and industry codes establish and embed newly created Connections Methodologies, created by NESO and approved by Ofgem, which set out the operational aspects of the new connections process.

4.23 The Connections Methodologies enable NESO to propose expedited changes to improve the connections process in TMO4+, for example to reflect developments in strategic plans (such as the introduction of the SSEP) or to ensure that the connections regime enables sufficient competition. Furthermore, NESO is required under new licence conditions introduced as part of this process to review the Connections Methodologies on an annual basis to adapt to changing circumstances in the GB energy system, including further alignment with additional government strategic plans. Any proposed changes would be subject to consultation and approval by Ofgem.

4.24 The Connections Methodologies enable NESO to determine connection eligibility, the ordering of the queue, and thus, the making of offers to 'ready' projects that align with strategic plans produced by the Government which, in the first instance, is the CP2030 Action Plan.

4.25 There are three Connections Methodologies: Gate 2 Criteria; Connections Network Design; Project Designation.

Gate 2 Criteria:

4.26 This contains the criteria that relevant applicants and existing customers seeking to connect to (either using or impacting on) the transmission system (including relevant distribution connections) must meet in order to receive

and/or maintain a connection offer with a confirmed connection location and date, and confirmed place in the connections queue. The key aspects that this Methodology covers are the Readiness Criteria and Strategic Alignment Criteria, which determine eligibility for Gate 2 connection contracts.

4.27 Following review of the consultation responses, our view is that the development and coming into force of this Methodology is an important step for delivering the mix of generation and storage needed firstly to meet Clean Power 2030 and subsequently net zero by 2050.

Connections Network Design:

4.28 This contains the process that NESO and network companies will follow to determine the make-up and order of the connections Gate 2 queue, assess the enabling infrastructure required to make connections, design a coordinated network and prepare connection offers.

4.29 Following review of the consultation responses, our view is that the CNDM provides a clear basis to determine which projects are eligible for a Gate 2 offer and how eligible projects will be prioritised in the Gate 2 queue, reflecting readiness.

Project Designation:

4.30 This provides the basis for enabling projects that can deliver significant net zero, system or consumer benefits to connect. In particular, the Project Designation Methodology will enable the connection of projects that: are critical to security of supply; are critical to system operation; materially reduce system/network constraints; are highly innovative or have particularly long lead times.

4.31 Following review of the consultation responses, our view is that this establishes a selective process for designation, based on specific and well-defined system needs, so as to operate in a way that is proportionate to the needs pursued.

4.32 The below applies to all three Connections Methodologies:

- **Our minded to position** was to approve the Connections Methodologies.
- **Our decision**: Following review of the consultation responses, **our decision is to approve the Connections Methodologies**.

4.33 We have made two recommendations to improve the protection clauses in the Gate 2 Criteria Methodology to address feedback to our consultation (set out in the relevant decision documents).

4.34 We consider that the Gate 2 Criteria Methodology, the Connections Network Design Methodology, and the Project Designation Methodology all meet the objectives in the new NESO licence conditions.

4.35 For a detailed appraisal and assessment of our decisions to approve the three NESO connection methodologies, please see 'Decision: Gate 2 Criteria Methodology', 'Decision: Connections Network Design Methodology' and 'Decision: Project Designation Methodology', published alongside this document.

4.36 For more information on how the proposed 'Gated' process works, please see the CMP434 & CMP435 decision documents.

Impact Assessment

4.37 Ofgem is under a statutory duty to conduct an Impact Assessment (IA) when an important change is proposed[54]. This includes, but is not limited to, changes that have a significant impact on persons engaged in the generation, transmission, distribution or supply of electricity, or have a significant impact on the NESO carrying out its functions. We consider that our accompanying Impact Assessment, which we have carried out in line with our Impact Assessment Guidance, complies with these obligations.

4.38 Our Impact Assessment provides an assessment of the impacts of the proposed changes to the connections process across different areas.

4.39 **Scope:** As highlighted, the TMO4+ proposals require changes to industry codes, licences and the introduction of new Connections Methodology documents. The Impact Assessment assesses all of these regulatory changes together as a single package of reforms. It looks at the benefits, risks, and

costs of implementing TMO4+ and compares these against the status quo. As part of this, we have reflected upon assessments carried out by NESO and the TOs, responses from industry to the NESO consultations, and responses from all those who contributed to the other consultations described above, including the most recent consultation on the full package of reforms.

4.40 **Data and Consultation:** We have relied on data provided by NESO and published on 20 December 2024 alongside their submission of the Connections Methodologies and code modification Final Modification Reports (**FMRs**) to Ofgem for decision, as well as additional and updated data provided subsequently by NESO.[56]

4.41 This NESO data has been supplemented by data and information provided for the purposes of informing this decision from the TOs and DNOs. We have also taken into consideration responses to consultations carried out by NESO on the Connections Methodologies and the code modifications. We have also updated the IA (from the draft IA published alongside the Minded-to Decisions) following both responses received to our minded-to position consultation and relevant changes made by Government to the Clean Power 2030 Action Plan (ie to merge permitted capacities for solar across transmission and distribution levels). We have undertaken a number of sensitivities in the IA using publicly available data.

4.42 **Transparency:** We remain committed to transparency regarding the inevitable limitations in the projections and data currently available. In this context, we consider it appropriate to note that this package of reforms contains various mechanisms by which adjustments can be made, including the opportunity for at least annual changes to the Methodologies.

5. Ofgem's Statutory Duties

5.1 Ofgem is required to act in accordance with its principal objective and other statutory duties when exercising its regulatory functions in relation to the connections reform package. In reaching this set of decisions, Ofgem has had regard to each of its various statutory duties as set out in the individual decision documents and Impact Assessment. A non-exhaustive summary of the relevant provisions and our consideration of them is included below.

Ofgem's duties

The principal objective

5.2 The Electricity Act 1989 ('**EA89**'), section 3A, outlines the principal objective of the Authority, which is to protect the interests of both current and future consumers in relation to electricity conveyed by distribution and transmission systems. Section 3A provides that these are their interests as a whole and include, but are not limited to, their interests in the Secretary of State's compliance with the duties under sections 1 and 4(1)(b) of the Climate Change Act 2008 (net zero target for 2050 and five-year carbon budgets);[50] and their interests in the security of the supply of the electricity to them. We have explained above that we consider implementation of these reforms to be a key step in this regard. Another significant aspect of consumer interests would be the costs faced by consumers if reform is not implemented as well as costs associated with implementation of these reforms[51]. We set out below and in more detail in the associated Impact Assessment our estimates as to impacts on costs on consumers of anticipated savings and potential additional costs.

5.3 Section 3A also provides that the Authority will carry out its functions in the manner it considers is best calculated to further the principal objective, wherever appropriate by promoting effective competition,[52] and in so doing,

[50] The Clean Power 2030 Action Plan states it "paves the way to decarbonising the wider economy by 2050" and "will help us meet Carbon Budget 6."
[51] Sections 3A(1) and (3)
[52] Section 3A(1B) of the EA89

will have regard to the need to secure that all reasonable demands for electricity are met, the need to secure that licence holders are able to finance their licensed activities, and the need to contribute to the achievement of sustainable development.[53] We set out below, and in the associated document package, why we expect reform to bring enduring benefits of focused investment into, and timely connection of, an efficient and operable energy mix, and hence support security of supply in line with these duties. We have considered potential adverse effects on investment and on competition taking account of consultation feedback. As set out below and across these documents, on balance we think these duties are still positively met.

5.4 The Authority will (subject to certain matters, including its duty under section 132 of the Energy Act 2013 – see below) carry out its functions in the manner best calculated to promote efficiency and economy on the part of persons authorised by licences or exemptions to distribute or participate in the transmission of electricity and to coordinate and direct the flow of electricity over transmission systems. The improved ability of network companies to focus on the network build required for projects to deliver Clean Power 2030, as set out under benefits below and in our Impact Assessment should materially assist both the economy and efficiency of the operation of the transmission system. The Authority is also to carry (and has carried) out its functions in the manner best calculated to secure a diverse and long-term energy supply. In doing so, having regard to the effect on the environment of activities connected with the generation, transmission and distribution of supply of electricity.[54].

5.5 The Authority will also have regard to the principles under which its regulatory activities should be transparent, accountable, proportionate and targeted only at cases where action is needed.[55] We explain above the need for change and how we consider the reforms to be proportionate. The consultation process followed, and the development of the reforms in material detail through industry-led processes, has sought to ensure transparency.

[53] Section 3A(2)
[54] Section 3A(5)
[55] Section 3A(5A)(a)

Ofgem's duties in relation to the SPS

5.6 Section 131 of the Energy Act 2013 ('**EA13**') allows the Government to designate a Strategic Policy Statement ('**SPS**') setting out the "strategic priorities" (and other main considerations) of the government in formulating its energy policy for GB, and the particular outcomes to be achieved as a result of implementation of that policy (the "policy outcomes"). Under section 132 EA13, Ofgem must have regard to the strategic priorities set out in the SPS when carrying out its regulatory functions and further, must carry out those functions in the manner which it considers is best calculated to further the delivery of the policy outcomes in the SPS (subject to the application of Ofgem's principal objective).

5.7 In May 2024, the Secretary of State designated the SPS.[56] The SPS includes (amongst others) the following policy outcomes:

"*Network regulation, including the appropriate use of competition, that enables the accelerated delivery, ahead of need, of electricity network and storage infrastructure to accommodate rapidly expanding and variable renewable generation capacity and demand from low carbon technologies*.'

