28 February, 2020

NZ Automobile Association submission on:

ETS Proposed Settings

SUBMISSION TO:	Ministry for the Environment
REGARDING:	ETS Settings
DATE:	28 February 2020
ATTENTION:	
ADDRESS:	ETS Consultation Ministry for the Environment, PO Box 10362, Wellington 6143
SUBMISSION AUTHORISED BY:	Mike Noon General Manager, Motoring Affairs New Zealand Automobile Association Incorporated (NZAA) PO Box 1, Wellington, 6140
SUBMISSION AUTHOR:	Peter King
AUTHOR E-MAIL:	peter.king@aa.co.nz
AUTHOR PHONE:	(04) 931 9982

NOTE TO REQUESTOR:

The AA requests an opportunity to present this submission orally.

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Executive Summary – Unworkable from the Outset

The New Zealand Automobile Association (AA) welcomes the opportunity to provide comment on the "Reforming the New Zealand Emissions Trading Scheme: Proposed settings" (the consultation document).

The AA recognises that transport has a considerable role to play in Greenhouse Gas Emissions abatement due to the large growth in transport emissions since 1990. However the government has not acknowledged that migration policy, which has seen New Zealand's population increase from 3.8 million to 5 million in the twenty years since 2000, with a consequent increase in the size of the vehicle fleet, has had a large part to play in the increase in New Zealand's transport emissions.

The AA has found most MfE projections in the transport sector to be unrealistic. The suggestion that the sector can achieve 500 kt abatement each year for five years (the equivalent of removing 210,000 cars per year) is not "ambitious", it is simply not credible.

Based on current growth rates the AA projects that transport emissions alone will be 14m tonnes greater than the proposed 80 million tonne carbon budget for the 2021-2025 and that neither improvements in fuel efficiency nor the foreseeable uptake in electric vehicles will significantly ameliorate this situation. Indeed the uptake of electric vehicles will not decrease our emissions but merely curb the Greenhouse gas emissions growth over the next 15 years.

The AA has surveyed its Membership in an effort to determine the willingness to pay for climate costs. While Members are generally positive regarding environmental issues there are limits to their willingness or ability to shoulder increased costs. Not surprisingly those who purchase the most fuel are less likely to be enthusiastic about higher carbon costs compared to those who purchase little or no fuel. Even a 10c a litre price increase (and raising the ETS cap from an effective 7c/l to 14c/l comes close to this) will upset a significant fraction (around 20%) of the population. We hope to have more information when we repeat the survey in September.

The AA does not see how a constrained price (the containment reserve price) and a constrained supply (the "ambitious" emissions budget) compared to growing demand can result in anything other than frequent and repeated calls on the cost containment reserve volume. Exactly how this will reduce emissions or work is not sufficiently explained by the discussion document. Thus the broad settings proposed are considered unworkable from the outset.

The AA believes that practical progress can be made in reducing transport emissions but it will require thinking beyond the confines of the Emission Trading Scheme. We suggest that some of the revenue generated by the scheme (roughly $500 million per year) should be hypothecated to developing these solutions.

The AA is happy to assist the Ministry in a genuine endeavour to reduce Greenhouse gas emissions from the transport sector where this can be done while meeting the transport needs of its Members. We do not believe this is beyond the capability of New Zealanders to achieve.

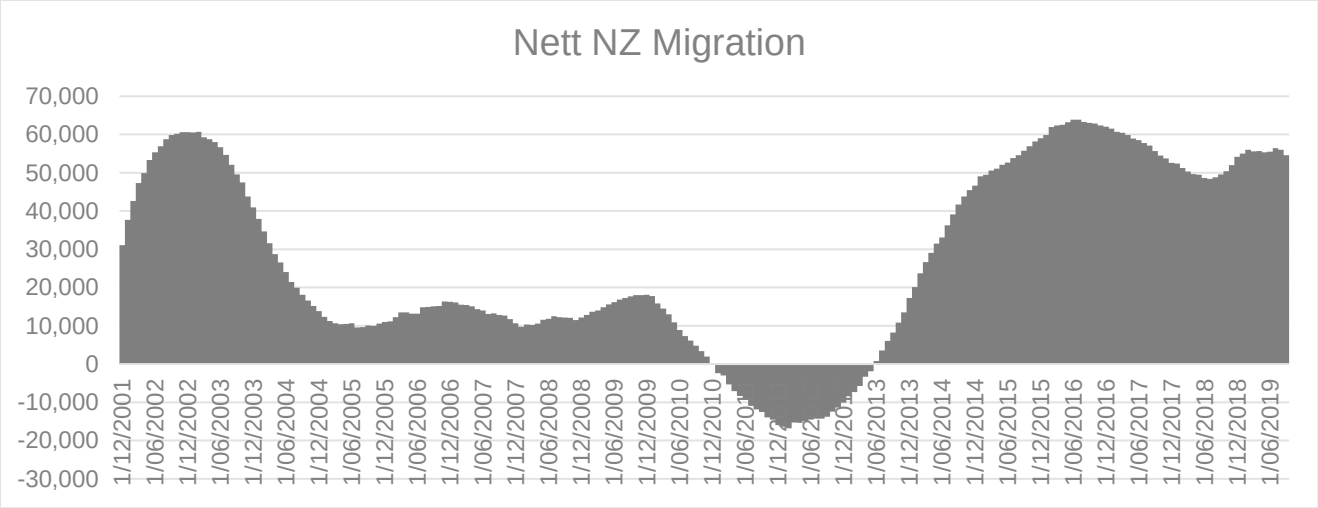
1. Transport and GhG emissions.

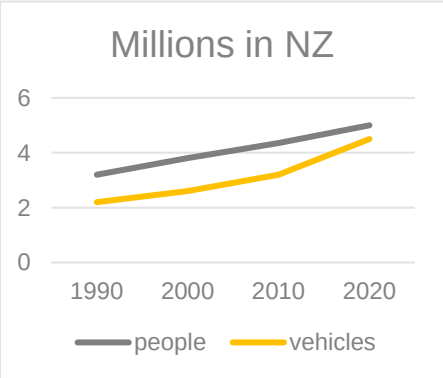
1.0 Importance of transport emissions to reducing Greenhouse Gas emissions

Transport emissions have received considerable attention in respect to climate change for the obvious reason that they have grown significantly since 1990. According to the NZ Greenhouse Gas Inventory:

> *In 2017, emissions from the Energy sector were 9,090.9 kt CO_2-e higher (by 38.2 per cent) than in 1990 (23,785.7 kt CO2-e). This increase is primarily due to a 6,981.5 kt CO_2-e (93.4 per cent) increase in emissions from the road transportation category.*

Growth in transport carbon emissions has been driven by population growth. Vehicle purchases and population growth are very highly correlated. Lacking alternatives much of New Zealand relies on private motorised transport and consequently has the third highest number of vehicles per head of population in the world. In recent years New Zealand's population growth has been driven by net migration which has averaged 27,377 per month since 2001. The New Zealand public does not have the transport options enjoyed in many wealthier nations.



