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Ministry of Business, Innovation and Employment (MBIE)

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Submission on the Sustainable Biofuels Obligation Regulations

Introduction

1. Energy Resources Aotearoa represents energy intensive businesses, from explorers and producers to distributors, sellers, and users of energy resources like oil, LPG, natural gas, refined products, and hydrogen.
2. This document constitutes our submission on the development of the regulations that will support the enactment of the Sustainable Biofuels Obligation. This submission is not confidential.

Executive summary

Overall comments on the proposed obligation

3. We support an Emissions Trading Scheme (**ETS**)-led, least-cost and orderly transition toward our 2050 net zero targets. Additional measures are justified where they address market barriers preventing discovery of cost-effective emissions abatement through the ETS.
4. In principle we generally do not support mandates or obligations requiring the use of any fuel to increase demand for that fuel. Where fuel mandates are pursued, they must be designed in such a way that they enable a sustainable, competitive, and commercial market to develop in the medium to longer term.
5. We consider the intervention case for a biofuel obligation has not been sufficiently made. The costs and benefits of the proposal have not been clearly laid out (though the costs appear to outweigh the benefits) and the proposal is silent on how the 'waterbed effect' of the ETS – which covers the liquid fuel market – will be accounted for.



6. The proposal would benefit from:
 - a. clearer presentation of expected costs and benefits (noting limitations in estimating these) for each option, including a marginal cost of abatement; and
 - b. more information about how the proposal will deliver emissions reductions beyond what the ETS would be expected to deliver, and how the 'waterbed effect' will be accounted for.

Target and timeframe

7. The targets for 2023-25 are ambitious, and the intended implementation date (1 April 2023) is particularly so. Meeting these will require an 'off the shelf' approach that uses existing international certification schemes with limited to no bespoke amendment, and that keeps as many options open to suppliers as possible.
8. We suggest a delay to the implementation date of 1-2 years would allow time to get the settings right and to ensure the sector is ready to meet the obligation.
9. We also suggest policymakers consider including an ongoing deferral mechanism (beyond the first two years of operation) of a percentage of the obligation to hedge against global supply issues.

Calculating the obligation and emissions intensity

10. We acknowledge the need to mitigate sustainability and land use concerns around biofuels. This needs to be balanced against the need to minimise economic costs and maximise flexibility. Specifically:
 - a. we support allowing fuel suppliers to use a mix of actual and default emissions intensity values for the lifecycle emissions intensity of a biofuel (questions 1 and 2);
 - b. we do not support a New Zealand-specific inhouse emissions model (questions 1-3) because it would require longer implementation timeframes and would increase the complexity and costs of the scheme;
 - c. we suggest a more flexible approach that enables recognition of fossil fuel emissions reductions (e.g. supply chain efficiencies), in line with the implied policy intent of emissions reductions and with overseas approaches (question 4); and
 - d. we do not agree with excluding biofuels that deliver less than 50 per cent emissions reduction because this constrains options (question 5).

Managing indirect land use and food security impacts

11. Specifically including indirect land use in the lifecycle analysis is preferable (notwithstanding its shortcomings). However, if this is not adopted, we support a combination of Option 1 (a sinking cap on food and feed-based biofuels, and banning feedstocks with significant indirect land use change emissions) and Option 2. However, regarding Option 1:
 - a. the proposed cap is yet to be prescribed, which inherently increases uncertainty for fuel suppliers; and
 - b. limited analysis is provided justifying the proposal to use a 5 per cent threshold for banning feedstocks (a stricter approach than the European Union's 10 per cent), so we suggest retaining the European Union's level.
12. We agree with using the approach to indirect land use change as a proxy to also addressing food security as this will minimise administrative costs (question 12).

Waste

13. We support the proposed requirement that biofuel sourced from any waste streams is verified against relevant international standards (question 13) and the approach to allocating emissions to products, co-products, residues, and wastes is broadly sensible.
14. Beyond this, we reiterate that proposals to exclude or limit residues or co-products that are excluded or limited under other criteria further constrain the options available to suppliers.

