



# SSEN Consultation: Unlocking Orkney's renewable potential

An Alternative Approach

February 2018

Consultation closing date: 12 March 2018

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## Overview

Over recent years, Orkney has become one of Britain's foremost centres for innovation in renewable energy and is home to some of Europe's greatest renewable resources, from onshore wind to wave and tidal. The Orkney electricity network is now at full capacity and no further generation can connect without significant network reinforcements. However, due to a number of factors over recent years the contracted generation background has varied to the extent it has not been possible to proceed with the reinforcement to date. In order to progress the reinforcement Scottish Hydro Electric Transmission PLC, the transmission owner for the North of Scotland; and Scottish Hydro Electric Power Distribution PLC, the Distribution Network Operator for the North of Scotland, trading as SSEN, is proposing an *Alternative Approach* to provide the network reinforcement to the Orkney Islands to meet the needs of renewable generators.

SSEN's Alternative Approach aims to unlock Orkney's renewable potential by creating an opportunity for those 'ready to connect' via a staged approach to network reinforcement. SSEN believes that the most economical and efficient solution is to reinforce the network in incremental stages. Capacity made available from the reinforcement will then be allocated on a 'ready to connect' basis to ensure that capacity is efficiently utilised in comparison to the standard industry practice of 'first to contract, first to connect' which can cause capacity to become fixed but not utilised. This Alternative Approach would allow reinforcement to be progressed and overcome barriers previously faced by the reinforcement project. This would be implemented on a trial basis and would require approval from the industry regulator, Ofgem. SSEN believes the Alternative Approach will overcome the catch 22 currently facing Orkney, allowing reinforcement to progress and meet the long standing need of renewable generators wishing to connect. Any lessons learned from this trial will also benefit wider industry work, such as flexible connections, network reinforcement projects, queue management and access rights.

The purpose of this consultation is to consult on the principles, development and framework for the proposed Alternative Approach to the reinforcement of Orkney.

The first section of this consultation outlines the background of the Orkney reinforcement project to explain what has led to the development of the Alternative Approach. Section 2 explains the development of the Alternative Approach before providing a high level and further detailed 5-step process of the Alternative Approach in Section 3. Finally, Section 4 outlines the next steps for the proposed approach.

In order to ensure SSEN develops a solution that not only works for network companies but also the wider industry and its connection customers, SSEN wants to hear stakeholder views; following the outcome of this initial consultation SSEN will consult further on the detail of the proposed Alternative Approach in the summer of 2018.

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## Section 1: Background

The Orkney electricity system was historically designed in order to meet the needs of the demand customers on the islands and transport electricity from the GB mainland to meet this demand. However, Orkney is home to some of Europe's greatest renewable resources, from onshore wind to wave and tidal and over recent years there has been a significant growth of renewable generation on Orkney. Following this growth in renewable electricity generation across Orkney, SSEN introduced the world's first Active Network Management (ANM) system to maximise the existing system's capabilities. Despite the success of the ANM system, which has allowed additional renewable electricity generation to connect which otherwise would not have been able to do so, the Orkney electricity grid is now full and the existing network infrastructure on Orkney cannot accommodate the connection of any additional generation.

There remains significant potential for renewable generation on Orkney with a long standing need from customers to connect to the electricity network. Over the last decade the contracted position of prospective generation has varied on the Orkney Islands. This has ranged from large Transmission connection projects, of which there have been many changes in the contracted position, to a vast number of smaller distributed generation (DG) projects enquiring and applying for potential grid connections. SSEN has explored and developed a number of options to reinforce the network depending on the generation requirements at the time. Due to a number of factors over recent years, such as changes in government policy or the readiness and commercial viability of emerging wave and tidal technologies, the contracted background has varied and it has not been possible to proceed with the transmission reinforcement to date. The fluctuation of the contracted background has previously made it difficult to demonstrate through the current conventional approach that the reinforcement is required.

Despite these changes in the generation background, the long standing underlying need for the reinforcement from renewable generators has always been present. As all flexible connections solutions have been exhausted, traditional network reinforcement is the only viable solution to allow additional renewable generators to connect to the network. SSEN has now re-evaluated the scope of works required for Transmission and Distribution<sup>1</sup> connection customers and is now proposing to connect the GB mainland grid to Orkney via a Transmission subsea cable connection. This will allow additional capacity for renewable generators to connect and to export to the GB mainland. In order to demonstrate that there is certainty of the reinforcement being utilised and to overcome the barriers SSEN has previously faced to progress the reinforcement, SSEN began development of the Alternative Approach.