"*Significant and urgent reform of the electricity connections regime so that new generation and demand projects critical to net zero can connect to electricity networks in a cost-effective and timely manner, and in a way that meets the needs of connection customers and the energy system as a whole*."[57]

5.8 The SPS also provides that:

"*Ofgem should work with ESO/NESO, industry partners and government to urgently address barriers to the efficient and timely connection of new low carbon generation and demand projects critical for net zero to the electricity network. This includes accelerating and significantly reforming the connections process and acting to address current delays, ensuring that connection costs*

[56] Strategy and policy statement for energy policy in Great Britain - GOV.UK

[57] Ofgem has also recognised connections reform as an objective in our Forward Work Programme 2024/2025 and Multi Year Strategy (See Objective 9 Forward Work Programme 2024/25 and Ofgem's multi year strategy).

are proportionate, and all network companies deliver strong and consistent customer service."

5.9 We consider approval of TMO4+ reforms the electricity regime in line with the SPS.

Ofgem's Growth Duty

5.10 Section 108 of the Deregulation Act 2015 requires Ofgem to have regard to the desirability of promoting economic growth. In particular, Ofgem must consider the importance for the promotion of economic growth of exercising its regulatory functions in a way that ensures that regulatory action is taken only when it is needed, and that any action taken is proportionate. The impacts on growth (for example, but not limited to, demand) are considered throughout these decision documents and we consider these reforms support economic growth.

Public Sector Equality Duty

5.11 Under section 149 of the Equality Act 2010, public authorities, including Ofgem, are required, in carrying out their functions, to have due regard to the statutory equality objectives set out in that section. Our conclusion is that the costs associated with these reforms are most likely to be relevant to those protected characteristics of age and disability, due to more likely impact of higher charges on those groups. This is covered in our associated Impact Assessment in the Distributional Impacts sub section.

Interference with property rights

5.12 The Authority also has an obligation under section 6 of the Human Rights Act 1998 to act in a way that is compatible with Convention rights, including the right to peaceful enjoyment of possessions. As noted in the Executive Summary, we have considered whether approval is consistent with our obligations under section 6 of the Human Rights Act 1998, particularly with regard to parties potentially affected to peaceful enjoyment of possessions. We consider that the reforms are a proportionate means of achieving our objectives (eg to meet the policy outcomes in the SPS and help deliver Clean Power 2030), and that they strike a fair balance between the public needs pursued and the individual interests of those involved. We have had regard in

reaching that conclusion to (amongst other things) the protections granted in respect of certain projects that are well-developed and the existing flexibility in the regulatory framework as well as current arrangements and practices in relation to connections.

Other relevant considerations

5.13 In addition to Ofgem's statutory duties, we also consider it appropriate to have regard to relevant statutory obligations placed on the NESO, TOs and DNOs as summarised below.

- **NESO**: the Energy Act 2023 outlines the functions and objectives of the NESO.[58] In particular section 163 provides that NESO must carry out its functions in the way it considers is best calculated to: (a) enable the Secretary of State to meet the net zero 2050 target and five-yearly carbon budgets ("the net zero objective"); (b) ensure the security of supply, to existing and future consumers, of electricity conveyed by distribution and transmission systems (the "security of supply objective"); and (c) promote efficient, co-ordinated and economical systems for the distribution and transmission of electricity and efficiency (including the efficient use of energy) and economy on the part of persons carrying out certain relevant activities, including electricity generation, transmission and distribution (the "efficiency and economy objective").
- **TOs and DNOs**: section 9 EA89 details the general duties of licence holders, including TOs and DNOs. It provides they are under a duty to develop and maintain efficient, coordinated, and economical systems of electricity transmission or distribution, as applicable. Sections 16 to 23 EA89 also specifically deal with the duties of DNOs, including their duty to connect and exceptions to that duty.

5.14 Overall, we are satisfied that implementation of the reforms is consistent with our statutory duties and in most aspects are considered to further them.

[58] The legislation refers to the Independent System Operator (ISOP). NESO was designated as the ISOP on 1 October 2024.

Legislation – The Planning and Infrastructure Bill

5.15 Government was clear in the CP2030 Action Plan that they "planned to introduce legislation, when parliamentary time allows, to ensure connection reform aligns with strategic energy and network plans and supports delivery of clean power by 2030". Government also separately made clear their willingness to legislate "in order to provide certainty to all parties on the direction of travel for connections".

5.16 The government introduced the Planning and Infrastructure Bill on 11 March 2025.[59] Within the Bill are changes proposed to explicitly link the connections process with strategic plans and give support to the introduction of connection reforms already underway in order to ensure they deliver the intended benefits in full.

5.17 We are satisfied that the existing regulatory framework allows – and indeed requires – the connection reforms to be implemented lawfully and effectively. Indeed, failure to implement reforms to the connection process would create a real risk of the Authority failing to discharge its principal objective, particularly in relation to assisting the Secretary of State to meet his obligations under the Climate Change Act 2008. We welcome the government's intent to further support connections reform in this way. It highlights that these are fundamentally needed changes that both ourselves and government clearly agree should be implemented.

[59] Guide to the Planning and Infrastructure Bill - GOV.UK

6. Impacts, Benefits and Costs

Summary:

This section describes our assessment of the impacts, benefits and costs of TMO4+. We cover the following:

- themes received in the consultation responses, and our views in response
- the impacts we expect to result on the connections queue
- the benefits case that we expect TMO4+ to deliver
- the different categories of cost that we expect to result from the implementation of the reformed process

The IA contains more detail on the impacts summarised in this section.

Consultation responses – key themes

6.1 Our consultation on our Minded-to Decisions provided valuable feedback and further insight on the proposed reforms, and some alternative data and analysis of the current connections queue. A detailed summary of consultation feedback, and our responses and actions taken as a result, is set out in section 7 of this document and in each of the individual decision documents and Impact Assessment, as relevant.

6.2 The majority of responses broadly validated the problems identified, indicated reform to the connections process was needed for the reasons we outlined in our consultation documents, and generally supported a more structured process that aligns connections with energy system need.

6.3 A small number did not support this reform, whilst others did not provide a clear stance either way but focused on specific issues or changes they considered are needed. Those opposed highlighted, in particular, concerns that the pace of work on the reforms was too fast or insufficiently robust, and the negative consequences (particularly for investment) were not sufficiently recognised or addressed.

6.4 Looking across the package of reforms, we draw out below some non-exhaustive handful of key points raised by consultation and changes which have followed, informing our updated Impact Assessment and our final decision:

CP2030 Action Plan capacities as translated into the connections queue

6.5 Respondents expressed a range of concerns including a need to increase some or all permitted capacities in the CP2030 Action Plan to better meet the goals and/or to handle attrition. There were also concerns about the solar transmission and distribution split. In response to feedback, the Government has published updated solar capacities to merge the distribution and transmission capacities from 2031-2035, addressing a clear evidence-backed point.[60] This has materially reduced the risk that well-progressed solar projects at transmission with planning submitted are moved to Gate 1. The Government's approach on this point, and our view, is set out in section 3 of our Decision on the Gate 2 Methodology.

6.6 Our Decision on the Gate 2 Methodology decision document also considers feedback on the case for attrition uplifts to mitigate the risk of project attrition (i.e. assumptions about replacing projects that exit the Gate 2 queue in future). The key measure to mitigate for attrition include:

- the connections process uses the upper end of the ranges presented in the CP2030 Action Plan.
- projects in 'phase 2' (needed in line with FES-derived capacities to 2035 but above what is needed for 2030) can receive a pre-2031 connection date if there is available capacity and if the project can meet all the milestones required to connect in that timescale. This is either because they (i) have an existing connection date before end 2030 with network capacity planned or available and/or (ii) there will be phase 2 projects capable of accelerating their current connection to 2030 or before.

6.7 We expect NESO to keep its assumptions on attrition under review as new information becomes available and rapidly bring forward changes to Connections Methodologies if required. However our Decision on the Gate 2

[60] Clean Power 2030 Action Plan: solar capacity update - letter to NESO - GOV.UK

Criteria Methodology sets out why are connect to approve NESOs approach to attrition.

Investment certainty

6.8 A number of respondents highlighted the risk to investment was, in their view, underestimated. Across these responses risks to investment were highlighted, including uncertainty about what sort of offer existing projects will receive ahead of and during implementation of TMO4+ reforms. Equally, we received feedback that supported the expected increase in investor confidence inside Gate 2 and for many new entrants (the majority of respondents generally supported the reforms). Respondents also affirmed that the current connection queue is a material risk to investment for new generation and demand. We also note, and as confirmed by responses received to the consultation, that delays in connections reform decisions would themselves be damaging investment certainty.

6.9 We recognise points raised by consultees on the risk and impact of an investment hiatus for projects due to connect in 2027. For that reason, we have recommended updates to Connections Methodologies to provide assurance on dates and connection points to projects already eligible for Protection Clause 2a (which includes those with planning consent by the closure of the CMP435 application window) if they have an existing agreement to connection on or before 31 December 2027. Our Decision on the Gate 2 Criteria Methodology provides further rationale and detail on this point.

6.10 We have carefully considered the arguments that these reforms undermine investor certainty, especially for projects receiving, or uncertain if they will receive, a Gate 1 offer. We have re-evaluated the likely profile of projects moving to Gate 1 in the Impact Assessment, taking account of changes to solar capacity allocations and updated data. We have also considered alternative data from consultation responses. Overall, the total of projects moving to Gate 1 appears likely to be slightly lower than initially assessed and materially lower in volume of projects with planning submitted.