Scene-setting and overarching comments

Our approach to net zero emissions reductions

15. We support the legislated domestic target of net zero emissions (excluding biogenic methane) by 2050 as set out in the Climate Change Response Act.
16. The target strikes a balance between playing our part in the global effort to reduce net emissions, while also preserving maximum flexibility to respond to technological and economic developments. It strikes this balance in that it pursues net, not gross, targets.
17. We support an orderly transition to net zero – this implies:
 - a. an **Emissions Trading Scheme (ETS) led approach** to emissions abatement, given this is the most comprehensive and effective tool we have at our disposal;

- b. **least-cost abatement** (rather than being a ‘cheap and nasty’ transition, this simply means least loss of community welfare, avoiding misallocation of resources, and minimising opportunity cost);
 - c. **sector, fuel, and technology neutrality**, which ensures all emissions abatement opportunities can compete on a level playing field, and preserves as many opportunities as possible to be explored through responses to the rising ETS price signal;
 - d. **a focus on net – not gross – emissions**, ensuring the optimal combination of emissions reductions, removals, and offsets can be discovered iteratively through time; and
 - e. **balancing the energy trilemma**, meaning that energy sustainability (low emissions) is pursued without unnecessarily undermining energy affordability and/or energy security.
18. We can support additional measures where they are additional to the ETS. This means they address a genuine market failure or barrier preventing the ETS from discovering cost-effective emissions abatement opportunities¹, and are designed in such a way that the neutralising (‘waterbed’) effect of the ETS is accounted for.

Our interest in the sustainable biofuels obligation

19. Energy Resources Aotearoa represents a broad range of energy intensive businesses throughout the energy value chain. We are interested in the sustainable biofuels obligation proposal because:
- a. our growing membership now includes the downstream liquid fuel market, which is directly affected by the proposal;
 - b. our wider membership includes energy-intensive businesses (and by extension, their customers) that will ultimately bear the costs of this proposal;
 - c. this proposal creates a precedent for fuel-selective mandates in other sectors of the economy; and
 - d. it is in all New Zealanders’ interests that energy and transport policy is sound, stable, and predictable so that it supports an orderly transition to net zero while balancing energy affordability and security.

1 Examples include where regulatory barriers prevent cost-effective emissions reductions from occurring, such as where regulatory regimes did not anticipate the emergence of offshore wind or carbon capture, utilisation, and storage (CCUS).

Our position on energy and fuel mandates

20. We strongly support market-based supply and allocation of energy and fuels. Energy is an input to all economic activity, and so it is in everybody's interests – and in the interests of an orderly transition to net zero – that energy is made available reliably and affordably. Alternative emerging fuels will have an increasing role in the market so long as they are:
 - a. available at competitive prices;
 - b. are supplied reliably;
 - c. are acceptable to consumers (in terms of quality, etc); and
 - d. are produced sustainably without unnecessarily constraining supply options.
21. The open market will generally be the most efficient way to incentivise the optimum energy and fuel mix that meets customers' needs at prices they are willing to pay. The ETS internalises a (rising) cost of carbon for all fuels, which will over time improve the commerciality of lower-emissions fuels and drive consumer decisions at the margins.
22. We generally do not support mandates or obligations requiring the use of any fuel to increase demand for that fuel. Mandates constrain optimisation and may result in the development of infrastructure and projects that are not internationally competitive without continued favourable policy treatment. Taxpayers and consumers may thus be burdened with propping up uncompetitive producers indefinitely.
23. Where fuel mandates are pursued, they must be designed in such a way that they enable a sustainable, competitive, and commercial market to develop in the medium to longer term. Direct or indirect mandates for the use of fuels are likely to result in projects which are not competitive without continued favourable treatment, and this will make phase-out of this treatment challenging. Government intervention needs an exit strategy.²

Comments on the Sustainable Biofuels Obligation

24. We first take this opportunity to register our views on the proposal for a biofuels obligation, including its policy intent and overall policy design (we refer primarily to the final policy design documentation on these points). In the section that

2 Here we note the political economy risk of 'government picking winners' leading to 'winners picking policy'. A fuel mandate will create groups with vested interest in its continuation. It may then be difficult to unwind in the future, even where the costs of the mandate become untenable, or the fuel needs to start competing on a level playing field.

follows we then address the specific proposals for regulations currently being consulted on.

