

Submission on Clean Car Standard and Clean Car Discount 2019

Robert McLachlan and Steve Trewick
Centre for Planetary Ecology, Massey University

1. We are professors in the School of Fundamental Sciences and School of Agricultural and Environment at Massey University. We work on local solutions to global ecological issues including climate change and biodiversity loss. Some of our work on this subject can be found online at blog.planetaryecology.org.

We wholeheartedly support the Clean Car Standard and Discount and endorse the evidence presented in the consultation document. In this submission we focus on additional supporting evidence and some other factors that in our view should be taken into account.

2. *Is the Clean Car Standard appropriate for New Zealand?*

Yes, absolutely.

The most important reason is that present policies have led to sustained and dramatic increased in CO₂ emissions from land transport.

However, other impacts of the status quo also support the Clean Car Standard: the fuel bill (which has an impact on consumers, on the New Zealand economy, and on the balance of trade), the health impacts, the congestion, the risks of future fuel price increases, the geopolitical impacts of our fuel purchases, and the overall effect on the quality of life of New Zealanders and the environment of the unprecedented increase in vehicles and pollution in New Zealand.

In addition to efficiency standards and feebates, there are some other mechanisms that have been employed internationally, but those two have been found to be the most effective and it is hard to see how the problems outlined in the consultation document can be addressed without them. Other mechanisms, such as the UK's (former) fuel price escalator, annual CO₂-based registration fees, low-emission zones, and public and active transport policies, are typically employed *in addition* to efficiency standards and feebates.

Furthermore, as well as the supporting factors mentioned in the LEV consultation document ('[LEV]'), emissions of light vehicles are one of the few large areas of emissions that are cost-effective to reduce immediately. Any arguments for weakening the Clean Car Plan must be examined in the context of economy-wide emissions reductions and explain where else the reductions are going to come from.

In 2009, the Government decided not to adopt fuel efficiency standards. Eight reasons for the decision are given in page 3 of the [Cabinet Paper](#). With the benefit of hindsight it is clear that the arguments behind all eight of the reasons are faulty. (Actually, there was plenty of evidence that the arguments were spurious even in 2009, except for the one about the impact of the Global Financial Crisis which was highly uncertain at that time.) We are now incurring the costs of that decision, which could easily be in the range \$500m–\$1b/year already.

3. *Is an average emissions target of 105 grams CO₂ per kilometre by 2025 an appropriate target for NZ? If not, why?*

Yes.

The figure on page 8 of LEV shows light vehicle emissions rising from 10.53 Mt CO₂ in 2017 to a peak of 11.17 Mt in 2022 under current policies. This seems optimistic. Emissions rose 0.36 Mt in 2017 alone and VKT rose 5%. The vehicle fleet increased by another 120,000 vehicles in 2018 and in the first half of 2019 sales are only down 8% on the previous year. Population growth is 2% and emissions increases due to longer commutes and congestion could add another 1% a year. 'Business as usual' could therefore take annual light vehicle emissions to 15.5 Mt in 2030 as our track record of adopting efficiency improvements is not good.

It has been argued that the target should move lower faster and that New Zealand should follow EU emissions standards. However, that could be difficult to achieve in practice. It could make it difficult for importers to source low-enough emission versions of popular models. The ability for them to do this easily is important for the success of the scheme.

Uncertainties about the testing cycles (see point 19 below) also indicate that the target should not be stricter than is proposed.

It is not yet clear if the proposed target and the Clean Car Discount will be enough *by themselves* to reduce land transport emissions sufficiently to meet New Zealand's decarbonisation goals most efficiently. Evidence gathered during its operation will allow it to be fine-tuned. Regardless, it should be complemented by other measures that reduce emissions and costs in land transport (see point 31 below).

4. *Do you think the Clean Car Standard would have an effect on vehicle supply and prices?*

It will affect supply, by altering the mix of vehicles, but is unlikely to have a net effect on prices.

