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Dear sir/madam,

# Ref: Response to the Norwegian consultation on awarding exclusive development rights for offshore wind<sup>1</sup>

RWE is a leading energy player with four main operating companies, including our newest subsidiary RWE Renewables, which is one of the world's leading renewable energy companies and a global player in offshore wind, with 2.4 GW of installed capacity (pro rata view) and around 10 GW under development. We already have a strong footprint in our European core markets, e.g. in Germany and the United Kingdom. And we are developing further offshore wind projects globally, including in Scandinavia. RWE Renewables is an experienced developer of bottom-fixed offshore wind farms, but with a strong focus on technology and innovation as can be seen through our floating wind and hydrogen demonstration projects.

RWE welcomes the publication of the Energy White Paper and the opportunity to respond to the questions in this consultation process, and is looking forward to a continued discussion with the Norwegian Government on how to shape the offshore wind policy to enable a thriving Norwegian offshore wind sector. Our full response to the queries set out in the guidance document are included in the appendix 1.

Yours sincerely,

Ebba Phillips John Project Development Manager Scandinavia and Baltics

**RWE Renewables AB** 

<sup>&</sup>lt;sup>1</sup> "Veileder for arealtildeling, konsesjonsprosess og søknader for vindkraft til havs"



# Appendix 1: RWE response to Guidance Document for Offshore Wind

#### Introduction

Offshore wind is key for meeting the increasing demand for renewable power in Europe, and Norway has great potential to benefit from the expansion into offshore wind. The North Sea has among the world's best wind resources, and Norway already has significant experience working with marine energy projects. The development of large-scale offshore wind farms (OWF) can build on the existing knowledge and experience of the Norwegian marine energy sector, and also help create new industrial opportunities and jobs in Norway.

We welcome the publication of the Energy White Paper and the guidance document on the awards process and licencing regime for offshore wind specifically. We also welcome the Government's invitation to respond to the published guidance document, as we believe there is significant benefit in using lessons learned from developers other markets to ensure the Norwegian offshore wind market can expand and thrive. In the following we want to give feedback on the key points which were addressed in the guidance document published on the 11/6. We also encourage the OED to continue to engage with industry participants, and to clearly set out expected timetables, next steps, and upcoming milestones as the process is further developed and matured.

Our key positions are set out below:

#### 1. Prequalification

Consortia should be allowed to prequalify together to ensure the combined strengths and capabilities of participating companies are assessed. The proposed criteria are appropriate and the key emphasis should be placed on past experience of developing, owning, and operating large-scale OWFs.

#### 2. Area allocation

We agree a qualitative approach for allocating development rights is appropriate for Utsira North (UN). Key factors to consider should be experience in developing large scale bottom fixed or floating OWFs, and R&D and innovation in floating wind technology. If the grid connection infrastructure is part of the developer scope, such experience should also be included.

In general we support auctions for mature projects and market environments, but we do not currently agree that this is appropriate for Sørlige Nordsjø 2 (SN2). While bottom fixed technology is generally well proven, there are significant uncertainties regarding grid and route to market in this particular instance potentially leading to a winner's curse situation and reduced overall competition or speculative bids. As such, a qualitative approach is currently better suited for SN2. Auctions will become the appropriate mechanism as the offshore wind industry in Norway develops and matures.

#### 3. Division of sites into smaller areas

Dividing the sites into smaller areas could enable the selection of several developers but have a large impact on the relative attractiveness of sites. However, this requires careful coordination on e.g. grid connections to ensure that any synergies are not lost. Seeking to develop several sites concurrently also limits the opportunity to optimise potential



projects through phased build outs. The site area awarded for development should allow for at least 500 MW on UN, and at least 1500 MW on SN2.

# 4. Grid planning and hybrid projects

We support extending the role of Statnett to cover the offshore system operator functions but also believe they should be given a stronger role on grid coordination and design. We also support further work into hybrid projects, as utilising interconnection can add significant value but the current regulatory framework needs significant development.

# 1. Prequalification

#### 1.1Prequalification process

We support the proposed prequalification (PQ) process as a mechanism to ensure only credible and experienced bidders are participating in the tenders. We look forward to understand the proposed process in more detail in terms of timeline, work to be included and hence expected resources needed in the PQ process. Therefore, we believe that the process should be further clarified especially regarding the timeline and concrete steps.

The process should limit effort for companies and regulators, but at the same time be sufficiently detailed to prevent speculative applications. The PQ criteria can be included in the qualitative tender process. In all cases, we suggest a separate PQ stage prior to the auction process.

