Submission by Mobil Oil New Zealand Limited (Mobil) on In*creasing the use of biofuels in transport: consultation paper on the Sustainable Biofuels Mandate*

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1. Mobil continues to encourage sound and constructive policy solutions that reduce climate-related risks across the economy at the lowest cost to society.

2. Mobil supports low carbon fuel standards or transportation policies that incentivise lower carbon intensity combustion fuels.

3. Mobil supports consistent methodology for lifecycle (well-to-wheel) greenhouse gas emissions.

4. Mobil encourages multiple solutions, which should be inclusive, to maintain customer choice and foster competition.

5. Mobil promotes a wise use of resources – regulations should have flexibilities such as credit-trading to drive more efficient use of resources.

How the Sustainable Biofuels Mandate would work

1. Do you support having a GHG emissions reduction mandate?

6. Mobil is supportive of policy outcomes that effectively address Climate Change risks, while maintaining business viability in order to deliver sustainable environmental, business and economic outcomes for Aotearoa New Zealand.

7. Mobil supports regulations that encourage multiple pathways for fuel technologies, with technology neutral standards for transportation fuels. At the same time regulators should avoid overlapping and contradictory regulations.

8. As an affiliate to a global company, Mobil believes regulations should be based on a robust and transparent data that is grounded in science. These regulations should encourage multiple market-based solutions, and should be inclusive to maintain customer choice and foster competition.

9. Mobil supports having GHG emissions reduction objectives which properly consider lifecycle emissions, however there should be choice for fuel companies as to the most effective way to achieve these emissions reductions in transport fuels (ref Mobil response to Question 3).

2. Do you support the proposal to require certifcation of lifecycle emissions of biofuels sold in New Zealand using international standards?

10. Mobil believes regulations should be based on robust and transparent data that is grounded in science, and the use of lifecycle analysis for biofuels is encouraged. From our global experience, lifecycle analysis (LCA) for biofuels is a specialist technical process, and relies heavily on the model used, the assumptions, the practitioner, and the robustness of the methodology.

11. Over the past two decades, Mobil's parent company ExxonMobil has invested more than USD 10 billion to research, develop and deploy lower-emission energy solutions, including advanced biofuels.

12. As an example of LCA used with biofuels, ExxonMobil has recently expanded its agreement with alternative fuels developer Global Clean Energy to purchase up to 4 billion litres of renewable diesel. Renewable diesel

has the potential to reduce life cycle greenhouse gas emissions when compared to petroleum-based diesel, and current data from the California Air Resources Board suggests reductions in the range of 40% to 80%.

3. Do you support applying the Sustainable Biofuels Mandate to all liquid transport fuel?

13. Mobil continues to encourage sound and constructive policy solutions that reduce climate-related risks across the economy at the lowest cost to society. Applying a biofuels mandate to liquid transport fuel is unlikely to achieve emissions reductions at the lowest cost to the consumer.

14. As defined in the consultation paper "*sustainable biofuels are not cost competitive with fossil fuels at market prices*", which is driven by increasing global demand for biofuel feedstocks. In addition, "*advanced drop-in sustainable biofuels are preferable but developers face high financial and technical barriers*".

15. Mobil agrees with the consultation that "*[a] biofuels mandate will, however, increase fuel prices as biofuels cost more to produce*". The paper goes on to indicate increases in baseline prices in 2025 of 0.4cpl for petrol, 7.1cpl for diesel prices, and 7.1cpl for Jet.

16. These defined price increases do not align with earlier statements supporting government intervention: "*to date ETS has not provided a sufficient incentive to increase the use of low carbon fuels, or to reduce transport emissions. This is because the current emissions price of around 9 cents per litre for diesel, and 7.8 cents for petrol is a very small component of fuel prices and is less than the marginal abatement cost of available biofuels*".

17. Mobil believes it would be in the public's interest to release the modelling that supports these pricing conclusions with its underlying assumptions, and therefore requests that the Ministry of Business, Innovation and Employment (MBIE) and the Ministry of Transport (MoT) make it available so an appropriate analysis and critique may be conducted by multiple parties.

18. It is Mobil's position that availability of feedstocks and biofuels in New Zealand is extremely limited, and that flexibility should be given to fuel importers to determine the most appropriate way to meet the mandated emissions reduction requirements. Alternate means to achieve emissions reduction in transport fuels could be through purchasing additional units under the New Zealand Emission Trading Scheme (NZ ETS).

4. Are the proposed initial emission reduction percentages for 2023–2025 appropriate for New Zealand? If not, what should they be?

19. The initial emissions reduction percentages to be achieved from blending biofuels for 2023-2025 are unrealistic and unachievable in the timeframe proposed, and in the quantity of biofuels to be blended. Based on the example provided in the consultation paper, if the total volume of Jet, Diesel and Petrol sold in New Zealand is included in this model with blends of E10 and B5, then 100% of petrol and 100% of diesel sales would not achieve the 3.5% emissions reduction target.