There is ample evidence from the many countries and states that do have fuel efficiency standards, and from the data in [LEV] on the vehicles offered for sale in New Zealand, that the main impact of the standards is to influence the mix of vehicles offered for sale. In adopting the Standard New Zealand would be reaping the benefit of what has already been done elsewhere. For example, had this Standard been in place over the past decade, we would certainly have seen the importing of many more used hybrids from Japan – they are something like 10% of the fleet in Japan, but only 0.5% in New Zealand.

One possibility is that some importers would apply a de facto feebate of their own, in order to achieve the sales mix they need to meet the Standard, or deliberately fail the Standard and pay a fine. Given the availability of lower-emission vehicles in all market segments, this seems like an unlikely market response. In any event, this should be monitored even though it would not necessarily be a bad outcome.

5. *Do you consider the overall process outlined for the Clean Car Standard is workable? If not, why?*

Yes.

The process is extremely sound and well thought out.

6. *The Clean Car Standard will cover new vehicles and used vehicles being brought into NZ. Should people who import 3 vehicles or less be exempted?*

Yes.

7. *Do you support phasing-in the 105g CO₂/km emissions target by: adopting multiple targets that progressively lower to 105g? OR using the increasing percentage of fleet approach? Please explain why.*

Adopting multiple targets that progressively lower to 105g.

It's simpler to understand, to implement, and less subject to gaming.

8. *Do you support the time-frame for the phase-in period?*

Yes.

A shorter phase-in period would be better if it can be achieved.

9. *Do you support adopting a weight-adjusted Clean Car Standard?*

Yes.

The arguments in [LEV] are compelling, especially that this "encourages vehicle suppliers to aim for improvement across all their vehicles irrespective of vehicle size" and "avoids disadvantaging vehicle suppliers who offer a greater proportion of large vehicles and favouring suppliers who supply a greater proportion of small vehicles."

The fact that battery EVs are heavier suggests that they might be used to 'offset' larger sales of heavy high-emission vehicles; whether this would affect the overall operation of the Standard needs attention.

10. *Do you support a penalty of \$100 for each gram CO₂/km that a supplier of new vehicles exceeds its fleet target?*

Yes.

11. *Do you support a penalty of \$50 for each gram CO₂/km that a supplier of used imported vehicles exceeds its fleet target?*

Yes.

12. *Do you support the "banking" mechanism to provide flexibility for vehicle suppliers? If not, why?*

No.

13. *Do you agree that the new vehicle sector should have the added flexibility of "borrowing"? If not, why?*

No.

14. *Do you support an arrangement for suppliers to “pool” their vehicles together to comply as a group?*

No.

15. *Do you agree that new and used vehicle suppliers should not be able to “pool” their vehicles and comply as a group?*

Yes.

Banking, borrowing, and pooling open the door to gaming of the system and to less overall emissions reductions than would otherwise be achieved. They risk undermining the entire Standard.

16. *Do you support having a fine not exceeding \$15,000 for an individual for misreporting data for the Clean Car Standard?*

Yes.

17. *Do you support having a fine not exceeding \$75,000 for a person or organisation other than an individual (eg a company) for misreporting data for the Clean Car Standard?*

Yes.

18. *Do you support the sanction of disqualification from being a registered motor vehicle dealer if a supplier deliberately attempts to evade meeting annual targets?*

Yes.

These fees and sanctions are standard in the NZ vehicle industry.

19. *Do you support amending the Fuel Consumption Information Rule so that only vehicles tested to the WLTP, NEDC, the JC08, and the American Federal Test Procedure meet requirements for entry certification?*

Yes.

There are a number of issues here.

- (a) Many manufacturers are in the middle of a transition from NEDC to WLTP testing. An EU report, [From NEDC to WLTP: effect on the type-approval CO2 emissions of light-duty vehicles](#), finds that emission figures are 7% (for inefficient cars) to 24% (for efficient cars) higher under WLTP than under NEDC. During this transition, manufacturers are using WLTP results *adjusted* to NEDC, in order to avoid an unfair comparison with vehicles reporting under NEDC. It appears that the examples in [LEV] are using these adjusted figures. (Examples: VW Golf 1.4, 137gCO₂ and BMW 330i 140gCO₂: these are the

adjusted figures.) When the true WLTP results are adopted in 2021, they will be higher. At present, each European country is in the process of working out how to adopt their CO₂-based fees and discounts to the true WLTP. (France will move to unadjusted-WLTP results in 2020, Italy in 2021.) As far as we can determine, no information is available yet about how this will be done.

