June 2023

GB Connections Reform

ESO

Foreword

There is a clear and urgent need to reform Great Britain's electricity transmission connection process.

Over 280GW of generation projects are currently seeking to connect to the transmission network[1] and an increasing number of those projects have connection dates into the mid to late 2030s. Renewable project developers are waiting too long to connect to the network and this is hindering our progress to deliver Net Zero. As the Electricity System Operator responsible for managing the transmission connection process, we recognise and take responsibility for this challenge. The causes for these delays are clear. We have seen huge increases in the numbers and capacities of projects seeking to connect, yet our data shows that up to 70% of those projects may never be built. Those projects are holding capacity that is significantly delaying the connection of other projects.

We are taking a range of actions to address these problems now, via our 5-Point Plan.[2] Changes to the way we design the network and how and when we provide access to the network are bringing forward connection dates. Because of the actions we are implementing we anticipate 70% of the pipeline of connecting projects, which currently have a connection date after 2026, will be able to connect between 2 and 10 years earlier. We will also be enabling energy storage projects to connect to the grid more quickly, speeding up the connections for up to 117GW of energy storage projects in the pipeline.

Whilst these tactical initiatives will alleviate pressures within the connections process – we want to and must, do more. After extensive engagement with industry, we put forward in this consultation a new, agile, future-proofed connections process. The initial recommendations we include in this consultation will deliver significant overall cost savings for consumers through coordinated network design and significantly reduced times to connect through more efficient management of contracts and capacity. Our recommended new connections process would also be future-proofed to the outcome of a number of other reform programmes across the energy sector.

We welcome the constructive engagement with industry in developing the initial recommendations in this consultation. We also welcome the support from Government and Ofgem, including Ofgem's recent open letter and the planned joint action plan in the summer. We are confident that the initial recommendations in this consultation can help deliver the improved outcomes we all want. Although our initial recommendations would require significant changes to regulations and industry codes, there is an opportunity now to work together creatively and ambitiously to expedite these reforms.

I look forward to hearing your views.

Julian Leslie
Head of Networks
Electricity System Operator

[1] As of March 2023
[2] www.nationalgrideso.com/industry-information/connections/connections-challenges-what-are-we-doing-now

Summary

Summary

Context and Purpose

Timely grid connections are one of the key challenges facing our energy system today. These grid connection pressures are a direct result of our rapidly decarbonising energy system, and similar pressures are being experienced across the world as we transition from fossil fuels to renewables-based energy systems.

As the Electricity System Operator (ESO), we are responsible for the process by which both generators and large-scale demand users connect into the electricity transmission system. We recognise and share in the frustration of many in the energy sector that there is a long and slow-moving queue of projects seeking to connect. The outdated design of the regulatory and industry framework means that many of those projects are stuck behind projects that will never progress. Those frameworks also drive an incremental and ad-hoc approach to network design, which is preventing us from introducing the coordinated approaches across GB that we have used with offshore wind, delivering significant value for the end-consumer.[3]

As we transition into becoming an independent public body, responsible for cross-vector strategic network planning, this incremental approach will also prohibit us from creating a whole-systems centralised strategic network plan.[4]

[3] www.nationalgrideso.com/future-energy/pathway-2030-holistic-network-design/holistic-network-design-offshore-wind
[4] www.nationalgrideso.com/future-energy/projects/network-planning-review-npr

Summary

These key challenges were set out within our ‘Case for Change’ report[5] published in December 2022. Since then, we have put into place various tactical initiatives (summarised on page 6) to speed up the current connections process and to ensure the process is more efficiently managed ahead of enduring reforms.

The main focus of this document, and the accompanying consultation, is our proposals for enduring reform. We set out the range of options we have considered, including our preferred model for a proposed new connections process for generation and large demand connections, which will fundamentally reform and future proof grid access.

In conjunction with the actions we are taking now, we think our preferred model could deliver considerably better outcomes for consumers and project developers when the new process ‘goes live’.[6] If we were to follow standard practices for changing industry codes and licences, the ‘go live’ for these reforms would be mid to late 2025. However, we will continue to work with industry, Ofgem and the Department for Energy Security and Net Zero to explore how this timeline can be accelerated.

[5] www.nationalgrideso.com/document/273021/download
[6] The magnitude of these improvements will to some extent be dependent on the impact of actions we are able to take to during the transition period

Summary

Actions we are taking now

We are working hard to make as many improvements as possible under the current frameworks ahead of these enduring reforms. Our 5-Point Plan[7] includes a range of initiatives to seek to reduce the size of the current queue to connect to the transmission system and the overall timescales for connection. We anticipate 70% of the pipeline of connecting projects, which currently have a connection date after 2026, will be able to connect between 2 and 10 years earlier because of these changes. This plan is:

1

Allowing customers to leave our queue without incurring penalties for doing so. This amnesty closed in April 2023 and received over 8GW of interest – alleviating pressures within the pipeline of projects. We are currently working on the costs with Ofgem and will soon be updating contracts.

2

We are updating how we calculate project connection dates. We are working with GB's Transmission Owners (TOs) to review and update existing contracts with these new Construction Planning Assumptions (CPAs).

3

Batteries and other energy storage technologies soak up energy generation when connected to the grid as well as releasing it back onto the grid. As this technology has a dual purpose, we have changed how we calculate its impact on the system.[8]

4

We are developing new contractual terms for connection contracts to manage the queue more efficiently, so those projects that are progressing can connect and those that are not can leave the queue. The proposals have now been consulted on, and we recently submitted the final report to Ofgem.

