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bp Australia submission in response to the Electricity and Energy Sector Plan Discussion paper

bp Australia welcomes the opportunity to provide our views in response to the Electricity and Energy Sector Plan discussion paper. Decarbonizing the energy sector including electricity, gas and liquid fuels will be central to achieving Australia's decarbonization objectives, reducing emissions within the energy sector and facilitating emissions reductions in other sectors. The Electricity and Energy sector plan provides an avenue for government to set an ambitious but realistic path to net zero and to set out the suite of policies it will deploy to support the energy transition.

About bp

bp's purpose is to reimagine energy for people and our planet. Our ambition is to become a net zero company by 2050 or sooner. , bp aims to be net zero across our operations (scope 1 & 2), in our oil and gas production (scope 3) and in the energy products we sell (life-cycle emissions intensity). For each of these we have also set short-term (2025) and medium-term targets (2030). You can read more about our net zero plans and progress in our 2024 Net zero ambition report.

Globally, our strategy is to transition from an international oil company to an integrated energy company. That transition is underway – between 2019 and 2022 the share of our annual capital investment going into what we call our transition growth engines (bioenergy, convenience, EV charging, renewables and power, and hydrogen) grew from 3% to 30%. We also continue to invest in oil and gas – investing in meeting the needs of today's energy system alongside investing to help scale lower carbon alternatives. We believe that the global energy transition needs to be not just rapid enough to meet the Paris climate goals, but also orderly. We aim to:

- Reduce our oil and gas production by 25-30% (from 2019 levels) by 2030 and lower emissions while keeping up cash flow by high grading our hydrocarbon portfolio and growing bioenergy.

- Invest in low-carbon energy to rapidly scale up in solar and offshore wind and develop new opportunities in carbon capture and clean hydrogen.
- Install 100,000 EV charging points and opening more than 1,000 new strategic convenience sites worldwide.
- Progress five transition growth businesses: bioenergy, convenience, EV charging, renewables, and hydrogen by 2025.

In addition, bp owns 50% of Lightsource bp, an independently operated global business. In November 2023, bp agreed to take full ownership by acquiring the remaining 50.03% interest. Subject to regulatory approvals, the transaction is anticipated to be completed by mid-2024.

About bp Australia

All elements of bp's global strategy are present in Australia.

- We've substantial gas interests in Western Australia as a foundation partner of the Woodside-operated Northwest Shelf Joint Venture (JV) and are developing the Browse project with our JV partners. We're working on ways to decarbonise these operations to ensure longer term supply of gas for both domestic and export markets.
- We're working with partners exploring the possibility of a Carbon Capture and Storage (CCS) hub, Angel, off the coast of Western Australia. This proposed offshore large-scale, multi-user CCS facility near Karratha in Western Australia offers the potential capture around 5 million tonnes per annum (mtpa) of emissions from existing hard-to-abate domestic and international sources, with the opportunity to expand.
- We are operator of the Australian Renewable Energy Hub (AREH) in the Pilbara, planned to provide green electrons and green hydrogen in the hard to abate sectors of the Pilbara and, in time, the Asia Pacific We're transitioning our Kwinana refinery site into an integrated clean energy hub:
    - The Kwinana Energy Hub has entered into front-end engineering design (FEED) for the manufacture of up to 10,000 barrels per day of sustainable aviation fuel (SAF) or renewable diesel (RD); and
    - We're also advancing plans for producing over 14,000 tonnes of green hydrogen per annum as part of our H2Kwinana project. H2Kwinana is a recipient of a federal government Hydrogen Hub funding grant and has been shortlisted for the Hydrogen Headstart program.
- We are working on a further hydrogen project – GERI at Oakajee in the Mid-west and secured access to around 105,000 hectares for future renewables generation.

- Over 1GW developed and financed, and 7.5GW under development of renewable generation in Australia through Lightsource bp.
- And alongside an established retail-convenience and B2B fuels business, we're rolling out electric vehicle charge points through our bp pulse brand, and exploring options with partners to decarbonise heavy transport, including hydrogen refueling.

