



Image: Offshore wind turbines tower over a boat, 90 kilometers from the Danish town of Esbjerg. Reuters/Nikolaj Skydsgaard

Submission to Offshore Clean Energy Discussion Paper:

Making Australia a leader in Offshore Wind, Climate Action, Jobs

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**Friends of
the Earth
Australia**

Department of Industry, Science, Energy and Resources

About Us: Friends of the Earth Australia is a national environmental organisation consisting of seven local member groups and thirteen affiliate members, with over 65,000 supporters throughout the country. We are a member of Friends of the Earth International, the world's largest network of grassroots environmental organisations, uniting 77 national member groups and some 5,000 local organising groups on every continent. We are committed to the creation of an environmentally sustainable and socially equitable future, and campaign for a world where environmental protection, social justice and economic welfare for all people, go hand in hand.

Introduction:

Australia has no current offshore wind sector, and no enabling policy or legal frameworks to attract and guide development in the sector. At a time when the impacts of climate change are worsening and the need for undertaking transformative action that reduces emissions becomes more urgent, the draft framework into regulating offshore clean energy is a welcome addition to renewable energy and climate policy.

Offshore wind is a burgeoning renewable energy technology that has reached a greater level of maturity in the past 4 years spurred by policy support and financial incentives, particularly in Europe.

If Australia is to seize the opportunities and maximise the benefits of the offshore wind sector, the Commonwealth should seek to learn from the successes of comparable jurisdictions, particularly in Europe.

A strategic, integrated approach to offshore wind is more likely to deliver for climate, jobs, investment and the reliability of the energy system than a purely market-led approach.

The increasing severity of the climate crisis requires a transformation of social and economic systems in order to mitigate severe climatic impacts that pose an existential threat to human life and ecosystems.

In 2018, the IPCC's Special Report found that limiting global warming to well below 1.5°C would require "rapid and far-reaching" transitions in land, energy, industry, buildings, transport, and cities¹. To reach this goal, greenhouse gas emissions will need to peak in 2030 at the latest and reach net-zero by 2050. If global warming exceeds this threshold, climate impacts are more likely to become more extreme, and countries would be forced to rely on experimental, unproven technologies to remove CO₂ from the atmosphere.

We still have a window to act with urgency to reduce emissions rapidly using proven and commercially viable technologies.

The transition away from fossil fuels to renewable energy is already occurring in the electricity sector, evidenced by the success of Australia's onshore wind and solar industries that now represent approximately 20% of electricity supply in the National Electricity Market (NEM).

Building an offshore wind sector is a significant opportunity to accelerate the transition to renewable energy, deliver good jobs and justice for workers in fossil fuels industries, and sustainable development for regional communities. It could have significant economic

¹ International Panel on Climate Change, Summary for Policymaker of IPCC Special Report on Global Warming, 2018
<<https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>>

benefits from helping to encourage the creation of domestic manufacturing capacity to make components required by an emerging offshore wind industry. Purposefully building Australia's offshore wind framework as part of a 'Just Transition' is most likely to deliver social and economic benefits to these communities.

Offshore Wind - Outlook

Between 2010 and 2018, the global offshore wind sector grew by 30 percent, with Europe leading the industry and representing over 80 percent of offshore wind installations globally as of 2018. The vast majority -- nearly 90 percent -- of the world's offshore wind installations are in the North Sea and the Atlantic Ocean².

Europe now has a total installed offshore wind capacity of 22,072 MW. The UK has the largest amount of offshore wind capacity in Europe, with 45% of all installations. Germany is second with 34%, followed by Denmark (8%), Belgium (7%) and the Netherlands (5%).³

All of these countries have set clear targets to support the rollout of offshore wind.

In 2018, a total of 4.5 gigawatts of new offshore wind capacity was added globally⁴.