6.11 We summarise our view on the balance of benefits and disbenefits to investment below, and explore the impact of reform on investor confidence in more detail in the investment section of our Impact Assessment.

Proposal development and alternatives

6.12 Some respondents expressed concern over the pace of development of reform and that this risked delivering reforms that were not robust. Respondents also highlighted alternatives that they felt should be explored.

6.13 In Chapter 7 of this document we consider the pace and focus of the process that supports this decision. This reform is the culmination of very extensive industry work over several years, including the development of different design options over the last 18 months. The pace of the reform has been driven by the view shared by industry, Government and Ofgem that the current connections process is not fit for purpose, is damaging investor confidence, and will almost certainly not achieve Clean Power by 2030. In particular, there is a clear need to immediately increase the pace of connection and build to meet Clean Power, and to do so in a way that supports the required substantial investment in both generation and networks at pace. In addition, in order to shape and deliver reform, NESO previously introduced a pause on new connection applications, to enable the move to the new TMO4+ process. If we had not taken the decision to proceed with the reforms, NESO would have reverted to the previous process which, as noted, needs urgent reform.

6.14 In considering alternatives we are mindful of the need to rapidly set a direction for the future so the queue can be re-opened to avoid significant negative consequences for investment and the decarbonisation of the power system. We have made changes where these would better achieve the key benefits, but beyond this we have not identified any alternative approaches which would better deliver benefits, or reduce costs / disbenefits while maintaining the same level of benefits, at the pace needed. Our consideration of the specific alternatives proposed and how we have taken account of each is set out in each decision document.

6.15 In summary, we are clear that we have analysed various alternatives through this process, including those suggested to us in response to the Minded-to Decision consultation. We have set out many of the alternatives, and our response to them, throughout this document and the decision documents

published in parallel. We do not consider there are any reasonable alternatives that carry meaningfully lower risk and cost and that could deliver the same policy outcomes and achieve the GB-wide benefits we have identified, including in support of Clean Power by 2030, in the context of the need for urgent and fundamental connections process reform.

Implementation

6.16 The need for policy clarity and rapid implementation was a regular focus, with strong calls for transparency, oversight and regular review.

6.17 We have taken that into account in our final decisions. More broadly, we fully support the need for rigorous, transparent implementation with regular review. We will be working with NESO, government, network companies and industry to ensure this is in place, and highlight NESO's obligation to keep the Connections Methodologies under review including on the points we specifically highlight in this decision.

Impacts on the Connections Queue

6.18 Understanding the impact that the reforms will have on the future connection queue, both Gate 2 and Gate 1, provides insight into the outcomes and benefits that the TMO4+ reforms will deliver.

6.19 As set out in the Impact Assessment in more detail, assessment of the impacts of reform on the queue is based on data from NESO that draws upon inputs from DNOs. Consultation respondents provided helpful further information, which we have used to underpin sensitivity analysis. There is some inherent uncertainty, as projects continue to progress in readiness, and it is not possible for the readiness status of all projects to be confirmed until implementation. Connecting customers may have focused on the need to demonstrate readiness, due to the possibility of the reforms being adopted. As a consequence, at the point the queue is reformed, a larger number of projects may be able to demonstrate readiness than current data available to us suggests. We have explored sensitivities to test this uncertainty and the impact and benefits of this decision remain positive when reasonable alternative assumptions are made about the volume of ready projects.

6.20 The result of reform is anticipated to be a confirmed (Gate 2) connections queue of approximately 296GW (including built capacity) that is broadly aligned with the CP2030 Action Plan capacities out to 2035, but potentially with some technologies under-supplied. Our final analysis (taking account of updated CP2030 permitted capacities since our Minded-to Decision) suggests an aligned Gate 2 queue for solar with less projects at 'planning submitted' stage receiving Gate 1 terms. The exact assessment of whether the Gate 2 queue will deliver what is needed to achieve Clean Power by 2030 depends on the readiness of projects, which depends on the actions taken by those projects. If we take a middle view of 'readiness' in the reordering of the queue, then some technologies - notably onshore wind, offshore wind, interconnectors and low carbon dispatchable power - are estimated to be undersupplied in the confirmed queue out to 2035.

6.21 Based on the data that is currently available, we estimate that 360GW of projects may have their contracts amended to Gate 1 terms on the basis that they do not meet the Readiness Criteria. A further 122GW of projects that do meet the Readiness Criteria are also forecast to be amended to Gate 1 terms because they do not meet Strategic Alignment Criteria (and are therefore not assessed as needed). Overall, as noted above the total amount of projects moving to Gate 1 appears likely to be slightly lower than initially assessed and materially lower in volume of projects with planning submitted. The affected parties that are sufficiently ready, but not needed, are likely to be predominantly battery storage projects and some solar projects in specific geographical locations. This has also been tested with other data as a sensitivity within the Impact Assessment. We estimate that the overall cost spent by investors developing projects that will receive a Gate 1 offer could be in a range of below £1bn to below £3bn. The factors that might affect or reduce this range are discussed in more detail in the Impact Assessment.

6.22 Our analysis of the unreformed queue compared to the likely reformed queues finds that the new Gate 1 and Gate 2 queue will provide a more effective technology mix, more efficiently, for the purpose of meeting Clean Power by 2030. A more credible and viable queue will allow existing ready and needed projects to connect faster than the status quo and will make the ambitious aim of Clean Power by 2030 achievable. The TMO4+ reform package

introduces a route for needed projects to move forward out of the Gate 1 queue when they become ready and/or for new projects to enter the Gate 2 queue (assuming they meet needed criteria). Developers of new generation and storage projects will have a clearer signal about what to invest in and where to locate, making investment more feasible and more likely, at pace, where most needed. This is in contrast to the current queue, where strategic need does not play any role in whether and which connections are made.

6.23 There is 42GW of demand in the queue (17GW at transmission level and 25GW at distribution level), including projects such as large industrial demand and data centres. All demand is deemed as needed, so demand projects connecting at transmission level (only demand at transmission is within scope of the reforms) would only have to demonstrate readiness to receive a Gate 2 offer.

Benefits

6.24 In the light of our assessment of the impacts on the queue, we have carefully considered the benefits of moving to the proposed first 'ready' and 'needed' connections process, taking account of the further information and views provided following our consultation.

6.25 The new process ensures the reformed connections queue has three key features:

- **Viability** – by prioritising 'ready' projects, the Gate 2 queue is made up of projects that are demonstrably viable and well progressed (having land rights and sufficiently progressed their planning status).
- **Need** – by aligning with the CP2030 Action Plan, and any future strategic plans set by the Government, the Gate 2 queue is made up of projects that best meet current and future system need.
- **Efficiency** – the mix of ready projects aligned with Strategic Alignment Criteria is preserved, with projects that drop out being replaced by projects with the same technology.

6.26 From our assessment of these features, we expect the following key benefits:

Key benefit 1 - More efficient network planning, build and connection

6.27 Under TMO4+, network companies will have clarity on the projects that are 'ready' and 'needed' for the 2030 and 2035 pathways as defined in the CP2030 Action Plan.

6.28 The consequence of enabling networks to design and build in line with a clearly prioritised, viable connections queue is more efficient network planning and build. The reform ensures the planned network build implied by the pre-reform connection queue is avoided, which notionally is in the region of tens of billions of pounds and would be expected to in part eventually flow through to consumer bills. Notably c.£5bn are costs anticipated to be non-attributable and liability would be shared by end-consumers and connecting customers.

6.29 More efficient, focused network build will allow a faster rate of connection. The historic rate of connection (c.8GW per year) will not be enough to achieve Clean Power by 2030. Following reform, the rate of connections will need to increase to c20GW per year between now and 2030. This faster rate of connections to achieve Clean Power by 2030 - while challenging – is only feasible with the TMO4+ intervention and a more credible queue. Without reform, the lack of prioritisation means networks must consider connecting the entire pre-2030 queue as it stands to deliver the technology mix required for Clean Power (213GW), implying a connection rate of approximately 40GW every year. This is not a feasible increase compared to the historical average of connecting 8GW per year since 2019. There is also then the issue of how quickly new projects entering the queue, over and above those already in, would be able to connect given the need to build through the oversized queue first, impacting longer term investment confidence.

Key benefit 2 - Investor Confidence for ready, needed projects

6.30 On an enduring basis, these reforms will increase investor confidence and focus investment where it is most needed to deliver Clean Power by 2030. New projects will have a clearer signal about what to invest in and where to locate. Projects that meet needed criteria, including demand, are highly likely to access a faster connection than they could expect to under the status quo. Existing generation and storage projects with firm (Gate 2) offers will have increased confidence that they are needed to achieve Clean Power by 2030, and both generation and demand will have increased confidence that the

required network will be built at pace, and their project will be able to connect on time. A number of consultation respondents (both generation and demand) highlighted the importance of timely and reliable connections to investment confidence, and their dissatisfaction with this under the present system.

6.31 We have carefully considered the **potential disbenefit** of this reform on investment, taking account of consultation feedback set out above.

