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To whom it may concern,

Chevron Australia New Energies submission in response to the Hydrogen Production Tax Incentive Consultation

Chevron Australia Pty Ltd (Chevron Australia) appreciates the opportunity to provide comment to the Treasury on the Hydrogen Production Tax Incentive (HPTI) as part of the government's *Future Made in Australia* package.

Chevron Corporation (Chevron) is one of the world's leading integrated energy companies and has been present in Australia for over 70 years. Chevron Australia is part of the group of companies of which Chevron Corporation is the ultimate holding company.

Please find below an overview of Chevron activities in Australia, including Chevron New Energies, our hydrogen ambitions, as well as commentary on questions outlined within the Hydrogen Production Tax Incentive consultation paper.

Chevron in Australia

With the ingenuity and commitment of thousands of workers, Chevron Australia operates the Gorgon and Wheatstone Liquefied Natural Gas (LNG) and domestic gas projects, has a one-sixth non-operating working interest in the North West Shelf LNG and domestic gas project and operates Australia's largest onshore oilfield on Barrow Island, all in Western Australia.

Chevron Australia, along with our joint venture partners, has invested more than \$80 billion in the Gorgon and Wheatstone projects, making a significant economic contribution that will last for decades to come. Chevron has the capability to execute and operate large major capital projects in remote locations of Australia as demonstrated by Gorgon and Wheatstone, producing almost 50% of the Western Australian domestic gas supply.

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Chevron New Energies

Chevron believes the future of energy is lower carbon, and that reliable, affordable and ever cleaner energy is essential to achieving a more prosperous world. Chevron New Energies (CNE) was launched in 2021 to accelerate Chevron's energy transition strategy by growing lower carbon businesses.

Chevron believes the energy transition poses challenges that need to be solved by practical and collaborative approaches. We ask policymakers not to disregard any energy source in favour of another, as various and different solutions will be essential to facilitate the energy transition.

Chevron intends to grow lower carbon businesses in renewable fuels and products, hydrogen, carbon capture, utilization, and storage (CCUS), offsets, and emerging lower carbon opportunities. We are targeting sectors of the economy where emissions are harder to abate or that cannot be easily electrified, like heavy-duty transportation and industrial.

With the specific purpose of assisting Chevron in achieving its lower carbon ambitions and recognising Australia's potential to be a significant supplier of lower carbon fuel, Chevron Australia New Energies Pty Ltd (CANE) was established in 2022.

Chevron's Hydrogen Ambitions

Chevron believes hydrogen can play a key role in delivering large-scale solutions that will support a lower-carbon world. As the energy transition accelerates, and technological and regulatory developments advance, we expect the demand for hydrogen to grow.

Chevron is evaluating hydrogen as an alternative for industries dependent on combustible fuels and assessing development of hydrogen production hubs. We are also leveraging our capabilities in CCUS to unlock market opportunities for hydrogen solutions.

Chevron seeks to grow lower carbon hydrogen production to 150,000 metric tons per year by 2030 globally. We are collaborating with partners to leverage complementary skills focused on developing, de-risking and competing across the value chain. For example, Chevron has a majority interest in the Advanced Clean Energy Storage Delta (ACES Delta) electrolytic hydrogen storage project in Utah, USA, with commercial-scale operations planned by mid-2025.

Chevron, through CANE, aims to build a large-scale lower lower-carbon hydrogen business in Australia that builds on our existing assets, capabilities, and customer relationships. We are well positioned to participate across the value chain to supply industrial and heavy-duty transportation customers.

Response to the Hydrogen Production Tax Incentive consultation paper

Many of the solutions essential to enabling a lower carbon future are challenged and require financial incentives and policy support to become scalable and competitive. Chevron believes a price on carbon is the most efficient way to enable lower carbon solutions and reduce emissions. As Australia is currently not considering an economy-wide price on carbon, investment in lower carbon solutions could be accelerated with the support of targeted government policies. Tax

incentives, like the HPTI, along with grant programs and public/private partnerships, can be effective policy tools to enable lower carbon operations and products if designed properly.