There can be considerable benefits to awarding development rights to consortia of companies with global offshore wind experience to leverage development of the Norwegian offshore wind industry. The Government should prequalify consortia together rather than assessing each individual company, but leave some flexibility to the companies to organise themselves and set out how they fulfil the overall criteria. The Government should not make an isolated assessment of the project company legal entity applying for development rights, but rather consider the competence and experience of the partners comprising the consortium, including the competencies partners can draw on in their parent companies or groups. This way consortia can utilise synergies to ensure the highest value added options are qualified (companies complement each other while bringing in individual strengths into the consortia) without over-emphasizing lower scores for individual PO criteria.

When applying to qualify as a consortium, the partners should confirm to the Government that a binding cooperation agreement has been entered into for the purposes of developing a project in the relevant area.

#### 1.2Prequalification criteria

We agree with the proposed categories for PQ criteria, and believe they should enable the Government to disregard speculative or inexperienced companies who are unlikely to be able to deliver large scale OWF projects. We also note that the PQ process could require companies to disclose confidential information (for example on financing and contracting strategies), and as such the submissions should not be made public. When setting out the PQ criteria, it is important that the requirements are clear, transparent, and the scoring easy to evaluate. Regarding the proposed categories, we have the following comments:



# Experiences of consortia and companies

- Developers should demonstrate repeated and recent experience of taking large scale OWF projects through the complete development and construction process, as well as operating such OWFs. This experience will be crucial to enable OWF projects to be developed in the timescales envisaged by OED, and should be the key for determining eligibility.
- Developers should also demonstrate repeated and recent experience related to stakeholder management in developing large scale wind power projects.
- Developers should also demonstrate experience of safe operations in marine construction projects on the continental shelf.
- Experience of development in new markets should also be emphasised.

# <u>Description of largest issues and challenges</u>

- This criteria seems difficult assess objectively. We believe that a better approach to identify issues and challenges is for the Government to have an open dialogue with interested parties, and to issue calls for evidence and consultations on specific topics.
- Evidencing a solid experience of developing, owning and operating large scale offshore wind farms should be sufficient reassurance for the Government that the prequalified parties will be able to identify and manage key development issues.

#### **HSE** framework

- The proposed criteria are appropriate. We agree that it is of utmost importance that all potential developers have a strong commitment to HSE and specific plans and mitigation measures in place.
- Developers should also provide evidence of their track record of onshore and offshore HSE performance from construction projects.

#### Annual reports

• It should be clear from which entity/entities the annual report is required, especially in the context of developer consortia.

# Financial performance and financing plans in the area

 The description of financing plans should be at a relatively high level and not scored based on the level of detail included at this stage. Developers may not be able to commit to a specific financing plan at a stage where there is still a high level of uncertainty regarding CAPEX and route to market.

#### Organisational strategy

- The organisational strategy should be described at a high level, and included as an additional requirement under the first criteria – developer experience. Demonstrating the ability to develop, construct, own and operate a large scale OWF should provide reassurance that the developer will be able to adequately staff the project development and execution organisation.
- This criteria should also enable consortia to describe their strategy which will include resourcing from different organisations, and for project companies to refer to experience from the parent or sibling organisations. Consortia should be allowed to make their own decisions regarding providing employees to a specific project company, or agreeing for the partner companies' to provide resources from their respective companies.



#### Description of internal knowledge on power markets and technical capabilities

- This criteria should also be included in the evaluation of the experience of the developer under the first criteria.
- Regarding power markets, developers should demonstrate commercial capabilities like negotiating power purchase agreements (PPAs), expertise on power markets, and access to Nordpool.
- Regarding technical capabilities, this should be tied to past experience in developing and constructing large scale OWFs and experience in complex marine construction projects on the continental shelf.

#### Contracting strategies

• It is not clear what this requirement is intending to capture. At the PQ stage developers can describe the overall approach to contracting, but specific contracting strategies will likely be developed at a later stage and depend on detailed design and market developments (e.g. selecting turnkey vs multi-contracting strategies).

# Internal and external training programmes

• We believe it is of utmost importance to have well trained staff and suppliers, both in terms of technical competencies and HSE. Government should elaborate on the specific requirements and industry standards it wishes to evaluate.

#### Description of R&D and innovation work conducted by the company in the last 5 years

The R&D activities should be clearly linked to OWF and the specific site in question, to
ensure that the relevant type of innovation is considered. Specific examples could
include strategic pilot projects, industrialisation and cost reduction projects, and
collaborations with the supply chain.