5

And finally, **we are enabling energy storage projects to connect to the grid more quickly**. This will speed up connections for up to 117GW of energy storage projects in the pipeline. To ensure system security, they may be instructed to reduce their output, however, only on very rare occasions.

Going one-step further, to help projects to progress even quicker, the ESO has set out our support to enable developers to build their own connections into the grid. The final consultation on the code modifications required to give effect to this was published recently on the ESO website.[9]

[7] www.nationalgrideso.com/industry-information/connections/connections-challenges-what-are-we-doing-now
[8] www.nationalgrideso.com/document/281171/download
[9] CMP 330/374 is the contestable works Code Modification. This code modification sets out changes to enable developers to build the required network to connect into the National Electricity Transmission System. Our ESO response on this can be found here: www.nationalgrideso.com/industry-information/codes/cusc/modifications/cmp330cmp374-allowing-new-transmission-connected

Summary

Alongside these tactical initiatives, we have been working closely with TOs and Distribution Network Operators (DNOs), through the Strategic Connections Group (SCG) facilitated by the Energy Networks Association (ENA). The SCG has been set up to help improve and better coordinate the arrangements by which relevant projects[10] that connect at the distribution network can use the transmission system. Developments and experience from roll out of our 5-Point Plan and Regional Development Programmes (RDPs) have proved important in this regard.

These shorter-term tactical initiatives are looking to address the current challenges with connection dates and the queue to connect. They should also help clear the way for more fundamental improvements through enduring reforms we are proposing as set out below.

[10] Not all projects that connect to the distribution network also have an impact on or use the transmission system

Summary

Delivering a reformed connections framework and processes

The tactical initiatives outlined above are a critical step in speeding up our connections process and ensuring those projects that are not progressing leave the queue. However, as a responsible System Operator, we must ensure the connections process not only addresses the challenges of today but is also agile enough to respond to future grid pressures. For example, further electrification of GB (for example in transport, industry and homes) will lead to significantly increased energy need and more demand customers plugging in. Our connections process must be agile to respond to this new growing area of need.

This summary report, accompanying consultation and technical appendices, follows four months of intensive engagement with stakeholders across industry to identify and test potential solutions. We ran **8 design sprint sessions**, with **229 stakeholders** attending from across **42 organisations**. We also created a new external steering group, with an independent chair and 25 different member organisations, that met 6 times over the course of the design phase. We would like to thank industry for their commitment and constructive approach to this engagement.

Through that thorough and inclusive process of engagement we refined the number of options from **15 high-level possibilities to four detailed option packages**. As part of that process we evaluated 73 “add-on” possibilities.

Summary

ESO's recommended future grid connections process

Out of the four shortlisted options, the ESO's preference is option 'TMO4'. This option performs best against our design objectives and design criteria (see 'Assessment of the shortlisted options against the design objectives and design criteria' on page 15) and crucially provides a range of system benefits that differentiates it from the other three presented. We also consider it to be the option that best meets the objectives and outcomes set out in Ofgem's recent open letter on future reform to the electricity connections process.[11]

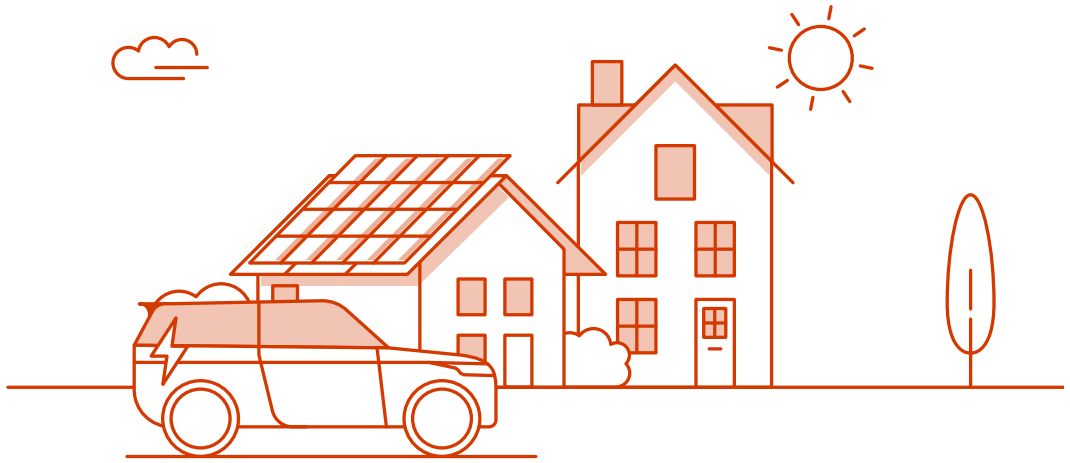
This option proposed is radically different to what we have in operation today.

The reformed connections process under TMO4 (as illustrated in Figure 1) would include an annual application window leading up to "Gate 1". Within the window period the ESO would work with the TOs to carry out a batched assessment of all accepted connection applications received within the window and develop an associated coordinated network design.

At this stage all applicants would receive a connection offer based on that network design. The reformed connections process would include a second gate ("Gate 2") that would be used to determine queue position for projects within the window and to accelerate connection dates of projects which have submitted planning consents,[12] or meet other agreed acceleration criteria.

