COVERING LETTER

Dear Sir/Madam,

Aberdeen Renewable Energy Group (AREG) has been working on energy transition for over 15 years, helping the oil and gas supply chain to transition into renewables. We have a core membership of around 150 companies and organisations and an unrivalled wider network across the UK and around the world. Our members are representative of the oil and gas supply chain and all aspects of energy project lifecycles.

The energy expertise in our region will be pivotal in delivering ambitions for offshore wind - in terms of developers, supply chain, innovation and technology. Also, the quality and diversity of science, technology and innovation embedded in the oil and gas industry should not be underestimated and should be recognised and harnessed for offshore wind.

We welcome the Scottish Government's support for offshore wind and the publication of a draft policy statement. This is an important opportunity to define aspirations for offshore wind and to give a clear indication to industry of the future pipeline of development.

Our key points are:

- Aberdeen is a global centre for offshore energy technology development, commercialisation, deployment and operations and maintenance
- There are over 1,000 energy companies in our industry in and around our city and they are critical not only for delivering Scottish Government ambitions in offshore wind but in creating and preserving jobs at a large scale
- The synergies between oil and gas expertise and offshore wind therefore must be recognised and harnessed
- We believe that more ambitious targets for the development of offshore wind in Scottish waters are deliverable if the oil and gas capability in North east Scotland is effectively harnessed
- There is growing interest in combining offshore with hydrogen production – the role of Aberdeen City Council in establishing a leading position should be recognised and built on
- Our city is a global hub for industrial research and efforts to link industrial research interests to academic and supported research and development organisations should continue.

We look forward to working with the Scottish Government as its plans for offshore wind and the wider response to the Climate Emergency are developed.

Yours sincerely

Jean Morrison
Chair

QUESTIONS (All questions ask for explanation of view)

CURRENT POSITION

1. **Does the current pipeline and level of activity in the offshore wind sector in Scotland provide a sufficient platform upon which to build the greater contribution required to achieve our climate change goals?**

AREG notes that the Committee on Climate Change (CoCC) recommend that 75GW of offshore wind capacity will be required in the UK by 2050. There is a sector deal target of 30GW by 2030 (UK). The current Scottish pipeline is 7.5 GW of potential offshore wind capacity of which only 3.5GW is currently scheduled for construction. If this is all constructed it would almost meet the Scottish Offshore Wind Energy Council (SOWEC) target of 8GW by 2030. However AREG believes that Scotland could and should aim for a capacity more in line with the CoCC targets.

2. **Do you believe that the 2030 visions and aspirations described above are sufficiently ambitious?**

For almost 20 years AREG has been assisting companies from our energy supply chain to diversify into renewables and has had a major role in facilitating the transfer of oil and gas skills to offshore wind and also faciltating offshore wind in North East Scotland. Our area is host to a leading global centre for offshore energy development comprising over 1,000 energy companies many of whom are active and experienced in offshore wind.

In our view the current pipeline, whilst encouraging, does not reflect the appetite for development or the value that could be secured by our supply chain. The following influences our opinion:

- Scotland has 25% of Europe's wind energy
- There is significant appetite for deployment in Scottish waters
- The Aberdeen city region hosts a global centre for offshore energy that forms an excellent delivery base for offshore wind – in terms of company base and 36,000 direct jobs in the Scotland's energy sector being located in the city region

AREG's view is that Scotland should aim for 40% to 45% of the proposed 75GW by 2050 which would be 30GW-35GW.

3. **What actions do you believe should be taken by the Scottish Government, UK Government and agencies in order to realise the full potential of Scotland's offshore wind**

The Scottish and UK Governments have a key role in providing a framework for offshore wind development and much progress has been achieved to date. However government should build on progress, develop a more ambitious vision and clearly articulate that new vision. There are also constraints to development that need to be addressed and

government should continue to work with developers, regulators and stakeholders to find a way to ease the constraints.

The Aberdeen city region offers Scotland and the UK a strong competitive advantage in this sector in terms of hosting both offshore wind developments and a globally competitive supply chain which can support project delivery and cost reduction. The scale and pace of development that has been achieved in the waters of North East Scotland demonstrates what can be achieved at scale and should be recognised so that this experience and learning should be built on.