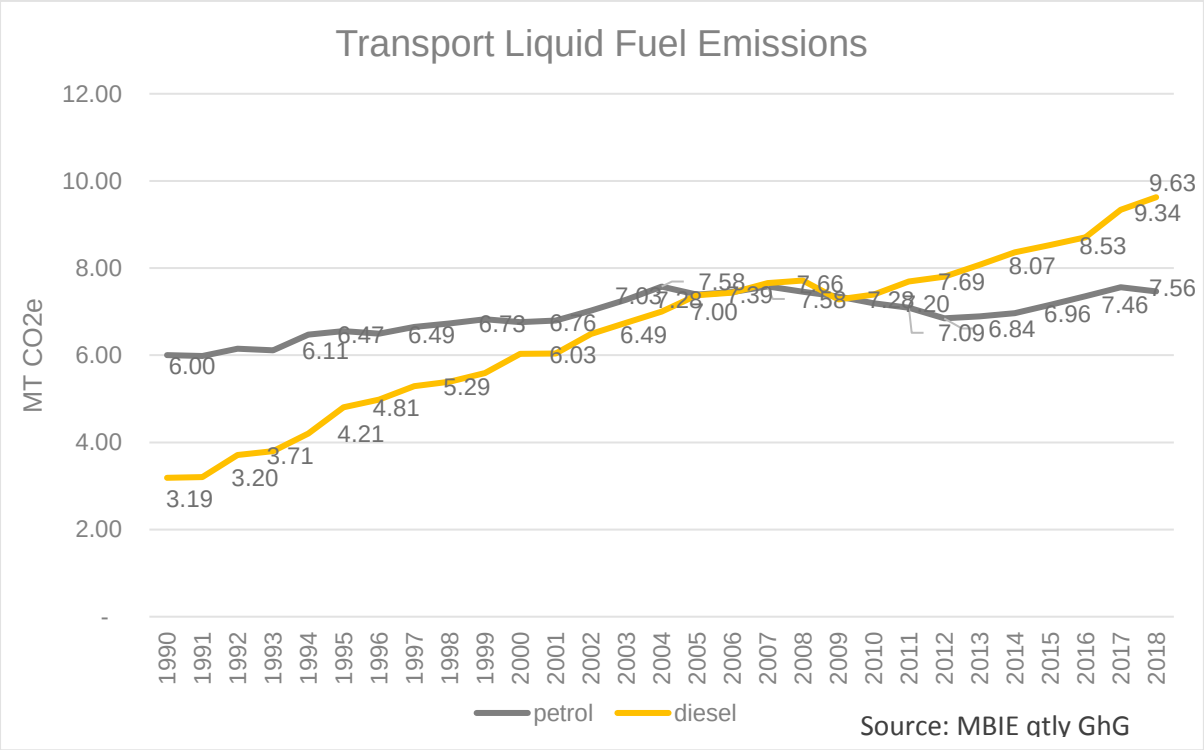


In 1990 New Zealand's population was 3.2 million with 2.2 million private vehicles. In 2000 it was 3.8m people with 2.6 m vehicles), in 2010 4.35m people with 3.2 m vehicles and in 2020 5m people with 4.5m vehicles. Emissions have doubled and so have the number of vehicles. Migration effectively transfers carbon responsibility from one jurisdiction to another.

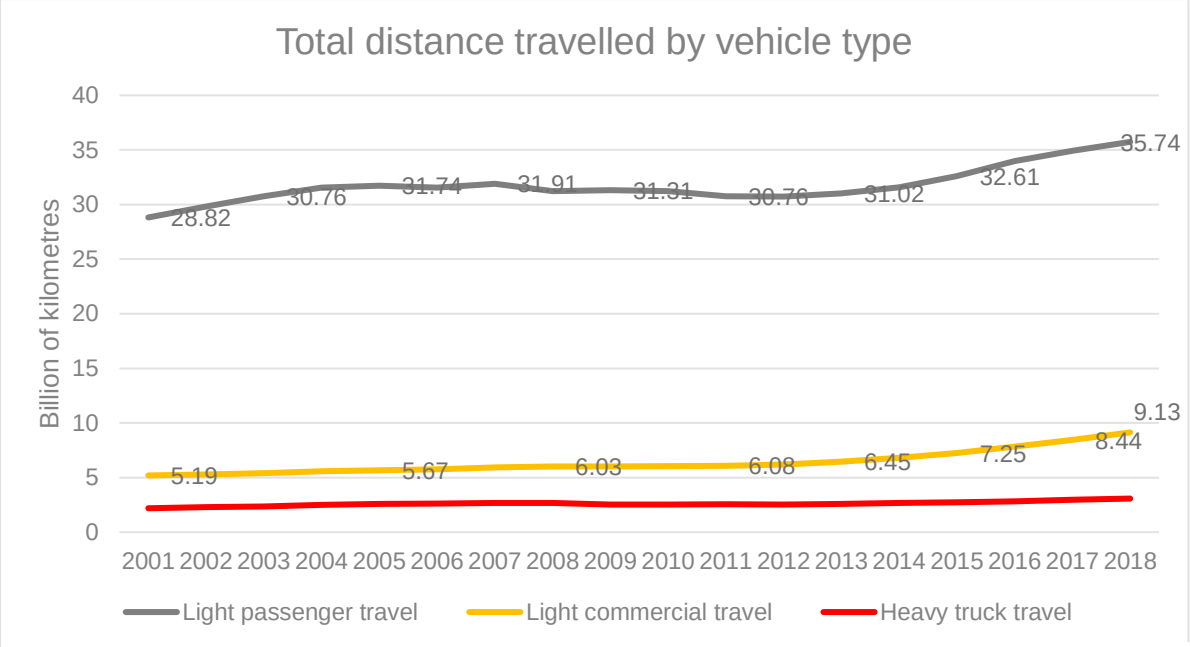
From a planetary perspective migration from nations with similar carbon intensity (per capita emissions) to New Zealand's 7.7T/yr (e.g China at 7.5T/yr) makes little difference. But even allowing for the fact that per capita emissions are a coarse average the difference between different nation's energy and transport systems shows that migration can have an overall climate change affect. To date this has not been acknowledged in government policy.

1.1 Emissions from road transport fuels

While total emissions from transport have climbed significantly since 1990 the total obscures a more interesting story. In fact petrol emissions have not changed so much. It is diesel which has seen a three-fold increase.