If implemented, this new process would apply to all generation and large demand connections across GB (onshore and offshore) from the date at which the reformed process 'goes live'.

We currently estimate the window being annual, with connection applications received within the first 3 months, then being studied under a batched assessment process and an offer issued following a subsequent 6 month network design period.[13] However, as we develop the next level of detail we will determine whether the windows could be run more quickly, while still delivering the same quality of output.



[11] www.ofgem.gov.uk/publications/open-letter-future-reform-electricity-connections-process

[12] We seek views in the consultation on whether submission of planning consents is the most appropriate timing for Gate 2. We have also considered setting Gate 2 to 'shovel ready' or 'securing planning consents', but had concerns about whether that might be too late in a project's development to enable the full benefits of accelerated connection dates.

[13] This 6-month period is based on our experience of running the Holistic Network Design (HND) processes for offshore wind. As we transition into an Independent public body with responsibility for cross-vector strategic network planning, we will have additional resource and licence powers to ensure these timeframes are met, and alignment of the HND and wider onshore connections process. will ensure efficient implementation.

Summary

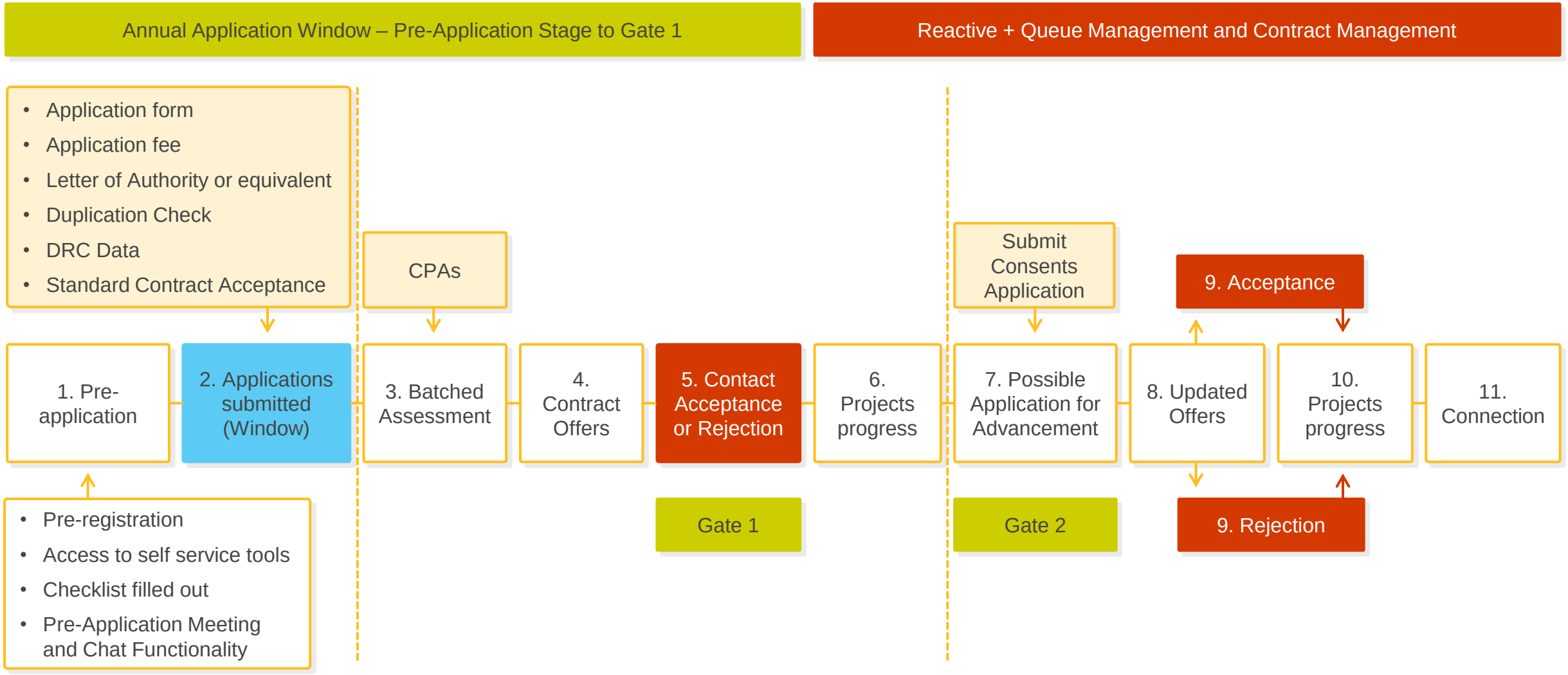


Figure 1: Process diagram of our preferred option (TMO4)

Summary

We think TMO4 would facilitate quicker connection to and use of the transmission system, in a more coordinated and efficient way, in order to help meet GB's Net Zero ambitions and targets:

