

Meeting 5 minutes

Connections Reform Steering Group

Date: 27/04/2023 **Location:** MS Teams

Participants

| Attendee | Attend/Regrets | Attendee | Attend/Regrets |
|---|-----------------------|---|-----------------------|
| Merlin Hyman, Regen, CHAIR | Attend | Claire Jones, Scottish Government | Attend |
| Neil Bennett, SSEN Transmission | Attend | Deborah, MacPherson, ScottishPower Renewables | Attend |
| Sally Boyd, PeakGen | Attend | Andy Manning, Citizens Advice | Attend |
| David Boyer, ENA | Attend | Susana Neves e Brooks, ESO | Regrets |
| Catherine Cleary, Roadnight Taylor | Attend | James Norman, ESO | Attend |
| James Dickson, Transmission Investment | Attend | Mike Oxenham, ESO | Attend |
| Amy Freund, Ofgem | Attend | Jennifer Pride, Welsh Government | Attend |
| Chris Friedler, ADE | Attend | Mike Robey, ESO, Technical Secretary | Attend |
| Sotiris Georgiopoulos, UKPN | Regrets | Patrick Smart, RES Group | Attend |
| Arjan Geveke, EIUG | Attend | Spencer Thompson, INA | Attend |
| Ben Godfrey, National Grid Electricity Distribution | Attend | John Twomey, National Grid Electricity Transmission | Regrets |
| Garth Graham, SSE Generation | Attend | Matthew White, UK Power Networks | Attend |
| Gemma Grimes, Solar Energy UK | Attend | Charles Wood, Energy UK | Attend |
| Paul Hawker, Department of Energy Security and Net Zero | Attend | Jade Ison, National Grid Electricity Transmission (substitute for JT) | Attend |
| Gareth Hislop, Scottish Power Transmission | Attend | Lynne Bryceland, Scottish Power Transmission | Attend |

Agenda

| # | Topics to be discussed | |
|----|--|--|
| 1. | Welcome | Merlin Hyman (5 minutes) |
| 2. | Actions and Minutes from Meeting 3 | Mike Robey (10 minutes) |
| 3. | Design sprint 3b report and discussion - The four target model options - Offshore considerations - Transmission-Distribution interface considerations | Mike Oxenham (45 minutes) (10 minutes) (40 minutes) |
| 4. | Any Other Business | Merlin Hyman (5 minutes) |

Discussion and details

Minutes from meeting, including online meeting group text chat during meeting, where referenced as “[From online chat]”

1. Welcome

The Chair welcomed Steering Group members and invited DNO representatives to comment on the recent ENA Strategic Connections Group (SCG) publication of the 3-point plan for distribution network connections.

It was noted that there is a good read-across from the SCG 3-point plan to the ESOs 5-point plan for connections. This prompted some initial discussion about these plans and the current processes.

- A Steering Group member noted that it would be great to see how jointly the Statement of Works (SoW) process is going to be improved. Are there plans especially on timeliness as this can be anywhere from 3 to 12 months. For example, there is the obligation to issue a connection offer within 90 days but no similar requirement on SoW. The expectation on the timescale for SoW varies between transmission and distribution connected customers. The SoW process is not currently in scope of the SCGs activities.
- [From online chat: CMP298 (App Gg/TIA) was supposed to address the defects of SoW however where in current use already by some DNOs, that does not appear to be the case and significant delays/lack of transparency is still evident. What is the ESO doing to ensure the TIA/App G process is and will be adhered to consistently by DNOs who have adopted it.]
- A DNO emphasised the desire for shovel-ready projects to be progressed more quickly in a non-discriminatory manner. A challenge is that the connection pipeline is organised in application order and not in mobilisation order. To speed up connections there is the risk of the need for short-term curtailment. DNOs have not gone out to customers yet on the steps being considered. ESO's Expression of Interest had gauged general interest and DNOs are now developing criteria and will set this out in the next 2-3 months and will seek customer interest on this.

Steering Group members also then raised the use of the term 'shovel-ready' and noted this may have different interpretations for different stakeholders.