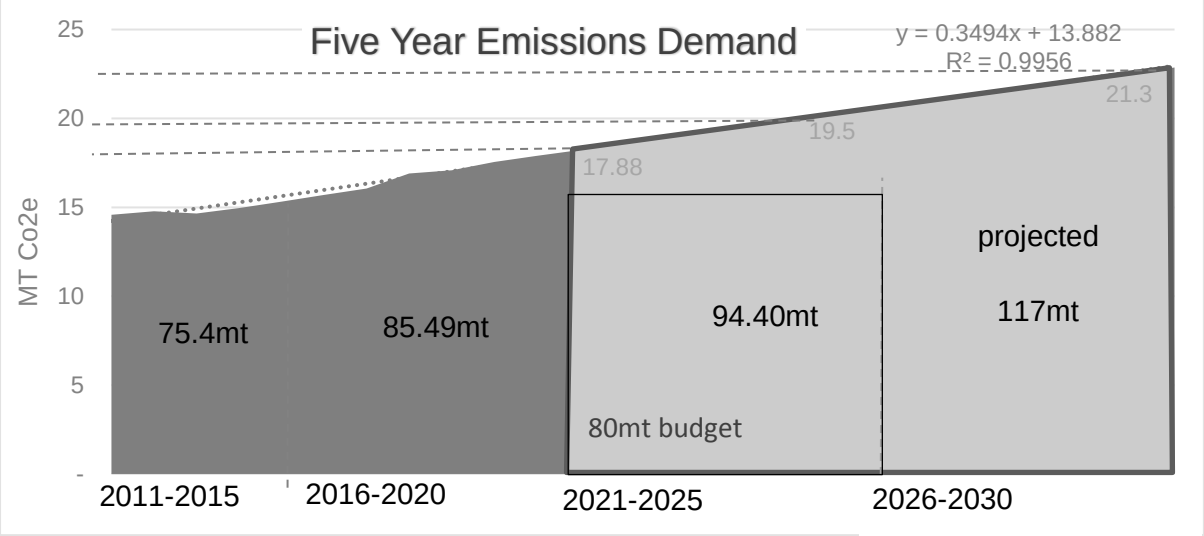


The regression equation for diesel (r^2 of 0.96) uses an annual slope coefficient of 21% while the regression for petrol (r^2 of 0.63) uses an annual slope coefficient of 4.5%. This suggests growth rates of 21% for diesel and 4.5% for petrol. Light commercial vehicles typically use diesel fuel.



Source: MOT

1.2 Projected Transport Emissions vs Proposed 80mt Settings Budget



Source: MBIE qtly GhG

Projecting emissions forward (assuming BAU migration and vehicle use) yields useful values for total emissions through the proposed budget periods.

This suggests that the total supply setting proposal of 80mt for the period 2021-2025 will not cover 14mt of transport emissions, not to mention emissions from the rest of the economy. This is already more than the projected 13 Mt of abatement suggested by the consultation document for all sectors and including forestry contributions.

1.3 Projected Savings target vs achieved.

The consultation document proposes that 0.5 mt CO_2-e per year can be saved from transport. This is the equivalent of (500,000,000kg / 2.45l/kg CO_2-e) = 204,081,633 litres of petrol. If the average vehicle achieves 9.6l/100lm and drives 10,104km per year (from MoT values) that is the equivalent of not having 210,396 petrol vehicles from the road each year.

For comparison we show the savings from the Clean Car Standard and Discount scheme if it achieved annual 20gm/km improvements for all newly imported vehicles that replaced scrapped vehicles in the fleet (as vehicles in addition to those scrapped provide no saving at all).

Replaced	vehicles	Mean km/yr	Total km	20gm/km l/100km	Total litres fuel burned	CO_2 kg/l	kg CO_2	kT CO_2
Used	101,000	10140	1,024,140,000	0.862	8,828,086	2.45	21,628,813	22
New	55,676	14386	800,954,936	0.862	6,904,231	2.45	16,915,367	17
							Total	39

That is 39 kT per year compared to the proposed 500kt target. This suggests the target is 12 times too ambitious even if the clean car standard annual increments were achieved.

There is also no real sign of any technological improvement likely from Japan.

Recalling that Japan's fleet is 1/3 micro Kei class cars (with 660cc engines) and includes 1 million hybrids it is notable that its rate of improvement appears to have stalled, albeit at a much lower level than New Zealand.

Japanese vs New Zealand Fuel Efficiency Performance

	2010	2011	2012	2013	2014	2015	2016	2017
Japan(GFEI)	163	159	147	143	136	143	144	144
Change		-2.5%	-7.5%	-2.7%	-4.9%	+5.1%	+0.7%	0.0%
NZ(petrol fleet)[1]	230	229	225	222	218	217	214	207
Change		0%	-2%	-1%	-2%	0%	-2%	-3%

Table 1 IEA Global Fuel Efficiency Initiative track of Japanese fleet achieved fuel efficiency compared to real world NZ petrol fleet fuel efficiency (MBIE petrol consumption divided by MoT petrol mileage data)

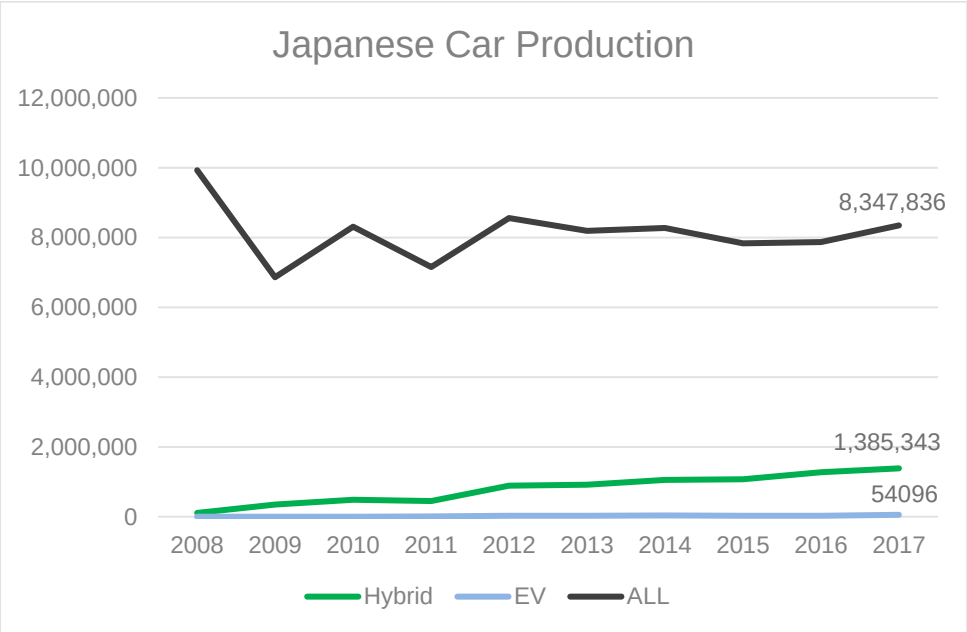
New Zealand is currently achieving a -3gm/km improvement in its petrol fleet each year.

[1] New Zealand actuals are for Petrol light vehicles only using MBIE emissions data and MOT fleet stats The value above for the New Zealand fleet includes all petrol vehicles in the fleet not just the vehicles manufactured in that year. This should not be confused with the targets referred to in the discussion document which are for the year of registration only.

2. Electric Vehicles as a carbon abatement measure

2.0 EV production

There has been a great deal of official enthusiasm for electric vehicles as a carbon abatement measure for domestic transport. This has been reflected by the Ministry of Transport, the Productivity Commission and the Ministry for the Environment. While the International Energy Agency (among others) also shows electric car production grew to 2 million vehicles in 2018, this was from a total production of 96 million. Of these 1 million were absorbed by the Chinese market. By contrast Japan, which supplies most of the world's **right hand drive** EVs, are 0.6% of Japanese car production.



