8 October 2024

SUBMISSION FROM FORD AUSTRALIA

PROPOSED NEW VEHICLE EFFICIENCY STANDARD (EXEMPT VEHICLES) DETERMINATION 2024

Ford Motor Company of Australia Pty. Limited (Ford Australia) appreciates the opportunity to provide a submission to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts in relation to the *Proposed New Vehicle Efficiency Standard (Exempt Vehicles) Determination 2024*. This submission builds on Ford Australia's input to earlier consultations for the development of the Commonwealth Government's 'New Vehicle Efficiency Standard' (NVES), ahead of the commencement of the NVES Act on 1 January 2025.

In our comments, we have considered the New Vehicle Efficiency Standard Exemption Principles published in August this year and how the proposed Determination may be applied to align with these Principles effectively and in delivery of the Objectives of the NVES Act.

Ford Australia's Operations

Ford is a long-term participant in the local automotive industry, and next year we will celebrate our centenary in Australia. Australian-based engineers and designers lead the development of the award-winning Ford Ranger pickup truck, sold in around 180 markets globally, and the Ford Everest Sports Utility Vehicle (SUV).

Ford Australia is a leading direct automotive employer, with a passionate and talented team of approximately 1,500 engineers, designers, technical and other automotive specialists working at multiple locations across Victoria. These are highly skilled jobs reflecting our focus on attracting and developing talented team members and providing graduates from Australian tertiary institutions a valuable employment pathway to a career in the automotive field.

Our Australian facilities include a Design Centre with studio in Broadmeadows, a Research and Development Centre in Geelong, and a Proving Ground at Little River for vehicle testing and development activities. Recently, we marked the significant milestone of the 1,000th prototype vehicle – a Ranger Plug-in Hybrid (PHEV) – to be built in our prototype facility located in Broadmeadows. Our Broadmeadows campus also serves as home to the Product Development Centre for the Ford Motor Company's International Markets Group.

We welcome the opportunity to discuss our submission with Department and Government representatives, and we authorise its publication to the consultation's website. We may be contacted through the channels that have been provided separately to the consultation team within the Department of Transport.

Sincerely

[SIGNED]

Andrew Birkic
President and CEO

Attachment: Submission from Ford Australia to the Consultation on Proposed NVES (Exempt Vehicles) Determination

Executive Summary

Ford Australia has reviewed the *Proposed New Vehicle Efficiency Standard (Exempt Vehicles) Determination 2024* (the draft Determination) and believes it should be revised in the following areas of critical importance:

- In line with the NVES Act's Objectives and Exemptions Principles, all Zero Tailpipe Emission vehicles must be included in the scheme, incentivizing the introduction of these models.
- The draft Determination proposes to subject the most work-capable and business critical vehicles to new or existing CO2 Test Standards. Such substantial regulatory change must allow industry sufficient compliance lead time, typically 2 years for New Vehicles and 4 years for All Vehicles.

Additionally, other jurisdictions have effectively used supply incentives to encourage deployment of zero and low emissions vehicles. To better meet the Objectives of the Act and accelerate reduced fleet CO2 emissions, adding measures such as import duty relief and technology credits for electrified vehicles is strongly advised to promote successful transformation.

All Zero Tailpipe Emissions Vehicles To Be Included

Under the draft Determination it is proposed that Exemptions to the NVES Act will be enacted for any vehicle to which an ADR test for Carbon Dioxide Emissions does not apply, until after such time that an ADR test for CO2 is created that applies to that vehicle. The draft Determination is notably silent on the specific subject of zero tailpipe carbon dioxide emissions vehicles, such as Battery Electric (BEV) and Fuel Cell Electric (FCEV) vehicles.

By definition, BEVs and FCEVs will never be subject to a CO2 tailpipe emissions test and will always have a known NVES Emissions Number of 0.0gCO2/km. Similarly, they will always have a measurable and known Mass In Running Order (MIRO). With these two parameters a Credit for these vehicle types can always be calculated without the need for a CO2 emissions test. As such, the applicability of an ADR test for the determination of Carbon Dioxide Emissions should not be a factor in exempting any Zero Tailpipe Emissions vehicles from the NVES Act.