## Section 2: Development of the Alternative Approach

Due to the level of network investment required for the transmission reinforcement, SSEN will need approval for the funding from the industry regulator, Ofgem. Following conventional technical and commercial approaches, the evolving contracted position of generation on Orkney over the last decade has been a challenge for SSEN to demonstrate that a transmission connection is needed. In order to try and overcome this impasse and help Orkney realise its vast renewables potential, SSEN began developing an Alternative Approach. Throughout the development of the Alternative Approach SSEN has combined its experience and history of the Orkney reinforcement project with feedback from its generation customers and stakeholders.

This section outlines the development of the Alternative Approach by firstly understanding the challenges to connection and identifying the 'obstacles' which have stopped the reinforcement progressing in the past. This section also explains how an Alternative Approach can overcome challenges previously faced due to conventional approaches. Thirdly, the aims of the Alternative Approach are outlined before finally explaining the proposed future development plans for the Alternative Approach.

<sup>1</sup> 1 Scottish Hydro Electric Power Distribution PLC developed and supported an innovative 'consortia approach', bringing together distributed connected customers to reduce costs to individual customers and apply a holistic approach to network development

## Understanding the challenges to connection

SSEN has engaged with a wide range of stakeholders in order to understand the challenges associated with connecting renewable generation on the Orkney Islands. Based on this feedback SSEN understands the barriers to be as follows:

**Contracting framework for transmission connections:** The current industry model for transmission connection is "first to contract, first to connect". This industry model creates the potential for one project with an early application to effectively prevent others from connecting even if their project fails to progress on time:

**Unique conditions on Orkney:** The islands have a number of designated areas due to environmental, historic and archaeological areas. The unique topography, archaeological and environmental conditions make it more difficult for customers to progress projects.

**Generation economics:** The economics of generators remains a barrier due to the significant liabilities associated with connecting a generator to the Main Integrated Transmission System (MITS) on GB mainland from Orkney. This is caused by the standard industry guidance on transmission securities. It should be noted that the potential support mechanism for remote island onshore wind being eligible to compete in a future Contract for Difference (CfD) bidding process does not take into account the up-front transmission securities required from generators.

**Generation technology type:** Due to the range of less established technologies on Orkney there is a risk that these technologies may not be commercially ready on time to meet their contracted position. The developing technologies currently looking to connect across the industry include battery storage and marine technologies.



Figure 1: SSEN engagement event with DG customers

## Obstacles to reinforcement progressing

Based on the above feedback SSEN has received from stakeholders combined with the Orkney reinforcement project's history, SSEN has identified three main 'obstacles' which explain why the project hasn't progressed in the last decade:

- 1. Fixed Capacity Queue:** there is currently a fixed queue for capacity under the "first to contract, first to connect" principle with limited options to move a customer's position in the queue depending on their readiness to connect. For example, this could mean that one customer with an early connection application date remains top of the capacity queue despite not progressing; this could mean capacity made available by any network reinforcement is not fully utilised.
- 2. Divided timelines for transmission investment and developers' projects:** making it difficult to demonstrate the need for network reinforcement and timely investment. Due to the level of investment required for the transmission reinforcement there is specific milestones and regulatory requirements SSEN must adhere to. In order to make an investment case SSEN first needs commitment from generators; however generators need commitment from SSEN before they can progress. This misalignment is exacerbated on Orkney due to the diversity in generation capacity and technology type.

- 3. Liabilities associated with Transmission works:** Following feedback from SSEN's customers the liabilities (specifically attributable transmission securities) associated with connecting a project on Orkney has stopped projects progressing in the past. This is due to the current industry guidance which requires connection projects to be liable for the underwriting of works from their connection point back to the nearest MITS node. For Orkney customers the nearest MITS node is on mainland Scotland at Dounreay. This results in Orkney customers being liable for substantial network reinforcement works (including the subsea cable element). These liabilities undermine the principle of the transmission liabilities policy of reducing the barrier to entry, as they have had the opposite effect acting as a barrier to customers connecting. This policy does not take into account where a connection project is connecting to a network which is not part of the MITS. This has caused the liabilities to be described as a barrier; and could cause an unintended disadvantage to some generation connections.

### Question 1

In your experience are the challenges we have identified accurate?

- Are there any other challenges, obstacles or factors we should take into consideration?

## Why an Alternative Approach?

After identifying the three main obstacles to connection it was apparent that following a conventional approach to system design and commercial arrangements for connection would likely either stop or further delay any Orkney reinforcement progressing.

The **conventional technical approach** of designing the network reinforcement is to base the network reinforcement design on the current contracted position. As previously mentioned, due to a number of uncertainties surrounding connection projects this contracted position on Orkney fluctuates. Following a conventional technical approach could potentially mean the reinforcement does not provide the capacity required or would risk stranded/underutilised assets.