Incentives should be designed with the goal of promoting the most efficient and cost-effective lower carbon journey given the options available to customers. To ensure the HPTI remains effective and doesn't shift risk back onto the project, we believe the incentive should be indexed for inflation. Without indexation, a \$2/kg incentive will lose value over a project's lifespan, undermining its intended support as market conditions and pricing evolve.

Proposed eligibility requirements

GO Scheme Registration

Eligible facilities under the proposed HPTI criteria are required to be registered with the Guarantee of Origin (GO) scheme to verify greenhouse gas (GHG) emissions intensity and renewable energy generation parameters. We are pleased Treasury proposes leveraging the GO scheme however, the timelines and methodologies for the GO and Renewable Electricity Guarantee of Origin (REGO) remain unclear and are still under development. It is crucial to prioritize the GO scheme and the associated different production calculation methodologies to ensure participant eligibility for the HPTI program is not hindered, especially if the relevant GO scheme production methodology has not yet been developed.

Additionally, we recommend consideration is given to how a variety of commercial structures will be accommodated. For example, many large-scale production facilities are structured as an unincorporated joint venture or consortium. Whilst one entity (operator) may operate the facilities, under an unincorporated joint venture or consortium the facilities will be owned by a number of entities and will be entitled to production based on their participating interest. If the GO Scheme only allows only one participant, the operator, to register as the GO Producer for the facility, this may restrict the ability for the other participants entitled to their participating interests share of production to claim the tax incentive separately.

Emissions Intensity Threshold

Chevron supports policies that reduce GHG emissions for products, services and activities based on their lifecycle emissions intensity. This allows for emissions reductions in any part of the value chain to be acknowledged and can optimise the emissions reductions per dollar spent. However, we understand Treasury has proposed a well-to-production gate emissions intensity boundary for simplicity in determining eligibility for the HPTI.

Chevron is in favour of policies that enhance the production and use of hydrogen in the market, leveraging technologies and feedstocks to maximise emission reduction opportunities. We believe the HPTI program should support all types of lower GHG intensity hydrogen by designing incentives that provide credit or value in proportion to the product's specific GHG intensity.

We recommend policies with broader eligibility that recognise the range of GHG intensity of products and promote ongoing improvements. We advise against policies that tie incentive eligibility, project approvals, or regulatory credits to a single GHG intensity threshold. While not our preferred approach, if policies use carbon intensity tiers (i.e., numerous thresholds), they should, at a minimum, include sufficient tiers to appropriately differentiate products and provide proportionate credit or value at each tier based on GHG intensity achieved. When further

reductions of emission intensity are valued and rewarded, incremental opportunities to reduce overall GHG emissions are enabled.

The proposed limit of $0.6\text{kg}_{\text{CO}_2}/\text{kg}_{\text{H}_2}$ for maximum emissions intensity is notably lower than thresholds set internationally by Japan, Europe, and the USA's Inflation Reduction Act (IRA), which offer incentives starting from higher emissions intensities. Chevron recommends the HPTI program align with international schemes or standards to ensure global competitiveness and effectiveness. If the HPTI eligibility requires a very low emissions intensity, much of the \$2/kg tax incentive will likely be used to achieve lower emissions intensity with purchase and surrender of REGOs, rather than close the commercial gap for projects. This is especially pertinent for export projects as demand markets currently do not require such low emissions intensities, with international signals seeking levels around $3.4 - 4.0\text{ kg}_{\text{CO}_2}/\text{kg}_{\text{H}_2}$ in the near to medium term.

If government adopts very tight emissions standards that are not aligned with global markets at this point, Australian projects will face limited access to the first phase of global hydrogen demand.