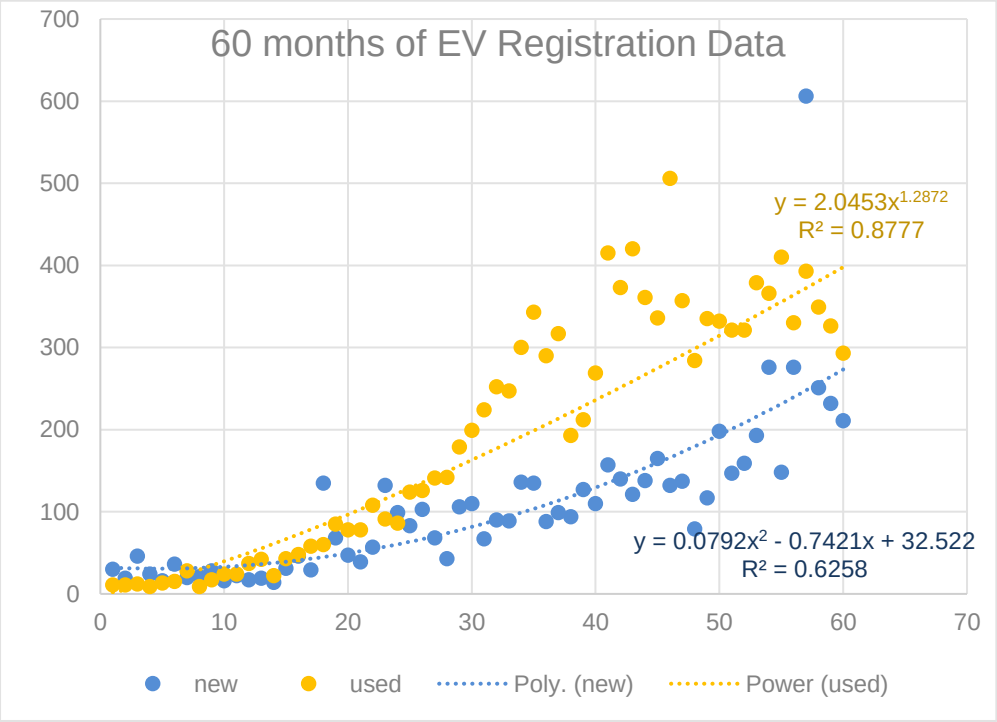
source JAMA 2018

In 2017 New Zealand EV imports (new and used) were 5% of total Japanese EV production. According to the Ministry of Transport there were 93,750 new petrol cars imported and 161,891 used petrol cars imported in 2017. According to the Japanese motor vehicle association as of 2017 the *total* Japanese EV production (all EVS and plug-in hybrids ever made) of 205,105 vehicles is 20% less than 2017*s* car imports (255,641) to New Zealand.

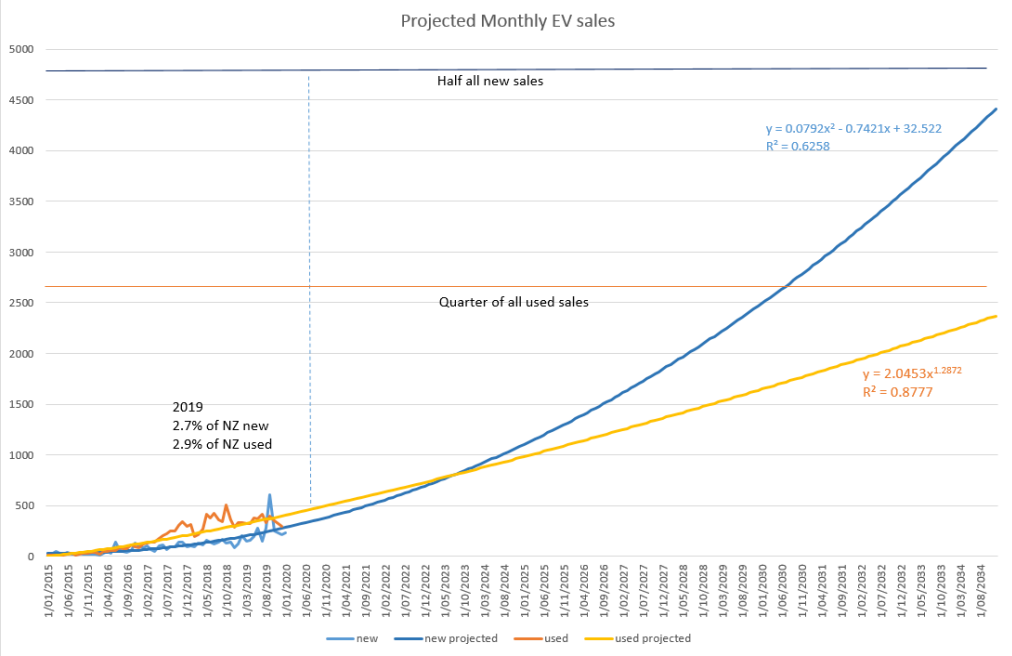
According to the International Energy Agencies *2019 Outlook* EVS are projected to be 37% of Japanese production by 2030. However there is a catch. A third of the current Japanese fleet are categorised as "Kei" or ultra compact cars. According to Reuters (Oct 23 2019) Japanese manufacturers believe these are the ideal class of vehicle to replace with battery electric vehicles. Unfortunately the tiny Kei cars generally do not meet New Zealand's frontal impact standards and cannot be legally driven on New Zealand roads.

2.1 Projected uptake of EVs

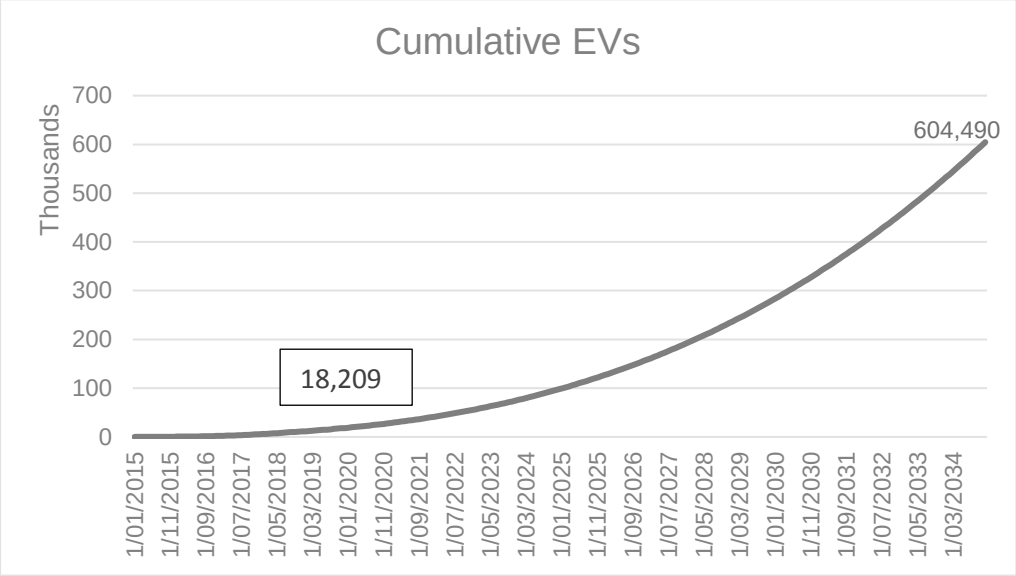
The Ministry of Transport republishes NZTA data on the number of EVs registered each month in New Zealand. The data was used to develop regression models for future uptake.



