Aligning UK international support for the clean energy transition
REA Response to BEIS Consultation

The Association for Renewable Energy and Clean Technology (REA) is a not-for-profit trade association, representing British renewable energy producers and clean technology suppliers and promoting the use of renewable energy since 2001. It has over 550 corporate members, making it the largest renewable energy trade association in the UK.

The REA believes much of the transition from oil and gas to renewable energy or circular economy solutions should begin now so that the reduction in greenhouse gas emissions continues at pace and as economically as possible. This action will also give clear signals to both the fossil fuel and clean energy sectors for the need to transfer skills and knowledge for delivering Net Zero in the early half of this decade, rather than postponing action to later decades.

The REA welcomes the proposed government policy stopping UK overseas support for the oil and gas industries. This change is expected to have long-term benefits for our members and the wider renewables and clean technology sector. With the optimism that a portion of the saved resource will be redirected to support our domestic renewable supply chain, we are looking forward to helping our members expand their businesses to be more internationally competitive.

The REA Response to aligning international support with clean energy sector. Finance Forum represents progressive international financial and legal companies, and who are in the process of transitioning their activities away from fossil-fuel sector. Due to the complexity of the international market, we are aware that they may be negatively impacted in the short term, however in the longer term the changes will be positive. The Government should aim to provide sufficient time to prepare and give clear policy guidance to minimise or reverse the possible negative impacts.

This implementation would clearly demonstrate the UK's leading position on decarbonisation and set a positive example globally. The REA are committed to help our members take part in the renewable sector internationally, increasing the export of British products, knowledge, and expertise. We will continue to build productive and innovative partnerships to decarbonise power, transport, heat, and circular bio resources, ensuring a smooth and productive transition of the decarbonisation of the global energy chain.

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Answers to Specific Questions

The UK energy transition:

1. What do you think the impacts of the energy transition will be on your business and how can these impacts be mitigated?

- The impact from redirecting international support would be to, improve, and increase the attractiveness of the renewable energy proposition against fossil fuel in the global energy market. This would increase the UK's renewable export potential and accelerate the global energy transition internationally.
- Both the REA and many of our members will benefit from the decision, the clear positioning of the UK Government would increase confidence in the renewable energy and clean technology sector. REA will follow the Government's decision closely and ensure that our members are aware of the change in policy and seek to promote any support and funding that is made available, thus helping to strengthen the UK renewable supply chain on an international platform.
- The positive impact could be improved and expanded by giving timely notice and confirming the strategy for redirection of the discontinued fossil fuel support to the renewable sector.

2. What activities would strengthen the supply chain's ability to transition into new energy technologies and how could these be delivered?

- Direct support for broader industry to decarbonise is essential, as they currently face rising costs and energy prices. Enabling them to reduce energy use and shift to cleaner ultimately zero carbon energy is vital to retain competitiveness internationally. They could demonstrate UK-delivered renewable energy and clean technology solutions – showcasing the ability to decarbonise the economy at scale. Following COVID-19 challenges, this would be a clear demonstration of "Building back better".
- Clear and stable UK energy policy which shows how the transition to zero carbon will be achieved is essential to attract the investment necessary to deliver the change. The milestones set out in the Energy White Paper (https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future) is a good first step but further policy development will be needed.
- Increase renewable energy diversity, recognise values beyond the current constraints and short-term profitability, focus on their future growth and export potential. With the right support, the UK has many potential international market leaders such as deep-geothermal energy, circular bio resources, biogas, Electric Vehicle (EV) charging infrastructure and market design including burgeoning EV to grid, micro grids development incorporating combinations of solar, battery and EV charging system, Green Hydrogen generation and distribution, Carbon Sequestration, and utilisation.

- Focus on domestic development, support all green technologies fairly through policy, funding, and media. To initially identify and focus on those sectors that will succeed in the global market. Encourage and incentivise with non-financial support (media, education, opportunities, awards, etc); while redirecting the available financial support to reduce key weaknesses in the supply chain. Creating a healthy, strong domestic renewable energy and clean technology sector is the foundation of export and influence internationally.

3. Where are the key capability gaps for the UK supply chain in taking advantage of the economic opportunities of the energy transition?

- Promoting UK experience of delivering renewable energy and clean technology solutions (both in demonstration and commercial), markets and infrastructure for energy transition, as well as the strong research capabilities as an export product. Successful British regulatory, management and financial expertise is valuable in the clean energy transition and increased international promotion of these should be considered.
- To utilise renewable energy through conversion of existing energy supply infrastructures (gas & electric grid, transport fuel stations), providing the country a clear commercial advantage which must be capitalised in the short term. However, changes to energy supply infrastructures requires direct government action and international collaboration.
- Zero Carbon / Emissions vehicle development and production, including the car and supporting infrastructure takes time. Accompanying policies are isolated between cities and insufficiently coordinated at the national level. The UK EV industry relies on imports and needs to develop its production chain.