Benefits of TMO4:	
It provides the greatest opportunity for earlier connection dates. It allocates capacity and earlier connection dates most efficiently and fairly on a 'first ready first served' basis to projects that are progressing towards completion,[14] without detriment to projects that are progressing more slowly.[15]	• Projects that are viable and are progressing (to Gate 2) under this reformed connections process should be able to secure connections dates aligned to their delivery plans, so that they can connect as soon as they are ready.
It promotes the development of a more coordinated GB network design (onshore and offshore, and across transmission and distribution), thus delivering significant benefits to consumers through savings from efficiencies in network design.	• Our Centralised Strategic Network Plan (CSNP) will ensure that we strategically plan and deliver the wider transmission network (onshore and offshore), including through targeted anticipatory investment. We think that the new connections process would best enable the development of a coordinated design for local and enabling works, including at the boundary between transmission and distribution networks. Ensuring process and methodology alignment between CSNP and the new connections process would therefore deliver efficiencies in network design and delivery at a whole network design level. • We anticipate that co-optimisation of the connections, HND and CSNP network planning processes would save consumers billions of pounds in capital and constraint cost savings.
It supports more efficient future planning of the network. This includes improved ability to design and deliver the network in anticipation of need, while also efficiently considering non-build solutions. It also allows better consideration of environmental and community impact.	• It best facilitates the introduction of competition, where appropriate, to help deliver solutions more efficiently. • It is most adaptive to future priorities and challenges. If for example Government, now or in the future, wanted to expedite grid connections for large demand customers or certain renewables to meet targets, then the model could flex to enable that. Ultimately this could potentially extend to enabling a future centrally planned approach for deployment of generation and large demand (see 'Other major options considered' on page 18).

[14] Or other projects that meet certain criteria, if these criteria are introduced, for example nationally significant projects
[15] We propose that projects that do not meet their contractual milestones will have their contracts terminated, as set out within the current queue management code modification (CMP376)

Summary

The main challenges of TMO4 relate to:

i) potential concerns from project developers about the introduction of a new process that will take longer to provide them with a connection offer than under the current arrangements (this could especially be the case for small and medium embedded generation project developers); and

ii) the time required to carry out detailed design and then implementation. We consider robust mitigations to these challenges within “Arrangements for the transmission / distribution boundary” (page 16) and within “Implementation and transition period” (page 20).

However, our overall view is that the benefits outstrip these risks, given the overwhelming priority from industry to reform the grid connection process. While this would come at an initial cost of waiting a few more months for a connections date the outcome would be:

a) a quicker overall connection date
b) more assurances for investors
c) significant cost savings on network design.

Summary

Our four shortlisted options

Our four shortlisted options (as illustrated in Figure 2) represent a transition from an improved version of the core current process (TMO1) through to increasingly more fundamental, ambitious and future proof changes (TMO2 to TMO4).

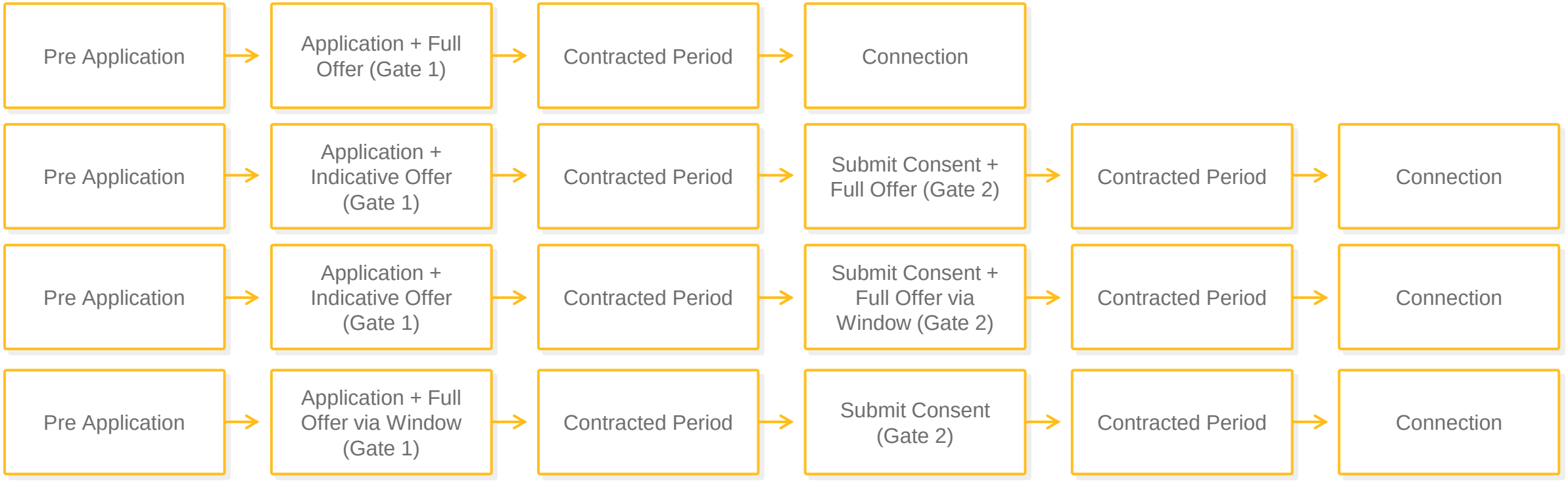


Figure 2: High level process overview of the four shortlisted Target Model Options

Summary

We consider the four shortlisted TMOs to be the most coherent and credible overall models to put forward for consultation. They attempt to balance the need for more efficient capacity allocation, coordinated network design and transmission investment with providing clarity on connection date and location to project developers as early as possible in order to support their investment case.