While we recognise these equations do not describe the classic sigmoidal or S-curve for new innovation there is no real indication from the data that this can be assumed.



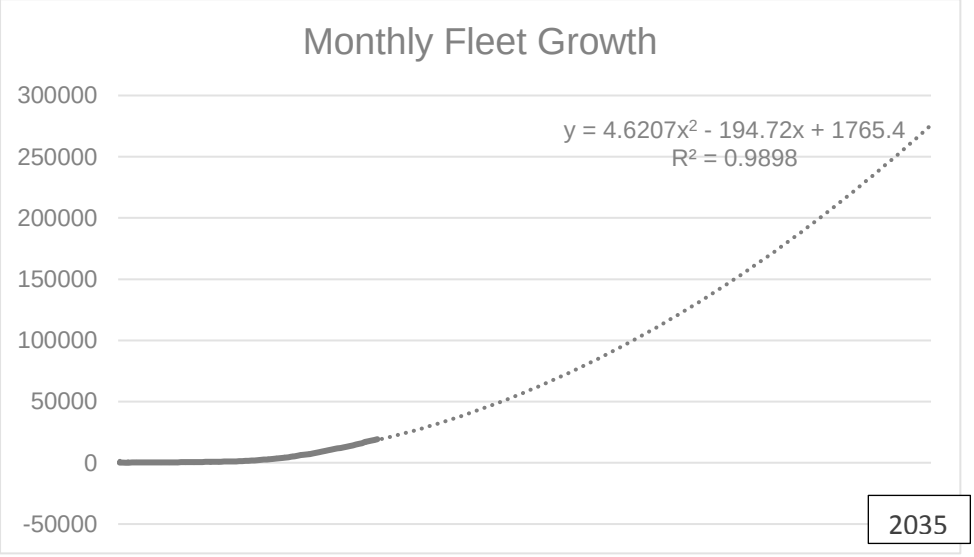
The higher new car share in this model is justified by the fact that more new electric vehicles will be available than used and new electric vehicles are anticipated to be cheaper than used ones (as the technology improves). Unfortunately this still does not suggest much impact by 2034.



Meaning that by 2034 EVs will constitute 18% of today's light passenger fleet count (3.2m) or 15% of 2034's projected light passenger fleet (R^2=0.92) of 4 million light passenger vehicles.

This means that there would still be 232,325 more internal combustion engined vehicles (in addition to the 604,490 EVs) by 2034. In short total road transport emissions can be expected to increase even with 15% of the fleet being EVs.

Please note this is a highly optimistic projection. If we project from existing monthly fleet numbers using a polynomial equation with an R^2 of 0.9898 fit against registrations over 85 months to date we get a projected total of considerably less.



That would mean under BAU there could well be another 300,000 ICEs in addition to the 232,000 in the previous projection by 2034. As we will see this is while enjoying a considerable subsidy.

2.2 Surveys on EV Interest

The AA has carried out surveys on EVs as a customer choice among its Members in 2016 and 2017. This matches similar work by the Energy Efficiency and Conservation Authority. What we essentially discovered was that awareness of EVs matches a predisposition to buy them. About 30% of the 925 in the sample thought EVs were desirable, of these 71% claimed to know a lot about them.

But when we examined those who were particularly interested many had not bought vehicles in the same price range previously (25%), around a half drove over 50km a day "a lot" or didn't have an off-street place to recharge them. In fact the people we found who best suited EVs were elderly women but they had limited interest or awareness of them. As EECA discovered the main market for EVs is actually technophile males on good incomes who have alternate vehicles.

Trade Me also surveys its members and found a growing interest in EVs yet high prices mean that when the final purchase decision is made most New Zealanders are put off by battery technology related concerns (range anxiety, battery longevity and recharge time) as well as high prices (average $25k for an electric vs $16k for an internal combustion engine on Trademe).

2.3 Revealed and Stated Preferences on EV purchases

According to MOT figures EV ownership is concentrated in Auckland and consists mostly of second-hand Nissan Leaf's. This is probably because they are mostly bought by motivated individuals rather than firms (who tend to buy new utes, possibly because of the fringe benefit advantages).

A 2018 survey of 232 EV owners by NZTA found just under two thirds of EVs (62.5%) were bought as a sole rather than joint decision. The free text comments clearly show the three main motivations for buying an EV are 1) better for the environment 2) more economical and 3) buyers like technology.

Flip the Fleet polls have found test drives and social media support groups have had a significant effect in reinforcing the decision to buy a EV.

Early adopters of EVs appear to be well educated, technophiles with significant disposable income who are motivated by environmental concerns and saving money.

2.4 Relationship between the clean car standard and discount scheme and the ETS

The proposed clean car standard and discount scheme was proposed as a means to re-orient New Zealanders purchase decisions by fixing a desired emissions standard and then intervening to impose costs on imported vehicles over the standard through penalties, fees for vehicles over the standard and discounts for imported vehicles under the standard. It was generally represented as a way to increase the price of utes and decrease the price of EVs. It was intended to be revenue neutral regarding government finances.

The unit measure of this policy is a gram of carbon per kilometre travelled (which equates to a change of 0.043 litres of petrol per 100km in fuel efficiency).

For every new vehicle 1gm CO_2/km over a 17 year average vehicle lifetime (the point when the average scrappage mileage is met) represents 83 litres of fuel, 0.204 Tonnes of CO_2 .The proposed Fuel Efficiency Standard penalty of $100 for each 1 gram every new car was over the standard therefore represented an abatement cost (or carbon tax rate) of around $100/0.204T CO_2 = $490/Tonne CO_2.

Because used vehicles have already consumed a fraction of their total lifetime offshore used vehicle whole of life emissions are considerably lower. Thus for every imported used vehicle 1gm CO_2/km over a 17 year average life represents 39 litres of fuel, 0.096 Tonnes of CO_2. A $50 penalty for each gram per kilometre each used car is over the standard represents an abatement cost (or carbon tax rate) of $50/0.096T CO_2 = $520/Tonne.

These proposed abatement costs are *ten times higher* than the proposed ETS cost containment reserve level of $50.

If an abatement level of 39kt per year requires a cost of around $500 a tonne it is most unlikely that the $50 cap will achieve a 500kT per year reduction target.

2.4 Abatement value of the EV road user charges exemption

When launched in 2016 then transport Minister Simon Bridges suggested the forgone RUC of the EV exemption was worth around $600 per year or (at the then rate of $62 per 1000km) or approximately 10,000km per year. At that assumed mileage under the current (July 2019) Road User Charges of $72 per 1000km the 19,285 EVS are exempt $13.8m in road user charges.

If we substitute a very small ICE vehicle driving 10,000km per annum might result in produce 1.86T CO_2e (using the Toitu calculator) each then over 19,285 EVs that's 35,870 T CO_2e not emitted at a cost of $13.8m or an abatement rate of $384 per tonne CO_2.

Similarly if a $384 per tonne subsidy for EVs is achieving relatively limited EV uptake a $50 price cap is not compatible with a 500kT per annum reduction target.

2.5 Conclusions about EVs as a climate change policy

While there is no doubt that the vehicle manufacturing industry is increasing its production of electric vehicles the principle constraints in New Zealand on our ability to take up this production is being a right hand drive jurisdiction and the tendency for manufacturing nations to absorb their own production.