The global energy transition:

4. What do you consider to be the main export markets and opportunities for new energy technologies or the UK supply chain?

- China. As the world's biggest GHG emitting nation who just pledged to become carbon neutral by 2060, China will likely remain the largest energy importers whilst transitioning to renewables. If China can generate 620 TWh of renewable power, it will be able to reduce crude oil imports by 100 megatons. China has high demand globally for new technologies or solutions to improve and convert the current approaches. The UK has an excellent opportunity to export its knowledge and research capabilities.
- USA. The second largest primary consumer of energy internationally. The UK and US have a historically close relationship and are both trying to redefine themselves in a period of political uncertainty. The new US administration will likely seek the UK as their close partner on renewable projects. Like the UK, the US has many homes built

without adequate consideration given to energy efficiency. Their energy transition could be a large market if the UK can demonstrate deployment and success domestically.

- India. Largely dependent on fossil fuel imports to meet its energy demands. In 2018, 46.13% of total primary energy consumption were from imported fossil fuels (includes oil, natural gas, and coal). Its dependence on energy imports is expected to exceed 53% by 2030. India has set stretching ambitions to decarbonise across the continent and needs to benefit from a range of centralised and decentralised renewable energy solutions across power, heat and cooling and transport energy and reduce their dependency on fossil fuels. The UK has a long relationship with India and supporting their energy transition should benefit not only India but also accelerate growth of UK renewable energy businesses.
- Australia. A major energy-exporter in coal and gas for decades, but they face the challenge to move away from fossil fuels. Australia is rich in renewable energy sources such as solar and wind but needs help to utilise and export them through such new energy as Hydrogen and Ammonia. The UK can aid the transition and export its knowledge on gas/electric grid management.
- South America. Brazil, Mexico, and Colombia will continue to be important oil producers and exporters, as well as Argentina given the discovery of shale oil and gas in the Vaca Muerta field. But while the Latin American oil and gas sector will continue to grow, renewable energy getting much more interesting for electricity generation. The vast agriculture industry and population growth in South America also makes them the perfect clients for the UK's biomass management sector.
- Japan. Currently produces about 10% of its electricity from renewable sources, Their Fourth Strategic Energy Plan set the renewable share goal to be 24% by 2030. As an island nation like the UK, Japan is historically conscious about its sustainability. For a highly developed renewable market, the UK could focus on the consumer side. Classic British vehicle brands are very popular in Japan and other Asian countries, and supporting brands developing luxury and passenger EVs can also promote exports.

5. What are the barriers to the UK becoming a global leader in the energy transition?

- The UK needs to direct more patient long-term capital to aid the transition. The findings of the Patient Capital Review (https://www.gov.uk/government/publications/patient-capital-review) should be implemented and a long-term, publicly held investment bank supporting decarbonisation established.
- The UK is very good at research and development (as demonstrated by the recent development of COVID-19 vaccines), but, with a few notable exceptions, historically it has lacked domestic market support that encouraged stable long-term investment. UK policy should better support the commercialisation in its own markets of the

output from the UK's excellent research and development facilities. This will provide a platform where export opportunities can be considered.

- As the UK's reserves of oil and fossil gas continue to dwindle, energy exports may become predominantly equipment and expertise. To lead on energy exports, the UK should continue to focus on scaling up UK deployment of a wide range of renewable energy and clean technologies and encourage UK companies to invest in their design, development, and production. Having a strong UK base will undoubtably make exporting easier whilst also helping to ensure a higher percentage of UK derived content in contained within the sale.
- The UK also has one of the oldest (and most efficient) energy distribution infrastructure systems, however, they are being relatively slowly adapted to accept renewable energy. The design of that infrastructure is a symptom of a national approach to infrastructure investment that all too often has been to 'make do and mend' and delay the big decisions. As we move to a more decentralised energy world, the UK will need to be at the forefront of that change or risk being left behind. If we can adapt the UK's aging infrastructure quickly, that expertise will have real value and with clear policy direction, could be a catalyst for UK companies to make more of the equipment here in the UK, and thus be able to export.
- Lack of international regulatory coordination. Decarbonisation experiences are subject to local conditions but rely on transregional cooperation to realise. The UK needs to take more responsibilities to promote green energy internationally. Finding common ground to form new partnerships and create UK friendly renewable energy markets globally will bring the UK more opportunities to export and implement its own standard internationally.
- UK businesses operate within a strong foundation of law and compliance. This is being reinforced by the need for corporations – driven by their shareholders and government - to operate their businesses responsibly under the broad Environment Social and corporate Governance (ESG). These corporate management criteria need to be adopted across the world and the UK has the potential to enable such a transition.

