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IMPROVING THE FUEL ECONOMY OF VEHICLES ENTERING THE NEW ZEALAND FLEET

SUBMISSION TO THE MINISTRY OF TRANSPORT
28 MARCH 2008

BACKGROUND TO IPENZ

The Institution of Professional Engineers New Zealand (IPENZ) is the lead national professional body representing the engineering profession in New Zealand. It has approximately 10,000 Members, including a cross-section from engineering students to practising engineers to senior Members in positions of responsibility in business. IPENZ is non-aligned and seeks to contribute to the community in matters of national interest giving a learned view on important issues, independent of any commercial interest.

EXECUTIVE SUMMARY

IPENZ strongly supports all initiatives to improve the efficiency of our vehicle fleet.

Of the three options set out in the discussion paper we prefer the vehicle levy scheme, as we note that the imposition of a charge for an externality would in this case incentivise the purchase of efficient vehicles, whilst not necessarily restricting vehicles available on the market. We also note that this scheme appears to be relatively simple, effective and low cost.

We also note that CO_2 emissions are produced during vehicle manufacturing, the production of biofuels, and the production of energy for electricity consuming vehicles. These life-cycle emissions should be considered if the Government intends to reduce overall emissions.

We do not seek to speak to this submission but are happy to further discuss any of the points raised within.

SUBMISSION

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The following are our responses to the some of the questions contained in the discussion paper.

1. *What other options might exist that will influence the fuel economy of light vehicles entering New Zealand?*
   We note that Road User Charges (RUC), which are not considered in the document, could potentially be separated from the pump price of petrol, as is currently the case for diesel vehicles, and that they could be graduated based on a vehicle's size, fuel type (or potential) and fuel economy.

   Regardless, we feel that the RUC fee structure should be reviewed, as it appears that that fees for small and efficient diesel cars are relatively high compared with other vehicles.

2. *Our preferred approach, option six, is a regulated vehicle fuel economy standard. Are there any factors we may not be aware of that might influence this preference?*
   We note that various countries prescribe different tests to determine fuel economy. These need to be benchmarked against each other to ensure a level playing field.

   We consider that the regulations should apply only to registered vehicle importers (ie to companies importing vehicles to sell in New Zealand), not private imports (individuals importing vehicles for personal use).

   Such an approach bears some similarity to the proposed Corporate Average Fuel Economy (CAFÉ) standards in United States, in that they are supply management rather than demand management tools. Supply management is sometimes seen as a heavy-handed approach, while demand management encourages a particular behaviour rather than enforces it.

3. *The NZEECS sets a target for the average fuel economy of light vehicles entering the New Zealand fleet by 2015 to be 170g of CO_2/km. We are proposing to base our standard on this target. Bearing in mind the current fleet average, for both new and used vehicles, is approximately 210g of CO_2/km, is 170g of CO_2/km by 2015 an appropriate level to be aiming for? If not, why not?*
   Firstly, we note that fuel economy is a useful comparator for prospective purchasers, and needs to be used in conjunction with emission data.

   Secondly, the target of 170g CO_2/km by 2015 is not particularly challenging, particularly considering the technology improvements likely to take place by then, as there are already cars available on the market which meet this target. As an example, 2000 model Peugeot 306 HDi can achieve approximately (in the real world on-road environment) 130g/km and an Audi A3 2.0TDi uses approximately 160g/km. We would expect to see mainstream cars capable of achieving an emission level below 100g/km in real life motoring in 2015.

5. *We are proposing that the standard starts at the estimated actual average vehicle fuel economy in 2009 and that it steps down three times to a standard of 170g of CO_2/km by 2015. Are the proposed steps to 2015 set at reasonable and fair intervals? If not, why not?*
   The steps seem reasonable; however, refer to our response to question 3.

6. *We are proposing that the standard should apply to all light vehicles i.e. vehicles of a gross vehicle mass of 3.5 tonnes or less, except for cycles, mopeds and motorcycles. What sorts of vehicles do you believe the standard should apply to?*
   This range of vehicles seems appropriate.