At best in the next 15 years EVs will merely curb the emissions growth due to rapid population growth. They will not reduce emissions. At current rates of EV fleet growth the next 15 years will see an additional half million internal combustion engine vehicles added to the New Zealand fleet.

At present while the general population is apparently intrigued by electric vehicles they are generally not convinced. Even with a $384 a tonne subsidy the main customers for EVs are private technophiles, mainly males, and generally with above average income living in large cities. This suggests that the $25/T increase of the ETS market cap will only gather revenue from everyone else.

3. AA Membership Views on Carbon Costs

3.0 Information Sources

The New Zealand Automobile Association regularly carries out random sample surveys of its Members. Surveys are conducted online with emails sent to Members inviting them to the survey website. Like all surveys the response is largely self-selected, however statistical power analyses generally finds that the probability of misrepresentation is small. To ensure representativeness the responses are sensitivity analysed against all demographic variables we collect. Typically we find age and gender is the greatest determinant of variance in the response and fortunately we can weight responses against the AA population accordingly. Because we often report by age and gender this means results can be extrapolated to the New Zealand population as well.

3.1 Carbon Costs Survey November 2017 Summary

This survey of 1132 AA Members (nationwide). The response was biased towards the older Members (which was corrected by weighting) and University educated Members. The full report of this survey (which is repeated at each election cycle) is available on request. In general the survey found:

1. AA Members have a high level of support for environmentalism with 85% being supportive or strongly supportive of environmentalism although only 30% self-identified as an "environmentalist". This has been further confirmed by other separate survey results.
2. There was limited optimism about New Zealand's ability to meet its Paris targets. Only 17% thought it "certain" or "probable"; 52% "possible" and 21% "certainly not possible". The more optimism a Member showed to meeting Paris targets the less accurate was their answer to the question of the proportion Greenhouse Gas emissions from private cars (too large), suggesting ignorance favoured optimism. There was even less optimism for the rest of the world meeting their Paris targets: "Unlikely" scored 52%.
3. Using a slider from zero to $100 per month we asked Members how much they would be prepared to pay in a climate change tax that was used to reduce emissions. The average of $26 per month varied a lot by both psychographic and demographic segmentation.
4. On a scale of 0 to 10 where 0 was "relaxed" and 10 was "Very upset" a five percent increase in petrol costs (from $2 to $2.10) due to ETS prices scored a median of 4. By contrast a 25% increase (from $2 to $2.50) scored a median of 7. Different psychographics, however, varied considerably. (NB The AA has also surveyed Members after each oil price shock).
5. Those who are worried about their financial situation were reluctant to shoulder more environmental costs (regardless of their beliefs) while those with the means and the environmental commitment were well out of step with the rest of the community.
6. There was very limited use of public transport or cycling for non-recreational trips. That said, the findings for cycle and public transport use were higher than MoT Household Travel Survey proportions for the general population. It was also interesting to note that cycling was not as favoured by environmentalists as one might think.
7. Looking to the future AA Members did not see much scope for video conferencing and telepresence (N.B. even though this was an online survey) in the immediate future (although the technology is readily available now). They were 15% certain (and 21% probable) that they would have at least one electric car in the next ten years

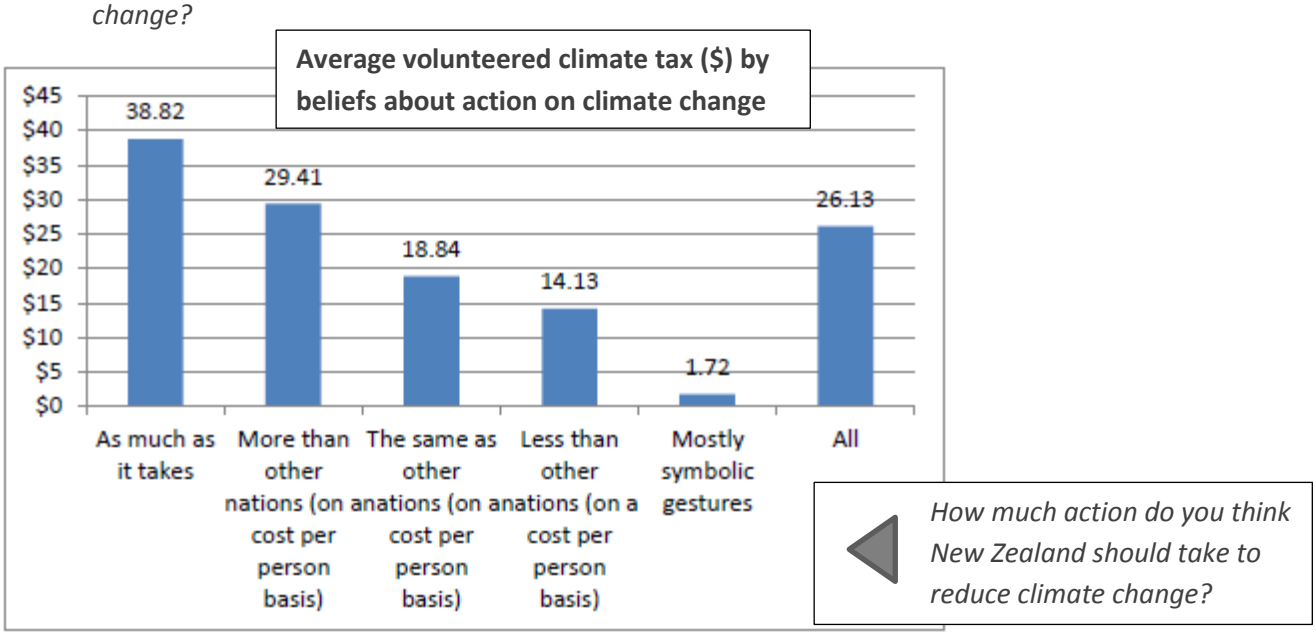
3.2 Carbon Costs Comfort

To test individual's commitment to climate change action we asked:

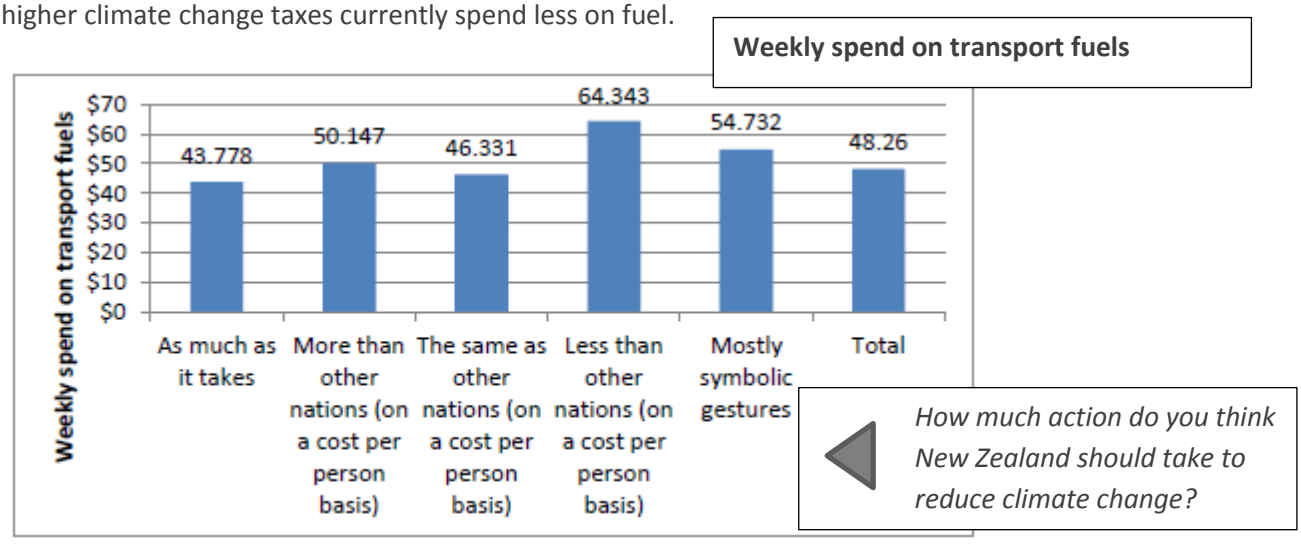
> *If you could set your own tax for climate change, where all funds went to projects to reduce Greenhouse gas emissions, how much would you be prepared to spend per month?*