Government should also recognise the unique contribution that the supply chain in and around Aberdeen can make and encourage and support its engagement with the offshore wind industry. Plans to increase Scottish supply chain/local content are welcome and should be built on and monitored.

There is also significant export potential for offshore wind and the supply chain in our region could make a large contribution to export ambitions. Our energy supply chain is already active in many oil and gas export markets and comprises and excellent platform for the diversification of energy exports. Aberdeen City Council is also active in supporting both global market entry and stimulating inward investment. Together Aberdeen City Council's status in global markets, our internationally active supply chain and AREG's own activities make Aberdeen a valuable resource for Scotland in both international trade development and inward investment.

BARRIERS TO DEPLOYMENT

4. **What are the key regulatory and cost challenges facing the offshore wind sector?**

The key overarching challenge is to deliver project life cycle cost reductions to achieve the prices committed to in recent Contract For Difference (CFD) auctions. The skills and experience of the energy supply chain in and around Aberdeen will be critical to achieving this and it is already making a significant contribution.

AREG and its members regard floating offshore as an exciting new development with significant future potential both in Scotland around the world. AREG members are already tackling the challenge with relish and again making a significant contribution to development and delivery. However we are aware that there is also demand for shallower water sites and in the short term the environmental and economic potential for such developments is of a much greater scale.

AREG is also concerned that projects in Scotland, particularly in the North East should not be disadvantaged by higher transmission or other charges as this could limit the ability to compete in CfD auctions and therefore inhibit development in Scottish waters.

5. What more can the sector and other key stakeholders do to tackle these?

AREG members comprise a representative cross-section of our energy industry which has almost 40 years experience in delivering cost reduction in offshore energy projects through the development of new technology, more efficient working

AREG is also aware of industry and supply chain concern about the length of development timescales -– they can be 10 years or more. Industry and government need to work together to reduce this, while maintaining a robust planning process.

6. What should the key Scottish priorities be in relation to Air Defence Radar, and towards Radar mitigation more generally

Aberdeen is home to the largest civilian heliport in the world, supporting our offshore oil and gas industry. Through personal experience AREG and its members are acutely aware of the need to balance aviation and other interests. In our experience this can best be done by open and active dialogue between all stakeholders.

7. What more can the Scottish Government do, working with industry and other stakeholders, to address 'knowledge gaps' in environmental assessments for potential offshore wind developments?

AREG respects and appreciates the skill and experience of the developers of the offshore windfarms around the coast of our region and this experience should be respected and harnessed. We are also aware that many AREG members have decades of experience in successful environmental assessment for offshore energy projects and this experience should also be harnessed.

8**. What steps can be taken to improve interactions between offshore wind and other marine sectors?**

It is important that there be dialogue between all users and potential users of the marine environment. In this, local intermediaries, respected individuals in the community and organisations such as AREG itself can play a facilitation role to improve communication. This should be recognised and examples of best practice identified.

9. How could a competitive market framework that promotes the development of floating wind be developed whilst still retaining value for money for the consumer?

Floating wind is not yet a commercial technology and cannot compete with established technologies in CFD auctions. A mechanism to provide support, most likely by adapting the CfD scheme will be required.

To protect the interests of the consumer a clear roadmap to the commercialisation of floating offshore wind would be required to enable a tapered support scheme, reducing as

FUTURE POSITION

10. Considering the currently available literature and analysis, what do you consider a successful offshore wind industry in Scotland in the future would look like?

A successful offshore wind industry in Scotland is one where we meet national and local net zero targets, our existing energy industry is fully engaged, where we have an active supply

chain creating new jobs and diversifying our economy, and offshore wind skills are a key export.

Aberdeen would see its Energy Transition Zone become a competitive hub and base for the wind industry and also support energy the transition within the oil and gas sector.

A successful offshore wind industry would also be linked to a vibrant industrial hydrogen sector supporting energy storage, transport and heat. It should be recognised that Aberdeen City Council has already developed some of the most significant hydrogen infrastructure in Europe, and this provides an excellent platform for the development of a true hydrogen economy.

11. What scale of deployment would you estimate or believe to represent a successful outcome, and why?
The baseline is the delivery of the SOWEC and UK Sector Deal targets, however Scotland should aim for 30GW – 35GW by 2050. A successful offshore wind sector will comprise new fixed developments and floating wind at commercial scale.