TMO1 represents the current process, as improved by the 5-Point Plan and by some other, lower impact changes. The general trend as we move through the TMOs (i.e. from TMO1 to TMO4) is towards:

- greater batching of connection applications and more co-ordinated network design;
- greater developer involvement in the network design process;
- a greater ability to change how queue position is allocated and managed; and
- a greater ability to treat readier to connect and priority projects[16] in a differentiated manner without detrimental impacts to other projects and/or consumers.

The overall effect of the above is the opportunity for progressively earlier overall connection dates as we move through the TMOs, with our preferred option (TMO4) also providing additional system benefits. The trade off to delivering these additional benefits is that additional processes (for example stage gates) need to be introduced.

All TMOs include the following design features to improve the current connections process, although TMO4 delivers these improvements most efficiently:

- the enduring improvements introduced through the 5-Point Plan (for example, to network modelling studies and interim non-firm access);
- improvements to the pre-application stage to support project developers with data, tools and engagement. These should help improve application quality and reduce speculative volume of connection applications;
- an additional requirement in order to apply for a connection (namely the requirement for a 'Letter of Authority'[17] from a local landowner for the site on which the project intends to locate – or equivalent for offshore projects);
- arrangements for accelerating the connection of projects that meet certain criteria, relative to other projects; and
- a range of more minor, incremental improvements designed to provide additional transparency and a more efficient overall process.

Under all of the TMOs there would need to be a review of application fees to ensure these are cost reflective as the new processes would drive a different cost profile. Similarly, as part of detailed design and implementation of TMO4 we would recommend a review of user commitment arrangements. This should be solely to ensure that the prevailing methodology is in alignment with the reformed connections process, rather than to change any of the underlying arrangements.

[16] In the accompanying consultation we set out further detail on what we mean by a 'priority project' and what criteria might be used to determine a priority project
[17] A 'Letter of Authority' is already used by DNOs as an application requirement for connections to the distribution network

Summary

Assessment of the shortlisted options against the design objectives and design criteria

We assessed each of the shortlisted options against the design objectives and criteria we developed as part of our Case for Change report.[18] Figure 3 shows how the four shortlisted options compare against each other in respect of each of the design criteria. The accompanying consultation provides full details on the criteria and how we assessed the shortlisted options against them.

In summary, the later options perform better as additional features are included for allocating and managing capacity efficiently and for developing co-ordinated network design.

Design Objectives	Design Criteria	Reference	TMO1	TMO2	TMO3	TMO4
Creates a more coordinated and efficient transmission system and network design	Better informs when and where to connect	1				
	Enables economic, efficient, coordinated network design	2				
	Delivers more efficient use of network capacity	3				
	Maintains or improves operability of network	4				
Options collaboratively developed throughout the connections lifecycle	Reduces risk of wasted effort	5				
	Parties able to engage to identify best option(s)	6				
Quicker connections for projects progressed on their merits	Better recognises nature and status of connections	7				
	Enables “shovel ready" projects to progress more quickly	8				
	Accelerates timing of connections	9				
A simple transparent and coordinated approach to connections	Improve Transmission and Distribution coordination	10				
	Improve the connections process experience of connectees	11				
	Efficiently manages policy complexity/interdependencies	12				
Easy access to self-service tools, consistent data and quality insight	Gives better access to and visibility of data and info for parties	13				
	Enables parties to plan and act more efficiently	14				
	Reduces reliance and/or workload on others	15				
Consistent, skilled and well-resourced engagement	Provides coherent customer experience across networks	16				
	Skills and capabilities matched to responsibilities and customer needs	17				
Future proof process	Adaptability to changes in the market landscape	18				
	Supports greater investment certainty across the industry	19				
	Flexibility to evolve process to deliver future needs	20				
Better cost outcomes for the end consumer	Reduces overall costs to end consumers	21				
	Can be implemented in a timely and efficient manner	22				
	Environmental and community impacts are avoided, minimised or mitigated by the network design	23				

Figure 3: Assessment of the shortlisted options against the design objectives and design criteria[19]

[18] https://www.nationalgrideso.com/document/273021/download; page 37

[19] We have not yet fully assessed our proposed arrangements for managing the transmission / distribution boundary against the design criteria as these are at a high level conceptual stage

Summary

Arrangements for the transmission / distribution interface

We are currently working closely with DNOs, via the SCG, to consider the level of interactivity between transmission and distribution networks. This includes the extent to which distribution connected projects impact the transmission system, and how that impact is managed. That work is ongoing and we do not want to prejudge the outcome at this stage. However, there is a shared ambition to align and standardise processes, provide more transparency to project developers and ultimately to support better and more coordinated medium and long-term planning and operation of distribution and transmission networks.