Key messages on energy transition policy

Australia is advantaged with abundant renewable energy resources that provides it an opportunity to be ambitious in its own energy transition and to support the transition of our trading partners with the export of low carbon energy and products.

However very significant investment will be required to realize this potential and substantial new policy is needed to provide investment signals across the whole energy system. This includes policy to:

- facilitate electrification of demand not currently connected to a grid for example the significant future demand for renewable electricity in the Pilbara,
- build momentum, scale, and broaden use-cases for Australian green hydrogen by signaling and scoping a Hydrogen Headstart Wave II, and/or a national hydrogen target, and
- drive the scaling of production and use of renewable liquid fuels, for example by the implementation of a low carbon fuel standard,
- better accommodate large electricity users and electric vehicles.

Australian low carbon energy investments will compete for capital, so an investor frame will need to be at the heart of energy transition policy. Australia's energy transition will require the coming together of investors, customers (demand) and government.

There is a role for government in co-investing alongside the private sector in the energy transition. Ultimately the success of these government investments will rely on the sustainable economic future of the low carbon energy projects they support. This will mean policy that drives demand and uptake for low carbon energy will also be needed.

It makes sense to electrify where we can, but there will be some energy uses that can't be electrified. We will also need low carbon energy like hydrogen and renewable fuels. Natural gas will continue to have a role to play in the energy mix for decades to come, so we need to focus on reducing emissions from its production supply and end uses. CCUS will also have a role.

Mobilising investment to transform energy

Additional policy needed to provide investment signals across the whole energy system

At bp, we encourage Australia, and other nations, to accelerate national climate ambitions through their Nationally Determined Contributions (NDC) and the implementation of policy to achieve these. We support the Paris Agreement goals, including efforts to limit temperature rise to 1.5°C above pre-industrial levels. The IPCC has concluded that improving the chances of limiting temperature rises to 1.5°C will require global net zero by 2050 and involve far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), as well as industrial systems.

To be meaningful, national targets need to be underpinned by policy frameworks to incentivize and support these economy-wide transitions. All sectors, particularly the energy sector, will need to contribute and be subject to some form of emissions reduction policy.

bp considers economy-wide carbon pricing as the most effective and efficient way to reduce emissions but understands that the Australian government intends to take a more sectoral approach. Given this, we believe that policies providing an explicit or implicit price on emissions should be considered.

We acknowledge the progress that has been made and the role existing measures will play in decarbonizing Australia's energy system such as the reformed safeguard mechanism, the capacity investment scheme and the hydrogen headstart. However, current policy does not provide investment signals across the whole energy system (e.g., large parts of the future electricity sector are not eligible under the CIS, incentives to fuel switch and electrify under the Safeguard mechanism can be improved, there is very limited incentives to decarbonize liquid fuel use and a large proportion of gas demand does not face an incentive to decarbonize). bp recommends that the Electricity and Energy Sector Plan set out a suite of policies that provides investment signals to reduce emissions across the whole energy system.

Policy to drive the energy transition will need to be ambitious enough to drive the necessary investments. At bp we think that would require a carbon price or equivalent incentives in the order of USD100/t CO2e by 2030 to deliver the investment in renewable electricity, hydrogen, CCUs and biofuels needed to achieve the Pairs Agreement goals.

We also believe the energy transition will require the uptake of a range of different abatement solutions and technologies. Energy users will deploy different solutions depending on their specific circumstances and energy needs. It is important therefore that policy in support of the energy transition remains open to all options and does not unduly disadvantage any viable options. bp prefer market-based policies that allow different abatement solutions to compete, with incentives aligned to the emission reduction outcomes.

An investment frame should be at the heart of energy transition policy.

Australian clean energy projects, investments in supporting infrastructure and supply chains will compete for capital that can be deployed in Australia or elsewhere. We encourage the Australian government to design its policy with a view to what conditions investors are looking for to deploy their capital.

To commit capital, investors need confidence in:

- Economics of the investment: that there will be an adequate return on their Australian investment, both in its own right, and relative to other investment opportunities in other markets.