- Does this mean land secured, planning permission, contractor selected, equipment purchased and/or other factors? The definition needs to be clear to everyone and the criteria should then not change.
- Another member suggested shovel-ready could be at the point when the final investment decision was made [From online chat: A steering group member agreed that shovel-ready was when the final investment decision is made, whilst another noted that it depends on the form of financing for the project as the final investment decision could be the last thing after contracting and fund raising.].
- Another view was that shovel-ready may be most effective as a series of steps, rather than a single gate, with a proper project plan for next steps.

- A further member flagged that shovel-ready also needs to consider network issues to include when projects can actually start and finish and how the connection will fit into the network plan. [*From online chat: will the TO at the shovel-ready gate have done more engineering at that stage?*]

2. Actions and Minutes from Meeting 4

ESO noted that the Minutes of Meeting 3 have been published.

Steering Group agreed to publish the minutes from meeting 4.

Decision: 5.2 To publish the minutes of meeting 4

3. Design sprint 3b report and discussion

The four target model options

The ESO provided an overview of four work-in-progress target model options for a reformed connections process as follows.

- Status Quo+ - the current process with some process enhancements from process add-ons
- A gated process, with the introduction of a second gate later in the process
- A gated process with a mid-process window and gates both early and late in the process
- A gated process with an early window at a first gate and a second gate later in the process

Based on a series of exploratory questions associated with these four work-in-progress target model options there was then a debate within the Steering Group, summarised as follows.

Option 1

- Steering Group members recommended redefining this as it was not considered a substantial reform, but more a progression from the current status quo and ESO's current 5-point plan actions. The connection queue **would** remain fairly static. This would therefore become the base case and options 2 to 4 being the actual reform options for consideration versus the base case. Calling this option 1 might give the impression that this is a viable option, but it is not radical enough.
- [*From online chat: Option 1 does not do enough for the congested queue but would be interesting to see the consultation feedback from customers.*]

Option 2

- Steering Group members expressed reservations about the use of provisional dates, as would be the case in this option at the first gate, noting that developers needed firm connection dates as soon as possible. For example, a firm date would be needed to place orders for the site equipment.
 - ESO noted this view and clarified that the provisional date approach in option 2 (and 3) was an intentional feature as a means to undertake the detailed network studies later in the process (when some more speculative applications may have exited the queue), to reduce the overall resource need and cost and to allow a greater focus on readier to connect projects.
- Steering Group members discussed what criteria should be included within the definition of 'shovel-ready' and whether this was too late to confirm connections dates.
- Steering Group challenged on how the approach to required enabling works would work if shovel-ready projects were preferentially advanced in the queue.
 - ESO's current view is that the existing construction planning assumptions would apply, as being amended/developed under the 5-Point Plan. The proposed reforms do not go beyond the scope of the current 5-point plan on this aspect to allow the impact of these

changes to first be assessed prior to deciding if necessary and prudent to make further amendments in future.

- A Steering Group member recommended that ESO note this approach within the consultation document.

Option 3

- Within this option there is still a provisional date at the first gate with the firm offer assessment done in batches via the connection application window added to the process at a later stage, to enable a more optimised network design. Option 3 also provides a firm connection date earlier in the process than option 2 i.e. once planning consents have been submitted. The frequency of application windows is not yet confirmed, perhaps 6 monthly, and ESO would discuss this with the TOs.
- A steering group member asked how reinforcement works will be considered within the windows. Might this approach delay reinforcement works if they are not identified until the later gate?
 - ESO noted that construction planning assumptions can be considered as a whole at each window and that this should reduce works required before connection. It could be possible to build in anticipatory requirements and investment. ESO shared the concern about potential delay for reinforcement works with a window later in the process and recognised that an earlier window works better for this.
- A steering group member expressed preference for option 3 and 4, whilst noting that option 3 may contain too much process.
- [From online chat: A windowed world has the most benefit but if that window is just set in time, it may not be the most efficient for holistic efficient designs as the following 6-month window may change the reinforcement again.]

Option 4

- ESO noted this option is the most different of the four options to the status quo. There is an early application window and connection applications are provided with a back-stop connection date and have the potential to advance to earlier connection dates when they meet a key milestone (Gate 2). This process model removes most interactivity between applications. The window (as with the other options) is envisaged to require completion of an application form, paying the required fee, a letter of authority from the landowner and acceptance of the standard connection terms and conditions at the point of application.