It is not clear that the proposal addresses a market failure

25. The rationale for the sustainable biofuels obligation rests on its problem definition, which highlights that biofuels have not proliferated in the absence of government intervention for a number of reasons:
 - a. biofuels are not cost-competitive with fossil fuels (even at current carbon prices);
 - b. biofuels face co-ordination issues (the 'chicken-egg' problem) between demand and supply, particularly in terms of domestic infrastructure;
 - c. the low blend wall (i.e. maximum biofuel blend share) for conventional biofuels places a physical limit on the potential market for these fuels (this issue is less relevant for advanced biofuels);
 - d. a lack of incentives for biofuels, and other policy uncertainty (given the historic introduction and then repeal of a biofuel sales obligation); and
 - e. the lack of domestic biofuel supply, due to the challenges above.
26. In our view, these do not necessarily establish market failures justifying government intervention.³ Taken together, they more likely point to a high-cost fuel that does not currently compete on a commercial basis with fossil fuels (even with the ETS price factored in). This fact implies that lower-cost emissions abatement opportunities exist elsewhere in the economy. To the extent that the ETS has a limited marginal impact on vehicle purchase and driving behaviour, this implies that transport is a high-cost abatement prospect.
27. We acknowledge that fossil fuels enjoy an advantage in terms of incumbent infrastructure (point (b) above). There may then be a theoretical case for government intervention to scale up biofuel infrastructure. But where biofuel production and use have proliferated overseas, they have generally required sustained government support. A key question is at what point biofuels can be expected to sustain themselves on a commercial basis without a government mandate.

³ The threshold for intervention should be the demonstrable presence of material market failure (externalities, monopoly, information asymmetries or public goods). Market failure is not simply an observed outcome that does not accord with the observer's preferred outcome. In considering regulations, a full analysis of costs and benefits should be made, and as a matter of course this should always include assessment of the risk of government failure.

The proposal is likely to impose net economic costs (though this is subject to significant uncertainty)

28. In any case, the purported emissions benefits (0.5 Mt in 2025 rising to 1.5 Mt in 2035, or 10 Mt cumulative to 2035) need to be justified in reference to their likely costs. These include the likely direct fuel costs imposed on consumers (both directly and passed through in the cost of goods and services), and the opportunity costs associated. This is a particularly salient point in the current inflationary environment, wherein consumers and firms are struggling with rising energy costs.
29. Ideally the proposal would include a lifetime **net present value** and an estimated **marginal cost of abatement**, across the lifetime of the proposal (for each option), to give a clear indication of whether the anticipated emissions reductions are worth the anticipated adverse impacts to economic growth (read: community welfare).⁴ These figures would also lend to meaningful comparison with other options to reduce transport emissions.
30. We recognise that modelling of impacts, particularly over the medium-to-long term, is inherently difficult, given the sensitivity of this policy to volatile fuel and carbon prices. We also appreciate that while there is confidence in the direction of impacts, their magnitude can vary based on multiple factors. However, this information should nonetheless be laid out, with appropriate caveats, to support an informed debate.
31. Notwithstanding the above, the information available indicates the costs are significant:
 - a. the final policy design RIS suggests the monetised benefits of emissions reductions would be \$50 million in 2025; \$200 million in 2030; and \$270 million in 2035. This compares to expected real net national income being \$0.2–0.5 billion lower in 2025; \$2–3 billion lower in 2030; and \$3–5 billion in 2035; and
 - b. the originally proposed penalty for non-compliance was increased from \$300 to \$800 per tonne of emissions, on the basis some fuel suppliers might elect to simply pay the penalty instead of participating in the mandate. If this suggests that paying \$300 per tonne of emissions rather than participating in the obligation would be a rational decision, it implies a marginal abatement cost that far exceeds the prevailing ETS price.

4 The proposal documentation does provide a high-level comparison of marginal abatement costs for fuel-switching for heavy trucks (which shows battery electric significantly outperforms biofuels where the vehicle is charged often and >50% overnight) but it is not clear how specifically this figure relates to the proposal.

32. The final policy design cabinet paper notes that while the mandate will have an economic impact, there would also be a significant cost associated with not meeting our emissions budgets and having to buy offsets. This is true, but in our view the proposal would still need to demonstrate that:
 - a. the ETS, which has a quantity cap set to align with those emissions budgets, will not deliver the required reductions; and
 - b. the proposal imposes lower net economic costs on New Zealand than the next best alternative (which might be simply buying offsets, or an alternative emissions reduction policy).
33. It also isn't clear how the policy's design accounts for the 'waterbed' effect – whereby any gross emissions reductions will be reallocated elsewhere within the sinking quantity cap of the ETS. Ministers have periodically pointed to the possibility of adjusting the sinking quantity cap in the ETS to account for additional (non-ETS) measures, but no further information is yet available about how this will be done. It is not yet clear whether the reductions from the biofuels mandate will be included in this adjustment, and how these will be calculated.