In addition to the criteria proposed by the Government, we believe there is merit in considering the following additional criterion:

#### Proposed programme for site investigations

• There could be a benefit to include a proposed programme for site investigations in the PQ phase. This would evidence that the developer is well aware of the requirements for developing a site, has taken the time to adequately consider the needs and challenges of the specific site, and would also allow the Government and the developer to quickly agree a programme for investigations following site award. It is however important that companies are not scored based on the largest scope of investigations proposed, as this could be a driver for increased costs and result in more investigations than required to be performed.

# 2. Award of exclusive development rights

We support the proposal to award exclusivity to developers prior to commencement of the detailed and more resource intensive development activities such as site investigations and detailed design work. The government might consider an increase of exclusivity period from 2 to 3 years. It is important to ensure that the award process is fit for purpose given the maturity of the market and technology development including grid solutions and regulatory framework. We also agree that if the Government is proposing to divide the open sites into smaller areas, this must happen before the process to award exclusivity.



Given the early days of floating OWF technology, it is appropriate to award development rights based on qualitative criteria for the UN site. While bottom fixed OWF are an established technology, there are a number of significant uncertainties regarding grid connection and coordination and route to market which currently make a price based auction unsuitable for SN2. As the Norwegian OWF industry matures, auctions should however be the favoured option due to the transparent and efficient process.

# 2.1 Award process for Utsira Nord

We support the view that a support mechanism is needed for projects in the UN area, as floating technology still is developing. Given the status of the floating technology, we agree that it is more appropriate to award exclusive development rights based on a qualitative process. The qualitative process should be non-discriminatory and transparent, with clear rules to be published and rating of projects and reasoning of evaluation to be published after the tender. In addition to providing the criteria, the Government should also develop a template for responses to ensure different submissions are comparable.

We propose the following criteria to be appropriate for a qualitative tender process:

# Strong experiences in business development with fixed bottom turbine technology

- As a lot of challenges in developing fixed bottom projects are similar to floating ones, demonstrated experience from fixed bottom offshore wind development and construction is important.. For example: offshore logistics, HSE, site layout optimisation with a large number of wind turbine generators (WTGs), e.g. regarding wake effects and O&M scheduling. A key similarity between bottom fixed and floating OWFs is the number of WTG and foundation interfaces which require similar planning and logistics to install.
- In addition to this, experience from delivering complex marine construction project on the continental shelf with a well-developed network of suppliers and partners should also be demonstrated together with a strong HSE track record.
- Experiences should range from offshore development, construction, and operations
  of wind farms. The track record of applicants with regard to installed, built and
  operated capacities should be considered.

# Experience in floating wind technology

- Bidders need to evidence ongoing capabilities in planning and managing floating wind farms by highlighting the role of floating within their organisation by showcasing the number of engineers and experts working in the field and by presenting demonstrator projects in their development portfolio.
- Dedicated budgets and growth targets for floating could be considered if they can be proven.

#### Financial capabilities

- Developers should evidence financial capabilities through having a non-subprime credit rating and by having a balance sheet that allows for the investment into an OWF of the size of UN.
- We do not believe it is appropriate at this stage for developers to be scored on providing a target budget within pre-determined parameters, as significant development activity needs to occur before this can be done with the requisite level of certainty. However, it is appropriate to provide a budget with a certain level of detail,



to show that the developer has an understanding of the costs which will have to be covered during the development phase.

#### HSE experience

- Developers should bring expertise in health and safety as the operations of large scale technology offshore is dangerous and the protection of staff needs to be guaranteed by state of the art HSE concepts and strategies.
- Developers should demonstrate how their HSE capabilities will be adapted to deep water conditions, for example by demonstrating HSE track record from deep water marine construction operations.

#### Environmental and maritime planning and consents

Experiences in environmental and maritime planning should be proven as well, as the
concept of the OWF needs to be aligned with potential constraints, for example with
regard to fishery, ecological protection needs, shipping, military and impact on
existing infrastructure (e.g. oil and gas).

# Sustainability standards

- Additionally the bidders need to prove that they follow sustainability standards.
- Applicants need to ensure environmental protection and social standards for themselves, involved OEMs and contractors. An easy way to incorporate this is the consideration of sustainability ratings given from external supervisors, which are used in the capital market for information of investors.