In its inaugural Offshore Wind Outlook 2019, the International Energy Agency (IEA) predicts that global offshore wind capacity is set to increase by at least 15-fold and attract up to US\$1 trillion in investment by the year 2040.⁵ Under current investment plans and policies, the global offshore wind market will expand by 13% per year, passing 20 GW of additions per year by 2030.

Through its global analysis of offshore wind resources, the IEA found that offshore wind has the technical potential to generate more than 420 000 Terrawatt hours (TWh) per year worldwide. Australia has a total technical potential of 16,132 TWh per year, which is vastly beyond current and predicted electricity demand but demonstrates the potential⁶.

According to the International Energy Agency, supportive policy frameworks are driving down the technology and investment costs in offshore wind, with the levelised costs of energy predicted to fall by nearly 60 percent by 2040⁷

In both the UK and Denmark, where the offshore wind sector is mature, governments have taken an active role in the early development of the offshore wind sector including developing strategy, regulatory frameworks, establishing agreements with industry, setting generation capacity targets, and securing finance for projects and enabling infrastructure

² International Renewable Energy Agency (IRENA), 'Future of Wind - A Global Transformation Paper', October 2019.

³ Wind Europe, Offshore Wind in Europe Key trends and statistics 2019.

⁴ IRENA, 2019, pg. 42.

⁵ International Energy Agency, 'Offshore Wind Outlook', 2019.

⁶ *Ibid*, pgs. 50, 70.

⁷ *Ibid*, pg. 12.

such as transmission through financial incentives. Jurisdictions like New York State (NY State) that are now beginning to build their offshore wind industries are learning from and implementing some of these key lessons. Australia has the opportunity to learn from these successes and create a best practise framework that will help ensure the long-term success of offshore wind.

Learning from Successes: UK, Denmark and New York State

UK Experience

The UK constructed its first offshore wind farm, the 60MW North Hoyle project in 2003. The country is currently home to 8 GW of offshore wind capacity, with thirty-nine projects now constructed in its territorial waters, making it a top jurisdiction for offshore wind. In 2019, the UK launched a commitment to source 30 percent of its electricity from offshore wind by 2030, announcing an Offshore Wind Sector Deal that would drive as much as \$40 billion in investment into the sector and create close to 20,000 jobs⁸.

In the UK, the Crown Estate manages the seabed around England, Wales, and Northern Ireland, and is responsible for leasing access to offshore wind development in the Exclusive Economic Zone (EEZ) within the declared 'Renewable Energy Zone'⁹. The Crown Estate ran leasing rounds or auctions in 2001, 2003, 2008 and most recently in 2019.

The Crown Estate has recognised the need for a good evidence base to effectively define the best offshore wind areas. Through the use of priority research projects by the Crown Estate and Strategic Environmental Assessments, the UK is able to effectively research and define optimal offshore wind zones that minimise impacts on sensitive marine environments and any possible land use conflicts. In conjunction with this strategic environmental assessment process, the Crown Estate runs leasing rounds or auctions to encourage investment in the best sites for offshore wind. Project developers are then able to submit project bids to these areas, with planning are conducted separately by the Department for Business, Energy & Industrial Strategy¹⁰.

According to CarbonTrust, the strike prices achieved in the UK's most recent 2019 offshore wind auctions are close to long-term wholesale electricity prices, suggesting price reductions are thanks to investment in the supply chain and ongoing technological innovation in the sector¹¹. Prices for building offshore wind are now considered competitive with costs of building new gas projects, and are expected to become competitive with operating gas

⁸ Greentech Media, 'UK to get 30% of electricity from offshore wind by 2030', 2019
<https://www.greentechmedia.com/articles/read/uk-to-get-30-of-electricity-from-offshore-wind-by-2030>

⁹ The Crown Estate, 'Guide to an Offshore Wind Farm', 2019
<https://www.thecrownestate.co.uk/media/2860/guide-to-offshore-wind-farm-2019.pdf>

¹⁰ The Crown Estate, page 17.