Steering Group comments:

- It is recommended that administrative updates can be made to projects without being pushed backwards to the next application window.
- Could fees be reduced as the reformed process model reduces workload for licensees?
 - ESO did not yet know the impact on fees. The fee should be cost reflective, it's possible the fee might go up, but it could come down due to the batched network studies.
- Query on the use of standardised terms and conditions for contracts when there are currently different considerations on key themes for different types of connection application. The principle of standardisation is great and ESO should clarify the point about non-standard projects.
- Some Steering Group members noted a preference for option 4, but subject to a work-around for distribution-connected projects as there was a strong feeling that a reformed process should speed up and not slow down embedded generators going through the connections process and getting connected (in relation to use of the transmission system).
- A member raised the possibility of a variant of option 4 with a second window, which had previously been discounted.
 - ESO agreed to have another look at this within option 4 but noted they had previously felt this approach would return the connections process to first-come, first-served.
- A Steering Group member noted that Option 4 is the only option that could really 'move the dial' on connections reform, but that it would need some additional features to be effective for distribution level connections. The member recommended including case studies within the consultation document to bring alive how the process options would apply.

- Reflection on how quickly the connections landscape was changing and given this a Steering Group member felt that option 4 was the most appropriate as it presents the most radical reform of the four options presented.
- Query from a member as to whether the application windows would be Great Britain wide or regional and will the windows link to transmission investment schedules? If regional, does this risk that the frequency of application windows in a particular geographic region could be lower?
- ESO response was that current view was that windows would be GB wide to reduce complexity and allow greater coordination in design
- Gates in the process should speed up the process by stopping unready projects from blocking other connection applications. This can work, but the messaging must be clear on what is required.
- [From online chat: I wonder if the "shovel ready" gate in option 4 might end up being "finance investment decision ready". Unless the grid landscape changes, developers won't reach FID without a confirmed connection date. Another member noted a concern that the existing process has a stop for FID now, will the new approach look any different to the customer?]
 - ESO noted that with FID being the shovel-ready point, not having a firm connection date will itself stop the ability to get a FID. A member clarified their view was that the gate needs to be pre-FID. Another member noted that the FID decision needs to be taken within a certain timeframe otherwise delays block other projects in the queue.
- [From online chat: I don't think any of the 4 options are optimal solutions. A lot of them are just moving the boundary on when full offers are provided. They don't take in to account the TO's business need requirements, Ultimately, major reinforcements will have a minimum needs case requirement, likely a threshold of capacity, and if not met, would not be able to proceed with. Therefore, the TO wouldn't be able to provide a definitive backstop if for example a 40MW scheme triggers a 400kV upgrade. The date would also be contingent on sufficient capacity to proceed with the reinforcements.]
 - ESO believes that transmission owner investment cases will be strengthened in option 4, as this process will help prioritise what works are required.
- Option 4 may affect the level of certainty and therefore may be different to the current security provisions. Where anticipatory investment on the transmission network is not viable is there any way for projects to move forward? The steering group member thought windows to be more optimal than gates in giving certainty.
 - ESO noted that the intention of a back-stop date would be for this date not to be pushed back, but noted that this may sometimes be necessary, like today, subject to issues such as the transmission owners' ability to do the works and securing regulatory approval.
- Certainty is an important consideration for both transmission owners and developers. Could delay charges be incurred by a transmission owner if a project incurs a delay beyond the agreed back-stop connection date?

General concluding Steering Group comments:

- Supportive of the options presented as a range for consultation and suggested it would be beneficial to clarify the timescale and why the duration of each stage of the process is required (so that consultees / applicants have visibility of what is required for each phase).
- Broadly happy with the range of options, but re-name option 1.
- [From online chat: With all these options what is the invest-ability impact for the customers - that will drive the feedback?]
- Shovel-ready gates are fraught with issues with interpretation and risk of delays and appeals. It will be important to understand the governance of the process and any appeals process.
- A steering group member agreed that the four options were right, and that the consultation document needed to also clarify the various add-ons that can be considered in addition to the four main process options. The member expressed some preference for option 4 with its earlier strategic network design, by considering connection applications in batches and avoiding first-come, first-served. The member raised the current connection queue and whether the reforms would be applied at all to the existing queue.