12. What actions should industry and government take to address the issues described in this section and ensure the most positive future position for offshore wind in Scotland?
Developers and the supply chain invest in projects, assets, new technology and skills. However in order to be able to justify this they need clear visibility of the development pipeline. Government should create a framework that states clearly the ambition, the timeline, include a clear indication of potential projects, the licencing process and timescales.

ECONOMIC OPPORTUNITIES – SUPPLY CHAIN

13. What areas of the Scottish supply chain do we excel at, and what could we do better?
The Scottish government should recognise the pivotal role that the energy expertise in the Aberdeen City region – in terms of developers, supply chain, innovation and technology - in creating a successful offshore wind industry in Scotland.

The consultation identifies specific strengths of the oil and gas supply chain - manufacture of specialised components such as moorings, chains and anchor. However for the supply chain in and around Aberdeen and AREG members this focus is too narrow. Indicative but not exhaustive strengths include:

- Environmental, engineering, technical, commercial, legal, intellectual property and risk assessment diligence services
- Engineering design, prototyping, fabrication, certification
- Modelling, project design, commissioning, installation, management
- Vessels, access, offshore services, anchoring
- Cable laying, trenching, moorings, electrical controls
- Operations, maintenance, inspection, instrumentation, condition and performance monitoring

- Logistics, emergency response, standards, training, health and safety
- Geotechnical, geophysical, oceanography, meteorology

Also, the quality and diversity of science, technology and innovation embedded in the oil and gas industry should not be underestimated and should be recognised and harnessed for offshore wind.

Scotland, and Aberdeen in particular has made good progress in developing hydrogen projects and infrastructure. Aberdeen City Council has led projects that have delivered a number of 'world firsts' in terms of deployment of vehicles. This presents to opportunity to develop a leading position in hydrogen, create a true hydrogen economy and though it significant job creation and economic activity.

Scotland should remain at the forefront of deployment of hydrogen energy and transport applications. There is also increasing interest in linking hydrogen production to offshore wind. To enable this we need to invest in large scale production of hydrogen from offshore wind facilities.

14. Where are the new areas that Scotland can develop and exploit a competitive supply chain advantage?

The supply chain needs access to certain facilities and infrastructure. One key area is to increase manufacturing and ports capability/capacity. This would support greater local content and activity in offshore wind. A good example is Aberdeen's planned Energy Transition Zone and the expansion to Aberdeen Harbour South which is under construction. Three East Region sites alone could deliver up to eight years of construction port activity for Aberdeen but the longer term 25 year opportunity is operations and maintenance and manufacturing related to all the wind farms in these waters.

It should also be recognised that that local government has a role to play, collaborating with industry and infrastructure providers such as ports and harbours.

There are also significant opportunities for the development of a hydrogen economy if appropriate investment is made either in infrastructure and/or in raising demand for hydrogen applications (transport, energy).

15. What are the main challenges a company faces when tendering for a contract?

In AREG's experience the supply chain in and around Aberdeen is very capable and competitive. The challenges tend to come prior to tender (see below).

16. Subject to procurement law, what more should government and its agencies do to assist the supply chain secure contracts?

To secure contracts, the supply chain needs timely knowledge of upcoming procurements, the process and access to it. AREG has an unparalleled supply chain network comprised of companies and organisations actively trying to diversify into offshore wind. It and other relevant organisations should be supported to secure and disseminate information on upcoming developments, tenders and contracts.

ECONOMIC OPPORTUNITY - SKILLS

17. What are the key skills issues and gaps facing the sector over the coming years, in the short and medium term?

The energy transition lends itself to transferable skills and workforce upskilling, while also attracting new talent. The growing commitment to energy transition means that the need for a skilled workforce is more important than ever. The oil and gas industry is uniquely placed to build on existing skills and provide people and services to the offshore wind across the project life cycle.

However the energy sector has an ageing workforce and this should be addressed by a strategy to attract and retain younger workers. This would ensure younger, newer workers gaining the benefit of the experience of the existing workforce benefit from the experience and knowledge of the current workforce enough skilled workers for both oil and gas and renewables. It is important that the Scottish Government recognises this need in the development of 'Shared Prosperity Funding' and how that is invested in to support existing energy hubs and productivity.

Skills training also needs to take into account predicted changes such as an increasing level of automation and the adoption of new technology and new working practices.