And compared it with the respondents answer to the question

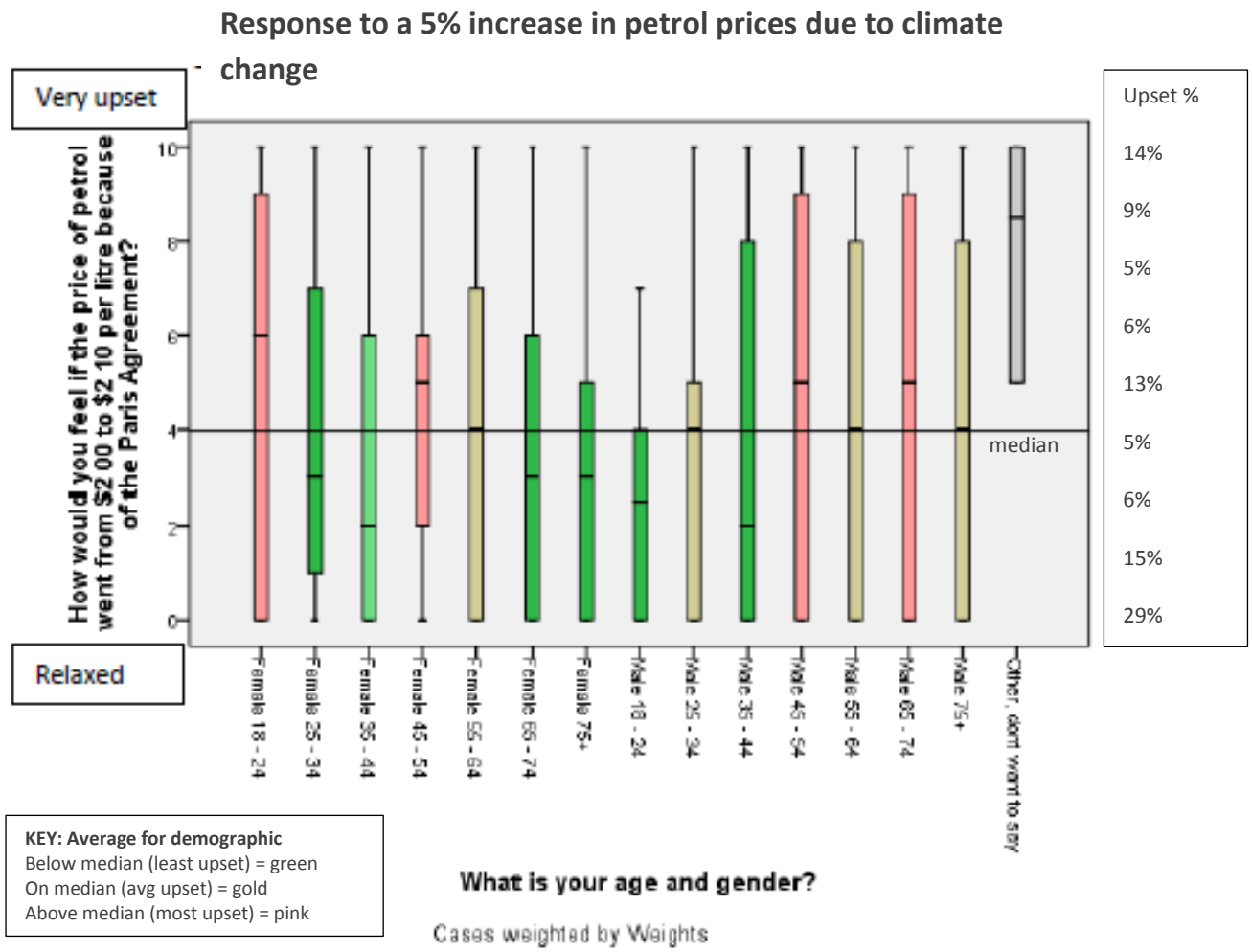
> *If meeting our target of 30% less emissions by 2030 will require difficult changes to our economy. How much action do you think New Zealand should take to reduce climate change?*



However it also turned out that there was self interest in this assessment as those who volunteered higher climate change taxes currently spend less on fuel.



Note that the self-selected carbon tax was *monthly* while fuel spend was *weekly*. However a $6 per week increase would be the equivalent of a 26c/ litre increase in fuel which would require an ETS increase of $100 per tonne (including GST). More realistic was the reaction to a 10c (5%) increase.



This graph shows the spread of responses to a 5% increase in petrol costs by age and gender. Upsetness is measured in a 10 point scale (10 is highest). The median (50% above and below) point was a score of 4 but some demographics (in pink columns) were higher (see line in centre of each column) and some lower (in green columns). The total distribution of scores (upset %) is shown on the right. This shows that (14+9=) 23% were very upset by a 10c/l increase in the price of petrol.

3.3 Other Evidence on public views on fuel costs

NZTA Research report 331 (Booz Allen, 2007) estimated that a 10% increase in fuel prices would have an immediate 1.5% decrease in petrol consumption and a 5% increase an immediate 0.75% decrease in petrol consumption. This remains the only transport fuel demand elasticities study on New Zealand consumers.

In 18 months from March 2007 to September 2008 the regular petrol price went from $1.64 to $2.19 (55 cents and an increase of 25%). Regular petrol consumption went from 22.6kt (March quarter) to 20.91kt (September quarter). This means a 25% increase led to a 7.5% decrease. This suggests that the elasticity is not linear. That said vehicle kilometres travelled per person over the period only dipped 2.25% with a 0.1% increase in public transport mode share.

3.4 Carbon Costs Survey Conclusions

There were strong levels of potential conflict within the AA Membership regarding the merit of shouldering carbon costs. We will have more information when we repeat the survey.

4. Economic implications of internal conflicts within policy settings

4.0 Budget vs Demand

As we have seen in sections 1 and 2 there appears to be an irreconcilable conflict between projected emissions growth from transport and a fixed 80mt five year carbon budget.

We cannot identify any way to obtain a 500kt per year reduction in transport emissions either from any realistic improvements of fuel efficiency of new vehicles or substitution of new electric vehicles.