6.32 One key risk to investor confidence is that the initial queue-to-gate process creates an immediate period of uncertainty for projects due to connect in the near future. Subject to the NESO delivering against our recommended update to Methodologies as detailed in our Decision on the Gate 2 Criteria Methodology, projects with planning consent and due to connect on or before 31 December **2027** will receive assurance about connection dates and connection points as a key mitigation. More generally, the rapid and effective move to a firm future connections approach is key to all projects, and we believe NESO and network plans are now in place to credibly achieve this.

6.33 The second key risk we and consultation respondents explored is to projects in Gate 1, and to projects uncertain of what sort of offer they will receive. Gate 1 is the provisional pipeline of future build and receive a conditional offer, with an indicative connection date and location. TMO4+ is explicitly designed to enable ready and needed projects to move forward, and for many projects this will be a viable option which provides the confidence needed to invest. To the extent the ability to advance out of Gate 1 is uncertain or limited, this is likely to be *broadly* reflective of the wider sector hurdles to readiness and energy market need for some technologies (notably batteries).

6.34 Investments always carry risk, including the risk that the law and regulation around them changes. In the context of the TMO4+ reforms, we have sought to help investors manage that risk by transparently informing stakeholders of the need for reform to the connections process, with regular, transparent communication on expectations and developments. Finally, we have been clear, transparent and thorough with our decision-making process, including an Ofgem consultation of the package of reforms, which followed specific consultations from NESO on Connections Methodologies and code modifications (in their capacity as Code Administrator). Developers have

therefore now been aware of the reform process through its extensive open development over two years. Nonetheless, we fully recognise the feedback provided by some developers that they will set clear limits on how far they are willing to invest in developing projects while in Gate 1, and that this may pose challenging decisions for some projects. We considered the potential that TMO4+ will increase investor uncertainty for some projects in Gate 1. We concluded that this potential disbenefit is outweighed by the enduring benefit of greater investment certainty both already made and due to be made in projects that will meet Gate 2. This benefit of enduring certainty that comes with Gate 2 is more material than the disbenefit of the temporary uncertainty for developers and end-consumers.

6.35 The TMO4+ reform will realise more efficient network build and connections, combined with increased investor confidence, and this will drive a key outcome: **timely delivery of connections of the energy generation and storage needed for clean power in 2030 under the CP2030 Action Plan**. These reforms deliver a connections queue and enduring process that, combined with the requisite network build, provide a critically necessary foundation for a sufficient capacity and mix of technologies to connect**, at sufficient pace,** to deliver what we need for Clean Power by 2030, and be on track for net zero.[61]

6.36 Delivering Clean Power 2030 will **accelerate the reduction of our reliance on fossil fuels**, protecting consumers from exposure to any future gas price spikes. Compared to the current system where gas price spikes can significantly increase costs to consumers (as evidenced recently), delivering the most efficient possible Clean Power system should lower consumer bills through cheaper generation, and enable reduced system costs both through avoided network build and reduced constraint cost.

6.37 Aligning connections with the CP2030 Action Plan **better enables security of supply**. The CP2030 Action Plan provides for a diverse range of generation and storage technologies that can be relied upon to provide the necessary

[61] Connection dates will still depend on the enabling network infrastructure required for connections being delivered on time.

levels of electricity to meet demand across a range of scenarios, reducing reliance on backup fossil fuels and expensive imported power during times of peak demand. The new connections process allows specific system security needs to be reacted to at pace.

6.38 The new process will also enable the **acceleration of large demand projects in the queue**, which can be blocked by generation projects or subject to unnecessary transmission reinforcement. The new process will allow these projects to accelerate into capacity gaps created by the reforms. In exceptional circumstances, demand projects may also be prioritised through the proposed Project Designation Methodology (and subject to NESO issuing a notice) if it aids system operability or reduces constraints. Such projects cannot be prioritised at this time solely on the basis of growth, although we may look to explore this further with the Government and NESO. Accelerating demand projects should better support economic growth and enable the decarbonisation of the wider UK economy, for example industrial decarbonisation, electric vehicle production, as well as wider goals such as increased housing.

6.39 It will also enable **a more efficient process for distribution-connected projects**. A significant proportion of distribution-connected projects are reliant upon transmission reinforcement and hence the connections process at transmission level. A reformed, streamlined queue will mean such projects are highly likely to receive improved connection timescales, as network build would be more focused.

6.40 To realise the above benefits to the maximum extent possible, the TMO4+ reform package will need to be complemented with action in two areas, both of which we are acting on:

- Improved regulatory frameworks through Ofgem's end-to-end review of connections, to ensure connection dates are adhered to; and
- Ensuring the network is delivered to connect these assets in a timely fashion to enable the CP2030 Action Plan through the RIIO-3 T3 framework.

Costs

6.41 We recognise that there are costs to consider for the implementation of these reforms. While the initial direct costs (of NESO, TOs and DNOs) of implementation of TMO4+ and applying the connections criteria to the whole queue are low (<£50million), there will likely be some more significant costs associated with abortive network works as a result of applying TMO4+ to the whole existing queue. These costs derive from works that have commenced but are deemed no longer necessary, as the projects they were conceived for no longer have firm connection dates, as they do not satisfy the connections criteria. NESO estimate these abortive costs to be in the range of £220-£960million. If recovered from consumers within one financial year, this could result in a one-off £3-£12 approximate charge to consumers, likely around FY27/28. We will work closely with network companies and NESO to minimise these costs and would consider whether costs could be recovered over multiple years.

6.42 We also recognise that significant sums (estimated in the region of between below £1bn to below £3bn) have been expended by investors in developing projects that are expected to receive Gate 1 terms.

6.43 In terms of positive impacts on costs for consumers, we note the benefits of future avoided enabling network costs (estimated at £5 billion) that would otherwise arise under the status quo from connecting projects that do not align with strategic need.

7. Summary of our analysis and responses to consultation responses

Summary:

This chapter describes our analysis of the responses we received to each consultation question in our minded-to consultation.

For each question we summarise the responses we received, set out our views in response, and provide our final assessment / decision.

To note, for questions 2-9 (code modifications) and question 10 (methodologies), the main analysis is set out in the decision documents themselves, though we do provide a high-level summary in the relevant sections for each question below.

Package of reforms (Q1)

Q1: Do you consider that the TMO4+ reforms as a whole advance the objectives that we identify? Do you support the TMO4+ package of reforms as a whole? If not, please explain why not. Please feel free to cross-refer to answers provided in response to questions on individual elements of the reforms, as set out below.

7.1 Of the 89 consultation responses we received, 65 responded to this question. These responses came from a variety of stakeholder types, including developers, network companies and other industry participants.

7.2 55 of those responses were either supportive, broadly supportive or supportive in principle. 10 responses explicitly indicated that they were not supportive.

7.3 As noted above, the vast majority of responses indicated broad agreement that some form of reform to the connections process was needed, for the reasons we outlined in our consultation document. There was broad acceptance of the problems, and a general consensus that a move towards a more structured process that aligns connections with GB need was required.

7.4 As this was a general question, we received a number of responses regarding issues more appropriately covered off within the analysis of the

methodologies, code modifications, licence changes and Impact Assessment. Where that is the case, we have analysed and responded to those points in those either a specific chapter of this document or in the relevant decision document published in parallel to this document. For completeness and clarity however, we have still listed the issues here, noting alongside the issue where we have addressed it.

7.5 Finally, a number of points were raised which were not in scope of the reforms. Some of these are relevant to our ongoing connections end to end review[62] - where that is the case, they will be considered as part of that process.

Summary of stakeholder responses:

7.6 Below is a summary of the main views received **in support of the overall need for reform**.

- The current queue is excessively long and is unnecessarily delaying projects / investments.
- As a project developer, uncertainty over availability of grid capacity and connection times has been the main risk threatening investment and project development.
- A more structured approach to queue management and capacity allocation is necessary given the current delays and inefficiencies in the system.
- Efficient, timely and well-considered grid connections are pivotal to achieving the UK's net zero targets and ensuring a resilient energy system.
- Agree with the need to move to a 'ready and strategically needed' approach, including applying these new criteria to the existing queue.
- Acknowledge that the current grid queue includes much more capacity than GB requires, and that radical reform is needed to create a workable queue.

[62] Connections end-to-end review of the regulatory framework | Ofgem. Our consultation closed on 13 February 2025. We expect to respond with next steps later in 2025.

- Agree that a large proportion of connection offers need to be removed from the queue to create a functioning system where the projects that are most ready to construct and connect can progress.
- Recognise the need to amend the connection process to accelerate the development of new low carbon generation and storage projects.

7.7 Below is a summary of the main views received **in support of the TMO4+ proposals for reform as proposed**:

- Fully support the Government's CP2030 ambition and support the TMO4+ package of reforms to drive strategic alignment by accelerating the projects required to deliver on this target.
- Support the principle of a planned approach to connections. Instead of focusing on areas with significant logistical challenges, investment should prioritise regions and technologies where renewable energy generation is more viable and economical, without the need for expensive and unnecessary grid build out.
- Support the need to reduce the connections queue to a level whereby projects are aligned with system need, both network companies and project developers have greater investment certainty, and the potential for finite resources to be inefficiently deployed is reduced. Consider that TMO4+ as proposed will broadly deliver the level of reform needed and drive a more economic and efficient approach to connections network design that enables project delivery.
- Support the primary objective of reforming the connection process to enable the delivery of legitimate projects, which support wider objectives, such as net zero and economic growth.
- Believe that the package represents a positive step in the right direction towards accelerating connections for viable projects and improving the overall connection process.