  Often these will be large capital investments in long-lived assets, where the investor is assessing the profitability of the projects over several decades. Investors will preference markets where there is stable and forward-looking policy.

  It often takes several years to develop projects to financial close and requires significant investment to get projects to operation. Investors will be looking for visibility today for those policy settings to underpin the economic case for those projects needed to support emissions reductions in the 2030-35 period. Governments can't delay in getting those policy signals in place.

  Australia's energy system, particularly for shared infrastructure, makes use of regulated returns on capital. New arrangements may need to be developed, as new energy infrastructure is built to support the transition. Careful consideration will be needed to balance the attractiveness to investors with the costs to consumers. Government may have different expectations to private investors for its return on capital, so there is a role for public-private partnerships in major capital investments such as electricity infrastructure. This may include both Government(s) providing both equity and debt to major energy investments needed.
- Demand: investors are looking for projects that can secure offtake. For many investments this will require closing the gap between the costs, including an adequate return, and the willingness (ability) to pay of the customers. That is, it will typically

require some intervention to close the green premium and encourage customers to uptake the low carbon energy solutions.

Australia's advantaged renewable energy resources provide an opportunity for it to be ambitious in its own energy transition and to supply low carbon energy to global markets. However, investors are indicating a preference for Australian projects that can also supply domestic demand. Australia has had a successful history with policies such as the Renewable Energy Target and more recently the reformed Safeguard mechanism that have provided clear demand signals and underpinned important investment decisions.

Australia will also need frameworks and systems to help customers credibly differentiate the low carbon energy from its alternative since this is the basis of its value. Policies such as the Guarantee of Origin will be essential to underpin demand and therefore investment.

- Competitive, known and secure supply chains: Australian clean energy projects will need to compete in global supply chains to secure their inputs, critical equipment and technology and labour. Government has a role to play in supporting the efficient expansion and diversification of these supply chains, including investing in supporting infrastructure such as ports and roads to facilitate.
- Skilled workforce: access to the skilled labor needed to execute will be key to attracting investors to Australia. The scale and pace of the transition needed will require attracting existing skilled labor as well as upskilling new labor. Government can support by continuing to prioritize its skilled and education programs, as well as consideration for skilled migration.
- A supportive investment environment: investors will also look at the overall environment here in Australia considering matters such as sovereign risk, foreign direct investment laws, tax arrangements, ease of doing business, clear and timely path for all relevant approvals and social license.

Government has a legitimate role co-investing in the energy transition.

We congratulate the government on the investment's already made in support of Australia's energy transition. These investments have had a material difference in the investment environment in some parts of the energy sector but are not yet sufficient to truly realise Australia's 'green energy superpower' ambition. We also welcomed the Prime Minister's announcement of the forthcoming "Future Made in Australia Act", though look forward to seeing the detailed proposal in the context of the May 2024 Budget to better understand how it will support the objectives of the Electricity and Energy sector plan.

We encourage the government to consider a range of different funding structures and financial incentives in forming its energy transition policy:

- We see a role for concessional finance such as that offered by the Clean Energy Finance Corporation and the National Reconstruction Fund. We encourage coordination between these different streams to maximize impact.
- We note concessional finance will not always be the solution and encourage continued development of production-based funding mechanisms where warranted, like those being deployed under the Capacity Investment Scheme and Hydrogen Headstart programme.
- We see an ongoing role for development and capital grants such as those provided by ARENA.

We note that Government funding and financial incentives can only go so far and be useful for so long. Ultimately the success of these government investments will rely on the sustainable economic future of the investments they support. This will mean policy that drives demand and uptake for low carbon energy will also be needed.

Enabling electrification for a smooth transition

Electrification will have a central role, but won't be the only solution to transition Australia's energy sector

bp expects that electrification of the energy system will play a key role in the coming decades as Australia and the world move to grow and decarbonise their economies.