The proposal will increase energy costs for consumers and force them to “pay twice” for their transport emissions

34. The final policy design RIS noted that the proposal could result in petrol prices 0.5 cents per litre higher, and diesel prices 7.1 cents per litre higher, by 2025. MBIE analysis indicates weekly household expenses could be \$7.41 higher (roughly \$385 a year) in 2025. Those most impacted will be rural and low-income households.
35. We note the final policy design documentation points to the likelihood that increased fuel prices arising from the sustainable biofuels obligation would increase incentives to purchase electric vehicles (EVs). While true, again we emphasise that low-income and rural consumers are less likely able to avail themselves of this option or to change their driving behaviour.
36. Imposing additional costs on these groups may erode public support for emissions reduction policy more broadly, particularly given they already face the cost of the same emissions through the ETS. We again note that these costs are difficult to put into perspective without an estimated marginal abatement cost or net present value for the proposal, and concede these are subject to significant uncertainty given the volatility of key factors.

The accelerated policy process and implementation timeframes create the risk of unintended consequences

37. The policy development process has suffered from urgency and time constraints. Policy developed and implemented with urgency creates risks of unintended consequences. We urge a cautious approach.

38. The targets for 2023-25 are ambitious, and the intended implementation date (1 April 2023) is particularly so. Meeting these will require an 'off the shelf' approach that uses existing international certification schemes, with limited to no amendment, and keeps as many options open to suppliers as possible. Additional criteria or amendments to existing standards will increase suppliers' difficulty in meeting the expected timeframes.
39. To mitigate against these difficulties, we suggest policymakers consider a delay of 1-2 years to the implementation date. This will ensure we get the settings right and that the sector is ready to meet the obligation.
40. We also suggest policymakers consider including an ongoing deferral mechanism (beyond the first two years of operation) of a percentage of the obligation to hedge against future global supply issues.

Mandating biofuels could drive up prices for limited feedstocks that are critical to decarbonise the industrial and commercial sectors

41. We acknowledge that increasing demand for biofuels globally will lead to economies of scale and could improve the efficiency of biofuels production, reducing costs. However, we note the proliferation of biofuel mandates across the world, for many years now, have not yet achieved this. Conventional biofuels are still not commercially competitive, even with rising carbon prices considered.
42. On the other hand, we see supply-side risks. As global demand for biofuels continues to increase, this may put increased pressure on limited feedstock resources, driving up the price (which will flow to consumers). By the same token, increased competition for this feedstock from alternative uses – for example, wood waste for process heat and electricity generation – could similarly drive up the cost of these resources. The Government already has in place subsidies for process heat that will, by design, increase demand for biomass in New Zealand.⁵ This effect could play out both domestically and globally.

Comments on the specific proposals for regulations

Calculating the obligation and emissions intensity

General comments

43. We have noted throughout this submission our preference for fuel and technology neutrality, and the need for a market-led approach to allocation of energy.

5 The Government Investment in Decarbonising Industry (GIDI) Fund has allocated \$69 million to date, with a further \$650 million to be allocated over the next few years, for process heat fuel switching projects. Some of this funding will likely support biomass projects. The Government has also signalled in the Emissions Reduction Plan its intent to implement a bioeconomy strategy and to explore ways to stimulate demand for, and supply of, bioenergy.

However, if a biofuels mandate is pursued, we support the proposed approach of setting a single emissions reduction obligation (excluding aviation) and giving fuel suppliers flexibility as to how they meet this. This will ensure the measure allows responsiveness to availability of fuels and is as low-cost as possible in the interests of consumers.

44. We acknowledge the need to mitigate sustainability and land use concerns around biofuels. But this needs to be balanced against minimising economic costs and maximising flexibility. Specifically:
- a. we support allowing fuel suppliers to use a mix of actual and default emissions intensity values for the lifecycle emissions intensity of a biofuel (questions 1 and 2);
 - b. we do not support a GREET-style⁶ New Zealand-specific inhouse emissions model (questions 1-3) because, while it is more transparent and allows the scheme to recognise New Zealand's particular context, it would require longer implementation timeframes and more specialist knowledge, all of which increases the complexity and costs of the scheme;
 - c. we suggest a more flexible approach that enables recognition of fossil fuel supply chain efficiencies, in line with the implied policy intent of emissions reductions (question 4) – see further commentary on this point below; and
 - d. we do not agree with excluding biofuels that deliver less than 50 per cent emissions reduction because this constrains options for suppliers. If a fuel supplier is still able to meet the overarching obligation, using a higher volume of lower-impact biofuels should be available as an option (question 5).

Further comments on question 4

45. The consultation document proposes to use a single default life cycle emissions intensity factor for all liquid fossil fuels, on the basis that the intent of the obligation is to increase the deployment of biofuels, not to incentivise efficiency improvements in the liquid fossil fuels supply chain.
46. We disagree with this expression of the policy intent and, consequently, with this proposal. In our view the overarching policy intent ought to be to reduce the emissions intensity of liquid fuels, to reduce the lifecycle emissions intensity of the legacy vehicle fleet. After all, it is presented as an emissions reduction obligation rather than a volumetric sales obligation.