The key Objectives for this standard, as outlined in the *NVES - Exemptions Principles August 2024* guidance issued by DITRDCA in August 2024 include:

- Establishing a vehicle emissions standard covering certain vehicles that will create economic incentives for the manufacturers and suppliers of such vehicles to provide models to the Australian market that emit less carbon dioxide; and
- Reducing carbon dioxide emissions in the transport sector, thereby contributing to the achievement of Australia's greenhouse gas emissions reduction targets.

The NVES Exemption Principles go on to state that considerations for Exemptions should be:

- Enabling: to ensure that vehicles with the best emissions technology are made to be available to Australians.

Under these Objectives and Principles, a final *Exempt Vehicles Determination* that results in the exemption of any Type 1 (MA+MB) or Type 2 (MC+NA+NB1) Zero Tailpipe Emissions vehicles from the NVES Act would be in opposition to the Act, as it would eliminate any economic incentive for their introduction. Moreover, these vehicle types would be hindered from being made available to Australians as they would not attract the CO2 offsets that the NVES is designed to provide.

CO2 fleet regulations around the world take specific steps to incentivise the introduction of Zero Tailpipe Emissions vehicles and some, such as in Europe, intentionally go further to include vehicles that are outside the default scope of M1 and N1 type categories to ensure that some N2 Battery Electric vehicles are also incentivised.

For these reasons, Ford Australia urges the Department to ensure that the final *Exempt Vehicles Determination 2024* contains specific clauses to ensure that all Zero Tailpipe Emissions vehicles, such as BEV and FCEV, are explicitly included in the NVES Act and are not erroneously classified as Exempt Vehicles.

Planned Revisions to Scope of ADR 81

The draft Determination discusses the mechanism by which vehicles will be treated by the NVES scheme once an ADR test for Carbon Dioxide Emissions becomes effective for them. One proposed method of achieving this is to update the scope of *ADR 81-Fuel Consumption Labelling for Light Vehicles* to have it apply to vehicles that meet *ADR 80-Emission Control for Heavy Vehicles* via the *ADR 79-Emission Control for Light Vehicles* compliance pathway.

In this manner, it is assumed by DITRDCA that if a vehicle can be tested to Euro5 or 6 emissions standards using a Light Duty test cycle on a Chassis Dynamometer setup rather than via a Heavy Duty Engine Dynamometer, then an NVES Emissions Number can be determined. This in effect means that vehicles with an ECE Reference Mass at or below 2,840kg could be brought into the scope of ADR 81 and become subject to the NVES.

<u>Mandatory Inclusion of Vehicles Having Reference Mass up to 2,840kg</u>

In the case that ADR 81 becomes mandatory for NB1 vehicles with Reference Mass up to 2,840kg, this will present serious risks to the free and open supply of vehicles into the Australian market. ADR 79 and 80 (and ECE 83 & 49 on which they are based) provide manufacturers who produce vehicles that bridge the Light and Medium duty vehicle categories with flexibility in how they are tested for tailpipe emissions. This recognises that it may be simpler, and in some cases necessary, to test vehicles using either a Chassis or Engine Dynamometer procedure even though vehicles are of different classifications.

When building Chassis Dynamometers for emissions and fuel economy testing there are design specifications that physically limit the range of vehicles that can be assessed. The rollers that simulate the road surface on which the car is being driven have restrictions such as the maximum vehicle weight that can be supported, resistance that rollers can provide during the simulated drive cycle, and possible

distances between front and rear rollers. Similarly, 2WD and AWD/4WD vehicles require different roller capabilities. Chassis Dynamometer facilities themselves may also have limitations on the size and weight of vehicles that can access the facility. These specifications are typically chosen based on Light Duty vehicles being the upper limit on the type of vehicle that will be tested. Extending the scope of ADR 81 and expecting that any vehicle with Reference Mass up to 2,840kg can be feasibly assessed in existing test facilities and in very short timeframes is unrealistic given that this is the first time globally that such an ECE-based regulation will have been scoped to include NB category vehicles.