18. What more should government and the sector do to build on the progress made in recent years?

Opportunities in the energy sector should be promoted – energy transition provides new challenges, opportunities and activity in new and emerging technologies. Organisations such as AREG would be excellent channels for such communication of supported to do so. Schemes should also be developed to support the training of individuals to enter the energy sector.

As part of Aberdeen's Energy Transition Zone, an offshore renewables 'academy' vocational approach will be taken with industry, the regional college and schools so that local people living in the city region are able to access new work as it develops.

19. What can Scotland learn from the approach taken in other countries around the world in this are? Are there examples of best practice you can share?

AREG believes that further research is required in this area and would welcome sharing in the results with a view to promotion and dissemination to the energy industry in our area.

INNOVATION AND COST REDUCTION

20. What can the Scottish Government most usefully and feasibly do to build on the innovation support previously and currently available?

AREG welcomes previous and current support for innovation. Our city is a global hub for industrial research and efforts to link industrial research interests to academic and supported research and development organisations should continue.

Also, the role of the OGTC in Aberdeen as a technology bridge between the oil and gas industry and the offshore renewables industry should be recognised and supported – across Scotland and the UK.

AREG welcomes the Scottish Government's willingness to consider more small test and demonstration projects, as the proving and commercialisation of floating offshore wind represents a significant opportunity for our supply chain.

The drive in the oil and gas industry to decarbonise production also offers new innovation potential through the supply of renewable power to offshore oil and gas facilities, co-location with floating offshore wind and technology sharing. Innovations developed in t our energy industry such as in foundations, cabling, interconnectors, production optimisation, data and communications, surveying, asset development and environmental mitigation all have application for offshore wind and can increase deliverability.

The Scottish Government should also work with industry to deliver solutions for realistic h2 applications.

21. How can we support technologies and developments which reach a viable stage between leasing rounds and Contract for Difference (CfD) auctions?

AREG recommends consultation with industrial and research technology developers including the OGTC as a partnership approach may be required. Some flexibility may be required in process.

22. Where respondents believe that scope remains for innovation in fixed offshore wind, what areas should be prioritised?

Again, AREG recommends consultation with technology developers including the OGTC to achieve a balanced overview.

23. What actions should be taken to address the key challenges facing the uptake of commercial scale floating in Scotland?

Feedback from AREG members indicates that they key challenges are:

- Cost
- Technology/construction/performance risk
- Consenting and timescales
- Supply chain availability
- Lack of certainty

We therefore welcome the creation of an environment that reduces risk and creates more certainty. Clarity and active communication about Government ambitions and targets, consenting and lease procedures and timescales and some form of financial support for pre-commercial projects would be very helpful.

AREG members and the wider supply chain in and around our city will be key to addressing and resolving the challenges.

24. What can be done, on the part of government and / or others, to strengthen and benefit from the synergies with a) hydrogen and b) the oil and gas sector?

a) The significant wind resources in Aberdeen and North East Scotland provide huge potential for renewable production of hydrogen. As a globally competitive centre for offshore energy our city can provide skills from the existing oil and gas industry for hydrogen production and distribution, both onshore and offshore.

The Scottish Government should also recognise Aberdeen's position as a global exemplar for low carbon hydrogen supply and demand. The role that Aberdeen City Council has played as first mover and facilitator of hydrogen production and adoption should be recognised and built upon as critical for building the economies of scale for a true hydrogen economy. (

AREG recommends that this should be given consideration in the preparation of the Hydrogen Action Plan for Scotland.

b) AREG members are working at the cutting edge of the offshore wind industry across the whole project lifecycle. We recognise that there are many synergies with the oil and gas industry as demonstrated by the answer to Q13. Our industry has a 40+ year track record of success and learning in installing, operating and maintaining complex offshore energy projects, and in some of the most hostile conditions in the world.

AREG has been working for over 15 years to support and promote energy transition and assist local companies and organisations to diversify into renewables. Some have been very successful and are now prominent players, others are still on the journey and will require further support. Organisations such as AREG are contributing to strengthen the synergies with oil and gas and drive economic benefit for Scotland. We will continue to strive to make a significant contribution to the delivery of Scottish and UK ambitions for renewables and recognise that we should seek to deliver benefit to all regions of Scotland. The contribution and impact of organisations such as AREG should be recognised and supported.

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Publish: Include organisation and respondent name