- Consider that the reforms broadly achieve the objectives to raise entry requirements, remove stalled projects and better allocate available network capacity by moving to a first ready, first connected process.
- The reforms should remove speculative and stalled "zombie" projects which delay genuine projects and ensure that infrastructure that this country needs to grow in the coming years is prioritised.
- The reforms advance the objective of protecting current and future consumers by streamlining the grid connections queue and providing greater certainty to TOs and DNOs about the network reinforcements required, in order to enable future projects and hence reduce network build cost.
- The structure of the reform package is a logical way to facilitate Government's CP2030 Action Plan.
- The consultation process must now give way to implementation. Industry is ready, investment in good renewable projects and assets is waiting, and the need for action is clear.
- Recognise the need for speed. Do not want to see any further delay to implementation.

7.8 Below is a summary of views received in support of the reforms as proposed from network companies (TOs and DNOs):

- Connections reform is essential to unblocking the current barriers to getting a quick and efficient connection to the network.
- This cohesive package of reforms, which is necessarily ambitious, will provide the fundamental shift that the connections market requires to make it fit for purpose.
- Ensuring those projects that are ready and needed are prioritised will allow network companies and NESO to focus on delivering projects that will contribute to the ambitious decarbonisation goals for the energy sector.
- If implemented effectively and in conjunction with the efficient use of existing tools, such as queue management, these reforms will significantly address connection challenges.

- Strong endorsement of the alignment of connections with the CP2030 Action Plan. It will allow TOs to better predict the impact that planned connections will have on the network and the reinforcement that will be required. This will mark a welcome change from the existing arrangements, which have engendered an uncertain and volatile network planning environment, resulting in inefficiencies in the planning and delivery of required network infrastructure.
- Support the intent of reform, and agree it is a vital change that is needed for our GB energy system to better serve customers and consumers overall.

Views not in support of reforms

7.9 As noted above, we received a number of views in response to this question that we have addressed elsewhere in the decision documents. We have listed the substantive ones here for transparency and clarity in any case.

7.10 The views have been categorised into four themes: Clean Power 2030 Action Plan, investor concerns, specific technology / developer group concerns, and general.

<u>Clean Power 2030 Action Plan</u>

- CP2030 capacities are overly rigid which risks undermining investment.
- Concerns about the solar capacities being split across transmission and distribution.
- Calls to increase capacities of technologies including solar and onshore wind in Scotland post-2031.
- If the permitted capacities are not lifted, an assumed level of attrition must be built in to account for projects falling away, in case projects cannot move through from the 2031-35 pot to meet the 2030 capacities.

Response: We have addressed these points in our Decision on the Gate 2 Criteria Methodology, as well as providing a summary below under Q10 (Connection Methodologies – see sections on solar capacities and attrition).

Investor concerns

- Concerns over the **investibility** of projects currently due to connect in 2027/28 – call for these projects to have their connection dates and locations confirmed as soon as possible to protect against an investment hiatus.
- Must ensure alignment between the timetable of reforms and key route to market auctions, eg the upcoming Contracts for Difference (**CfD**) Allocation Round 7 (**AR7**) and the forthcoming Long Duration Electricity Storage (**LDES**) cap and floor regime.

Response: We have addressed these points in our Decision on the Gate 2 Criteria Methodology, as well as providing a summary below under Q10 (Connection Methodologies).

- Lack of near-term policy clarity for investors – concerns raised that investors need clarity quickly around how the process will work, including through anticipated subsidiary / guidance documents expected from NESO and network companies.

Response: We address this below.

- Need for long-term clarity for investors. Calls to provide clarity beyond 2035 in order to ensure projects come forward to contribute to longer term net zero goals. One respondent particularly called out hydropower and tidal projects as critical for long-term post-2035 delivery, and the need for policy clarity for these projects to ensure investibility.

Response: We address this below.

Technology / developer group specific issues:

- Interconnectors – concern raised that Gate 2 entry requirements for interconnectors will not appropriately filter out unviable projects. The specific concern is that the readiness criteria (land rights and planning status), as well as protections through holding a Cap and Floor agreement will allow unviable interconnectors into Gate 2, which will then not progress as the connecting markets ultimately don't support the project.

Response: We have addressed this in our Decision on the Gate 2 Criteria Methodology, as well as providing a summary below under Q10 (Connection Methodologies – see section on Interconnectors).

- Data centres – calls for different readiness criteria for data centres. As these projects typically acquire land rights later in the development process, readiness criteria should not be based on the requirement to hold land rights / planning consent.

Response: We have addressed this in our Decision on the Gate 2 Criteria Methodology, as well as providing a summary below under Q10 (Connection Methodologies – see section on Rationality of using 'land rights' for readiness and planning milestones for queue ordering).

- Energy Intensive Industries, projects of economic importance, and other large strategic demand projects - calls for special treatment for these demand projects given the potential carbon savings to be achieved through electrification / economic benefit to UK.

Response: We address this below.

- Community Energy projects – concern raised that, without bespoke treatment in the new connections process, community energy projects will remain disadvantaged relative to larger generation and demand projects and not be able to compete for grid capacity.

Response: We address this in the Project Designation Methodology decision, as well as providing a summary below under Q10 (Connection Methodologies – see section on Project Designation).

<u>General:</u>

- Concerns raised that the pace of policy development has been too fast, and that stakeholders have not been given adequate opportunity to feed into the process through consultation.

Response: We address this below.

- Concerns raised that, as the TMO4+ proposals will involve significant changes to the GB connection processes being enacted within short

timescales, the risk for unintended consequences and unforeseen errors will be high.

Response: We address this below.

- Linked to this, some respondents called for regular reviews of the process, including the content of the methodologies and the values of the Clean Power 2030 capacities, to ensure it remains proportionate and fit for purpose in achieving the intended outcomes.

Response: We address this in each of the Methodology decision documents.

Further detail on responses

7.11 As noted above, many of the points raised have been addressed elsewhere in the decision package. We have flagged above where that is the case.

7.12 We do address some specific points here not covered elsewhere, as follows:

Pace of policy development and the risk of unintended consequences

7.13 As noted above, this reform is the culmination of very extensive industry work over several years, including the development of various process design options over the last 18 months. The pace of the reform has been driven by the view shared by industry, government, and Ofgem, that the current connections process is not fit for purpose, and was damaging investor confidence to the extent that rapid action was required. In particular, the chapter on 'Impacts and costs' and our Impact Assessment both describe the need to materially increase the pace of connection and network build to achieve Clean Power by 2030.

7.14 As the direction of potential reform has become clearer, we also see stakeholder feedback, including from our consultation, that it is important to conclude and implement an outcome at pace. The current uncertainty (including the consequent closed connections queue) is itself a material concern for investment certainty.

7.15 We firmly consider that the reforms have been subject to a robust policy development process. Stakeholders have been able to shape both the policy intent of the reforms and the specifics of the text within various regulatory documents at several points, both in response to NESO and Ofgem consultations. The code modifications were also subject to the established code change processes.

7.16 We also note the role of the Ofgem-chaired Connections Delivery Board, comprising a broad range of cross-industry stakeholders, in shaping the proposals.

7.17 In summary, we consider that an appropriate balance was struck between robust policy development and the need for reforms to be enacted at pace.

Calls for specific treatment for demand projects, including data centres

7.18 We consider that these reforms put the energy system in a better baseline position and provide opportunities for all ready and needed projects to progress (including demand, as all projects are deemed needed). Projects that do not meet the ready and needed criteria will be moved to Gate 1, making it likely that some demand projects that are ready receive improved dates. We are also exploring with the Government and NESO whether any further future changes to the connections process are required to better facilitate demand. This could include those of strategic importance.

Need for near-term policy clarity for investors

7.19 As noted throughout this document, we recognise the need for investors to have certainty over the process as soon as possible, including details of how the process will work in practice, and when they should expect to receive information about the status of their projects. This need is particularly acute for developers of projects with near-term connection dates. We therefore welcome the commitment from NESO and networks to publish guidance documents, FAQs and templates, as well as running a series of webinars and surgeries for both transmission and distribution connecting customers. It is

critical that investors and all interested parties are provided the clarity they need on the key details of the implementation timeline as soon as possible.

Need for long-term policy clarity for investors of post-2035 projects

7.20 The CP2030 Action Plan provides investor clarity for those projects required for both the 2030 and 2035 pathways. Beyond 2035, the first SSEP, expected in 2026, is expected to provide the foundation for Gate 2 eligibility, queue ordering and offer preparation in line with a longer-term view of need beyond 2035. This will give investor clarity to those projects needed beyond 2035.

Code Modifications (Q2-9)

CUSC Modification Proposal CMP 434

Q2: Do you agree with our minded-to position to approve WACM7 of CMP434?

Q3: Do you expect the Pause for market self-regulation and information published in the Gate 2 Register would lead to a different approach taken by projects?

Q4: Do you have any further remarks, comments or concerns with our minded-to position that you would like us to take into account?

CUSC Modification Proposal CMP 435

Q5: Do you agree with our minded-to position to approve WACM1 of CMP435?

Q6: Do you expect the Pause for market self-regulation and information published in the EA Register would lead to a different approach taken by projects?

Q7: Do you have any further remarks, comments or concerns with our minded-to position that you would like us to take into account?

STC Modification Proposal CM 095

Q8: Do you agree with our minded-to position to approve the Original Proposal?

Q9: Do you have any further remarks, comments or concerns with our minded-to position?