Following the **conventional commercial approach** of allocating capacity based on the 'first to contract, first to connect' basis could result in capacity becoming fixed if one generator is not ready to connect on time. The conventional commercial approach of projects being liable for works to the nearest MITS node could also result in projects being unable to progress due to the significant attributable security costs. Overall the conventional approach makes it difficult for:

- SSEN to progress reinforcement even where there is evidence of sufficient need as there is a risk that projects at the front of the queue fail to materialise on time. This has the potential to result in stranded capacity or underutilised assets.
- Customers behind projects in the queue that are not progressing, not being able to progress themselves as the reinforcements are effectively held back by those generators at the front of the queue not progressing.

The conventional approach creates a catch-22: Customers can't connect because the reinforcement's progression isn't certain. The reinforcement isn't ready because customer's progression isn't certain. This catch-22 (as demonstrated in Figure 2) is delaying Orkney realising its renewable potential.

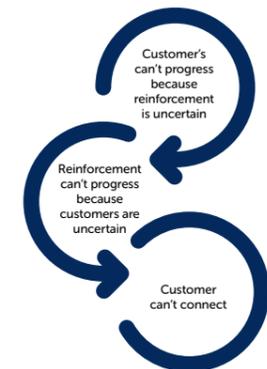


Figure 2: Orkney's catch-22

## SSEN's aims for the Alternative Approach

Previous industry work streams such as [Quicker and More Efficient Connections](#) and [Unlocking Capacity in the Electricity Networks](#) focused on alternative and innovate ways to provide connections. This included unconventional technical approaches such as Active Network Management and alternative commercial arrangements such as timed connections. Following on from these industry work streams SSEN aims to develop an approach to overcome the current obstacles and break the current catch-22 stopping or delaying Orkney realising its renewable potential. In line with SSEN's licence obligations it proposes the 'Alternative Approach' should aim to:

1. **Create an opportunity for customers to connect at the earliest opportunity:** At the moment the network is at full capacity and there is no opportunity for customers to connect on Orkney without significant reinforcement. SSEN's first objective is to maximise potential for renewable generation on Orkney and to help meet its customers' expectations, it plans to introduce new queue management arrangements to allow those that are ready to connect to proceed at the earliest opportunity.
2. **Further facilitate economic and efficient development and operation of our network:** Through the Needs Case and Queue Management arrangements SSEN plans to introduce arrangements that will ensure timely and coordinated Transmission and Distribution investment to help ensure the most efficient design solution, at lowest cost, maximising use of all available capacity removing the uncertainty of investment.
3. **Fair, transparent and consistent approach to managing customer's readiness:** By providing transparent and clear arrangements for monitoring customers' readiness to connect and managing positions in the queue SSEN will ensure all customers can progress projects in a timely manner to utilise available capacity.
4. **Deliver more equitable security arrangements for customers:** SSEN plans to implement arrangements that will ensure customers do not face a disproportionate burden associated with the significant costs of reinforcement, such as those associated with the subsea cable link on Orkney. Until the Alternative Approach is finalised and implemented, current security arrangements will continue to apply.

### Question 2

Do you agree that our aims for the Alternative Approach would provide an opportunity for those ready to connect and as a result unlock Orkney's renewable potential?

- a. Are there any other aims we should take into consideration for the Alternative Approach?

## SSEN's Proposed Alternative Approach

To achieve the above aims SSEN's proposed Alternative Approach is made up of two solutions: a technical and a commercial solution. This section explains both the technical and commercial solution before explaining the proposed 'Alternative Approach'.

### Technical solution

As noted in the previous section the conventional technical approach to design network reinforcement is to the known contracted position. Due to the fluctuating contracted position on Orkney it has proved difficult to progress reinforcement to date. Taking into account the barriers identified for connections progressing on Orkney SSEN is proposing a staged approach to network reinforcement as the most economic and efficient approach. This approach will reinforce the network in multiple stages. SSEN has identified the first stage of the reinforcement to be a 220kV subsea cable solution which will provide a transmission connection to Dounreay (mainland Scotland) from Orkney.

This is the technical solution SSEN is proposing to Ofgem in its needs case as part of the regulatory approval process required to invest in the network reinforcement. The local on-island infrastructure will also require transmission and distribution reinforcement to allow the connection of renewable generators.

<sup>2</sup> This will be demonstrated in our Needs Case submission to Ofgem.

This solution shall provide a minimum export capacity of 180MW from Orkney to the MITS for renewable generation. SSEN is proposing to allocate this capacity on a ready to connect basis following queue management (explained in the commercial solution below). The next stage of the reinforcement would then be triggered as soon as SSEN can demonstrate the need for the additional reinforcement works. Phase 2 of the reinforcement is currently planned for October 2025 which will provide a further minimum of 180MW of export capacity; this may be subject to change depending on the contracted background of generation and investment process. Any subsequent phases would be assessed on an ongoing basis.