ECE-101 is the recognised and harmonised Global standard for lab-based Fuel Economy and CO2 emissions testing. Its scope is limited to Light Duty Passenger & Commercial vehicles only (MA & NA) and reflects the technical impediments to testing vehicles of NB1 category on Chassis Dynamometers. If ADR 81 expands in scope and effectively mandates testing for NB1 vehicles to support NVES Emission Number determination, this will add further to Australia's unique homologation requirements. This will increase barriers in Australia to the acceptance of vehicles that fully comply with requirements in large jurisdictions such as the European Union and United States. The unique Engineering and Homologation needed for supplying vehicles to Australia will subsequently grow, adding to the cost and complexity of providing mobility to citizens in a country that comprises less than 2% of worldwide new vehicle sales. The quite likely effect of these unique barriers will be to restrict availability of certain types of vehicles to Australian consumers as their supply and development costs become uneconomical.

Timing of Changes to Scope of ADR 81

The proposed change in scope for ADR 81 will make affected NB1 vehicles subject to Fuel Economy and CO2 testing standards that they are not required to meet in any other jurisdiction globally. In no other market is this test procedure mandated as a pre-condition for a NB1 vehicle to be sold. With the proposed changes to ADR 81 to be signed at the start of 2025 and enforced from January 2026, manufacturers will be expected to meet this new requirement for vehicles arriving within 12 months of these changes being made. Consequently, the DITRDCA proposal to change ADR 81 means:

- A new and unique standard will be enforced for vehicles that have not been designed for it;
- No existing tests nor prior certification will have been conducted on these vehicles;
- No, or very limited availability of emissions facilities to conduct tests in the proposed timeframe; and
- No time to complete certification and homologation of vehicles to the new standard.

Labs that conduct vehicle emissions tests typically need to be booked at least 12 months ahead of time as vehicles that undergo evaluation today have already been in development for 1-2 years. Testing itself can take up to 3 months, after which certification needs to be completed, production vehicles built, and then shipped into the intended markets.

For this reason, when a new technical regulation is applied for the first time it is anticipated that vehicles currently planned for development will need at least 2 years of work to achieve compliant vehicle arrivals in that market. For existing vehicle types that are in production and have limited or no development

ongoing, the compliance lead time extends to 4 years. NB1 commercial vehicles, which will now be required to test for tailpipe CO2 levels on a Chassis Dynamometer for the first time in any jurisdiction worldwide, will potentially be subject to substantial financial penalties based on the test outcome. Time needs to be given to allow manufacturers to optimise powertrain performance considering this new requirement, recognising that vehicles will have been designed and optimised to perform within the constraints of Engine Dynamometer testing and On-road performance demands.

It is likely that substantial emissions control software changes will be needed because of this newly added regulation. Engine, gearbox, exhaust, and aftertreatment systems such as Urea-based Selective Catalytic Reduction systems may also require hardware updates to optimise performance. This will naturally be followed by substantial re-evaluation of on-road behaviour in laden and unladed configurations to ensure that the performance of the vehicle remains acceptable.

There is also a lack of testing facilities that can support such rapid and unique regulatory changes. The current test labs that are available to most light duty vehicle importers are designed for testing products on a Chassis Dynamometer that are of a size and weight typical of standard MA or NA category vehicles. To update existing facilities or build new ones that can handle substantially larger and heavier vehicles, extensive planning and capital investment is needed. Obtaining permits for and designing a new or expanded emissions facility can take up to 3 years. This is followed by up to another 3 years of capital works, commissioning, and 3rd party accreditation for Certification testing to be possible. Extending the scope of ADR 81 and expecting that any vehicle with Reference Mass up to 2,840kg can be feasibly assessed in existing test facilities, or that facilities can be expanded to be compatible with new requirements within 1-2 years, is unrealistic.