# Commercial capabilities

 Depending on the design of the support that is granted for the windfarm there might be the need to find additional revenues that complement the income. In such a case demonstrating commercial capabilities and experiences like negotiating power purchase agreements (PPAs) and expertise on power markets and access to Nordpool should be a criteria for identifying the best proposal.

#### Scalability and future development of the offshore wind sector

- The first round of wind farms at UN should only be the start of a larger scale pipeline of deep water OWF.
- Developers should explain their concept for the scalability of the OWF to what extent the concept of the windfarm is suitable to be replicated and/or developed further in future wind farms within the Norwegian North sea, so that maximum socio-economic benefits for the country can be generated.

While we believe the development of floating wind projects at UN will be beneficial for the Norwegian supply chain, we do not believe it is not appropriate to have specific local content criteria as part of a qualitative assessment. These are not in line with competition law, and specific commitments will be difficult to make at a very early stage in the project. Furthermore, local content criteria tend to make projects more expensive and might increase the cost of the projects for consumers and industry offtakers. However, the ability to utilize existing infrastructure and know-how will be key driver for scalability and development, and we expect the UN project will be a significant factor for the development of the Norwegian offshore wind industry.



#### 2.2 Award process of Sørlige Nordsjø II

Price based auctions are an efficient way to allocate sites that use a mature technology and where there is a stable commercial and regulatory environment. Auctions have been used in different forms in several offshore wind markets with transparent regulatory conditions and with balanced commercial risk and opportunities. As the Norwegian offshore wind market develops the regulatory framework and surrounding commercial environment auctions can become a suitable mechanism for awarding exclusive development rights.

However, despite most likely utilizing the well-established bottom fixed foundation concept, the specific areas where more clarity is needed for an auction to become suitable for SN 2 include:

- Downside price risks in the Nordic price area with low or insufficient interconnection capacities.
- Long distance to shore leading to expensive grid connections to be developed, designed, and self-financed by the developers.
- Permitting process with clarification potential during development, construction and operations phase.
- Uncertainty regarding access to other revenue streams in case of a hybrid/interconnection project, e.g. congestion rent or additional revenues from support from countries outside Norway (e.g. CfDs from the UK):
  - Even if regulations in other countries would allow Norwegian projects to participate in tenders for financial support, SN2 would be at a competitive disadvantage considering its relatively high grid cost
  - Depending on the target market(s), there is uncertainty on the sharing of offshore grid cost between different parties (see section 4)
  - If hybrid projects (interconnector + OWF) are considered the market design and revenue sharing from the interconnector are uncertain (see section 4)
  - The potential to include green hydrogen in the business model is currently subject to even more regulatory, infrastructure, and cost uncertainties.

Despite the large uncertainties at the present moment, we believe that the project is very attractive, because the ambitious decarbonization targets in Europe will trigger a huge demand for electricity for direct use and for transformation into synthetic green fuels like green hydrogen that will have to be served partially from more remote Offshore wind sites. However, this fundamental value is as of today relying on detailed developments of markets and regulation and difficult to evaluate with information available, even though favorable developments are likely and expected by RWE, there are significant risks on the details of future developments. In other markets with price based tenders risk for bidders is reduced by giving higher commercial value and more balanced risk-chance profile, for example:

- UK tenders land leases by the Crown Estate where in a second step a two sided contract for difference (CfD) is offered that allows for more certain revenues above market prices. Further, the cost of the transmission infrastructure and grid connection is not fully covered by the developer and there is a capacity market which OWFs can bid into.
- Germany offers a one-sided CfD and the grid connection is paid by the TSO.
- Denmark offers a two-sided CfD, and has a tender process where the site for the OWF has already been subject to early-stage surveys and development investigations by the Danish Government. There is certainty around grid



connection and the maximum costs to be paid by the developer to the TSO prior to the submission of bids.

Due to technical and regulatory uncertainty, also depending on developments in other countries, that are not controllable when designing the SN2 tender (see section 4), we think it is not possible to establish more commercial certainty in the short term. Hence introducing auctions for SN2 at this stage could result in two undesirable outcomes:

### Winner's curse

- Due to limited certainty on future revenues, bidders have to speculate on potential returns. The more uncertainty there is, the more speculative are the bids. According to usual bidding rules the most optimistic bidder wins a price tender, however there is no reason to believe that the most optimistic bid is realistic.
- In case the optimistic assumptions do not materialize, there is the risk that a project is not built. This leads to a situation where the socio-economic benefits of offshore wind remain unused to Norway. Meanwhile bidders with realistic price assumption could build the project but are not awarded the rights to do so.