### Commercial solution

Due to the number of barriers to connection faced by developers on Orkney, SSEN believes it is unlikely that all projects will progress to completion on time and there is a potential for capacity to become fixed under conventional commercial arrangements. In order to ensure the 180MW of capacity made available by the technical solution is fully utilised and avoid capacity not being utilised SSEN is proposing an Alternative Approach to ensure the capacity is allocated efficiently to those ready to connect.

SSEN is proposing capacity is allocated on a 'ready to connect' basis. In order to implement this 'ready to connect' approach SSEN will work with developers, in line with their current contracted position, to understand their delivery plans for connection and agree progression milestones within their contracts. Developer's readiness would then be measured against these milestones. If these milestones are not met there is then an opportunity for other developers who are ready to connect to progress their projects quicker and ensure the capacity made available by the reinforcement is fully utilised.

Given the level of Transmission investment required to connect Orkney customers, particularly the need for the sub-sea cable, security arrangements and liabilities have been viewed as prohibitive to Orkney connection customers. The current industry guidance for transmission securities means that all Orkney connection projects are liable for the underwriting of works from their connection point back to the mainland, resulting in transmission liabilities being disproportionate to the customer's connection size. As part of this consultation SSEN is also seeking views on the Transmission Securities associated with Orkney connection projects and whether these are viewed as proportionate. The calculation of Transmission liabilities will be considered as part of SSEN's Alternative Approach trial.

### Proposed Alternative Approach

The combined technical and commercial solution make up the 'Alternative Approach': 'Creating an opportunity for those 'ready to connect' via a staged approach to network reinforcement.' SSEN believes the proposed Alternative Approach shall allow connections to progress and is seeking views from industry stakeholders and its generation customers on the Alternative Approach. Overall SSEN believes that the Alternative Approach shall overcome the catch 22 currently facing Orkney, allowing reinforcement to progress and meet the long standing need of renewable generators wishing to connect.

### Question 3

Our Alternative Approach aims to create an opportunity for those 'ready to connect' via a staged approach to network reinforcement

- a. Our technical solution is to provide a staged approach to reinforcement. We believe, for Orkney, this is the most economical and efficient solution and shall avoid under utilised or stranded assets. Do you agree with our technical solution?
- b. Our commercial solution is to allocate capacity to those ready to connect based on established delivery plans and meeting contract milestones. Do you agree with our commercial solution?
- c. Are there any other technical or commercial issues or approaches we should consider?
- d. Combined our technical and commercial approach make up the 'Alternative Approach' which aims to create an opportunity for those 'ready to connect' via a staged approach to network reinforcement. Do you agree our proposed Alternative Approach shall create an opportunity for those ready to connect?

<sup>3</sup> You can read more about the proposed network reinforcement on our website here and will be further explained in our needs case at: <http://www.ssen-transmission.co.uk/projects/orkney/>

## Question 4

Due to the geographical nature and current industry guidance Orkney customers are liable for Transmission works from their connection point back to the mainland.

- In your experience have transmission liabilities created a barrier to progressing your connection?
- Do you agree that transmission liabilities create a disadvantage for connection projects outside the MITS such as Orkney?
- Do you agree with our plan to implement arrangements that will ensure customers do not face a disproportionate burden such as those associated with the significant cost of reinforcement i.e. on Orkney the subsea cable link.

## Section 3: Proposed Alternative Approach Process

The purpose of this consultation is to consult on the principles, development and framework for the proposed Alternative Approach to the reinforcement of Orkney. The proposed framework for the Alternative Approach seeks to allocate capacity made available by the staged reinforcement on Orkney to those who are ready to connect. This section focuses on the commercial elements of the Alternative Approach and provides a high level overview of the process made up of 5 'Steps' before providing further detail on each of the steps.

### Proposed Alternative Approach overview

In order to allocate capacity to those who are 'ready to connect' SSEN must be able to assess, measure and manage developers' readiness. This is outlined in the five 'steps' below with further detail provided in the following section.

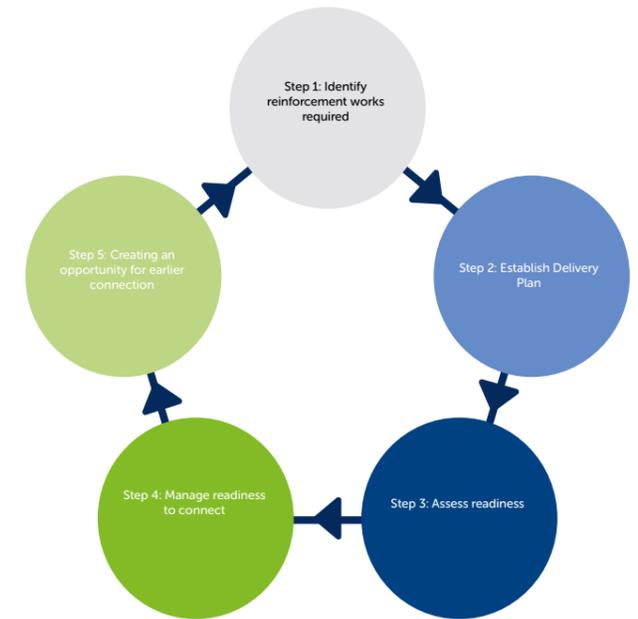
**Step 1 Identify reinforcement works required:** As noted in the previous section, based on the current contracted background SSEN has identified the reinforcement works as a 220kV solution for the first stage which will provide a minimum of 180 MW of capacity (see section 2- technical solution).