¹¹ CarbonTrust, Analysis: Record-low price for UK offshore wind cheaper than existing gas plants by 2030, September 2019
<https://www.carbonbrief.org/analysis-record-low-uk-offshore-wind-cheaper-than-existing-gas-plants-by-2023>

plants by 2030. These factors will likely continue to drive cost reductions in the sector, and are a key element of offshore wind policy in Europe.

Denmark Experience

Denmark is a key leader in offshore wind industries globally, and provides a strong example of the benefits of undertaking a strategic, integrated approach to the development of the sector that aims to expand offshore wind and create economies of scale and supply chains to drive price reductions.

The Denmark Energy Agency is the lead agency for planning and assessing offshore wind projects, acting as the one-stop shop for undertaking strategic environmental assessment of potential offshore wind sites, assessing environmental impacts and license applications.

Denmark's licensing regime allows room for both a strategic, government led approach utilising tenders, and an 'open-door' approach that responds to applications from industry. The tender system is comparable to the use of renewable energy auctions and Contracts for Difference (CfD) by the ACT and Victoria that have driven new investments in onshore wind and solar in recent years. Most of Denmark's offshore wind projects have been developed through the use of government tenders, and the country now has 1.3 GW of capacity installed.

New York State Experience

In the US, New York State (NY State) is driving investment into offshore wind through its 'Offshore Wind Master Plan', revealed in 2018. Through the Master Plan, NY State is taking a proactive role in guiding development of the sector through a range of activities that include:

- Setting a generation capacity target of 2,400 megawatts for offshore wind.
- Conducting detailed studies of offshore wind resources, infrastructure requirements, workforce opportunities, the marine environment and land uses.
- Assessed offshore wind procurement options, including the use of publicly run renewable energy auctions and utility-owned generation.
- Identified optimal offshore wind areas.

The creation of highly detailed assessments of offshore wind resources, supply chain, marine environment etc. has enabled NY state to effectively identify the best areas for offshore wind development that maximise output while minimising land use conflict and ecosystem impact.

NY State's target of 2,400 megawatts of offshore wind is expected to deliver 5 million tonnes of CO2 reduction by 2030, roughly one third of the state's planned greenhouse gas

emissions cuts¹². Critically, the state has introduced measures requiring all new wind projects are covered by pre-hire collective bargaining agreements or Project Labor Agreements brokered with unions involved in the construction and operation of projects¹³.

Case Studies Summary:

Some of the key ingredients in each of the successful case studies cited above include:

- Use of a consolidated energy agency that acts as a 'one-stop shop' responsible for sector planning and licensing.
- Strong role for government in setting targets, planning, research and finance to strategically identify and develop optimal offshore wind sites.
- Use of financial mechanisms such as tenders and government purchasing to secure investment, build supply chains and deliver cost reductions long-term.

If Australia is going to secure the significant benefits of offshore wind for jobs and climate action, it should seek to incorporate all of these factors into a regulatory framework.

¹² New York State Energy Research and Development Agency, 'Offshore Wind Policy Options Paper', January, 2018

¹³ The Worker Institute, State Commitment to Wind Industry Workers, Skinner Says, 2018
<https://www.ilr.cornell.edu/worker-institute/news/state-commitment-wind-industry-workers-historic-skin-ner-says>

Offshore Wind Framework Recommendations:

Friends of the Earth believe that offshore wind presents a significant opportunity for Australia to undertake urgent action on climate change, transform the energy system and deliver for workers and communities currently reliant on fossil fuels industries.

The scale of offshore wind projects could in a very real sense be game changer for Australia's energy system both in terms of decarbonising electricity and delivering a reliable energy supply as the phaseout of aging coal and gas facilities begins.

By undertaking a strategic, integrated approach to the sector, the Commonwealth will be better placed to deliver these outcomes. The following recommendations set out a number of key ingredients to achieving this.

Make Action on Climate Change and Emissions Reduction a Guiding Principle

As a signatory to the historic Paris Climate Agreement, Australia has committed to undertake actions to reduce greenhouse gas emissions across the economy to limit global warming to well below 2°C and pursue efforts to limit warming below 1.5°C above pre-industrial levels¹⁴.