6 Greenhouse gases, Regulated Emissions, and Energy use in Transportation.

47. The final policy design RIS partially justifies the sustainable biofuels obligation on the basis that the increased costs it imposes on consumers will incentivise uptake of electric vehicles. It is arguably inconsistent to claim this non-biofuels emissions reduction benefit on one hand, but not to incorporate another non-biofuels emissions reduction benefit into the policy's design on the other hand (where fossil fuel efficiencies are concerned). If this policy can drive the same emissions reductions through incentivising cost-effective fossil fuel efficiencies, we argue it should be allowed to do so.
48. We suggest policymakers incorporate further flexibility into this element of the policy design to enable fossil fuel supply chain efficiencies to be recognised in meeting the obligation. This would bring the proposal into alignment with overseas approaches, including the California Low Carbon Fuel Standard.

The sustainability criteria

General comments

49. We support efforts to mitigate the adverse impacts of biofuels production stimulated by any obligation. As the consultation document notes, biofuel mandates in Europe and the United States in the mid-2000s caused immense environmental destruction and ecosystem loss; caused high food prices that directly impacted the global poor; and may have increased fossil fuel consumption and associated emissions. These risks remain pertinent today.⁷
50. Any such effort will inherently constrain options available to fuel suppliers in meeting the obligation, meaning higher costs are passed on to consumers. A careful approach to balancing this trade-off is essential. Suppliers will also need certainty about which options are and are not available to them.

Indirect land use change

51. We agree that modelling indirect land use change is complex and uncertain. However, notwithstanding its shortcomings, it does provide the best available means to account for the GHG emissions impacts of crop-based biofuels so that these can be minimised. Incorporating this into the lifecycle analysis would generally be preferable to blanket decisions on particular feedstocks based on their average or potential indirect land use implications.
52. To the extent this is not preferred or possible, a combination of Option 1 and Option 2 might be the best approach (to enable use of feedstocks not within the prescribed cap). Regarding Option 1 (a sinking cap on food and feed-based

⁷ See www.independent.co.uk/news/uk/politics/boris-johnson-biden-g7-biofuels-b2110040.html

biofuels and banning feedstocks with significant indirect land use change emissions):

- a. the proposed cap on food and feed-based biofuels is yet to be prescribed, which inherently increases uncertainty for fuel suppliers; and
 - b. limited analysis is provided justifying the proposal to use a 5 per cent threshold for banning feedstocks (which is a stricter approach than the European Union). We recommend the proposal be aligned with the European Union's approach.
53. Option 2 (requiring all biofuels to be certified as "low risk" of causing indirect land use change) adds further flexibility, for example where a supplier uses a feedstock that doesn't fit within the cap, and the scheme could be designed in such a way to incorporate both approaches.

Food security

54. We agree with Option 2, i.e., using the approach to indirect land use change as a proxy for also addressing food security (question 12). The approach to managing indirect land use change should in theory also address food security impacts, and this approach will minimise administrative costs.

Waste

55. We support the proposed requirement that biofuel sourced from any waste streams is verified against relevant international standards (question 13) and the approach to allocating emissions to products, co-products, residues, and wastes is broadly sensible.
56. Beyond this, we reiterate that the proposals to exclude or limit residues or co-products that are excluded or limited under other criteria serves to further constrain the options available to suppliers and should be subject to cost-benefit analysis.

Conclusion

57. We support a market-led, least-cost, fuel-neutral approach to net emissions reductions. This is important because it is ultimately New Zealand firms and households that bear the costs of the transition to 2050 and beyond. This is increasingly important to recognise in a context of rising costs of living and of business globally.
58. The transport sector will clearly need to play a significant role in this transition. Global fuel suppliers are already making huge investments in new fuel technologies (including advanced biofuels), and uptake of electric vehicles is

accelerating. Market price signals (including carbon price signals) and consumer demands are fundamentally shifting investment into innovative new solutions.

59. But on the limited information available it is unclear whether the costs of the initiative – which include materially lower national economic growth through 2035 – are outweighed by its benefits. It has been developed at speed and is being implemented on an ambitious timeframe.
60. Meeting this ambitious timeframe means the scheme, if implemented, should strive for simplicity. An ‘off the shelf’ approach is likely to be most efficient, because internationally established standards are familiar to global fuel suppliers, and they will likely already be accredited against them. Any additional sustainability criteria – while important – will necessarily constrain options and increase costs and should therefore be subject to robust cost-benefit assessment.