7.21 Below is a high-level summary of the responses for completeness. The main analysis is set out in the code modification decision documents.

CMP 434

Summary of stakeholder responses[63]

7.22 On the first consultation question, of those who expressed a view, a majority of respondents were in agreement with our minded-to position to approve WACM7. On the second consultation question, respondents were split both on

[63] We have not followed a question-by-question distinction in these summaries since answers to the questions were not necessarily clean split. Therefore, we have not sought to separate these out against each specific question to ensure that we cover all responses.

whether the Pause for market-self regulation and information published in the Gate 2 Register[64] would lead to a different approach taken by projects.[65]

7.23 Whilst a few responses outlined that the Register would contain useful information on which projects could reconsider their viability, or were supportive of the added transparency in general, a significant amount were of the opposite view. Those opposed questioned if the information contained in the Register would be material enough to make a decision upon, ie immaterial incentive for Users to withdraw at this stage. They argued that Users would have spent considerable resources to get to this stage in the process, and so already had a good understanding of their project's viability, and as such (even if the information presented in the register could materially assist in such a decision) would not use the Pause to withdraw. Further, a Gate 2 offer was seen as very valuable, and even if so inclined, a User could simply withdraw at any time under the Original Proposal.

Ofgem response / decision:

7.24 Regarding WACM7, we are no longer of the view that this option would test most positively against the ACOs given stakeholder feedback to the minded-to consultation. We consider the anticipated benefits of WACM7, ie withdrawals, are less likely to occur than we believed at the time of our minded-to consultation.

7.25 In our Minded-to Decision consultation, WACM7 and WACM2 tested most positively against the ACOs. Following consultation responses, WACM7 now tests less positively against each of these ACOs, WACM2 is the strongest option and has been approved.

CMP 435

Summary of stakeholder responses:

[64] The concept of the Register is a database containing data including connection point, completion date, installed capacity and technology type of each project that has met the Gate 2 Criteria; the idea was that the Pause could be used by applicants to review published information in the Register and consider whether to update their decision making (self-regulate) for their project in light of this.

[65] With 17 positive, 19 negative, and 45 n/a votes.

7.26 Stakeholders were split both on whether they supported our minded-to position to approve WACM166 and on whether the Pause for market-self regulation and information published in the EA Register would lead to a different approach taken by projects.67

7.27 Those that were supportive liked the added transparency achieved by WACM1. Others considered that the Register would allow Users to better understand their project's chances and that the advancement process would facilitate efficiency. There were also calls for changes to enhance the EA Register. However, many did not see the EA Register as offering value and therefore it was unlikely to change User behaviour. They considered that Users were far more likely to assess their project's prospects before applying Gate 2 or afterwards once in possession of the full information that Gate 2 provided. Further, the information in the EA Register was seen as immaterial, in part due to it occurring too early in the process, and because a Gate 2 offer was seen as very valuable and therefore there was no incentive to withdraw before receiving it. Another view was that the Pause period was too short. There were also strong views regarding the drawbacks of the proposal introducing a pause, namely the significant delays, disputes, and administrative costs that it would bring and the potential gaming opportunities it could create.

Ofgem response / decision:

7.28 Regarding WACM1, we are no longer of the view that this option would test most positively against the ACOs given stakeholder feedback to the minded-to consultation, which questioned the anticipated benefits of WACM1, specifically, the expected likelihood of advancements or withdrawals occurring in response to the Pause. In light of respondents' views we consider, on reflection, that we agree that Users may be less inclined to withdraw at this stage. Further, we are less confident in considering that the administrative cost, potential increased number of disputes, and delays to the process would be outweighed by WACM1's benefits.

[66] With 27 positive, 20 negative, and 34 n/a votes.
[67] With 23 positive, 13 negative, and 45 n/a votes.

7.29 We also recognise the strong support Users expressed in the NESO publishing project data, as WACM1's register would have contained, as this improves transparency in the connections process for the benefit of consumers and CUSC Users. We therefore expect NESO to publish this information, which NESO are able to do independently and without the need for a code modification.

7.30 We therefore have decided to approve the Original Proposal of CMP435.

CM095

Summary of stakeholder responses:

7.31 Stakeholders were broadly supportive of our minded-to decision to approve the Original Proposal, however, the majority abstained.[68] Two respondents supported the proposal for its ability to create a more efficient system and for being necessary to enable the TO – NESO interaction that the reform process required. However, the Readiness criteria for interconnectors was criticised.

7.32 Changes to Capacity Reservation were also proposed. It was preferred that the process would be standardised and not at NESO discretion whereas another view supported a more limited scope with defined processes which would increase transparency and aid in disputes.

7.33 Another response expressed concern at the increased administrative work that TOs and NESO would need to undertake. TO obligation to adhere to a timetable administered by NESO was also seen as a drawback. Finally, there was a view that a post-implementation review was required to ensure that the reformed process was performing as expected.

Ofgem response / decision:

7.34 We agree with stakeholders that CM095 will be instrumental in creating a more efficient system and enabling the TO – NESO interaction required for the reform process.

[68] There were 28 positive, 2 negative, and 51 n/a votes.

7.35 We accept that without any assistance, concerns around the Readiness criteria for interconnectors would be warranted. However, this is why Component C exists.69 This is no longer a risk, as by allowing the NESO to Reserve capacity, interconnectors will be able to achieve Readiness just as any other eligible project can.

7.36 It is appropriate that NESO has autonomy to use the Reservation tool given its role and responsibilities as system operator. There is an expiry date applied to the Reservation of each Gate 1 Offer alongside an annual review conducted of the project with reservation by the NESO, therefore we deem that these both offer sufficient safeguarding on the use of Reservation.

7.37 With regard to concerns about the work and obligations placed upon NESO and the TOs, it is our view that while there will be an increased administrative burden, these organisations have been involved in the development of these proposals since the beginning. We therefore expect they will have made the necessary preparations for this initial workload. Further, the predictable demand curve of gates and windows, plus ultimately spending less resource on processing non-viable or needed projects, will see a net positive against workload. In terms of the concerns around TOs obligation to adhere to a timetable administered by NESO, we consider it appropriate that NESO owns and sets this timetable, with full buy-in expected from TOs; Ofgem will also help to hold all parties to account on delivery timelines.

7.38 Finally, we agree that a post implementation review would be a useful tool to assess whether the reformed process was delivering as expected. This is why we have obligated NESO to review the Methodologies annually through the new licence obligations.

7.39 As a result, we have maintained our minded-to position and are approving the Original Proposal of CM095.

[69] Component C of the CM095 proposal introduces the high-level process by which NESO can reserve connection (or interface) point and/or capacity in the Gate 1 and Gate 2 processes in specific circumstances. This aims to allow NESO to prevent an issue with the proposed new process by which the introduction of the Gate 2 Criteria could unfairly disadvantage certain project types which are part of specific regulatory regimes

Connections Methodologies (Q10)

Q10: Do you agree with our assessment, conclusions, and Minded-to Decision to approve the three Connections Methodologies?

Please consider in your response our assessment against the proposed objectives for each Methodology as consulted on as part of the licence changes.

If you do not agree, please share your views on (a) the objectives you think the Methodology does not meet and (b) the changes you think are needed to better facilitate the proposed objectives.

Summary of stakeholder responses:

7.40 About half of respondents took no position on our assessment that the Methodologies met the objectives we set for them in licence conditions. Of those that did engage with our assessment, most agreed with our conclusions. The decisions on each Methodology, published in parallel, provide a more detailed breakdown of responses.

7.41 **Calls to extend or change protection clauses** – Multiple respondents argued for a change to, or extension of, the protection clauses contained in the Gate 2 Criteria Methodology. There were calls to provide more assurance to projects due to connect in 2027 or 2028. There were calls to extend Protection Clauses 2 and/or 3 to account for the fact that there is an uncertain, and often long, timescale for Nationally Significant Infrastructure Projects (NSIPs) between submitting planning and receiving consent. Some respondents had concerns about the disparity of how Protection Clause 3 treats projects seeking planning under the Town and Country Planning Act (TCPA) compared to projects applying under section 36 of the Electricity Act 1989. Conversely, a small minority of respondents were against the concept of protecting projects that achieved planning consent on the basis that it is not a good measure of the progress.

7.42 **Rationality of using 'land rights' for readiness and planning milestones for queue ordering** - some respondents put forward the view that 'land rights', 'planning submitted' and 'planning consent' do not

accurately reflect the progress or viability of a project. There were challenges to the rationality of using land right as the readiness threshold for demand.

7.43 **Interconnectors** - There were specific calls to assess the readiness of interconnectors based on 'connecting market support' rather than land-based requirements. There were also specific calls to make sure that the protection of interconnectors with regulatory approvals does not result in 'stagnant' projects blocking the path for more viable interconnector projects.

7.44 **Solar capacities** - there were specific requests to reconsider the transmission and distribution split for solar pathways and allow for 'permeability' between transmission and distribution. There were also specific calls to reconsider the capacities for Scotland, with some respondents regarding them as too low relative to the pipeline of projects.

7.45 **Impact on competition and attrition** - some respondents strongly disagreed with the fact that NESO's CNDM does not apply attrition (i.e. more capacity than needed) over CP2030 Action Plan pathways to account for projects that exit the queue. Some respondents asserted that this would have an adverse impact on competition, including CfD liquidity. Some responses noted that this was particularly the case for storage and onshore wind in Scotland and there is little or no capacity growth between the 2030 pathway and 2035 capacities used as the basis for connections.