Australia currently has a target of reducing greenhouse gas emissions by 26-28% on 2005 levels by 2030. The Paris Climate Agreement commits the Australian government to review mitigation targets every five years to build ambition over time, informed by a global stocktake. This exists to ensure governments ratchet up efforts over time so that targets are actually met. In addition to the federal government's commitment, every state and territory has set a policy goal of achieving net-zero emissions by 2050, which is a legislated target in Victoria.

The lack of reference to climate change and reducing emissions is a startling omission in the proposed offshore wind framework.

Decarbonisation is a core purpose and benefit of building an offshore wind sector. Reducing greenhouse gas emissions as part of efforts to tackle the climate crisis should be made a key principle of the offshore wind regulatory framework. Emissions reduction should inform planning for the sector and the granting of licenses.

Australia is not on track to deliver on its very modest commitments to the Paris climate agreement, and legal questions remain about the viability of attempting to use Kyoto carryover credits to make up a significant shortfall in emissions reduction. The federal government needs to ramp up emissions reduction efforts if it is going to meet existing targets and any future targets as the international community ratchets up climate goals under the Paris agreement.

¹⁴ <https://www.environment.gov.au/climate-change/government/international/paris-agreement>

The International Renewable Energy Agency reports that “the gap between observed emissions and the reductions that are needed to meet internationally agreed climate objectives is widening”. It finds that accelerating investment in renewable energy is necessary to bridge this gap, and will improve energy security while bringing substantial socio-economic benefits.

As offshore wind farms are able to access higher and more consistent wind speeds, projects are likely to generate electricity at higher capacity factors with lower variability. As a form of ‘Variable Baseload’, offshore wind can make a significant contribution to reducing greenhouse gas emissions, and will be a high value addition to the existing electricity system that complements onshore wind and solar.

The electricity sector is the largest domestic contributor to Australia’s emissions, and developing an offshore wind sector is a significant opportunity for Australia to take leadership on climate change while bolstering electricity supply and creating jobs. This will only be possible if the federal government in conjunction with the states are able to develop an effective and strategic policy framework. In the case studies described above, countries with successful offshore wind sectors have integrated offshore wind frameworks with climate policy - Australia should too.

Recommendation: A key principle of the framework should be to guide and develop the offshore wind sector to reduce greenhouse gas emissions as part of action on the climate crisis.

Create a dedicated regulator for offshore renewable energy

If Australia is going to ensure the success of the burgeoning offshore wind in an already highly complex energy system, the best approach is to establish an independent agency specifically tasked with regulating offshore renewables. This should sit within the Energy portfolio to ensure development of the sector is harmonised with other key planning processes and to prevent unnecessary fragmentation of policy priorities.

The discussion paper proposes that the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) be made the regulator for offshore wind -- this proposal is unlikely to see Australia seize the significant opportunities in the sector and may lead to greater fragmentation of energy agencies and regulations.

As the institutional makeup of Australia’s energy system is already highly complex and stretched across multiple state, federal and private agencies, the proposal to nominate NOPSEMA as the offshore wind regulator is likely to make offshore wind regulation more complex, not less.

NOPSEMA exists to regulate the activities of the offshore oil and gas sector, is funded through cost-recovery measures on the petroleum industry, and should not become the defacto regulator for other marine users.

The chief purpose of building offshore wind projects is to generate electricity from a renewable resource to supply domestic users with power while reducing greenhouse gas emissions, not to extract a finite resource for export to commodity markets.

The chief purpose, physical assets, operation and risks associated with offshore wind are fundamentally different to offshore oil and gas, a point recognised by Department representatives at the Melbourne consultation session.

When offshore wind projects come online, they will have a significant impact on the electricity sector by providing a source of 'Variable Baseload' that will deliver reliable, renewable electricity to the grid.