In summary, to physically test, certify, manufacture, and transport NB1 vehicles that comply with a newly applicable ADR 81 CO2 regulation within 12 months is unfeasible. Any increase in scope for ADR 81 needs to be appropriately scheduled in line with industry-typical lead times to prevent vehicles being locked out of the Australian market. Changes to CO2 testing standards must recognise that the tests required will need access to facilities and resources that are already fully subscribed, and are likely to be incompatible with the proposed changes.

Supply Incentives To Accelerate Transformation

Import Duty

Ford Australia urges extending the current import duty exemption for electrified passenger vehicles to electrified commercial vehicles to help more Australians access more affordable EVs that meet their requirements. The extension of this duty exemption would also ensure that electrified commercial vehicles sourced from countries that don't have a trade agreement in place allowing duty-free importation would not be unfairly penalised.

Even where trade agreements exist, eligibility thresholds for originating content required to qualify for 'free' duty under the product rules can be difficult to achieve for EVs. This is due to the relatively high contribution of the battery pack to an EV's total value, meaning that it will typically not qualify under an

agreement's Rules of Origin unless the battery supply chain is localised at point of manufacture. At this point in the technology adoption, only a few locations worldwide have battery processing and manufacturing activities situated alongside EV manufacturing operations.

The Commonwealth Government's 'EV Discount' initiative facilitates duty-free importation of passenger EVs without requiring product content thresholds to be met. With an extension of this same initiative to commercial EVs, it would remove the duty and thus a significant cost associated with supplying these highly capable but economically crucial Commercial vehicles in Australia.

Super Credits and Off-cycle Credits

Super and Off-cycle credits have been successfully used in CO2 reduction standards around the world to promote the availability of low and zero emission technologies. They are particularly impactful early on as they help offset potential penalties by giving extra stimulus to deploy Plug-In Hybrid (PHEV) and Battery Electric (BEV) vehicles, along with Off-cycle technologies such as Engine Stop-Start and lower Global-Warming Potential (GWP) refrigerants. These credit systems work by lowering the economic barriers to the introduction and uptake of the real-world CO2 reductions presented by new technology, without requiring extra subsidies or funding from governments.

Super Credits do this by rewarding vehicles with lower-CO2 emitting powertrains to have their emission credits magnified which are then used to offset CO2 from models in categories where such technology is not yet economically and technically viable. This system makes the more expensive technologies used in lower-CO2 emitting powertrains, such as in PHEV and BEV vehicles, more affordable. It does this by incentivizing manufacturers to offer these powertrain types sooner and more cost effectively, offsetting the effects of higher-emitting vehicles in segments such as highly capable but economically crucial Commercial vehicles. As implemented currently, the NVES scheme merely penalises these more capable vehicles, which are not yet able to be substituted with lower-emitting powertrain options. It provides no incentive to offset the emissions of these economically critical vehicles with lower CO2 technologies.

Data produced by the International Council on Clean Transportation shows that over the period of 2020-2023 inclusive the European Union, China, the USA, Canada, India, South Korea, the United Kingdom, and Mexico all had Super Credit systems in force that rewarded PHEV and BEV powertrain vehicles to varying degrees. Over a similar period, the International Energy Agency reports that world-wide stocks of vehicles equipped with these powertrains went from 7.5 million in 2019 to over 40 million in 2023, an over 500% increase.

The recent experience in the New Zealand market serves as a comparison. Here, substantial cash subsidies to incentivise customer purchases of PHEV and BEV vehicles (the Clean Car Discount) were implemented in July 2021. When these were discontinued at the end of 2023, the adoption of these vehicles slowed severely.

Given the NVES Act's requirement for rapid fleet CO2 reductions, Ford Australia strongly recommends the inclusion at the earliest opportunity of a Super Credit system that allows all BEV and PHEV vehicles

to be counted as 3 and 2 vehicles respectively. Off-cycle technologies should be eligible for further CO2 offsets. This will not require government-funded purchasing incentives to encourage consumers and will give impetus for automotive companies to deploy the best technologies that achieve real world CO2 reductions.