7.46 **Treatment of hybrid projects** - some stakeholders disagreed with the way in which hybrid projects would be assessed against the CP2030 Action Plan pathways and considered that the benefits of hybrid projects should result in more flexible treatment or prioritisation. In particular, there was a view that hybrid projects, which comprise of storage and another technology, should not necessarily contribute to the permitted capacity of storage.

7.47 **Project designation** – some respondents felt that designation was 'too limited in scope' and/or should include new categories, including demand and community projects. Conversely, others wanted more limitations to the categories and/or designation criteria.

Ofgem response / decision:

7.48 We have decided to approve the Gate 2 Criteria Methodology, CNDM and Project Designation Methodology. Our Decision Notice and our full assessment, which considers consultation responses in further detail is contained in the Methodology Decisions published in parallel. Some of our key conclusions in response to the consultation themes are below.

7.49 **Calls to extend or change protection clauses** - we agree that it is important to ensure that the most well-progressed projects with existing contracts that can support Clean Power by 2030 are given maximum certainty as early as possible that they will be eligible for Gate 2 contracts. We also agree that there is an opportunity to simplify and extend Protection Clause 3 to make it fairer across different planning regimes. Accordingly, we recommended that NESO:

- provide assurance that projects eligible for Protection Clause 2a, and which have existing agreements to connect on or before 31 December 2027, will retain connection dates and connection points.
- simplify Protection Clause 3 so that projects/customers that (i) submitted planning on or before 20th December 2024 (ii) have no outcome by the closure of the CMP435 application window and (iii) achieve consent after the closure of the CMP435 window are eligible to receive Gate 2 terms in a future CMP434 window even if this would breach zonal or national permitted capacities.

7.50 **Rationality of using land rights for readiness and planning milestones for queue ordering** - planning milestones, in particular attaining "land rights", "submitting planning" and achieving "planning consent", are the most objective indicators of progress with broad applicability and that can be used to verify readiness in the case of "land rights" and to order the queue in the case of planning milestones. Turning to demand, we do not agree that demand projects should be exempt from needing to demonstrate progression. Ensuring projects are demonstrating readiness is a core policy intent of these reforms, and if demand sites are unable to demonstrate this, it is justifiable for these projects to be moved to Gate 1 until readiness can be demonstrated.

7.51 **Interconnectors** - the acquisition of land may come later in the process for interconnector projects. There are provisions to deal with this explained in the

Gate 2 Methodology Decision. We agree that it is important that interconnectors that either do not have, or that lose, connecting market support do not block the path for more viable interconnectors. Ofgem will work with NESO following this decision to establish whether provisions are needed in Gate 2 interconnector contracts to ensure that where projects no longer benefit from regulatory approval, they can be terminated and capacity reallocated to other viable interconnector projects as quickly as possible.

7.52 **Solar capacities** – the Government updated the Connections Reform Annex of the CP2030 Action Plan on 7 April 2025 to address a misalignment between solar capacity allocations and the solar pipeline for 2031-35. The amalgamated transmission and distribution zones for 2031-35 allow for the permeability requested by some respondents.

7.53 **Attrition** – considering the use of the upper end of permitted capacity ranges for 2030 in the CP2030 Action Plan Connections Annex, the inclusion of 2035 capacities which can receive connection dates before 2030, and the protections for well-advanced projects, our view is that the CP2030 Action Plan can be implemented through the Connections Methodologies without additional attrition in the connections process. We acknowledge that there is low or no uplift from 2030 capacities to 2035 capacities in the case of storage and onshore wind in Scotland. In the case of onshore wind, the capacity ranges allow for a doubling of onshore wind capacity in Scotland between 2025 and 2035. In the case of storage, the application of protections is likely to result in far more battery projects in the queue than the capacity range for 2035. Increasing 2035 capacity allocations for any technology would reduce the scope for the SSEP to optimise the future network. We expect NESO to keep the need for further required action under review.

7.54 **Competition and CfDs -** we do not expect that CfD competition will be reduced in the near-term by the implementation of the TMO4+ package. We see the development of the SSEP and policy choices about its implementation as an opportunity to explore the longer-term impact on competition and the role of the SSEP, connections, and other policy levers in fostering the right balance between competition and strategic planning. While we do not agree that it is necessary for the Gate 2 Criteria Methodology or the CNDM to

contain attrition assumptions for approval, we do expect NESO to consider, after receipt of Gate 2 evidence, if, based on new information, there is any reason to review and update the Methodologies. We will also have the ability to trigger a review of the Methodologies to enable intervention if there are significant risks emerging to competition.

7.55 **Treatment of hybrid projects** - it is appropriate to treat hybrid projects in line with their behaviour and impact on the network and thereby ensure that the treatment of technologies that comprise a hybrid project is consistent with the treatment of other technologies of the same technology type.

7.56 **Project designation** - designation should be reserved for exceptional circumstances, either to address specific network issues, enable the connection of innovative technologies or projects that have very long lead times. These projects must deliver significant consumer, net zero or other benefits to the energy system. In our view, the existing designation categories are adequate to meet these needs; however, there is scope to explore options for further categories, such as large demand which benefits UK economic growth, or community energy projects, in future.

Impact Assessment (Q11–16)

Q11: Do you agree that we have, to a reasonable extent, identified and understood the potential impacts of TMO4+, including in particular the impacts on size and makeup of the queue and network build and connection dates?

Q12: Do you agree that we have, to a reasonable extent, captured and understood the potential impacts of TMO4+ on different user types, including generation, storage and demand customers across transmission and distribution, as well as consumers, NESO and network companies?

Q13: If you are a developer who has one or more connection agreements that may be affected by TMO4+, do you have feedback on how your contract may be affected and what impact this would have on your business? Please provide as much detail as possible (including confidentially if desired), including as to the likelihood of being affected (positively or adversely); the reasons for this (e.g. opportunities for acceleration, failure to meet Gate 2 Criteria); and the extent of any likely or potential financial or other impact.

Q14: Do you agree that we have, to a reasonable extent, identified and understood all the potential costs of implementing TMO4+?
Q15: Have we, as accurately as possible, identified and understood all the potential benefits of implementing TMO4+?

Q16: Are there any unintended consequences of TMO4+ that we have not identified?

Summary of stakeholder responses:

7.57 There were significant overlaps in stakeholder responses to the questions on the Impact Assessment and other questions asked in the consultation. We have therefore limited the summary of these responses to new points that do not arise in other questions or are focused on those impacting the quantification of the Impact Assessment.

7.58 **CP2030 Action Plan**: Responses highlighted potential negative impacts of forming the electricity connections queue based upon the permitted capacities stated in the CP2030 Action Plan. Multiple users indicated the Gate 2 permitted capacities in CP2030 Action Plan did not reflect the reality of the

current development pipeline and highlighted the risk that CP2030 Action Plan permitted capacities would not be delivered due to attrition, suggesting that the permitted capacities should be increased to account for this.

7.59 **Data:** Some respondents highlighted concerns with the data and analysis on the confirmed and holding queues presented in our Impact Assessment. These issues can be summarised as follows**:**

- Overestimation of built capacity for different technologies.
- Overestimation of Solar PV capacity in Gate 2, and overestimation of the capacity of Solar PV that has submitted a planning consent.
- Underestimation of the amount of battery capacity in Gate 2.
- Underestimation of the amount of onshore wind in Gate 2, and the amount of onshore wind that has either obtained planning consent, or has submitted a planning application – with specific implications for projects moved to Gate 1 in Scotland.

7.60 **Hybrid Projects:** Taking the points related to impacts alone for these responses (policy points were raised, but this is addressed in Q10), some respondents noted the impact on hybrid projects and on the repowering of projects, particularly onshore wind, had not been fully considered in our impact assessment.

7.61 **Costs:** Concerns were raised about the Impact Assessment not fully considering the costs being faced by developers being moved to Gate 1. Respondents noted that the TMO4+ reform package would result in some degree of sunk costs being lost. Some stated that some of their project portfolio would benefit from acceleration. In addition, developers and DNOs also stated that the Impact Assessment underestimated the costs of network reinforcement.

7.62 **Investment:** Respondents considered that the Impact Assessment had not fully captured the effects of reforms on investor confidence and in bringing uncertainty to the sector. Some respondents also raised concerns about the impact on investment uncertainty that the TMO4+ reform package process is having and the time it is taking to develop is resulting in delays to projects even if they expected to receive Gate 2 offers.

7.63 **CfDs:** Respondents also expressed concerns about the impact of the TMO4+ reform package on CfD auctions. Some respondents raised concerns that the reform would result in a lower number of projects competing in these auctions, potentially resulting in higher prices of CfD contracts.

7.64 **Distribution Projects and DNOs:** Respondents highlighted a lack of transparency on the process at the distribution level. There was concern that DNOs would not be able to meet their delivery commitments and that an assessment of third party works would delay receipt of Gate 2 offers to an undeterminable length of time for affected users.

7.65 **Community Energy**: Concerns were raised about the impact of the TMO4+ reform package in Scotland. Respondents commented that there would be a disproportionate impact on community owned energy projects in Scotland as the threshold for Transmission Impact Assessment in Scotland is much lower than in England and Wales.

Ofgem response / decision:

7.66 We have provided a brief summary of our response to this. Please see the Impact Assessment for a more detailed response to these questions and the Impact Assessment takes into account these points within its full appraisal of the impacts.