Whatever arrangements are ultimately agreed through that work, some distribution connected projects will still have an impact on, or use, the transmission system (we refer to these here as 'relevant distribution-connected projects'). So we have considered within the connections reform project what arrangements and processes could be put in place for these projects. Our initial view is that all relevant distribution-connected projects should go through our preferred reformed transmission connection process (TMO4) in order to be allocated the most efficient connection date in relation to the transmission impact/works. However, given the dynamic nature of connections to the distribution network, we propose that DNOs would be able to reserve additional capacity within each window, which would be allocated to relevant distribution-connected projects that come forward between the annual windows. The level and type of this additional capacity would need to determined under a robust methodology, that supports more coordinated medium and long-term planning, based on robust generation and demand scenarios.[20]

[20] For example the Future Energy Scenarios (FES) developed by ESO and the distribution FES developed by DNOs

Summary

We think that this approach would provide flexibility to account for the high volume of connection applications to the distribution network and prevent smaller relevant distribution-connected projects from having to wait for the next window. Aligning the processes in this way would also help address existing concerns around non-alignment of queue allocation, queue management and data exchange across transmission and distribution networks. It would ultimately also allow many relevant distribution-connected projects to connect significantly more quickly than is currently the case. Furthermore, this approach would align with and support the general direction of travel in the industry towards sharing more and better data, which should drive greater transparency and efficiency. It would also better align with potential future direction of travel under Ofgem's recent consultation on Regional System Planning.[21]

Our working assumption is that the front end distribution connections process run by DNOs would continue as is, subject only to any improvements made via the SCG over the coming months. Changes would however be required at the transmission / distribution interface in respect of the most efficient processes and mechanisms to manage application windows and reserved capacity. For example, if taken forward, there would be a need to replace the existing 'Statement of Works' and 'Project Progression' processes.[22]

Our proposed approach is high level at this stage, and further development is needed to determine how many distribution-connected projects would ultimately impact on the transmission system and how the transmission / distribution interface processes would work in practice. Subject to the outcomes of this consultation we intend to work further with key stakeholders, including with the SCG, to develop the detailed design further. We also welcome views on alternative arrangements for managing the transmission / distribution interface that would deliver better or comparable overall outcomes against the design criteria.

[21] www.ofgem.gov.uk/sites/default/files/2023-03/Consultation%20on%20frameworks%20for%20future%20systems%20and%20network%20regulation.pdf

[22] There would likely continue to be a need for processes to manage capacity and data exchange, potentially including the Appendix G process, although this would need to be reviewed following the outcome of this consultation

Summary

Other major options considered

Given the size of the challenge, we considered a number of more radical options that could be implemented either in addition to, or instead of, our shortlisted options.

Centralised Planning

The main option we considered was whether we should move away from the current market-led approach, where project developers can apply to connect any type of technology, in any location, at any time, and instead move to a more centrally-planned approach for deployment of generation and large demand. Under such an approach connection applications would need to align with some deployment plan developed and mandated by a central planning entity or perhaps a range of planning entities. For example, the Future System Operator (FSO), Government and/or (in relation to offshore projects) The Crown Estate and Crown Estate Scotland. Such an approach could potentially deliver connection of specific technologies faster than currently possible, as well as potentially supporting more efficient overall network design and improving network operability.

However, the wider benefits and risks of such an approach on investment appetite, cost and deployment efficiency compared to our current largely market-based approach would need careful consideration. For example, any centrally planned approach across technology types would need to take account not just of energy system costs and benefits, but wider factors that impact on deployment of generation and large demand such as land availability, availability of other natural resources (e.g. wind, sun), and national or local government targets. Project developers we engaged with also had concerns that such an approach would risk significantly undermining investment confidence or appetite in their projects, would stifle innovation and ultimately delay or otherwise hinder delivery of Net Zero.

These are really important and significant decisions, which we think require further consideration with Government, Ofgem and other key decision makers. We do not think it would be appropriate to make such decisions solely in the context of connections reform, particularly in the context of wider upcoming decisions on locational signals through the Review of Electricity Market Arrangements (REMA). As such we have not included any options that assume or mandate a centrally planned approach for deployment of generation and large demand.

However, we think it is important that the reformed connections process can efficiently enable whatever approach is ultimately determined with regards deployment. Our preferred option, TMO4, could enable a range of different approaches to future deployment, for example by adjusting the entry requirements within an application window, or running windows limited to certain technologies and/or capacities. As such, if our preferred option is ultimately implemented, we would adjust its detailed design as appropriate to reflect any decisions with regards project deployment.

Summary

Other options

We reflected on whether capacity should no longer be allocated as part of the connection contract, including whether some separate process (e.g. an auction) should be used to determine the capacity that each project is entitled to. We also considered a related option whereby project developers would be invited to apply for capacity made available by network companies. We decided not to include these features in our shortlisted models as we think the current issues with the connections process could potentially be addressed through other, less radical, and lower risk means on an enduring basis. Our initial view is that any decision to introduce capacity auctions or permanently change transmission system access arrangements should be taken once the direction of travel on REMA is clear in terms of how transmission system access arrangements will work in future, for example if there were any moves away from firm access as standard.

We also considered reducing the scope of transmission works required before projects can connect, as this would lead to earlier connections dates. Under our 5-Point Plan we are already assuming greater levels of project attrition within network modelling studies (CPAs),[23] which should lead to fewer enabling works within connections contracts. We could assume higher project attrition rates to further reduce enabling works. Or we could seek to limit the scope of enabling works,[24] and then seek to manage the resulting network non-compliance risk.

We are however not recommending making any further reductions to the scope of works required for connection at this stage. This is because further changes may introduce significant additional balancing cost and/or system operation risk for consumers and could have material network safety and compliance implications. We first intend to assess the impact of the 5-Point Plan over the coming months before deciding whether further action is required.