This means that the targets proposed in the Standard are actually *stricter* than a simple comparison to current EU targets would suggest. This area needs attention.

- (b) WLTP was introduced because of the discovery that real-world fuel use was much higher than tested fuel use, and the gap was growing over time. For example, the ICCT report [*From laboratory to road: A 2018 update*](#) finds that “On average, a new car in 2017 emitted about 42% more CO₂ under everyday driving conditions than advertised by vehicle manufacturers, up from a gap of 9% in 2001.” This has cancelled out two-thirds of the claimed efficiency improvements since that time. Even the new WLTP is unrealistic, but at least the discrepancy is less (about half as much).
- (c) If the discrepancy between tested and real-world fuel use were constant across time and across tests, then it would be less of an issue. Unfortunately, that is not the case. The ICCT has a detailed report on this issue, [*From laboratory to road: International: A comparison of official and real-world fuel consumption and CO₂ values for passenger cars in Europe, the United States, and Japan*](#). They find that:
 - i. The US EPA test has a small discrepancy.
 - ii. The EU NEDC test has a discrepancy that grew from 21% to 37% from 2008 to 2014. (That is, real-world fuel use was 37% higher than NEDC tested fuel use.)
 - iii. The Japanese J08 test has a discrepancy that grew from 23% to 46% from 2008 to 2014.
- (d) Therefore there is a risk that under the proposed Standard, WLTP-tested cars will be disadvantaged relative to J08-tested cars (by 2021 these will be used imports only), and US EPA-tested cars will be disadvantaged even more. This is not just an issue for the manufacturers and importers, it has the potential to undermine the Standard and result in the importing of cars that are much less efficient than claimed (and even giving them a discount!). This issue needs close attention.
- (e) Needless to say, battery EVs and to some extent PHEVs do not suffer from this problem.

20. *Do you agree with the proposed process for setting future emission targets? If not, what would you change and why?*

Yes.

21. *Do you think the Clean Car Discount is appropriate for New Zealand?*

Yes.

The ICCT has reviewed the best practice design of feebates, and their impact, first in 2010 and then in 2018 in the article [*Practical lessons in vehicle efficiency policy: The 10-year evolution of France's CO2-based bonus-malus \(feebate\) system*](#). They find that feebates are simple and effective and act in a complementary way to fuel emission standards. They mainly act by encouraging manufacturers (for NZ, read 'importers') to provide lower emission vehicles, not by affecting consumer's choice from within the range of offered vehicles.

In addition to the arguments in [LEV], the Discount creates a hugely important precedent in New Zealand, to move the taxation system towards the taxation of pollution. Although it's not really a tax, and it does this only in a small way, it is an important first step. It adopts the principle that society must bear responsibility for its choices.

22. *Is the emissions benchmark of 105 gram of CO₂/km by 2025 an appropriate one to have for the Clean Car Discount?*

Yes.

23. *Would an initial emissions benchmark of 150 grams CO₂/km be suitable for the first year of the Clean Car Discount? If not, why?*

Yes.

24. *Do you think the level of the fees and discounts in the example Clean Car Discount schedules would increase demand for low-emission vehicles? If not what changes would you make?*

Yes.

We are doubtful that the parameters of the Discount are sufficient to reduce emissions rapidly enough or to achieve the most net economic benefit. The data from different countries is conflicting and the market share of EVs, for example, has sometimes fluctuated widely in response to changes in incentives. The UK had very steep fees on high-emission vehicles for quite a while; this brought down official fleet emissions but has had surprisingly little effect on EV uptake.

In light of this uncertainty, the parameters of the Discount offer a good compromise. Further improvements can be achieved through complementary measures (see below).

The French experience with vehicle suppliers matching the steps in the feebate should be studied closely.

25. *In the example schedules, the schedules change every year to lower the emissions benchmark and to keep the scheme self-financing. Do you think annual change is practical or should there be less change?*

Yes.