If there is to be a shortfall of available NZUs it is almost inevitable that the demand will push up prices to the proposed cost containment reserve price of $50 per tonne. This will mean new volume will have to be released into the market. This will create both fiscal and political difficulties for any government.

4.1 Political Impact of constrained budgets

As page 49 of the Discussion Document makes clear the 2021-2025 period is closed to international credits it appears that the Government will be forced to either release more NZUs into the cost containment reserve or start actions to prosecute those unable to comply with their surrender obligations. If it releases more NZUs these will have to be "backed" by real emissions reductions, if not, they become "hot air" credits similar to the widely criticised Kyoto credits. Either way the government would be forced to make politically unpopular decisions.

4.2 Alternate options

Logically the government therefore will have two realistic options: 1) increase the budget or 2) raise the cost containment reserve price. Given that it is likely that there will be a conflict between ambition and reality we make the following recommendations.

4.3 Recommendations

1. That more complete analysis is carried out and published examining where costs fall should budgets prove too constraining. The current document contains a great many optimistic assumptions and no guidance as to government's response if these are not realised.
2. That should the cost containment reserve rate consulted on at this stage be raised that a detailed plan on how that might be carried out and what the likely effects would be is made plain and public.
3. Government begins to clarify its intentions for ETS revenue regarding other climate change abatement policies and mitigations
4. Government identifies those impending government policies likely to have an impact on ETS prices (e.g the Clean Car Standard) and makes full disclosure in a system similar to NZX disclosures to prevent insider trading and thus ensure transparency and equity.

5. Non ETS Responses to climate change and transport

5.0 Overview

The ETS is a market mechanism for determining the Greenhouse Gas abatement price to those obligated to surrender units within New Zealand. There are however many people and firms who are not obligated parties under the Climate Change Response Act, and there are numerous uncertainties in the interface between commercial realities, market uncertainty and abatement prices for those who are obligated.

The AA has identified two potential GhG abatement approaches which do not directly fall within the scope of the ETS but which may be influenced by it.

5.1 4-day commuting

The Government invested $1.5 billion in the Ultra-Fast Broadband project through Crown Fibre Holdings between 2011 and 2019. It has followed this with the Rural Broadband phases 1 and 2 and the Mobile Black spot Fund. While there were no benefit cost analysis projections it was anticipated that the provision of widespread fibre to the home would have benefits to business and households.

In transport one of the most important contracts between organisations and households is the employment contract. In most cases this stipulates a place and time of work. In doing so the employment contract induces large amounts of transport network use and consequent congestion.

The AA Research Foundation has commenced research to examine the transport network effects if those workers who can do not commute five days a week but rather four days a week. We hope to identify the transport and emissions benefits and costs.

5.2 Biological Synfuels

As noted in Section 2 above while electrification of the land transport fleet will inevitably happen the rate of change is likely to be slow. New Zealand's vehicle fleet is typically derived from Japan's and if we want to examine our future fleet we can take a flight to Japan and inspect it there. This reinforces the view that we can expect to still largely be driving internal combustion engine vehicles in 20 years time.

The Biofuels Roadmap produced by Scion in 2018 indicates it is technically feasible to develop carbon neutral petroleum and diesel from non-food and waste feedstocks. Given that the Government has embarked on its "Billion Tree" programme it would seem only sensible to integrate the forestry programme with a fuel replacement programme.

However as the Z biodiesel project has shown there can be considerable challenges and uncertainty in developing novel fuel technologies. Given that the price of mineral fuel is difficult to predict (and most predictions have proven wrong) the danger is a situation where the market conditions for carbon neutral petroleum and diesel will arrive suddenly leading to a delay between demand and production. The AA suggests the Government could ameliorate this problem by investing ETS revenue in realising this technology before it is commercial thereby reducing the lead-in lag. Figures from the MFE *Marginal Abatement Cost Curves Analysis* lend weight to the virtue of this suggestion.

Conclusions

In a business as usual environment the combination of a constrained carbon budget and a constrained ETS market price with largely unconstrained population growth inevitably means conflict. As defined at present the conflict can only be resolved through recourse to the cost containment reserve.

This effectively means the New Zealand government will need to issue new NZUs from outside the budget but which are backed by genuine carbon reductions in New Zealand not already captured by the ETS.

The source of carbon reductions outside the ETS is not clear from the discussion document although emissions reductions from non-obligated sources are feasible. How these would be measured or recognised is not clear either.

The motoring public are unlikely to be supportive of increases in the costs of transport particularly if there is no effect on emissions. In transport in particular elasticities suggest that the effective cap on ETS prices will mean very little if any abatement will be achieved.

The AA suggests the solutions to emissions reductions will come from outside the scope of the ETS but that the ETS could have a role to play in funding the research necessary to achieve large scale emissions reductions in this rapidly growing sector.

About the New Zealand Automobile Association

The NZAA is an incorporated society with over 1.7 million members, representing a large proportion of New Zealand road users. The AA was founded in 1903 as an automobile users' advocacy group, but today our work reflects the wide range of interests of our large membership, many of whom are cyclists and public transport users as well as private motorists.

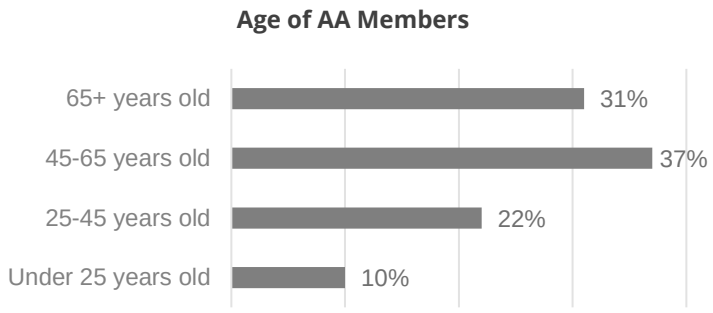
Across New Zealand, the motoring public regularly come into contact with the AA through our breakdown officers, 37 AA Centres and other AA businesses. Seventeen volunteer AA District Councils around New Zealand meet each month to discuss local transport issues. Based in Wellington and Auckland our professional policy and research team regularly surveys our Members on transport issues and Members frequently contact us unsolicited to share their views. Via the AA Research Foundation, we commission original research into current issues in transport and mobility. Collectively, these networks, combined with our professional resource, help to guide our advocacy work and enable the NZAA to develop a comprehensive view on mobility issues.

Motorists pay over $4 billion in taxes each year through fuel excise, road user charges, registration fees, ACC levies, and GST. Much of this money is reinvested by the Government in our transport system, funding road building and maintenance, public transport services, road safety work including advertising, and Police enforcement activity. On behalf of AA Members, we advocate for sound and transparent use of this money in ways that improve transport networks, enhance safety and keep costs fair and reasonable.

Our advocacy takes the form of meetings with local and central government politicians and officials, publication of research and policy papers, contributing to media on topical issues, and submissions to select committees and local government hearings.

Total Membership	1.7+ million members	
	Just over 1 million are personal members	
	0.7 million are business-based memberships	
% of licenced drivers	Half of licenced drivers are AA Members	
Gender split	54%	Female
	46%	Male

Age range & Membership retention



Half of AA Members have been with us for 10 years or more.