#### Reduced competition

- There is a risk that an early introduction of auctions could decrease the level of competition due to the uncertainty and difficulty to formulate accurate and wellfounded bids. This could lead to experienced developers withdrawing from the process rather than spending time and effort formulating a bid they know is unlikely to be competitive.
- In such a reduced pool of bidders the risk of inexperienced and overoptimistic winners who ultimately fail to develop the site to its full potential.

#### Conclusion on SN2

We do not believe that at this present moment it is appropriate to use a price based auction to award exclusive development rights for projects in the SN2 area. Given the large uncertainties and need for future policy development, there is a large risk that successful bids would be subject to "winner's curse" which would hamper the development of large scale projects in the near future. As the Norwegian market matures and developers have more certainty around grid connections, route to market, etc., future projects will be better placed to use auctions. This should be the ultimate goal of developing a competitive Norwegian offshore wind industry.

### 2.3 Ensuring the seriousness of bids for Utsira Nord and Sørlige Nordsjø II

For both sites to be tendered the seriousness of bidders needs to be ensured. This can be done by minimizing winner's curse risk via reducing speculative bidding in the award process (see 2.2). Furthermore, it needs to be ensured that winning bidders stick to their promises. This can be done by an establishment of penalties, and/or the control of project milestones:

In case a tender winner is not building a project or is delayed, he can be obliged to
pay a <u>penalty</u> towards the regulator. A penalty gives incentives to realize a project
if it is set at adequate level. If penalties are set too high or are bound to too
ambitious targets and milestones it might blur competition and might reduce the
attractiveness of a site for developers



Instead of financial incentives also time constraints could be established in order
to give incentives towards developers: if certain project <u>milestones</u> are not
achieved in due time, e.g. reaching FID, a project developer could lose the use
rights of a tendered site.

In order to improve the quality of bidding, both measures are suitable if designed properly. However, if the regulator defines too high penalties or too ambitious timelines it also might have the opposite effect and the quality of bids is decreased. Nevertheless it should be envisaged to ensure the quality of the bidding process by making use of one or both of the above mentioned measures in order to ensure the seriousness of bidding in the process, speculative bids are reduced and a successful realization of the projects becomes more likely.

# 3. Splitting of sites into several projects

Splitting sites into several projects can bring challenges, as the different projects would need to coordinate with each other and might have conflicting interests, e.g. wake effects between the windfarms and environmental considerations, as well as differing requirements for co-existence with other stakeholders such as the fishing industry. Environmental investigations and impact assessments would need to be coordinated as it is the sum of all environmental impacts in an area which needs to be assessed.

If sites are awarded to several developers there may be an issue relating to coordination and optimisation of the transmission assets. Dividing a site into smaller areas could also mean that economies of scale are reduced, as for example one large grid connection might be realized cheaper than several smaller ones. This is critical due to the far distance to the shore, and lack of coordination can have a detrimental impact on the business case as a result of this. This is discussed in further detail in section 4.

Furthermore depending on target markets and envisaged business models the coordination effort between involved consortia with several companies, TSOs and regulators from several markets might become cumbersome. Therefore we believe the preferred option is to limit the number of projects to maximum two per site that is tendered. Ideally just one consortium is awarded per site.

# 4. Transmission grid planning and hybrid projects

#### 4.1Transmission grid planning and coordination

We welcome the Government's stated position to extend Statnett's role to become the offshore system operator<sup>2</sup>. We view it as essential that there is a single party with responsibility for coordinating the Norwegian electricity grid, and ensuring that OWFs can be connected in an efficient manner. We would welcome further clarity on the specific role of Statnett, for example in planning and coordinating connections if sites are awarded to several parties.

Due to the long distance from shore for SN2, we believe the projects in the area will all utilise HVDC transmission systems, whereas UN being closer to shore can utilise HVAC

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<sup>&</sup>lt;sup>2</sup> "systemansvarlig"



technology. It is important to note that due to the technical configurations of HVDC transmission systems, it is not possible to join systems from two different suppliers. If several developers plan for a coordinated transmission system or a meshed offshore grid, unintended power flows might cause problems. Any grid coordination beyond single-project radial connections will therefore require coordination both on design and supplier selection. Without details on how Statnett's role in offshore grid coordination will work in practise the business cases for OWFs will be hard to evaluate.