Finally, we also explored whether to introduce more radical contractual mechanisms to manage the queue of connections. These included allowing projects that meet certain delivery milestones (i.e. projects that go through a “Gate”) to advance into queue positions previously held by other projects that have not yet met those delivery milestones. While we could see the benefits of such an approach for projects that are able to advance quickly (as they would secure significantly earlier connection dates), we considered that the risks may outweigh the benefits, because projects that were progressing more slowly would have their connection dates pushed backward. Our initial view is that this might pick winners and losers on the basis of technology (for example, by favouring projects with shorter or less complex delivery schedules) and therefore risk undermining investment in and delivery of the full range of projects and technologies we will need in order to deliver Net Zero efficiently. However, we will be guided by consultation responses and by our assessment of the impact of the 5-Point Plan over the coming months before making our final recommendations.

[23] i.e. we are assuming that a significantly greater proportion of projects that currently have a connection agreement ultimately do not connect
[24] For example the scope of enabling works could be reduced to the physical connection to the system

Summary

Roles and responsibilities and decision making

We think that there should continue to be an important role for TOs in developing connections and network designs and delivering network reinforcement and investment. TOs are the parties with greater understanding of the detailed design, operation and maintenance of their networks, as well as the responsibility for ensuring these are compliant and safe. However, we think there should also be a role for competitively-appointed parties in designing and delivering aspects of the network.[25] We also think there should be an important role for the ESO (and FSO once it is in place) in designing the network strategically and holistically. Any additional responsibilities in future for the ESO/FSO is subject to the outcome of a number of reform programmes, but our initial view is that as a minimum our role in connections would likely focus on providing a 'guiding hand' and coordination of network modelling activities used by the TOs.

The additional efficiencies our preferred option drives in terms of coordinated network design, including anticipatory investment through better alignment with CSNP, may be able to inform the regulatory interaction between Ofgem and the TOs. For example, our preferred option, in combination with the CSNP, may identify strategic investment on both the wider and more local network. Our preferred option should also create an opportunity to use competition to deliver connections works and reinforcements through third parties, as it should be easier to accommodate competition timescales within the critical path for network delivery.

Implementation and transition period

Following this 6 week consultation, we propose to review responses and make our final recommendations by November. This will follow and be informed, as appropriate, by the proposed joint Ofgem and Department for Energy Security and Net Zero action plan in the summer.

Figure 4 sets out the key actions we think would need to be taken to support timely and efficient implementation of our preferred option (TMO4), if it is ultimately taken forward. We note that all the TMOs would involve code and licence changes[26] and therefore require similar actions and overall time to be implemented.

If we were to follow standard practices for changing industry codes and licences, the 'go live' for these reforms would be mid to late 2025. We are therefore actively exploring and encouraging both Ofgem and Government to consider alternative options to expedite the required reforms, given the urgency of this challenge. This includes whether there may be ways to accelerate delivery under existing code governance processes, or whether approaches outside of those industry governance processes may be possible (for example requiring legislative change).

[25] The ESO is supportive of early competition and contestable works
[26] With the exception of TMO1, which may not require licence changes