6. What activities are needed by the government and the industry to support UK clean energy businesses and those transitioning from oil and gas in export markets?

- Encouraging energy diversity. Energy sourced from a variety of renewable generation sources, diversifying energy sources can improve energy security, reduce emission and waste, cut cost, and support new technologies. More importantly, the new technologies will need to become the new revenue stream for the businesses transitioning away from fossil fuels.
- Ensure UK companies can compete for all UK ODA contracts on a level playing field. If we are to export more as a nation, UK companies will need to access such

opportunities. ODA projects could enable UK companies to set up a presence in overseas markets and act as a springboard for local investment in the region.

- UK Government underwrite the risks taken by SME renewable energy and clean tech companies in international ventures. Provide a service to progress promising projects and developments through all the perceived barriers associated with exporting.
- Improve the communication between research institutions and business and encourage the development and utilisation of new technologies.
- Protect Intellectual Property (IP). Work with foreign governments to ensure UK IP is protected, thus ensuring UK companies have the confidence to trade overseas. Make this an element of future trade agreements.
- Clear and consistent policy. Many nations have their support or preferential policies to support their own renewable industry, the UK should provide stable support to minimise negative effects and ensure a level the playing field for our own business and give companies the confidence to invest in the transition.
- It will be difficult to grow exports without a strong and stable home market for those products and services. This will mean a strong policy framework for deploying those products and services in the UK first to ensure a strong domestic renewable and clean technology sector.
- More media support to educate the public so they are more supportive to change. The UK lifestyle and value are still popular internationally, if raising renewable energy and environmental consciousness can be part of the value proposition, it will be a win-win for both renewable exports and the UK's international image.

7. In what parts of the supply chain should the government focus its export support for UK clean energy businesses and those transitioning from oil and gas?

Export potential will largely be a by-product of the technologies and services deployed in the UK. Therefore, government will need to widen its ambition and quickly embrace a much wider mix of technologies than it currently promotes. All forms of renewables and clean tech should be supported.

<u>Short term</u>

- The green gas sector. They share part of the infrastructure and consumers with the traditional natural gas industry, so they can accommodate more oil & gas professionals to transfer their skills.
- Sustainable biomass management is needed in many developing countries. Developing countries are the fastest-growing nations for food and agricultural waste, the UK's biomass experience and technology can help them standardise their practice and produce more cheap, green electricity to meet their growing demand.
- Gas/electric grid coordination and intelligent demand management have grown fast in the past few years. The UK can help other nations to better utilise their renewable energy to meet the market demand while reducing emissions.

- Electric car charging and 'connected systems' infrastructure, market design and software. For example, holistic solutions can be developed domestically and exported to any nation. Using big data and intelligent grid management, improving the efficiency from the grid to the plug, providing fast and waste-free charging experience. Through standardising practise, ensure a network of charging stations widely available and can be shared by all consumers.

Long term

- Green aviation. Aviation is responsible for 12% of CO2 emissions from all transport sources, compared to 74% from road transport, If the UK becomes the first country offering sustainable aviation decarbonising technology, it will increase our international standing, boost exports, and provide jobs domestically.
- Hydrogen. Germany and France announcing their green hydrogen investment for this decade, many countries see hydrogen as having the potential to be profitable before 2030. China had almost 2,000 new hydrogen-related companies registered in 2019. Also, the Netherlands is planning to build a renewable hydrogen network in the North Sea as part of the European hydrogen network. The EU has an emerging Hydrogen economy strategy.
- Marine technologies are an area of UK leadership which could be exported to markets such as South Korea and Canada, and others.

8. Where can the government add the most value internationally in supporting UK clean energy businesses and those transitioning from oil and gas?

- The UK Government will need to ensure effective domestic support is provided to those UK companies, particularly SME's, looking to export.
- Consider green energy exports in international trade agreements. Government should consult the industry representatives in these aspects to form an expert opinion to include renewable energy and clean technology in negotiations.
- Encourage international delegations, consistently promote British companies active in the renewable energy and clean technology sector and use diplomatic platforms and events to increase their international presence. Ideally, have at least one UK brand representing each type of renewable technology and circulating their name(s) whenever the technology is considered. This should be beyond the current focus on a few technologies such as offshore wind.
- Government could consider direct equity stakes and long term, patient capital funding for UK businesses in this space to avoid the early frontrunners failing due to lack of liquidity and or being bought out by international competitors. There must be a concerted effort to overcome the 'Valley of Death' between concept development and commercialisation.