**Step 2 Establish Delivery Plan:** In order to understand a developer's project and the timescales associated with the project's development SSEN will ask developer's to share their delivery plans for their project by completing a pro-forma. A delivery plan will be requested from each customer, building on established industry guidance, to agree a date for connection that aligns with the developer's delivery plan. The proposed trial will use the delivery plan to form progression milestones in the developer's contract. SSEN proposes to work back from the connection date previously agreed or applied for by the developer.

**Step 3 Assessment of readiness:** Once developers have submitted their delivery plan pro-formas SSEN shall assess developers' delivery plans to understand their readiness. This shall allow a capacity 'queue' to be formed. The delivery plan will be used to establish a queue that will help maximise use of available capacity according to readiness to connect.

**Step 4 Management readiness to connect:** Readiness against progression milestones will be managed with customers throughout the project.

**Step 5 Creating an opportunity for earlier connection:** If milestones are not met the proposal is that the queue will be managed to create an opportunity to those who are ready to connect, in line with their contracted position.



## Proposed Alternative Approach: Criteria and detailed Steps

This section provides further detail of steps 2-5 of the commercial elements of the Alternative Approach (this is also detailed in a process map in [Appendix 1](#)). This section also includes the proposed criteria for the trial as well as outlining each 'step' of the Alternative Approach including consultation questions.

### Proposed criteria

As part of the Alternative Approach trial SSEN will share any lessons learned to influence wider implementation across GB as well as wider industry work streams; specifically this trial will provide learning to the ENA's Open Networks and System Operator's work on Queue Management. In order to ensure the trial is meaningful yet manageable SSEN is proposing the following criteria has to be met in order to participate in the Alternative Approach Trial:

- Geographic area:** Orkney islands
- Commercial requirements:** The trial will apply to all contracted customers across Transmission and Distribution<sup>4</sup> who are not already connected as of January 2019<sup>5</sup>
- Time bound:** The trial is expected to commence in early 2019 and run during the first and second phase of the Orkney reinforcement with regular reviews throughout the project.

Throughout the review of the trial SSEN will review learning and determine how the arrangements can be taken forward e.g. as business as usual for implementation GB wide. This will build on queue management work being progressed at an industry level through the Energy Network Association (ENA), Open Networks project.

<sup>4</sup> SSEN is working together to develop the Alternative Approach trial within the limits of SHE-Transmission and Scottish Hydro Electric Power Distribution PLC's respective regulatory and contractual requirements which will continue to be managed by the responsible license holder.

<sup>5</sup> Any customer with an accepted Bilateral Connection Agreement with National Grid Electricity Transmission or accepted agreement with the DNO

## Question 5

The proposed criteria will allow us to run a meaningful trial of the Alternative Approach. SSEN proposes to work back from the connection date previously agreed or applied for by the customer. In your experience which delivery milestones are critical to a project's progression? Please provide details of the project's technology, location (i.e island or mainland) and size.

### Step 2 Establish Delivery Plan

When providing a connection offer SSEN must provide customers with a reasonable date for connection. The conventional approach to providing this date is for a customer to propose a connection date and SSEN would then assess if any network upgrades are required and when these will be completed (as necessary) in order to allow the connection. As noted in the previous sections one of the 'obstacles' to the Orkney reinforcement is the misalignment of developer's timelines and the timeline for the necessary network upgrades.

In order to better understand the developer's project and associated timeline for delivery SSEN is proposing developers complete a pro-forma to outline their delivery plans. This will allow SSEN to further refine and align its timelines with developers. In order to ensure that developers understand and are able to complete the pro-forma contract, SSEN will engage and support developers in completing the pro-forma. SSEN is seeking views on the pro-forma approach as well as what the critical milestones associated with renewable generation projects will be, and the extent to which these milestones or delivery dates may vary e.g. months, years etc. SSEN will then consult further on the delivery plan pro-forma in summer 2018.

SSEN proposes to work back from the connection date previously agreed or applied for by the customer. The purpose is to understand their delivery plan leading up to this connection date. The milestones within the delivery plans will then form part of the developer's contracts as 'progression milestones'. These progression milestones will then be actively managed later in the process as part of step 4. This closer alignment of the developer's and SSEN timelines shall further facilitate SSEN's obligation to provide developers with a reasonable date for connection.