The Australian Energy Market Operator is currently developing its 'Integrated System Plan' or ISP as the energy system undergoes a transition away from generating electricity using large, single fossil fuel generators to distributed renewable energy resources. This system-wide plan is assisting governments, energy agencies and the private sector address issues such as variability of renewable generation and long-term transmission planning. A key element of this is identifying 'Renewable Energy Zones' that can help ensure investment in new renewable generation is targeted to areas with the best resource and access to existing and future transmission lines.

An early challenge of the sector will be integrating projects into the existing energy system -- development of regulations should be integrated with developments in energy system planning like AEMO's ISP. This role will be better achieved by a dedicated offshore renewable energy agency within the Energy portfolio. Development of offshore wind projects -- particularly those proposed near to existing transmission and ports -- have the potential to offset the need for extensive new transmission infrastructure in inland Australia, but this must be planned effectively.

As identified in the successful case studies above, sitting key responsibilities within dedicated energy agencies has been critical to realising the benefits of the offshore wind sector.

At this early stage of the sector's development, it's important that offshore wind receives the resources and attention needed to become a successful industry long-term. Creating a dedicated regulator will better enable governments to set strategic goals for the sector, integrate offshore wind with the existing energy system and agencies, avoid further fragmentation of the energy system and manage the specific risks associated with the offshore wind sector.

Recommendation: Create a dedicated offshore renewable energy regulator that sits within the Energy portfolio that can carry out a strategic, integrated approach to building the sector.

Mobilise the Clean Energy Finance Corporation to drive investment in new offshore wind projects

The Clean Energy Finance Corporation (CEFC) has played a key role in mobilising investment in renewable energy technologies since its inception in 2012, and is responsible for investing \$10 billion in clean energy projects on behalf of the Australian government. Since 2013, the CEFC has committed more than \$2 billion in debt finance to accelerate the deployment of almost 3 gigawatts of renewable energy projects, bolstering energy supply while reducing emissions, transforming the electricity system and securing the development of the onshore wind and solar sectors.

The CEFC can play a similar role in the early stages of offshore wind to ensure the sector can more easily attract finance for new projects. The federal government gives guidance to the CEFC through its 'Investment Mandate'¹⁵, which should be updated to include offshore wind to ensure the corporation is able to invest in the sector.

Recommendation: *Incorporate offshore wind into the CEFC's investment mandate to help drive investment in the sector and develop local supply chains.*

Industry Planning and the Just Transition:

Australia's energy system is currently going through a largely unplanned transition away from aging fossil fuel generators to distributed sources of renewable energy. There is an urgent imperative to act on climate change, and hasten the phase-out of industries that burn coal and gas to protect people from the catastrophic impacts of climate change. Renewable energy is becoming more economically competitive and is increasingly driving out the use of fossil fuels in the electricity sector.

Additionally, governments and companies now face increasing pressure to divest themselves from fossil fuels as the international community rallies to prevent the worst

In a highly privatised energy system, there is little policy in place to protect workers in the fossil fuels industries that are displaced by the phaseout and closure of coal, oil and gas. An important task for governments is to create new sources of sustainable economic development that reduce emissions and deliver for these communities.

A national Just Transition Authority should be established to guide this process.

Offshore wind is a jobs-rich sector. Offshore wind farms are large energy projects that require a high level of capital investment and create a large number of jobs during construction. The operation of offshore wind farms is also more highly labour intensive than onshore projects and will require a significant workforce to operate. New training standards will be required for the offshore wind workforce, which is likely to include workers moving out of the offshore oil and gas industries as well as the coal sector.

¹⁵ Clean Energy Finance Corporation Investment Mandate Direction 2019

Offshore wind supply chains also present the opportunity to create new opportunities in manufacturing, transport, logistics and ongoing servicing.