- These four options feel like the right options. For the gates in the process, there needs to be a clear view on parameters to pass through the gate, what delay might be incurred, the duration of each stage in the process and what the benefit of each stage in the process is.
- ESO thanked steering group members for sharing their views. At the next meeting ESO will share an assessment of the four options against the agreed design criteria. ESO will consider how 'shovel-ready' is defined and how the risk of challenge from projects that are judged not to have met the criteria for a gate can be mitigated. ESO will continue to refine the options.

Action: 5.3.1 ESO to share assessment of the four options against the agreed design criteria.

Offshore considerations – carried forward to meet 6

Action: 5.3.2 Discussion of offshore considerations at meeting 6

Transmission-Distribution interface considerations

Steering Group members were invited to comment on five considerations across the transmission distribution interface for all the options.

- At what gate/stage should the process specify interim restrictions on availability (temporary non-firm access) for relevant distribution connected generation projects?
- Should the process also apply to Demand i.e., DNO/IDNO (and Directly Connected Demand)?
- Should the process include the provision of headroom in respect of relevant distribution connected generation projects and if so, under what methodology should that headroom be calculated, defined and managed?
- Should the process include a Distribution Impact Assessment or improved Third Party Works process and how?
- Should the process change the threshold under which connections trigger the transmission access process?

Based on a series of exploratory questions associated with these considerations there was then a debate within the Steering Group, summarised as follows.

- Support the approach used for demand connections to avoid the risk of a year or more delay until the next connection application window.
- On fairness, it sounds like there is a suggestion that reserved developer capacity will favour distribution connection applications? Does this approach make it more complicated? Is the reserved developer capacity a concern for transmission connection applicants?
- A member flagged that this would be a concern to them. It depends how reserved developer capacity is calculated; there's a need to understand these details. Several steering group members supported the need for transparency and further details of this.
- [*From online chat:* Ideally we should be clear on these points to the industry so it looks joined up. The changes in the queue management for Transmission connected projects will impact the Project Progressions for the DNOs and Statement Of Works. This will create more uncertainty for the DNOs and D customers. And can there be Anticipatory Investment for the DNOs too?]
- Support changing the description from 'headroom' at grid supply point to 'reserved developer capacity' and it would be good for stakeholders to understand better the available capacity at each grid supply point.
 - ESO suggested that reserved developer capacity could be reserved by the DNO at each grid supply point at a generation capacity above the current level of applications, which would provide DNOs with some flexibility (for example to provide offers to smaller generators). This might create a fairness issue for transmission connection applicants however, for example where there is no current capacity available in an area but DNOs still have unused reserved developer capacity.