20. This blending level would require around 320 ML of ethanol and 180 ML of Fatty Acid Methyl Ester (FAME) biodiesel to be blended. As a real-world comparison, the Wiri biodiesel plant has a nominal capacity of 20 ML of FAME biodiesel. If biofuels with lower emissions factors were available, then the quantity would be lower, but of a similar magnitude.

5. Do you support having single GHG emissions reduction percentages across all fuel types, or do you favour separate reduction percentages? Why and how many separate percentages would you suggest we have?

21. If the New Zealand Government chooses to implement a mandate, then it should be across all fuel types and should not have separate percentages for each type of transport fuel. Doing so would limit the potential biofuel and emissions reduction solutions.

22. Any policy intervention must be flexible, should encourage multiple market-based solutions, and should be inclusive to maintain customer choice and foster competition.

6. Do you support provisional emission reduction percentages being set for 2026–2030 and 2031–2035 with the percentages being finalised in 2024 and 2029 respectively?

23. It is up to the New Zealand Government to define set emissions reduction targets, however, Mobil cautions that setting biofuel mandated emissions reduction targets too high may result in fuel companies being unable to meet them, due to limited availability of lower carbon biofuels on the domestic and international market.

7. Do you support the proposal that biofuel producers must be certifed against an established sustainability standard to count towards achievement of the emissions reduction percentage?

24. Mobil supports market-based approaches to reduce emissions, and having a defined certification for biofuels against a credible standard is essential to ensuring actual emissions reduction.

25. Whichever certification standard or standards the Government determines are acceptable should be internationally recognised, transparent, and fit for purpose.

8. Do you support having a joint fuel industry/government information campaign to inform New Zealanders about biofuels and the Sustainable Biofuels Mandate?

26. The New Zealand Government should take responsibility for raising public awareness about products which they have mandated, however fuel companies will continue to market the benefits (including environmental) of the fuels they supply, in line with current practices.

9. Do you support the labelling proposal that informs consumers about specifc biofuels at the point of sale?

27. Consumers should be made aware of what is being blended into their fuel, including engine performance and product quality considerations.

10. Should New Zealand try to overcome the challenges that domestic biofuel producers face in maintaining access to affordable supplies of domestically produced feedstocks? Do you have any suggestions for how this challenge could be overcome?

28. From the extensive global experience of ExxonMobil, having affordable, suitable and reliable feedstocks is the primary barrier to cost effective biofuel production. With the global demand for such feedstocks increasing, it is unlikely that domestic feedstocks will become more affordable, or indeed readily available.

29. The prevailing experience in New Zealand and in Australia with biofuels manufacturing and blending, including Z Energy's Wiri plant and Gull's biodiesel imports, is that the commercial reality of a sustainable biofuels business is questionable, even where a biofuels mandate exists (as in Australia).

30. Market experience in Australia supports Mobil's position: in a submission to the Australian Government's Department of Industry, Science, Energy and Resources on future fuel technologies, the Australian Institute of Petroleum (AIP) highlighted that "*first generation biofuels have found difficulty in gaining market share, held back by concerns over cost vs petroleum products and broad consumer aversion due to perceived quality concerns and the potential to damage vehicles. Heavy vehicle users in mining, agriculture and freight have also been reluctant to adopt biofuels unless supported by clear emissions reductions signals or a price discount.*

31. "*Experience with the biofuels mandates in both NSW and Queensland, where each [state] government has committed to increased biofuels purchases in their respective fleets, has not resulted in large uptake of those fuels. Furthermore, AIP members have not observed significant uptake of biodiesel by large business consumers in transport, mining and agriculture.*" [AIP Submission to Future Fuels Strategy April 2021]

32. The above market observations suggest that cost to consumer remains a significant barrier to the successful establishment of biofuels within commercial markets, even those where a mandate exists. However, there are potential commercially viable solutions being worked internationally. For instance, ExxonMobil and its partners at Clariant and Genomatica are working together as part of an ambitious research program to turn agricultural leftovers into low-emissions fuels. Taking advantage of ExxonMobil's experience in developing and supplying energy products on a global scale, the partnership aims to build seamless refining processes, which could transform corn leftovers and other non-food biomass into energy game changers.

33. Internationally there is limited availability of advanced cellulosic biofuels, with small scale production (<50 ML per year) currently being commissioned by Fulcrum Energy, as well as companies such as Red Rock, and Praj developing pilot projects. The commercial availability of cellulosic biofuels at scale is still likely to be a number of years away.

How could the Sustainable Transport Biofuels Mandate be implemented?

11. Do you think the minimum threshold for compliance of 10 million litres of transport fuel in a calendar year in New Zealand is appropriate? If not, what level would you change it to?