After a while, everyone will become used to the annual changes and short-term effects on the market will become less.

26. *Should new vehicles include near-new vehicles less than 3 years old?*

Yes. This is appropriate for the NZ market.

27. *Do you think a zero band is appropriate?*

Yes.

In France, nearly all vehicle sales have fallen into the zero-band or the smallest discount band. Therefore the zero band should be carefully designed.

28. *Do you think the size of the zero band in the example feebate schedules is appropriate?*

Yes.

29. *Do you support the proposal to apply the fees and discounts directly at the point of vehicle purchase? If not, why?*

Yes.

The fees and discounts should be displayed clearly on the vehicle and in the purchase agreement. The refund policy should be clear.

30. *Do you support the penalties outlined in this section to ensure that fees and discounts are displayed on each vehicle and are correctly applied by vehicle suppliers? If not, why?*

Yes.

31. Additional factors affecting transport emissions in New Zealand, and suggested actions.

- (a) Private vehicle transport in New Zealand is underpriced and is subsidized by general taxation and by non-drivers. A [study](#) by Concept Consulting for the Parliamentary Commissioner for the Environment found that about one-third of the cost of driving (congestion, land for parking, respiratory illness, obesity, injury, death, noise, and CO₂) was not paid directly by drivers. This is likely to be a factor in the recent massive increase in vehicle numbers in New Zealand, in excess of population and economic growth, which is otherwise hard to explain. Other factors include the level of provision for public and active transport, and freight, road, and urban policy.
- (b) One reason for this subsidy is that private cars are taxed relatively little in New Zealand. See, e.g., [A comparison of CO₂-based car taxation in EU-28, Norway and Switzerland](#). A major deficiency in New Zealand is the lack of across-the-board vehicle excise taxes, CO₂-based registration charges, and no fuel excise tax above that which is spent on roads.
- (c) By themselves, the Clean Car Standard and Discount will not significantly alter this situation.

- (d) This sudden increase in the vehicle fleet of 820,000 in 5 years was likely not anticipated or planned for – a cautionary tale.
- (e) The Standard and Discount do not address nitrous and sulphur oxides and particulate matter emissions from vehicles. These are generally higher in diesel than in petrol vehicles. They could be addressed separately, but since they come out of the same pipe it would be natural to incorporate them in the same mechanism.
- (f) The Standard and Discount do not address heavy vehicles. Since hybrid and electric buses are already available, and electric trucks are imminent, this is the time to get policy in place. We should not be importing diesel buses any more. The ICCT recommends feebates as a more practical mechanism than an efficiency standard in this area.
- (g) The Fringe Benefit Tax exemption for utes deserves attention. It seems to be impossible to find out how widely this exemption is abused, i.e., how many of the exempt vehicles are actually used for non-work purposes. The exemption was expanded in 2017. Even if the ute is not used for non-work purposes, the exemption probably means that many work utes are bought where a ute is not really needed in that role.
- (h) Any decisions made now will have impacts for decades to come. Switching the fleet to electric is different from just switching to more fuel-efficient cars. It involves new charging infrastructure and some behavioural changes from the public, and these challenges (rather than simply cost) are stumbling blocks worldwide to more rapid adoption. It is clear already that the long game in land transport does not involve fossil-fueled vehicles. Policies should be designed to phase out fossil fuels in the fastest and best way possible. These arguments have persuaded many countries to bring in electric vehicle incentives beyond simply targeting carbon dioxide. They could include, for example, redesigning the RUC and fuel excise system to disincentivise fossil-fueled vehicles even more, announcing a phase-out date for the importing of such vehicles in different classes, greatly expanding the Low Emission Vehicle Fund and the Urban Cycleway Fund, looking at FBT around parking, bicycling, public transport, means-tested low-interest loans for EVs, and so on. The UK's Cycle to Work scheme has recently been [expanded](#). The UK has recently [exempted](#) electric company cars from fringe benefit tax.

Thank you for the opportunity to submit on the Clean Car Standard and Discount.

We would welcome the opportunity to present in person if possible.