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- DNOs have flexibility on <1MW connection applications, which works well.
 - Headroom is already zero at many grid supply points. The ENA Strategic Connections Group is working with ESO to agree mutually acceptable levels of headroom.
 - 0.5MW would be an appropriate threshold to apply (for the threshold under which connections trigger the transmission access process).
 - ESO acknowledged that there is a valid concern about the risk of delay for issuing connection offers to connect via a grid supply point where the reserved developed capacity has been exceeded and hence the importance of a robust forecasting and allocation process being developed in future.
 - [From online chat: There could be an incentive for accuracy for generation by DNOs be around transparency of (a) what they said initially and (b) what the outcome was? So good or poor performance would be visible to all stakeholders.]
 - [From online chat: Should there be visibility to the market on DNO Project Progressions to give more transparency and reduce churn / increase accuracy for customers?]
 - [From online chat: Monthly Appendix G requirement for visibility of the queue and expected energisation needs to be the trigger, rather than TIA.] [From online chat: I think this is one of the reasons we might need to think about those additional levers to limit enabling works! If enabling works for all D customers were limited to GSP works then I think headroom limits etc become a lot more straightforward to manage.]
 - [From online chat: There could be, for example, an OHL which may limit the capacity at the GSP i.e., if a T scheme connected to the line it may reduce the available capacity at the GSP. So that line may be enabling or not for D but would still be impacted by those that connect to it.]
 - DNOs face a fair challenge about the accuracy of demand forecasts. There is an obligation on DNOs to provide curtailment estimates, a back-stop connection date and incur penalties if the back-stop date is missed. Could this be mirrored across the transmission / distribution interface?
 - There look to be more winners and losers in the window approach which are outside of the developers' control.
 - Concern shared about variable DNO delays to transmission impact assessment of distribution applications. DNOs want to avoid this and noted that sharing of data and the frequency of this is important. The Strategic Connections Group considers that continued use of firm and non-firm connection agreements to be key. During the consultation, it should be expected that stakeholders will be looking at how well these approaches all work in practice for different user groups.
 - In some regions all connections must go through the distribution network; might these options have a chilling effect? This approach pushes the complexity that the transmission owners and ESO deal with out to the applicants.
 - Not all applications are as valuable to the network as others. There are lots of concerns and challenges to consider.
 - Strong views have been expressed from both a distribution and transmission connection perspective, which is good to hear. Are there more models to consider across the transmission distribution interface, are there more distribution-centric ideas?
 - ESO thanked steering group members for sharing views and acknowledged that resolving issues across the transmission distribution interface is difficult. ESO will continue to work with the ENA Strategic Connections Group in developing the reform options. ESO speculated on whether it will be possible to get to a single approach for all, and if this was not possible, to clearly articulate why not. ESO continues to focus on looking for solutions to resolve this.
 - If the transmission and distribution interface concerns cannot be resolved before the consultation, ESO should expect a lot of responses on this. The consultation therefore needs to be as clear as possible on the options and implications.
 - It was noted that the ENAs Strategic Connections Group is looking at solutions to today's connection challenges and there would be a need to relook at this if option 3 or 4 progress following the consultation.
 - [From online chat: Could ESO go to consultation but in parallel work up with the DNOs/ENA the clear view on how that would work? OR do you wait until both parts of the equation are ready for consultation?]
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Action 5.3.3: ESO to continue engaging and developing thinking on connections reform considerations across the Transmission / Distribution interface and provide an update at the next meeting.

6. Any Other Business

Next meeting, 18 May:

- Any updates to the target operating model options and assessment against the design criteria
- Additional ad hoc process improvements (Add-ons) overview
- Further thinking on considerations across the Transmission / Distribution interface
- Carried forward discussion on offshore arrangements
- Implementation plan (including transition, following Steering Group member request)

Decisions and Actions

Decisions: Made at last meeting

| ID | Description | Owner | Date |
|-----|-------------------------------------|------------|------------|
| 5.2 | To publish the minutes of Meeting 4 | Mike Robey | 27/04/2023 |

Action items: In progress and completed since last meeting

| ID | Description | Owner | Due | Status | Date |
|-------|--|--------------|------------|---|---------|
| 5.3.1 | ESO to share assessment of the four options against the agreed design criteria. | Mike Oxenham | 18/05/2023 | On agenda for 18 May | |
| 5.3.2 | To discussion offshore considerations at the next meeting | Mike Oxenham | 18/05/2023 | On agenda for 18 May | |
| 5.3.3 | ESO to continue engaging and developing thinking on connections reform considerations across the Transmission / Distribution interface and provide an update at the next meeting. | James Norman | 18/05/2023 | On agenda for 18 May | |
| 3.6.1 | Steering Group members can respond to circulated slides with comments via email before the next meeting. | All | 30/03/2023 | Open invitation for Steering Group members. | ongoing |
| 2.5.1 | ESO to track progress with REMA, FSO and other strategic policies and to consider how the evolution of these affects consideration of the centralised planning process design option | James Norman | Ongoing | To keep under review | |