Technology Neutral Approach

To effectively produce lower carbon hydrogen at scale in Australia and expedite the technical and commercial feasibility of renewable hydrogen production, it is crucial that regulatory and policy frameworks are optimised to enhance early industry growth. Additionally, the anticipated capital for Australia's energy transition is likely to be sourced from global investors collaborating with Australian enterprises and governments, motivated by both domestic and international market opportunities.

Both lower carbon hydrogen, derived from natural gas reformation with CCUS, and renewable hydrogen serve as versatile energy carriers applicable across diverse sectors. Presently, natural gas reformation with CCUS is the most cost-effective method for producing lower carbon hydrogen, costing about half as much per tonne as hydrogen generated through electrolysis powered by renewable energy. This cost efficiency results in roughly double the emission reductions per dollar invested.

Moreover, the most economical production of lower carbon hydrogen via natural gas with CCUS can also facilitate the development of hydrogen demand and infrastructure in the short to medium term. As mentioned above, Chevron recommends the HPTI program should support all types of lower GHG intensity hydrogen and this will enable a transition to alternative hydrogen production methods as they evolve and become more cost-effective.

Incentive Window and Duration

Our project assessments have found the duration of regulatory approvals as a critical factor influencing the timeline for reaching a Final Investment Decision (FID). Following FID, the execution, construction, and commissioning of large-scale export facilities may typically span a further 4-5 years before production can begin. It is suggested flexibility in achieving FID beyond 2030 or ensuring production by 2035 could be beneficial, particularly as project sanctioning will hinge on the readiness of the demand market to enter firm offtake agreements. We also recommend that the criteria to meet FID be clearly defined for the purposes of this HPTI program. Additionally, participants should have the option to specify the commencement date of the 10-year window, which may not necessarily coincide with the first day of production, especially if initial production is below the nameplate capacity.

We support a firm end date for incentives to encourage participants to initiate their projects promptly. Nonetheless, the proposed duration of the HPTI may not adequately accommodate the long operational life of export scale facilities, which typically span 25 to 30 years. When the \$2/kg proposed incentive that is limited to only 10 years is economically evaluated over the full lifespan of a facility, the effective value of the incentive is reduced by more than half. Moreover, If the post-FID startup phase of a project is prolonged, the 10-year period will be truncated which further eroding the value of the incentive to the project.

Incentive Amount

In the global competition for capital, Australian hydrogen projects must present a compelling case. While the proposed production tax incentive is positively regarded, the incentive amount of \$2/kg may fall short in attracting investments when compared to the maximum incentives under the USA Inflation Reduction Act 45V, of which the proposed HPTI is less than half. Taking into account the HPTI's maximum duration of 10 years and the 2040 end date, along with the stringent low emission intensity criteria of $0.6\text{kg}_{\text{CO}_2}/\text{kg}_{\text{H}_2}$, we see that the HPTI by itself may struggle to bridge the financial gap for large-scale hydrogen production projects, thereby limiting foreign investment to Australia.

Minimum Capacity

Given the non-competitive nature of eligibility, the main consideration on minimum capacity is whether smaller projects align with the public interest and the objectives of the Future Made in Australia policy. If the policy's aim is to promote large-scale industrial development, projects under 10MW would be impractical. Conversely, if the intent is to equally support mobility or small-scale regional initiatives, capacities below 10MW will be necessary, particularly if the program stipulates a 'single site' requirement.

The guidance for a '10 MW electrolyser equivalent' minimum capacity is open to varied interpretations due to factors like daily or annual utilisation rates or differing efficiencies, which could lead to inconsistent conclusions of production rates. It is recommended to assess based on the volume, mass, or energy of the product produced which will also facilitate inclusion of alternative non-electrolysis production methodologies. Furthermore, it is necessary to give further consideration to how hydrogen derivatives will be accommodated, particularly when the hydrogen and derivative production processes are closely integrated, and hydrogen is not a distinct intermediary product.