Our Energy Outlook 2023 estimates that the share of electricity in global final energy consumption will increase from around a fifth in 2019 to between a third and a half by 2050, depending on the scenario. The vast majority of the growth in electricity demand is accounted for by emerging economies as rising prosperity and living standards support a rapid expansion in the use of electricity. Increasing electrification in developed markets like Australia will also contribute to this growth but not to the same extent. This is important because it means Australia will be progressing its energy transition in the context of rapid expansion in electricity demand from emerging economies many in our region.

Our Energy Outlook 2023 sees an increase in electrification across all-end use sectors, but some end uses are more easily electrified than others. Buildings have the greatest scope to electrify. We also see a significant increase in electrification of transport, largely reflecting the electrification of road transport. Our analysis indicates that compared to other end uses, the scope for significant electrification in industry is more limited. This means that while it makes sense to electrify where we can, it won't be the only solution needed to achieve Australia's emissions reduction goals.

Energy transition policy will need to facilitate the expansion of Australia's electricity system to meet increased demand

Understandably a focus of the electricity and energy sector decarb plan will be on how to decarbonise and expand the existing electricity grids to meet the electrification needs of the future. We welcome the efforts to date from governments and market regulators to plan for this future. Central to this effort will be projecting the increase in demand and building out the grid, networks and distribution systems to meet that demand.

In particular, we encourage continued collaboration with large energy users to embed their expected demand into the various electricity system planning efforts. This should cover both existing energy users who may be looking to electrify parts of their operations currently serviced by other energy, or new energy users such as Hydrogen producers or data centres. These can be very lumpy sources of demand, requiring close coordination between energy users and market regulators to allow a smooth transition. For hydrogen producers for instance, the presence of electrolysers in an electricity grid could enable the improved utilisation of existing renewable generation during high wind and solar availability and low grid demand intervals. And could provide additional load during very low demand intervals resulting in improved utilisation (reduced curtailment) of consumer rooftop PV output.

These energy users will need confidence their demand can be met before they commit to their plans. Some of these large energy users will have flexibility in the timing of their electricity demand and this flexibility will have a value to the future electricity system. We encourage integration of the flexibility into the functioning of the electricity markets to ensure these energy users are incentivised appropriately for the benefit of the whole system.

Another important increase in demand for electricity will come from the electrification of road transport. The pace of electrification will be driven by government policy in the transport sector. bp, through our electric vehicle charging brand, bp Pulse is building out ahead of demand based on the belief that government will align relevant policies and planning for the electricity system to support steady EV uptake. bp expects that 90% of EV passenger car drivers can be expected to charge at home. However, there will still need to be an adequate public fast charging network to support the uptake. These technologies require high power grid connections, which remain one of the biggest bottle necks in delivering charging infrastructure today. An immediate priority should be to harmonise and streamline network connection to minimise delays in connecting charges and reduce network costs associated with operating across jurisdictions. We recommend that second lines of supply to commercial premises and large gigahub developments for EV charging would be beneficial. We also encourage the introduction of tariff structures that are supportive of charge point operators. Finally we expect that EVs will also bring benefits for grid optimisation, manage/support loads, avoid network costs and overinvestment. We therefore also encourage electricity system operators to enable

vehicle to grid deployment at scale and trial different types of incentives/tariffs to encourage consumer participation to enable EV use as a distributed energy resource that can support energy system security.

Plan for increased demand for renewable electricity in locations not currently serviced by a grid

A significant share of Australia's energy demand is not currently serviced by an electricity grid and will also need to transition to low carbon alternatives. This includes the significant off-grid electricity generation, as well as the significant off-road liquid fuel use that over time could look to electrify where feasible. As with decarbonizing and expanding the current grids, there will be a role for government(s) in facilitating this energy transition.

This will require the building of new renewable generation, new transmission infrastructure, likely new ports, roads and other supporting infrastructure. This might not appear to be a too different to the barriers to transitioning grid connected demand, but it will require specific policy considerations. For example, arrangements will need to be settled for the best ownership models for shared infrastructure, the cost-recovery models, access and use rights for any shared infrastructure, by who and how will these new systems be regulated and operated, and how to overcome construction challenges of building the new electricity infrastructure in often remote locations.