Summary

Connections Reform – High-level Consultation-to-Implementation Plan

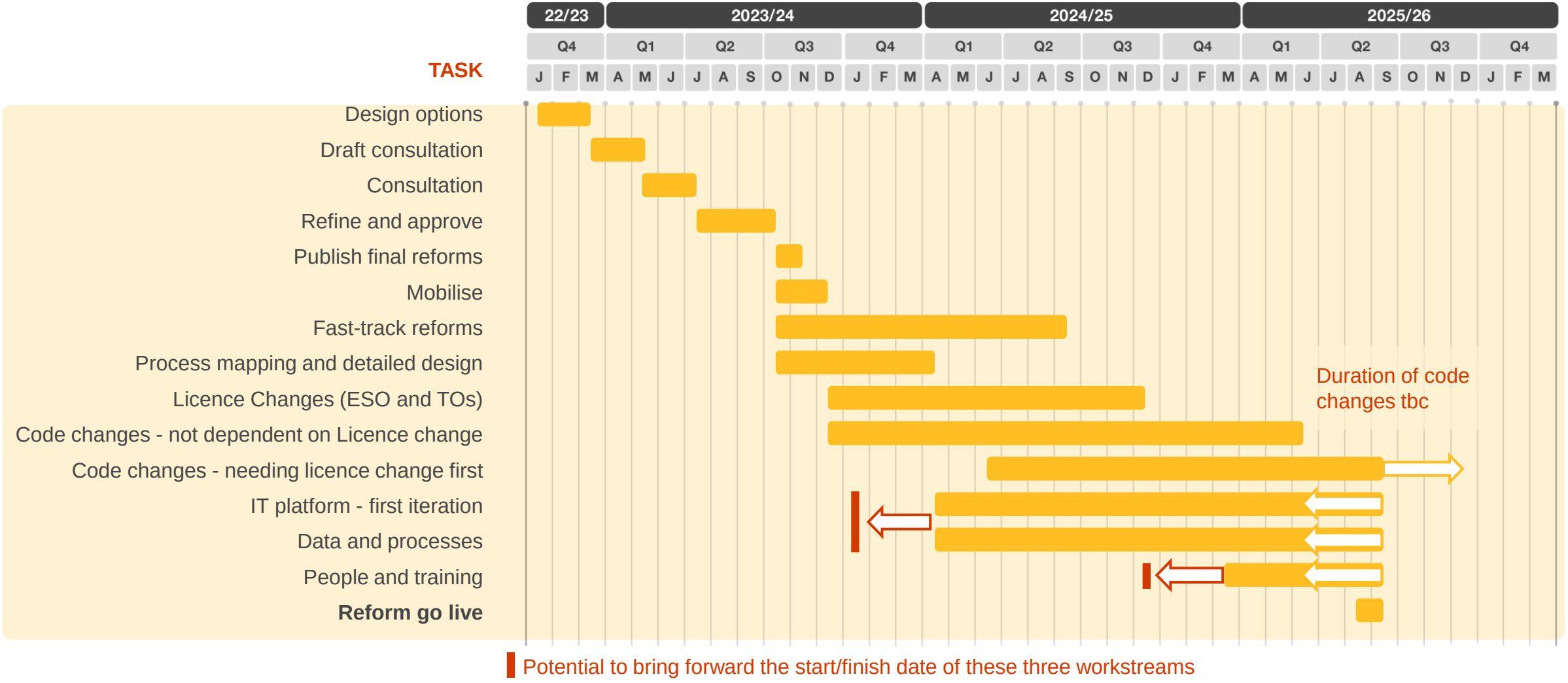


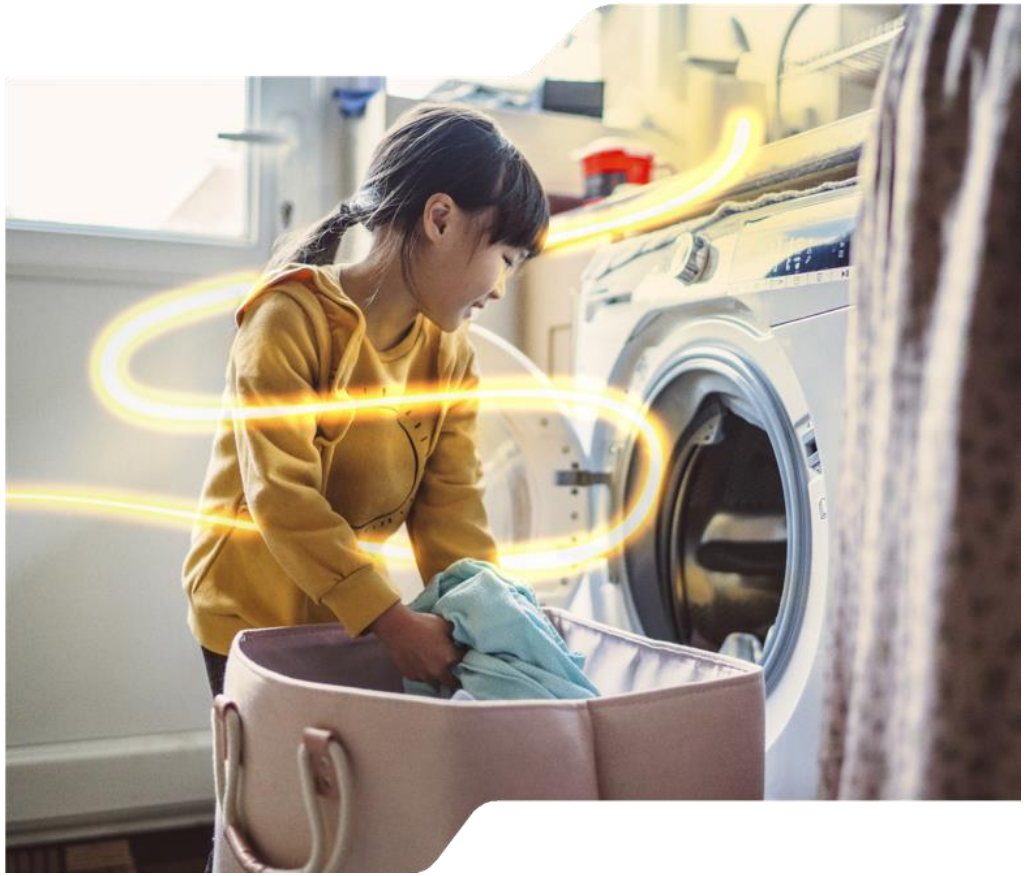
Figure 4: Indicative implementation plan

Summary

Figure 4 also shows the other workstreams that would need to be taken forward, including licence changes, detailed design and process/guidance changes, data and technology changes (including IT platform), although the code change activity is on the critical path.

In parallel with this consultation we will consider whether any of the improvements associated with our preferred option (or the other TMOs) can be introduced without the need for changes to licences and industry codes. Our current view is that there may be few areas in which changes to codes and licences would not be required. However, we will investigate this further and confirm our view in our final recommendations.

In the transition period before ‘go live’, we need to continue to improve the connections process as much as possible. As such we will continue to introduce improvements via our 5-Point Plan and will assess their impact over the coming months to determine whether further tactical measures are required. We will also work with TOs and DNOs to pilot the alignment of connections platforms through our Connections Portal. One of the key areas of focus during the transition period will be on actions we are able to take to manage existing contracts and to address the size of the current queue. Otherwise it will take significant time to deliver benefits through the reformed process. We will continue to communicate our plans in this area, especially in the weeks that follow Ofgem’s decision on the relevant code modification (CMP376).



Thank you for reading our Connections Reform Summary Report

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For further details on Connections Reform, please visit our website at https://www.nationalgrideso.com/industry-information/connections/connections-reform
You can also read our full report at https://www.nationalgrideso.com/document/281561/download