Grid or Geographical Correlation

GHGs are global in nature, having the same impact on climate change regardless of their location. Chevron advocates for the adoption of book-and-claim accounting, which is designed to reduce GHGs in an efficient manner.

Book-and-claim accounting facilitates the efficient matching of lower GHG intensity gas and electricity with hydrogen production. This enhanced efficiency is critical as there are many situations where co-location or direct physical connections are impractical, less cost-effective or will lead to overall higher net emissions.

Although many proposed hydrogen projects in Australia are intended to connect to the National Electricity Market (NEM), those not connected to a grid with substantial renewable energy sources will not have the same opportunity to reduce emission intensity through the purchase and retirement of REGOs under the proposed 'same grid' requirement. This discrepancy could disadvantage projects in other states or more remote regions, highlighting the need for equitable measures that facilitate emission reductions across various locations. We suggest the HPTI does not have any geographical correlation requirement, even a broad one, so that it can accommodate projects that are not necessarily linked to a large-scale grid.

Additionality and Temporal Correlation

When pairing lower GHG intensity electricity with hydrogen production via market-based accounting, we support time matching on an annual basis as a practical approach that accelerates development. We believe where robust GHG accounting is in place, additionality requirements for linking lower GHG electricity to hydrogen production are not needed and only hinder development.

When pairing electricity with hydrogen production via book-and-claim accounting, we believe time matching is acceptable when it is done on an annual basis. This is aligned with the proposed GO scheme design for surrender of REGOs to claim emission intensity reduction. In the short to medium term, less prescriptive time matching requirements such as annual matching, are not only more feasible but can also lead to more efficient use of capital and faster progress.

Interaction with other government incentives

Noting the benefits of the HPTI program, there remains a need for further comprehensive investment and policy support to enable Australia to become a global leader in lower carbon intensity hydrogen production. As such, Chevron recommends that projects which are eligible for the HPTI program should also remain eligible for additional Commonwealth or State funding.

The development of pre-commercial early-stage abatement projects can be accelerated if allowed to take advantage of the full range of relevant incentives. Policies that allow the use of all applicable incentives support advancement towards scalable technologies and production.

A diverse array of funding supports may be necessary to foster the development of a hydrogen industry at scale in Australia. Projects capable of attracting international incentives and foreign investment present an opportunity for Australia to gain a competitive edge globally, and as such, should be encouraged and supported.

The ability to attract multiple international incentives enhances project viability. Given the substantial financial incentives for hydrogen projects in other jurisdictions, the capacity to 'stack' various incentives will help maintain Australia's competitiveness in the global market. Such funding could provide support for both demand and supply, maximising the impact of the HPTI program funding to Australia's benefit.

To mirror the scale of recent energy industry advancements in Australia, it's instructive to consider the LNG industry and North West Shelf's development as a model of success. This took an integrated approach across industry, state government and federal government including shared

funding across common infrastructure, tax offsets, streamlined permitting systems, and bilateral relationships to ultimately assist in establishing the LNG industry as we know it today.

In conclusion, we commend the Australian Government for its initiative in establishing the HPTI as a key policy instrument to foster the hydrogen industry. We believe eligibility for the HPTI should be broadened to include all production methodologies, as lower-carbon hydrogen offers cost efficient emissions reductions and can help in the initial establishment of hydrogen infrastructure and value chains. We also recommend that the incentive's emissions intensity threshold should align with international standards and market signals, to ensure Australia is capable of being globally competitive and can attract foreign investment and offtakers.

Chevron Australia appreciates the opportunity to respond to the consultation paper and welcomes further discussion on this submission and the Hydrogen Production Tax Incentive. We look forward to continuing to work collaboratively with the Australian Government and other stakeholders to realise the potential of hydrogen as a clean and versatile energy source for the future.

Yours Sincerely,

A handwritten signature in black ink, appearing to be 'David Fallon', with a long horizontal flourish extending to the right.

David Fallon
General Manager – Energy Transition