Growing alternative low carbon fuels

We agree with the consultation paper that further policies are needed to provide incentives to reduce emissions from the use of natural gas and liquid fuels, which as the paper indicates are critical enablers of our economy and make up a large proportion of Australia's final energy consumption.

Continued role for natural gas in the energy transition.

It is our view that natural gas will play a critical role in Australia's energy transition, and that of our trade partners. Here in Australia, numerous evidence-based reports recognize the role of gas-powered-generation (GPG) to firm renewables, to support domestic industry (be it with heating or chemical feedstock), and to develop and process critical minerals which will support Australia and the world transition to net zero. With a likely role in the energy mix for decades to come, policy will need to focus on decarbonizing the production, supply and use of natural gas both at home and in our trading partners as quickly as possible to meet the Paris Agreement. Australian policy can support this transition by:

- Enable accelerated deployment of technologies to reduce the emissions from end use – for example, by investing in industrial applications of CCUS to reduce domestic emissions and support industry-wide learning and costs reductions; and develop policy frameworks that would allow Australia to provide 'CCUS as a service'.
- Support the development of low carbon alternatives like low carbon hydrogen and renewable fuels.
- Work collaboratively with other governments to encourage them to implement policies that support the transition to low carbon alternatives, drive efficiencies, and deploy CCS.

We look forward to the release of the Future Gas Strategy and are hopeful any policy identified will be fully funded in the upcoming 2024 Budget.

Energy transition policy should support the critical role of CCUS.

Achieving deep global reductions in CO2 emissions will require a mix of technologies and solutions. We, like experts such as the IPCC and IEA, believe that CCUS has an important role.

In bp's 2023 Energy Outlook, we see CCUS playing a central role in enabling rapid decarbonization trajectories: capturing industrial process emissions, acting as a source of carbon dioxide removal, and abating emissions from the use of fossil fuels.

CCUS can be used to reduce the emission associated with the production and use of natural gas. Given the ongoing role for natural gas over the coming decades, we need to focus on ways to reduce emissions from its production, distribution and use. For example, the Browse Joint Venture has determined that a CCS solution to abate Browse reservoir CO2 is feasible and has incorporated it into the development concept.

We anticipate natural gas will be needed to support the rapid uptake of intermittent renewables. CCUS can be used to reduce the emissions associated with this firming.

CCUS can also be used to decarbonize hard-to-abate industries like steel and chemicals. It can also be used with natural gas to produce low carbon hydrogen.

Given Australia's natural advantages in the storage of emissions, it can support the decarbonisation of those countries that do not have the same access to renewable energy or viable CCS sites by providing CCUS as a service. This can help reduce the cost to Australia through scale. It can also be an avenue to reduce Australia's scope 3 emissions. For example, many major industrial point emitters in the Asia-pacific region do not have access to viable

CCS. Japan, Korea, Taiwan, and Singapore all have emission reduction ambitions that will likely need the support of other countries including by providing CCUS as a service. Japan's Ministry of Economy, Trade and Industry estimates that Japan may need to capture and store 140-240mtpa of CO2 by 2050, and is targeting 6- 12mtpa of CCS by 2030.

Importantly CCUS can also be used with biomass for power generation and with technologies that capture carbon from the atmosphere to provide negative emissions.

We understand that it can be confusing for some in the community to understand the technology and the important role it will play in support of Australia's and the global transition. We believe CCUS is a proven technology and can offer a viable abatement option. It is one tool in the toolkit.

We want to see policy in Australia that remains open to CCUS alongside other abatement options. Policy that can support collaboration with our trading partners on CCUS as a service; and policy that incentivises negative emissions technologies including CCUS.