7.67 **CP2030 Action Plan:** TMO4+ proposes that the connections process aligns with the CP2030 Action Plan. The Impact Assessment does not assess the impacts of Government's CP2030 Action Plan. It assesses the impact of TMO4+, including its implementation of the CP2030 Action Plan permitted capacities.

7.68 In response to feedback and consultation responses, solar capacity allocations were amalgamated in the CP2030 Action Plan across transmission and distribution (as covered in Q10). The impacts were assessed. We found that increased solar capacity is expected to receive a Gate 2 offer compared to the Minded-to Decision position. Also, we now expect that comparably fewer solar projects that have submitted a planning application will be moved to Gate 1. This reduces negative consequences for the cohort of relatively advanced solar projects which may have invested in preparing planning applications.

7.69 We recognise the strength of responses with regards to attrition and this is covered in more detail in our response to Q10 above.

7.70 **Data:** We have acknowledged there are limitations in the projections and data currently available. We address the differences found in the Impact Assessment Appendix 1.

7.71 We have sought and considered views on TMO4+, including a sensitivity check of our underlying data on batteries, solar and onshore wind with publicly available data published by Regen, and have taken them into account throughout our assessment. Whilst noting the uncertainties, we are comfortable that our assessment of benefits, costs and impacts of TMO4+ remains sound.

7.72 **Hybrid Projects:** While there is a risk that solar and battery hybrid projects may be misclassified, our sensitivity analysis does not demonstrate that this is likely to be the case. Therefore, there is no obvious change to our Impact Assessment calculation methodology required.

7.73 It is possible that there is a misclassification of onshore wind and solar hybrid projects which could be overestimating the total capacity of solar in the queue and underestimating the total capacity of onshore wind in the queue. We do not see this as having a material impact and it does not change our conclusions on the impacts of the relevant technologies.

7.74 **Costs**: we have provided a detailed assessment of costs associated with TMO4+ to networks, developers and consumers in our accompanying Impact Assessment. These costs have been carefully considered against the assessed benefits arising from reform.

7.75 Network companies have provided analysis showing that under reform the level of network build required will reduce. They have also quantified the potential costs of abortive network costs and implementing the new process.

7.76 We recognise the concerns raised by stakeholders on investment in projects in Gate 1 and we have carefully considered these costs and have quantified the potential sunk costs to consider against the benefits.

7.77 **Investment:** We recognise the impact reform could have on investor confidence in the short term due to the uncertainty, but believe these are

reasonably mitigated by NESO's protections for the most well-progressed projects. We have recommended further changes to protections in response to consultation (see above in Q10)

7.78 We have a clear timeline with NESO and Network Companies in place, see section 8. This will be subject to robust, clear and transparent governance, and there must be clear accountability and process in place governing how changes are managed. Ofgem and Government will be heavily involved in this process.

7.79 **CfDs:** On the basis of our analysis, we do not expect that CfD competition will be reduced in the near-term by the implementation of the TMO4+ package as projects that receive Gate 1 terms would be unlikely to be in a position to compete in CfD auctions. Ready projects are expected to receive dates that can accelerate their ability to compete.

7.80 We expect NESO to consider, after receipt of Gate 2 evidence, if, based on new information, there is any reason to review and update the Methodologies. We will also have the ability to trigger a review of the Methodologies to enable intervention if there are significant risks emerging to competition.

7.81 **Scotland**: As acknowledged in our Impact Assessment in 'Background: Data used to apply readiness criteria to the existing queue and Breakdown of parties in the Gate 1 queue', we recognise that there will be locational specific impacts with these reforms, including in Scotland. Indeed, our sensitivity check does note that there could be up to 4.2GW of onshore wind projects in Scotland that have submitted a planning application that may be moved to the Gate 1 queue. The criteria to be applied under these reforms are GB wide and designed to deliver Clean Power by 2030 in line with the plan set by the Government, which laid out a specific technology mix to provide a secure, operable and cost-effective system. The impact of the permitted capacities in different parts of GB will necessarily be different depending upon the current level of generation (of the different technology types) in different areas.

7.82 **Community Energy***:* We are confident that TMO4+ will benefit a range of connection customers of differing scheme sizes or ownership arrangements. We support government's ambition and agree that community-led solutions

can help deliver benefits to current and future consumers while also delivering on broader social, economic, net zero and place-making goals.

7.83 We recognise that changes are being considered to the Transmission Impact Assessment threshold in England and Wales, which is welcome. While further changes are not yet being proposed for the TIA in Scotland, the thresholds for the Scottish mainland and island schemes remains under regular review. In addition, the ENA is also exploring options for bringing about consistency (among DNOs, between DNOs and the TOs) in how transmission related costs (securities and reinforcement) are passed down to distribution connection generators.

7.84 **Distribution Projects and DNOs:** In response to this feedback, we have included a 'TMO4+ at distribution' chapter in this document. We have made changes to the distribution licence as part of this process to ensure that DNOs are required to follow the reformed connections process and are agreeing a clear delivery timeline with all parties, as set out in section 8 below.

8. Delivery and implementation of connections reform

Summary:

This chapter describes the next steps for delivery and implementation of the TMO4+ reforms.

We discuss our expectations for the implementation / delivery timeline, which has been agreed at a high level by NESO, network companies, Ofgem and Government.

We then set out our expectations for the continuous monitoring and improvement of the reformed process as we move into and through the implementation phase.

Timeline for implementation / delivery

8.1 NESO and the network companies have worked collaboratively to draw up an implementation timeline for the TMO4+ reform package. The timeline has been subject to detailed planning and scrutiny, involving both Ofgem and Government input.

8.2 Whilst work continues on the specific detail of the plan, a high level timeline has been agreed by all parties. Whilst we provide the high level points below, to support customers through the new processes, NESO and network companies will be publishing guidance documents, FAQs and templates, as well as running a series of webinars and surgeries for both transmission and distribution connecting customers. It is critical that investors and all interested parties are provided the clarity they need on the key details of the implementation timeline as soon as possible.

8.3 We are satisfied that the TMO4+ reform package represents an ambitious but achievable plan, that balances pace of delivery against the risk and costs.

8.4 The key features of the delivery timeline are as follows:

- The decisions we are making today will be followed by a standstill period of 56-days for the licence changes, followed in turn by a notice period of 4-weeks as required by the new CUSC requirements.
- We therefore expect the Gate 2 evidence submission window for transmission connecting customers to open in July 2025. NESO will publish the exact dates for the window with a minimum of 4-weeks notice.
- The evidence submission window for distribution customers to submit evidence to their respective DNO will open in May 2025.
- NESO will indicate to projects whether they have been successful in securing a place in the reformed queue from September 2025.
- NESO and network companies expect to start issuing revised offers from Autumn 2025, with an initial focus on those that are connecting in 2026 and 2027.
- All offers up to 2030 will ultimately be prioritised to best support achieving Clean Power by 2030, with the ambition to have issued all 2030 Gate 2 offers by early 2026.
- Looking beyond the current connection queue to future generation, storage and demand growth, NESO will work to open the next window for new applications, aiming for this to be before the end of 2025.

8.5 We welcome the timeline prioritising the creation of offers for those projects that need them most urgently to maintain investibility, starting first with projects with connection dates in 2026 and 2027, followed by the remainder of the projects needed for the 2030 pathway of the CP 2030 Action Plan.

8.6 We also welcome the commitment from NESO and network companies to continue to further refine the plan, and to keep the timeline under review to continue exploring alternative options on an ongoing basis, to understand where further efficiencies can be realised.

8.7 The timeline must be subject to robust, clear and transparent governance, and there must be clear accountability and process in place governing how changes are managed. NESO and networks will establish, and Ofgem and Government will be heavily involved in, this process.

8.8 As well as working collaboratively on cross-party solutions, we also expect NESO and network companies to fully own their own delivery timelines and to individually explore how best to maximise efficiencies and expediate offer development within their own processes.

8.9 We expect the dates in the timeline to be treated as backstop dates, and NESO and networks should aim to issue offers ahead of those backstop dates.

Continuous monitoring and improvement

8.10 Our decision to approve the TMO4+ reform package means that the new connections process will operate in accordance with the provisions of the licences, codes and connections methodologies.

8.11 We think these new provisions, building on existing regulations, will facilitate a connections process that enables us to achieve our objectives of faster connections for projects aligned with the CP2030 Action Plan in a fair, reasonable and proportionate manner. We think this is the right next step to take in reforming the connections process on the journey to Clean Power by 2030 and beyond to net zero.

8.12 We reach this conclusion aware that there is inherent and unavoidable uncertainty in the data and assumptions underpinning the reforms. We have considered various sensitivities to our data and are satisfied that our decisions are robust against those. However, whilst it is not possible to be certain that the reformed process is optimally designed to deliver the intended objectives, that is, could not in some way be improved, we are satisfied that it will achieve its objective and are conscious that to do so is a matter of urgency.

8.13 We will continue to monitor the emerging information and impacts closely. This package contains various mechanisms by which adjustments can be made, including the opportunity for at least annual changes to the Connections Methodologies (subject to consultation and approval). As noted, we expect NESO and network companies, with the support of Ofgem and Government, to carefully and regularly monitor the new process as we move through the early stages of implementation.

8.14 Given the existence of those mechanisms, we are confident that there is sufficient flexibility to course-correct if and as required, in order to maximise

the impact of the reforms in achieving their objectives and minimise any adverse or unexpected consequences.