Decision Log

Decisions: Previously made

| ID | Description | Owner | Date |
|-------|--|--------------|------------|
| 1.01 | Agreed to apply Chatham House rule – All participants not to attribute comments to individuals or their affiliations | ALL | 16/02/2023 |
| 1.02 | Steering Group agendas and minutes will be published. Minutes to be published following confirmation at the next meeting that they are a fair record. Additional documentation may be published (e.g., slide packs/papers taken to the Steering Group), but subject to confirmation by the Steering Group. | Mike Robey | 02/03/2023 |
| 2.3.1 | Approved the Terms of Reference v1.2 subject to the inclusion of the edits identified in Meeting 2 (creating v1.3) | Merlin Hyman | 02/03/2023 |
| 2.5.1 | General agreement with the position to not continue to develop Option C as a stand-alone option within the remaining sprints, but to consider whether elements of option C could be incorporated into options A and B. | Merlin Hyman | 02/03/2023 |
| 2.5.2 | Add-on 1 should not be a focus for Connections Reform | Merlin Hyman | 02/03/2023 |
| 2.5.3 | Add-on 3: Stakeholders identified some concerns to be further considered but there was a general overall view that this add-on is worthy of further consideration in later design sprints | James Norman | 02/03/2023 |
| 2.5.4 | Proposed that Add-on 4 is not given focus in later design sprints, although REMA developments will be monitored. | James Norman | 02/03/2023 |
| 3.2 | To publish the minutes of Meeting 2 | Mike Robey | 16/03/2023 |
| 3.2.1 | To approve the Terms of Reference v1.3 | Merlin Hyman | 16/03/2023 |
| 4.2 | To publish the minutes of Meeting 3 | Mike Robey | 30/03/2023 |

Action Item Log

Action items: Previously completed

| ID | Description | Owner | Due | Status | Date |
|-------|---|--------------|------------|----------|------------|
| 0.1 | Steering Group members to provide photograph and biography for Steering Group web page | All | 09/03/2023 | Complete | 23/03/2023 |
| 1.2.1 | ESO to update and circulate the Terms of Reference, updating the narrative on purpose and membership details (members, Welsh Government, Scottish Government, DNO representative(s)). | James Norman | 23/02/2023 | Complete | 23/02/2023 |
| 1.2.2 | To seek Steering Group agreement of updated Terms of Reference at meeting 2. | James Norman | 02/03/2023 | Agreed | 02/02/2023 |
| 1.3.1 | ESO to share details of who is contributing to the design sprint workshops, including which Steering Group members are participating. | Mike Oxenham | 23/02/2023 | Complete | 23/02/2023 |
| 1.3.2 | ESO to clarify how its evaluation of options within each design sprint will work at meeting 2. | Mike Oxenham | 02/03/2023 | Complete | 02/03/2023 |
| 1.3.3 | ESO to clarify the process following the consultation at the end of this phase of the connections reform project | James Norman | 16/03/2023 | Complete | 17/03/2023 |
| 1.3.4 | Strategic policy goals (particularly net zero and energy security) to be elevated and given more prominence within the design objectives | James Norman | 02/03/2023 | Adopted | 02/03/2023 |

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|-------|--|-----------------------------|-------------------------------|--|-------------------------------|
| 1.3.5 | ESO to add a summary status of relevant code modifications and a summary of tactical initiatives to improve connections to the Steering Group pack | Ruth Matthews & Laura Henry | 23/02/2023 | Complete | 23/03/2023 |
| 1.4.1 | Relationship between connections at Transmission and Distribution levels to be discussed at meeting 2 | James Norman | 02/02/2023 | Complete | 16/03/2023 |
| 2.2.1 | ENA to share updates from its Strategic Connections Group within subsequent Steering Group packs | David Boyer | 16/02/2023 | Included for 16/03 and ongoing | 16/03/2023 |
| 2.3.1 | ESO to update and circulate the agreed Terms of Reference (v1.3) | James Norman | 09/02/2023 | Circulated | 16/03/2023 |
| 2.6.1 | ESO to share project timeline | Mike Robey | 09/02/2023 | Circulated | 10/03/2023 |
| 3.4.1 | ESO to reconsider RAG rating for high-level options and provide more information on scoring in any future version | James Norman | 27/04/2023 | Further thinking to be brought to 18 May meeting | 27/04/2023 |
| 3.4.2 | ESO to return to Steering Group with further views on the T&D interface at a later meeting | James Norman | 30/03/2023 | Added to 27 April agenda | 27/04/2023 |
| 4.2.1 | To discuss connections across the Transmission and Distribution interface at the 27 April Steering Group meeting. | James Norman | 27/04/2023 | Included on 27 April agenda | 27/04/2023 |
| 4.4.1 | ESO will bring refined versions of the process options to the Steering Group in four weeks' time. | Mike Oxenham | 27/04/2023 | Included on 27 April agenda | 27/04/2023 |
| ID | Click or tap here to enter text. | Owner | Click or tap to enter a date. | Status | Click or tap to enter a date. |