SSEN understands that each developer's delivery plan and timescales will be specific to their project connecting to the network; however to ensure all customers are treated consistently, SSEN proposes to adopt a similar approach to the [ENA's contract management](#). This approach applied a standard timescale to each progression milestone depending on the project's size and type. For example a PV projects construction timeline may be 6 months whereas a 1MW Wind Turbine may be 10 months. SSEN proposes to build on the data used for the ENA, as well as data held by SSEN on connection projects and any feedback from this consultation in order to provide a standard timescale to benchmark projects delivery plans. SSEN is seeking stakeholder's views on the standard timescales associated with the delivery of their projects.

## Question 6

In order to better understand a customer's project and further align reinforcement and developer's delivery plans we need customers to provide information to demonstrate they are able to meet their proposed connection date. We are proposing this information is provided via a delivery plan pro forma. Do you agree it is reasonable to ask for this information?

## Question 7

In order to assess a developer's readiness we propose to adopt a similar approach as the ENA of benchmarking projects against standard timescales (dependent on project size and type).

- Do you agree with SSEN's proposed approach to benchmark progression milestones against standard timescales?
- In your experience, what do you think are the standard timescales associated with project delivery for generation projects? Please include the technology type, location (i.e. island or mainland) and project size.
- In your experience, which delivery milestones are critical to a project's progression? Please provide details of the project's technology, location (i.e. island or mainland) and size.

### Step 3 Assessment of readiness

Following the establishment of developer's delivery plans the next step is to allocate capacity based on their readiness according to the delivery plans, this shall form the initial capacity 'queue' following implementation of the trial.

In order to make this assessment SSEN proposes to work from the earliest date of connection from the established delivery plans (step 2) to form the capacity queue. If customer's delivery plans result in them having the same connection date capacity will then be allocated on a first come, first served basis, to determine the developer's queue position. SSEN proposes the assessment of readiness and capacity allocation follows the below method:

- Agree delivery plans to provide reasonable connection date:** Available capacity will be allocated in ascending order as to when the customer will be ready to connect according to their delivery plans.
- First come first served:** Available capacity would then be allocated on ascending order of the acceptance date of the connection offer.
- Any available flexible connections would also be subject to the same process.**

We are seeking stakeholder's views on this proposed assessment of readiness and capacity allocation method.

## Question 8

In order to assess customer readiness we have taken the approach to firstly assess delivery plans against connection dates and secondly consider when the customer accepted the offer. Do you agree this approach to initial capacity allocation is reasonable?

### Step 4 Management readiness to connect and Step 5 Creating an opportunity for earlier connection

Once the initial capacity queue is formed, progression milestones will then be actively managed by contract managers regularly reviewing progress. In managing customer's readiness, customers could potentially move up and down from their position in the initial capacity queue.

If a developer does not progress, they could lose their initial queue position which would simultaneously create an opportunity for another developer who is ready, further down the queue, to move up and connect earlier. This is referred to in the industry as queue management.

The queue management rules shall be consulted on further in 2018 depending on stakeholder feedback to this consultation. SSEN is proposing that the rules are based on the following principles:

- **Customer driven:** progression milestones are based on the delivery plans from developers and agreed up front.
- **Capacity efficiency:** queue management rules shall create an opportunity for those who are ready by managing those who are not.
- **Fairness:** Consistent Contract management shall ensure fairness, efficiency and transparency.

## Question 9

We will consult further on the queue management rules based on the principles within this consultation. Do you agree with our proposed principles to queue management?

- a. Are there any other principles we should consider?

## Section 4: Conclusion and Next Steps

### Conclusion

SSEN believes that the proposed Alternative Approach shall overcome the catch 22 currently facing Orkney and meet the long standing need for network upgrades to allow the connection of additional renewable generation. Following stakeholder engagement, SSEN developed the proposed Alternative Approach to overcome some of the barriers facing connection customers on Orkney. The combined technical and commercial solution make up the 'Alternative Approach': 'Creating an opportunity for those 'ready to connect' via a staged approach to network reinforcement.' The purpose of this consultation is to consult on the principles, development and framework for the proposed Alternative Approach to the reinforcement of Orkney and SSEN would encourage any of its stakeholders to respond to this consultation and will take all feedback from this consultation into account before consulting on the detailed process in the summer of 2018.