Making the policy shift – timing and impacts. If you are a relevant business, what would be the impacts of these different timing options?

9. If you are a small-medium enterprise how would the timing of these different options affect you?

Many of our members have been pioneers in driving forward renewable and clean tech and would welcome a speedy transition. For a green small-medium business the sooner the policy is implemented the clearer the signals of the UK government's intentions. This will lead to more SMEs coming forward and seeking export opportunities. Work with the Trade Associations that have the relationships with the SMEs to educate and support the potential growth.

10. Do you see variable impacts on different parts of the supply chain? If so, what are these?

The technologies more closely related to the oil and gas industry, such as green gas and deep geothermal, may have stronger impact and likely positive as they enable fossil fuel jobs to transition to the clean energy sector.

11. Would these options affect players of different scales in the supply chain?

Yes.

12. Do you see any possible geographical impacts of different timing options for the policy shift?

Through the lens of the renewable energy sector, we do not see significant geographical impacts created by the timing. However, any delay in making this policy change will see developing countries reliance on fossil fuel increased in the short to medium term.

13. How could these impacts be mitigated, and how would different timings affect the ability to do so?

Impacts cannot be avoided completely even with the latest date after 2021, but an early implementation will enable an earlier adjustable period and reach the new balance faster. The existing investment portfolio could be conditionally pivoted to renewable energy developments with the requirement of UK business content greater than 20%.

14. How do these timings impact your transition plans? Is there anything that you would adjust in the proposed approach to support your transition to the fullest degree possible?

The REA wishes the government to follow the earliest time frame, to not only give the market more certainty, but also possible to have more positive results to deliver in the run up to COP 26.

If you are a member of civil society or non-governmental organisations, what would be the impacts of these different timing options?

Whichever timing option is adopted, REA stands ready to assist its members in understanding the benefits the transition will bring and helping them grow their businesses both within the UK to demonstrate capability as well as deployment internationally. We welcome implementation as soon as possible, to show the UK's strong intention of an early international renewable energy transition.

15. What are the different potential impacts of these options on climate leadership, domestically, and globally?

- March 2021: The best option in our opinion. It will be disruptive for those parts of the UK fossil fuel sector looking to find new business overseas. However, the Paris Agreement and subsequent UK leadership describes a world that needs to decarbonise quickly, and we support an early implementation of this policy. Early implementation gives a clear signal of the UK's priorities and provides stability, attracts investment, and will give confidence to the UK's renewable energy and clean technology sector.
- June 2021: The 6-month notice should be sufficient for most businesses; it is a reasonable trade-off between fast action and adequate notice but is the latest date the policy should be implemented.
- October 2021: We understand the need to synchronise with COP26 but realistically there is no need to wait for that long.
- After 2021: Delaying this much will increase uncertainty for our members and potentially damage the outcome.

16. What opportunities do you see for international collaboration towards the goals of the policy shift in the lead up to COP26 (November 2021) and how could the timing of the policy shift's implementation affect this?

- The ideal time for implementation is well before COP 26 and not during. There will be so many announcements that the UK's decision to remove overseas oil support may be overshadowed.
- Early implementation could deliver measurable results to announce at COP 26, and if the policy needs adjustment, COP 26 will be a good time to update it.
- If implemented early enough, the potential problems/benefits the policy brings may also come to light, which can be useful in the COP 26 negotiations.

17. How do you see the timing of the implementation of this policy shift fitting alongside wider work to raise global climate ambition?

We think the earlier timing is better. Climate change mitigation has been, and will continue to be, one of the key areas of global focus in the coming decades, and a

could be one of the key long-term growth markets open to the UK. All nations are investing heavily in renewable energy to not only decarbonise themselves, but also discover and occupy new markets, thus time is valuable if UK is to succeed in its export ambitions. Cessation of UK support for fossil fuel internationally clearly demonstrates this ambition and by redirecting the available support into a range of renewable energies will help the UK stand out from other countries climate ambitions. Yes, given the nascent nature of both the heat network sector and some of the technologies that will be used to power the networks, we believe it appropriate to include costs associated with commercialisation. However, given there will be projects able to go ahead faster with more established technologies, having already completed early commercialisation stages, the proposed commercialisation grant is appropriate.

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