Grid planning is likely to become more complicated if international connections are considered, as the regulations of other countries need to be well-thought-out and coordinated. In order to optimise the business case for a large wind farm with no additional financial support, a connection to another country is likely needed. We note that the Government states a preference for initial projects to utilise radial connections while evaluating future hybrid projects. To ensure that future benefits of interconnection can be realised across a portfolio of Norwegian OWFs, it is important that the regulatory framework also can support sequential build-out of hybrid projects to enable OWFs to benefit from interconnection at a later stage.

### 4.2Hybrid projects

We share the view that hybrid projects connecting to more than one market will be relevant for Norwegian OWFs, and policy development in this area needs to be of the highest priority. Hybrid project development is common in many markets, with explicit policy development focused on multipurpose interconnector and energy islands being under way in several markets. There is also work ongoing at the EU level to clarify the policy framework for interconnectors between European countries. The process on planning of offshore grids is currently, and will remain, unclear likely until beyond the starting point of the Norwegian site allocation tenders. For this reason it is difficult to incorporate interconnectors into a business case even if this solution is in principle allowed and supported by Norway. Two issues with the current EU regulations which require resolution to enable the development of hybrid projects are:

- Prioritisation of cross-zonal trade: 70% of an interconnector's capacity has to be
  used for cross-market power flows to optimise price differences and to further
  integrate power markets. This reduces the attractiveness of hybrid projects even
  where there is an overall benefit of using a cable both for OWF export and as an
  interconnector, as the OWF cannot be certain it can export its full capacity.
  Several potential solutions are under discussion, e.g. the establishment of
  offshore bidding zones, but all options under consideration have technical,
  economic, and legal challenges that are hard to overcome in the short run.
- Unbundling rules and the separation of ownership of generation and transmission assets. Presently the generator is unable to receive the congestion rent that occurs from prices differences from interconnected countries, which impacts the revenues of an OWF connected to an interconnector cable. Rules for sharing the congestion rents and/or transport of wind energy need to be established.

From a technical perspective radial connections towards just one country are the simplest option for connecting to the grid. However in Norway the current policy position is that no extra revenues can be earned and most adjacent countries have ambitious offshore plans of their own. However there is greater interest in hybrid connections, where the OWF is combined with an interconnector towards Norway, as in low wind situations the hydro



reservoirs in Norway might be helpful in providing backup energy and in balancing volatile renewables generation. The dual use of a grid for interconnection and transport of the produced offshore wind lowers the cost of the offshore grid and has a beneficial effect on the economics of the projects. Hence hybrid connections are likely if regulation allows for them, but will require a significant amount of coordination between several parties including TSOs and developers.

As the plan is for developers to be in charge of planning and financing the grid infrastructure, there is the need that potential congestions rents need to be allocated to the developer in order to compensate for grid cost. The valuation of congestion rents is rather difficult to calculate, as they depend on price differentials between connected markets. This increases overall uncertainty on the business case and the bidding risks. Hence combining hybrid connections with a price tender at short notice makes it challenging to undertake a proper commercial evaluation.

Finally, if an interconnected grid is shared by several consortia, rules need to be defined on how to allocate grid use in case of bottlenecks. Rules for congestion management, balancing and curtailment need to be defined ex ante before the auction otherwise it might have a negative impact on the business case, and would increase the winner's curse problem.

#### 5. Conclusion

Norway has great potential for a large and thriving offshore wind industry, benefiting from excellent wind resources, a well-established and experienced marine energy sector, and potential for interconnection to several European countries to support the creation of a large-scale North Sea offshore wind market. The Government's proposals to identify further development areas and create an offshore wind collaboration forum show a commitment to ensure offshore wind can play a significant role for Norway in the future.

As identified in our submission, there are some important policy issues which need to be resolved to ensure that developers have the technical, commercial, and regulatory certainty needed to develop and mature business cases which can be delivered in the timeframe envisaged by the Government, and create socio-economic benefits for the country. There is great experience and know-how in the European and global offshore wind industry, and we note that work is already under way to resolve several of the issues identified. The key areas for the Government to focus on are:

- Enabling consortia to participate on terms which favour experience, innovation, and the ability to commit to large scale developments,
- Appropriate allocation mechanisms which do not result in winner's curse problems, inappropriate risk taking and non-materialisation of projects,
- Clear role for the offshore TSO in offshore grid planning and coordination, and
- Development of a regulatory framework which supports hybrid projects from the outset.

As one of the leading developers of offshore wind globally, RWE welcomes the opportunity to respond to this consultation, and we look forward to continue to play a role in the development of the Norwegian offshore wind market.