All of these could be located in areas that currently depend on fossil fuel generation. The Star of the South offshore wind farm proposed for Gippsland, Victoria, is a good example. The region is currently home to the state's ageing coal fired power plants, as well as offshore oil and gas industries. The project has the potential to create thousands of jobs during the manufacturing, construction and operation of the project. The Latrobe Valley has a real opportunity to establish itself as a servicing hub for the offshore wind industry, but this will require leadership and clear industry plans from government.

It is common practise for the renewable energy companies to outsource the construction of large-scale projects to labour hire firms, which poses a threat to the wages and conditions of workers in the sector¹⁶. At a time of rising wealth inequality and significant shifts in the energy sector, building the offshore wind as part of a just transition away from fossil fuels would strengthen protections for workers in new industries. NY State's requirement for all new offshore wind projects to have pre-construction labour agreements in place is a good example of how this can be implemented for new industries, and could be adopted by Australian governments in combination with local content requirements.

If Australia is going to use offshore wind to deliver for communities that are currently dependent on fossil fuels, it will need to develop clear industry plans that maximise the economic benefits for local communities, capture manufacturing opportunities, and develop long-term supply chains that continue to deliver good jobs.

A dedicated offshore renewable energy agency backed by the Clean Energy Finance Corporation is more likely to deliver these broader economic benefits to communities than a purely market-led approach where decisions are more likely to be made on the basis of profitability only.

Recommendation: *Alongside the offshore wind regulatory framework, the federal government in conjunction with the states should establish a sector plan for offshore wind that can deliver good jobs and a just transition for workers and communities currently relying on fossil fuels. This would include measures to protect the wages and conditions of offshore wind workers throughout the supply chain and local content requirements to maximise local manufacturing opportunities.*

Harmonised Safety Regulations:

As highlighted by representatives from the Maritime Union of Australia and Electrical Trades Union at the public consultation session in Melbourne, there is some risk that multiple levels of health and safety laws could apply to workers in the offshore wind sector who move across state and commonwealth boundaries during construction and operation. This could create unacceptable levels of compliance to both workers and the industry.

¹⁶ Maritime Union of Australia, 'Putting the Justice in Just Transition: Tackling Inequality in the New Renewable Economy', 2019

Health and safety should be a high priority for the development of new offshore industries, and this must be reflected in robust and harmonised legislation.

Recommendation: *The Commonwealth should ensure that health and safety requirements for offshore wind are harmonised to ensure maritime workers are not unduly impacted or put at risk during the construction and operation of offshore wind farms.*

Undertake Strategic Assessment to declare offshore wind zones

In the proposed framework, the declaration of wind areas appears to be a largely market-led approach based on responding to projects proposed by developers.

This is likely to create a higher barrier to entry at the beginning of the sector's development, as offshore wind proponents will have to undertake significant amounts of research to assess whether a proposal is worth making. Given the complexities of establishing an entirely new sector, there is key role for government in helping guide offshore wind investment to the best sites.

Identifying offshore wind zones should proceed through a process of Strategic Environmental Assessment to ensure sensitive marine ecosystems are less likely to be impacted and to maximise emissions reduction by accessing the best offshore wind resources

As the knowledge base for marine areas is improved through this process and the sector develops, the Commonwealth should take an adaptive management approach, and could consider updating the framework based on greater understandings of marine ecosystems. This could include updating any triggers in the Environment Protection and Biodiversity Act to ensure sensitive marine ecosystems are protected from offshore energy projects.

As seen in the case studies above, government has played a stronger role in identifying and declaring the best offshore wind energy zones/areas as part of strategic development of the industry. Australia can learn from the UK and Denmark where governments maintain both a strategic and 'open-door' approach that can guide development and respond to private sector proposals.

As mentioned above, the AEMO is developing its Integrated System Plan (ISP), including the establishment of 'Renewable Energy Zones'. The ISP currently recognises the potential for offshore wind within the Gippsland Renewable Energy Zone in Victoria, accounting for the landmark Star of the South offshore wind proposal. This is encouraging.

The ISP also includes an assessment of renewable energy resources, matched to existing transmission to aid in system planning. However, as yet it does not include an assessment of offshore wind potential.