While we acknowledge the Safeguard mechanism should provide incentive for the use of CCS over time, long-lead times for projects and need for significant coordination between different customers (where CCS is provided as a service to an industrial hub) requires additional policy intervention to attract investment. Policy currently available in Australia is limited and largely available through grant/funding mechanisms such as Powering the Regions. Policy currently available in Australia is limited and largely available through grant/funding mechanisms such as Powering the Regions. While programs such as these can be helpful to support investment into new plant and equipment required to capture CO2, the breadth of program objectives may mean that available funds are insufficient to support investment decisions.

The Government should consider further programs available to support investment in equipment and technology to capture emissions, that would then help customers better afford the costs of transporting and storing the emissions via shared infrastructure (also known around the world as 'clusters'). This can be available to multiple technology options and open to all emitters that require CCS.
The United Kingdom, for example, has put investment in CCUS clusters as a central part of their 2050 Net Zero Strategy, and have developed a policy framework to encourage CCUS across a range of applications including industrial & waste, power, and hydrogen production.

Low carbon hydrogen will be required

We believe low carbon hydrogen has a critical role in helping to achieve net zero – it's complementary to electrification and will be pivotal in the decarbonisation of hard-to-abate industrial and transportation sectors where electrification is not commercially or technically feasible.

Our 2023 Energy Outlook shows an increase in demand for low carbon hydrogen as the world takes action to reduce emissions. The uptake is relatively slow in the period to 2030, reflecting the long lead time to develop projects and the need for considerable policy to incentivize its use in place of lower cost alternatives. However, demand increases rapidly in the following decades, with demand increasing by a factor of about 10 in the period from 2030 to 2050. Here in Australia, low carbon hydrogen will also have an important role in allowing Australia to meet its emissions reduction goals. For example, the Australian Industry Energy Transition Initiative indicates Australia's heavy industry alone needs some 140kt of clean hydrogen each year by 2030, with demand increasing rapidly in the following decades.

At bp, we're excited by the potential for Australia to be a major green energy producer and a green energy exporter. We believe that there is an opportunity to produce domestic energy at globally competitive costs, and that this will be an enabler for value-added products. By combining the renewable energy and resources that we have in abundance, we can expand the breadth of high value, low carbon products available for export and have tangible impacts on decarbonisation both domestically and globally.

Announced in the 2023-24 budget, the $2 billion Hydrogen Headstart Program represents Australia's strongest commitment to nurturing a green hydrogen industry. By providing revenue support to close the gap between the current cost of production and a customer's ability to pay recognises the need to underpin significant investments in the early stages of a market forming.

bp's H2Kwinana is one of the six shortlisted projects for the program which cover a range of production capacities and end use-cases including Ammonia, Sustainable Aviation Fuel, mobility, e-fuels, and critical minerals processing.

From our experiences progressing hydrogen projects in Australia and globally, we believe a subsequent wave of the program will be required to unblock Australia's green hydrogen pipeline. It would build momentum off the first wave of projects, broaden the use cases, provide scale to underpin an Australian supply chain, and enable existing industries post-2030

decarbonisation needs to be met as well as future industries to emerge, such as green steel manufacturing and critical mineral refining. Doing so will assist Australia support our region's energy transition by supplying reliable, secure - and increasingly - decarbonised energy to our regional partners and beyond.

Through the Headstart application process, the government has received a comprehensive view of Australia's hydrogen pipeline and can make an informed judgment on readiness for the pipeline to progress. We think the pipeline justifies scoping of future rounds and clearly articulating this would provide the certainty required for continued investment in significant pre-FEED and FEED stages. It would also be an important signal to our trading partners.
bp also supports well designed hydrogen demand targets that can effectively and efficiently deliver emission reduction and industry development goals. Australia has a lived experience with the success of the Renewable Energy Target – a decarbonisation objective focused on the electricity sector.

bp supports policy covering as broad a range of demand sectors as possible so a market can develop efficiently. Narrowing hydrogen end-use cases risks inefficiencies, higher costs, and unintended consequences. A scheme that covers a broad range of end use cases will lead to a lower overall cost while delivering similar or better industry development outcomes. It is possible to design a scheme that covers industrial sectors without being so specific to cover a single use case such as ammonia. If designed well and in close consultation with industry, a hydrogen demand target would provide a consistent, efficient approach, and would support hydrogen demand stimulation, accelerating the growth of the industry. This could, in turn, encourage increased investment in technology such as electrolyser manufacturing in Australia.