### Next Steps

SSEN's proposed Alternative Approach has been developed by being open and transparent about its plans for the Orkney reinforcement project with its stakeholders and SSEN plans to continue this approach. Following this consultation SSEN will take any feedback from this consultation into account before consulting on the detailed process in the summer of 2018. In parallel to the development of the 'Alternative Approach' SSEN is progressing regulatory approval for the investment for the reinforcement; the final investment decision will be subject to approval by Ofgem that the investment is in the best interests of GB consumers. The following outlines SSEN's estimated timeline for implementing the Alternative Approach, please note this may vary depending on the views of stakeholders and any necessary regulatory approvals:

- **February-March 2018:** Consultation based on the principles, development and framework of the Alternative Approach (this consultation).
- **March-April 2018:** Analyse feedback from consultation.
- **June 2018:** Taking into account feedback from this consultation, a more detailed consultation on the Alternative Approach. This shall include detail on the information required from developer's delivery plans, proposals for security arrangements and the proposed queue management rules.
- **July 2018:** Analyse feedback from second consultation.
- **August 2018:** Final proposal produced and submitted to Ofgem (as appropriate).
- **January 2019:** We aim to start the trial in January 2019 (subject to approval and consultation).
- **January-July 2019:** we aim to agree delivery plans and form capacity queue within 6 months after the trial start date.
- **July 2019:** We aim to start contract management after the agreement of delivery plans.

Throughout the development of the Alternative Approach and beyond its implementation SSEN intends to share the lessons learned from the trial in order to inform the potential wider implementation across the industry. SSEN's proposed Alternative Approach is informed by work from the Energy Network Association (ENA), Scottish Power Energy Network (SPEN) and National Grid Electricity Transmission (NGET)'s on queue management as well as Ofgem's work streams on Quicker More Efficient Connections and Unlocking Capacity of the Electricity networks. SSEN believes a trial would add value to future work streams including the System Operator's queue management implementation and Ofgem's Future Charging Forum for access rights.

SSEN is hosting three consultation events which shall walk through the information in this consultation and gather any stakeholder feedback:

- **Wednesday 14 February:** Ayre Hotel, Orkney 18:00-20:00.
- **Thursday 15 February:** St Magnus Centre in Kirkwall, Orkney 09:00-12:00.
- **Friday 16 February:** Radisson Blu, Glasgow 10:00-13:00.

If you wish to request a place please contact [transmission.commercial@sse.com](mailto:transmission.commercial@sse.com). Please note spaces are limited and will be allocated on a first come first serve basis.

You can respond to our consultation by completing the consultations question in Appendix 2 and emailing this by 12 March 2018 to: [transmission.commercial@sse.com](mailto:transmission.commercial@sse.com).

## Question 10

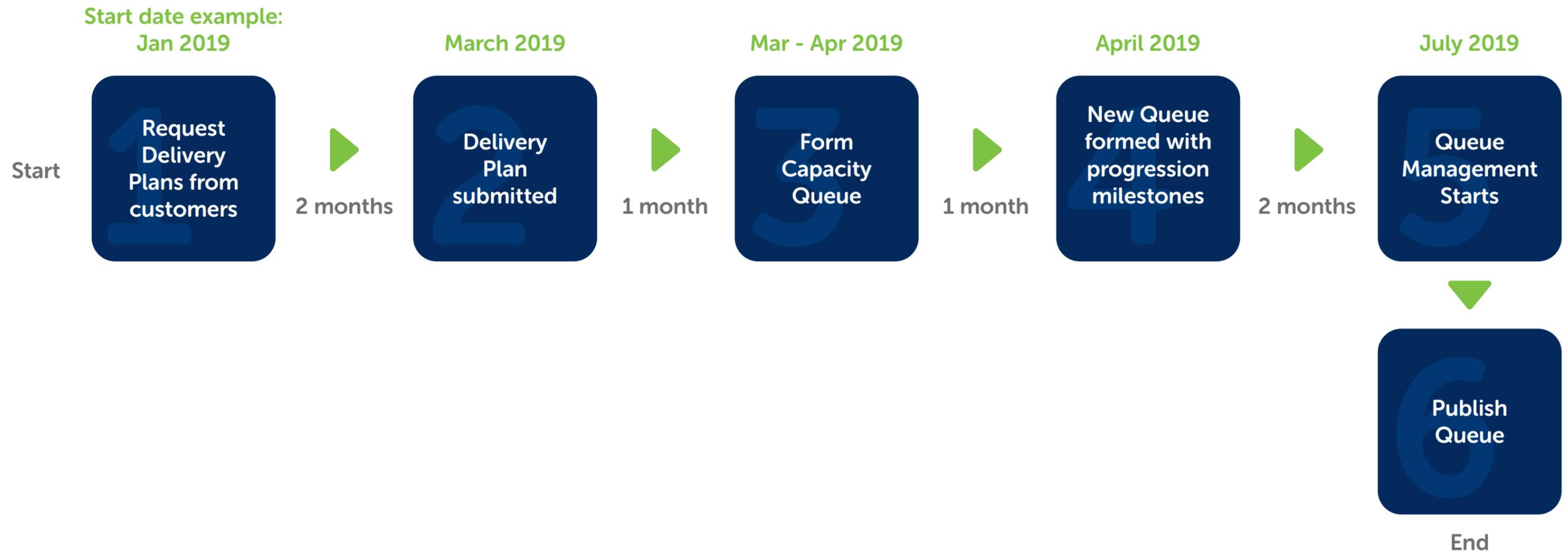
Do you agree with our proposed timeline?