34. It is up to the New Zealand Government to define minimum thresholds for compliance.

12. Do you agree with the method for calculating a supplier's GHG emission reduction?

35. The methodology proposed appears to be sound, however it needs further definition of parameters such as emissions factors, and energy content.

13. Do you think the annual reporting regime, including its offences and fines, is practical and appropriate?

36. The proposed reporting regime may be appropriate for this type of mandate, however setting biofuel mandated emissions reduction targets too high may result in penalties to fuel companies if they are unable to meet the targets due to limited availability of feedstock and lower carbon biofuels on the domestic and international market. Alternatives to meeting emissions reduction for transport fuels should be permitted.

37. The timing for the implementation of the proposed mandate is also problematic, with 2023 less than 18 months away. Development of commercial arrangements and logistics for introduction of biofuels at scale into New Zealand fuels is complex, and would require significant investment across the whole biofuels value chain. Typical biofuels such as ethanol and biodiesel must be blended into trucks at each fuels terminal, which would require significant engineering efforts, and extensive design and construction activities. These projects generally take two years to complete from concept to commissioning.

14. Do you support the performance of fuel suppliers being published to enable consumers to reward the industry leaders in reducing GHG emissions?

38. Given the stated intent of the Fuel Industry Act 2020 is to "promote competition in engine fuel markets for the long-term benefit of end users of engine fuel products", a biofuels mandate in the New Zealand market

would potentially undermine the intention of this legislation, as a biofuels with attached emissions reduction requirements will add additional complexity, and additional costs to consumers.

39. The New Zealand Government should carefully assess any unintended consequences the mandate may have on customer choice and domestic competition.

15. Will the proposed penalties encourage fuel suppliers to achieve the required emission reductions? If not, would level should they be?

40. It is up to the New Zealand Government to determine appropriate penalties, however it should consider what would occur in situations where fuel companies are unable to meet their biofuels requirements for unforeseen reasons, such as a lack of availability domestically or internationally, or in situations requiring emergency response.

16. Do you support the proposal for fuel suppliers to defer achieving their emissions reductions for years 1 and/or 2, in full or in part, to the following year?

41. Mobil's global experience with these types of mandates is that the broader the options given to the market, the more effective the solutions that can be implemented.

42. Mobil therefore supports flexibility for fuel suppliers to defer emissions reductions for years 1 and/or 2, in full or in part, to the following year.

43. Mobil also supports the proposed review of the Mandate in its second year of operation, including a review of emissions reduction percentages and penalties for 2024 and 2025, with these to be changed if there are significant supply issues in the market.

17. Do you support fuel suppliers banking any surplus emissions reductions in a year and using it to reduce the percentage needed to be achieved the following year?

44. Mobil's overseas experience with programs such as the US Renewable Fuel Standard (RFS) and California's Low Carbon Fuel Standard (LCFS) is that flexibility within regulation, including banking any surplus emissions reductions, provides a much higher likelihood that the objectives of the program will be achieved. As an example, carry over permitted in the RFS is 20% of the fuel suppliers' annual obligation.

18. Do you support fuel suppliers borrowing for shortfalls in emissions reductions in a year, and making the shortfall up the following year?

45. Mobil's overseas experience with emissions reduction programs is that flexibility within regulation, including carrying forward shortfalls, provides a much higher likelihood that the objectives of the program will be achieved.

19. Do you agree with the proposal to allow trading through the use of entitlement agreements?

46. The foreword of the consultation paper explains that, New Zealand is "*out-of-step in mandating biofuels*", however this provides an opportunity to "*learn from other countries' experiences*". In addition, "*by drawing on international best practice we can design and implement an effective mandate of our own; adding to our arsenal of low-carbon solutions to decarbonise transport*".

47. ExxonMobil's global experience since 2007 has identified that costs of emissions reduction from biofuels mandates is in the range of US$100-$400 per tonne.

48. As defined in the consultation paper, "*each year a fuel supplier would have to demonstrate that the percentage emissions reduction it achieved, across its fuels, is at least equal to, or higher than, the required percentage*". How this is achieved could include through the trade of entitlement agreements.

49. Given that the consultation paper has an objective to reduce emissions, it would be more cost effective for consumers to provide fuel suppliers with alternatives in how to meet the emissions reductions required by the proposed Biofuels Mandate. Rather than investing solely in biofuels that are not commercially or economically feasible, it may instead be more economically viable to allow fuel suppliers to buy verified carbon credits through another mechanism, such as the NZ ETS.

50. The outcome of having alternatives is that there would be an equivalent amount of emissions reduction, but at a lower cost to the consumer.

51. Mobil believes that having the opportunity for choices in how to meet a mandate for uneconomic investment in biofuels is the best solution to provide emissions reductions.