9. *We are proposing that full electric and plug-in hybrid vehicles be attributed a fuel economy value of 75g of CO_2/km. Given that full electric vehicles do not produce carbon emissions, other than from the electricity generation, what do you consider is the appropriate fuel economy rating, in grams of CO_2/km, which we should attribute to these vehicles?*
   We do not wish to comment on what the appropriate fuel economy rating should be. However, it should be noted that although these vehicles do not directly produce CO_2 emissions, they will tax an electricity generation/transmission infrastructure already at capacity in some parts of the country (although we anticipate that most electric cars would be recharged overnight when there is surplus grid capacity, and note that pricing incentives can be used to ensure that recharging takes place at off peak times).

13. *What is your preferred implementation option and why?*
    The proposed tradable credit scheme seems unnecessary and very complicated. Consequently, it may be open to abuse from "wheelers and dealers" in our society who may discover the loopholes.

    We consider that it is preferable to charge per vehicle so that if any vehicle doesn't meet the target then it pays. However, if fuel efficient vehicles are rated less than the target they should be eligible to receive a subsidy. We also recommend that the target is regularly reviewed, so that as the average vehicle becomes more efficient the target is reduced accordingly.

14. *Under the tradable credit option, vehicles that fail to meet the standard would be banned from import unless the importer can show a requisite number of vehicles that meet the standard. Do you prefer this scenario or the penalty option? Why?*
    We support a financial penalty (ie charging for the externality) on vehicles which do not meet the standard, but do not support a total ban.

16. *If any additional Crown revenue does result from the implementation of any of the outlined schemes, how should this be used?*
    We think it would be appropriate to direct excess revenue towards improving New Zealand's transport infrastructure and capacity (including public transport, road, rail, shipping facilities)

17. *Some suggestions have been made that an additional incentive, rather than a penalty or charge, should apply in the vehicle fuel economy standard scheme. How could such an incentive work effectively?*
    We note that such an incentive scheme is only likely to apply to a small range of vehicles.

18. *Do you believe the industry compliance code is a workable option? If not, why not?*
    We think that this is a workable option, but this is not our preference.

19. *How well do you think the proposed schemes will contribute to CO_2 reductions?*
    We are not convinced that the proposed schemes will achieve the fuel economy goals in the intended timeframe, but considered them a more palatable solution than banning vehicles outright.

20. *What other benefits, costs and influencing factors should we consider?*
    It should be remembered that New Zealanders enjoy a range of outdoor pursuits, many of which involve towing equipment relatively large distances. While some

households may be able to afford one (large) vehicle for towing and a smaller one for daily use, many cannot. At present, hybrid and electric vehicles are not capable of towing.

23. *Do you have any other comments to make on the proposed standard and implementation options?*
    At present, turbodiesels use less fuel than other comparable vehicles. Hybrids are often portrayed as being extremely fuel efficient; however, for real life use they may be only as efficient as Euro4-compliant diesels (which are also very clean burning).

    The document does not mention RUC and how they might apply in the future to cars running on anything other than petrol. However, we note that the present situation penalises small and efficient diesel cars.

    For example, a car weighing 1300 kg has to be run on a "two-tonne-or-less" tariff which doesn't accurately reflect the low fuel consumption. Consequently, a small diesel car might pay 3.2 cents/km and a five-tonne truck about 3.8 cents/km, despite the disproportionate damage to the road and the environment. In comparison, smaller petrol engine cars are taxed per litre of fuel.

    We note that not only is the fee too high for diesel cars, but there is no equivalent mechanism, as in the case of petrol cars, to encourage lower energy use. We consider that the policy should address the matter of RUC – it needs to be applied consistently to all vehicles regardless of fuel.

    It has also been suggested that the introduction of a tax, which would reduce CO_2 emissions to any desired target (by increasing the cost of fuel), is simple, visible, requires no additional bureaucracy, and leaves responses in vehicle owners' control. We note that individuals are very negative about high fuel costs, but on an international scale New Zealand's fuel prices are still relatively low.

CONCLUSION

IPENZ strongly supports all initiatives to improve the efficiency of our vehicle fleet. Of the options outlined by the discussion paper, we prefer the vehicle levy scheme, as we note that the imposition of a charge for an externality would in this case incentivise the purchase of efficient vehicles, whilst not necessarily restricting vehicles available on the market.