## Question 11

Please let us know if you have any other thoughts or comments.

## Appendix 1 – proposed Alternative Approach consultation

The below process maps demonstrates the more detailed steps associated with the Alternative Approach. Please note that the timescales and dates are an example only and are subject to the regulatory and consultation process.



## Appendix 2 - consultation questions

### Question 1

In your experience are the challenges we have identified accurate?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

a. Are there any other 'challenges, obstacles or factors we should take into consideration?

### Question 2

Do you agree that our aims for the Alternative Approach would provide an opportunity for those ready to connect and as a result unlock Orkney's renewable potential?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

a. Are there any other aims we should take into consideration for the Alternative Approach?

### Question 3

Our Alternative Approach aims to create an opportunity for those 'ready to connect' via a staged approach to network reinforcement

a. Our technical solution is to provide a staged approach to reinforcement. We believe, for Orkney, this is the most economical and efficient solution and shall avoid under utilised or stranded assets. Do you agree with our technical solution? If not please provide reasons why.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

b. Our commercial solution is to allocate capacity to those ready to connect based on established delivery plans and meeting contract milestones. Do you agree with our commercial solution?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

c. Are there any other technical or commercial issues or approaches we should consider?

d. Combined our technical and commercial approach make up the 'Alternative Approach' which aims to create an opportunity for those 'ready to connect' via a staged approach to network reinforcement. Do you agree our proposed Alternative Approach shall create an opportunity for those ready to connect?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

Please tell us the reasons for your answers to questions 3a, 3b, 3c and 3d:

### Question 4

Due to the geographical nature and current industry guidance Orkney customers are liable for Transmission works from their connection point back to the mainland.

a. In your experience have transmission liabilities created a barrier to progressing your connection?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

b. Do you agree that transmission liabilities create a disadvantage for connection projects outside the MITS such as Orkney?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

c. Do you agree with our plan to implement arrangements that will ensure customers do not face a disproportionate burden such as those associated with the significant cost of reinforcement i.e. on Orkney the subsea cable link.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

Please tell us the reasons for your answers to questions 4a, 4b and 4c:

**Question 5**

The proposed criteria will allow us to run a meaningful trial of the Alternative Approach. SSEN proposes to work back from the connection date previously agreed or applied for by the customer. In your experience which delivery milestones are critical to a project's progression? Please provide details of the project's technology, location (i.e island or mainland) and size.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

Please tell us the reasons for your answer to question 5:

**Question 6**

In order to better understand a customer's project and further align reinforcement and developer's delivery plans we need customers to provide information to demonstrate they are able to meet their proposed connection date. We are proposing this information is provided via a delivery plan pro forma. Do you agree it is reasonable to ask for this information?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

Please tell us the reasons for your answer to question 6:

**Question 7**

In order to assess a developer's readiness we propose to adopt a similar approach as the ENA of benchmarking project against standard timescales (dependent on project size and type).

a. Do you agree with SSEN's proposed approach to benchmark progression milestones against standard timescales?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

b. In your experience, what do you think are the standard timescales associated with project delivery for generation projects? Please include the technology type, location (i.e. island or mainland) and project size.

c. In your experience which delivery milestones are critical to a project's progression? Please provide details of the project's technology, location (i.e island or mainland) and size.

Please tell us the reasons for your answers to questions 7a, 7b and 7c:

**Question 8**

In order to assess customer readiness we have taken the approach to firstly assess delivery plans against connection dates and secondly consider when the customer accepted the offer. Do you agree this approach to initial capacity allocation is reasonable?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

**Question 9**

We will consult further on the queue management rules based on the principles within this consultation. Do you agree with our proposed principles to queue management?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

a. Are there any other principles we should consider?

**Question 10**

Do you agree with our proposed timeline?

Strongly agree  Agree  Neutral  Disagree  Strongly disagree  Don't know

Please tell us the reasons for your answer to question 10:

**Question 11**

Please let us know if you have any other thoughts or comments:

To find out more about the project and find out how to fill this questionnaire online go to:  
<https://www.ssen-transmission.co.uk/projects/orkney/>

## Appendix 3 – proposed Alternative Approach consultation

The below diagram outlines the timeline for the overall Orkney reinforcement project. This includes SSEN's project execution activities, the Alternative Approach timeline as well as the milestones for regulatory approval for phase 1 on the reinforcement. Please note these proposed dates are subject to stakeholder consultation as well as regulatory approval and therefore may be subject to change; as previously notes we aim to start the trial in January 2019.