Australia's reputation as a trusted exporter of energy should be no different in the decades to come than in decades past. We encourage the government to continue partnering with governments in export markets to align funding programs and develop end-to-end supply chains for Australia's low carbon hydrogen, included but not limited to working with the German and Japanese governments that have made funding commitments. We've regularly encouraged design of point-to-point policy initiatives and/or co-contribution of funding to existing support mechanisms that can be tailored to Australian proponents.

Policy is urgently needed to drive the uptake of renewable liquid fuels

We see a significant role for renewable liquid fuels to reduce Australia's energy emissions – both in long-term, difficult to abate sectors (like aviation and marine), and in sectors where the transition to electrification will take time (such as heavy vehicles used for mining). Given the

time it will take to electrify Australia's existing fleet, low carbon fuels are an option to reduce emissions from internal combustion engines in the meantime. Supplied using existing infrastructure, renewable fuels are available today and can be used in today's vehicle fleet.

As is the case for most other abatement solutions, renewable fuels have a green premium compared to their fossil alternative. These will likely only be deployed at the pace and scale required when liquid fuel users face an incentive that closes this cost differential.

Policy to drive down the carbon intensity of liquid fuel used in Australia will be needed. Similar policies have had success in other markets and Australia can leverage their experience in designing its own policy settings. bp encourages the government to introduce a market-based policy that sets regulated carbon intensity targets for liquid fuel used in Australia that reduce over time. These can be set to align with Australia's emission reduction targets and expectations for transport's contribution.

It is our view that Australia's low carbon fuel standard should be designed to capture a wide range of liquid fuel end users. This will provide liquid fuel users the incentives needed to transition away from today's fossil fuels. Consideration can be given to sub-targets for aviation and maritime given the different abatement options and cost curves compared to ground transport modes.

We also believe the Australian policy should accommodate different decarbonisation technologies, with the carbon intensity of different fuel types to be determined using a lifecycle emissions assessment model. This allows for different technologies to compete, which should drive efficiencies and reduce costs.

The obligation could be placed on fuel suppliers, like bp, or in some modes on the fuel users (e.g. airlines or ship operators). With fuels supplied with a carbon intensity below the target receiving credits and fuel supplied with carbon intensity above the target generating a debit. The tradability of the credits allows for efficiency across the system, with fuels supplied into the system where it is most cost effective and with compliance (emission reduction) claims separated.

It will be important to include safeguards to ensure the low carbon liquid fuels are sustainable. Government will need to establish a sustainability standard and certification system to underpin policy. bp chairs the work stream of the jet zero council related to the sustainability certification of sustainable aviation fuel. Much of the work undertaken in that context is relevant more

broadly to developing a sustainability standard and certification system for low carbon liquid fuels. bp encourages the department to consider this work in preparing the Electricity and Energy Sector Plan.

Government funding can also play a role in developing a local low carbon fuel refining industry. For example, ongoing project development grants like those provided by ARENA could help to bring forward new investment opportunities. Contracts for difference like those offered for hydrogen and renewable electricity could also assist in getting large commercial scale project to financial close and help bridge part of the green premium for domestic airlines. Funding for research and development, grants and concessional loans can help to improve the availability and productivity of Australia's feedstock industry.

Conclusion

Thankyou again for the opportunity to submit our views in support of the Electricity and energy sector plan. We are encouraged that government will be coordinating across the size sector plans and drawing on policy developments happening through other processes. We draw your attention to the following submissions bp has previously made that are relevant to your considerations:

bp's submission to the Parliamentary inquiry into electric vehicles

bp's pre-budget submission (yet to be published)

bp's submission to the Future gas strategy

bp's submission to the National Hydrogen Strategy refresh

bp's submission to the Agriculture sector plan

bp's submission to the CCA

We welcome further engagement with you as you finalise the Electricity and Energy sector plan.