The government should set out to clearly identify the best offshore wind areas, and integrate this with AEMO's ISP. This would include assessing offshore wind resources matched to existing transmission and future transmission needs, and an analysis of existing marine uses and potential ecosystem impacts. This could be carried out by the dedicated offshore renewable energy regulator, or by a combination of AEMO and the CSIRO, which developed the Wind Atlas to aid development of the onshore wind sector.

This would enable the government to strategically identify the best places to develop offshore wind, a key step at this stage of the sector's development.

Recommendation: The government should undertake a strategic assessment of offshore wind resources integrated with existing energy system planning by the AEMO, with the goal of identifying the best offshore wind sites and minimising ecosystem impacts.

Role of the Minister

There is a lack of clarity around the role of the federal Minister, and what specific guidelines are in place to inform the Minister's decisions. In order for the community to have confidence in ministerial decisions it is important there are clear, transparent guidelines for how the Minister will assess project proposals and the declaration of offshore wind areas. This should include reference to the guiding principles of the framework, including action on climate change and reducing emissions.

In recent years, Australia's energy policy discourse has become a highly politicised arena. Given the significant economic opportunities presented by offshore wind, it's important that policy development and all decisions related to Ministerial decisions be made highly transparent.

Decommissioning Bonds:

A consistent decommissioning framework for offshore projects should consider the variation in environmental risks posed by different industries. For example, the exploration, excavation, construction and drilling of offshore oil and gas wells poses higher environmental risks than the construction of offshore wind turbines.

Unlike the offshore petroleum industry which extracts finite resources, wind energy projects can be repowered at the predicted end of life and continue operating with updated technology.

In developing the sector, state and federal governments should take a long-term perspective that sees offshore wind as long-term assets that continue to provide a sustainable source of electricity into the future, rather than short-term assets that extract resources for a limited amount of time. Where it occurs decommissioning should seek to maximise the reuse and recycling of offshore wind components wherever possible.

It is sensible to require bonds to ensure that the private sector is able to cover the costs of decommissioning assets if and when projects reach the end of their operating life. However,

the design of these bonds is significant to ensure that costs do not become prohibitive for renewable energy proponents, which would act as a brake on potential emissions reduction.

While this is sensible, it is unclear why decommissioning bonds have been proposed for the offshore wind sector when there is no requirement for bonds to cover the costs of rehabilitating offshore oil and gas projects.

As identified in the recent review into decommissioning bonds in the offshore petroleum sector, there are approximately 136 fixed offshore petroleum projects likely to require decommissioning and rehabilitation in the coming decade¹⁷. Additionally, over the next 50 years, the offshore petroleum industry's decommissioning liability is estimated at \$21 Billion.

If and when an offshore wind project is decommissioned, this will involve the complete or partial removal of wind towers and some transmission from the sea floor, and the transportation of these and other components to shore. In contrast decommissioning offshore petroleum assets involves removing drill rigs and drills, as well as rehabilitating wells and safely containing any toxic waste produced in the process, an overall more intensive process.

Recommendation: The government should develop a consistent framework for decommissioning bonds for both the offshore wind sector and the oil and gas sector that fairly accounts for these differing environmental impacts and costs.

Conclusion:

The offshore wind sector represents a significant opportunity to ratchet up Australia's ambitions to act on climate change, rapidly decarbonise the electricity sector, deliver a new source of good jobs and reliable electricity into the grid.

If Australia is going to have hope of seizing and maximising the benefits for the climate and local jobs, governments will need to take a strategic approach to building the sector that is integrated with wider energy system planning, develops local supply chains and protects workers and communities transitioning away from fossil fuels.

We look forward to the outcome of the consultations on the discussion paper and contributing to further development of a framework for offshore wind.

¹⁷ Department of Industry, Innovation and Science, 'Discussion Paper: Decommissioning Offshore Petroleum Infrastructure in Commonwealth Waters', 2019