To the Ministry of Transport via cleancars@transport.govt.nz

21st August 2019.

Formal submission on: Moving the light vehicle fleet to low emissions: Discussion paper on a clean car standard and clean car discount.

Juno and Jupiter are a consultancy in the NZ motor industry, currently work with 2 of the Top 10 brands and several dealer groups in NZ. Our knowledge and experience spans importing, distribution and retailing of new and used light vehicles, plus motorcycles, ATVs and the leisure boating industries. More recently our experience at Deloitte Motor Industry Private Consulting NZ and Australia, has provided financial and operational support to dealerships and distributor. We currently provide dealerships with virtual and direct non-executive CCO/CFO advisory services. We also provide Motor Industry Association representation, strategic planning and change management services to motor manufacturers, including GM Holden.

[redacted]

The following pages outline a simple joint policy development 'plan of attack':

The two documents contain responses to Parts 2B and 3B policy proposals. Each doc includes the following:

A. Summary of the policy as a statement,
B. Breakdown table of policy key implementations with critique,
C. Revised policy statement Summary,
D. 4 key suggested changes with supporting evaluation and reasoning,
E. Supporting Information and other proposals to consider

Together these documents are intended to adapt the two proposals into sound working policy - subject to working group finesse discussions. We have also completed online answers to the key discussion questions.

Broadly we are in favour of both policies, in summary we believe:

- **The Standard CCS Policy Part 2 is unfortunately NOT workable** in its current format and cannot be described as complimentary to "Wellbeing Governance", nor is it fit for purpose – yet. It will fail to be effective unless adapted in 4 simple ways, to be simpler to administer and better at driving change.

- **The Discount CCD 'feebate' policy, Part 3 is nearly there,** and with a few tweaks we feel could be better placed to gain cross-party support, and with public and motor industry willingness. Otherwise we fear the simplistic ideology of the CCD as written, (like a tax), will not be approved by National, NZ First, the farmers and other voting groups.

We are happy to expand on the commentary and proposals we have made here. Each suggestion or verdict is researched and grounded in being more practical, effective and easier or simple to implement. Combined, it is also more likely to get industry and public acceptance and agreement as far as is possible.

We believe with these changes, it will be perceived as a ***driving enabler***, rather than a set of green taxes, and better able to be labelled "**Wellbeing Policy**".

Yours sincerely,

Phill Haynes

Director - Juno & Jupiter Consulting

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Response to Part 2/2B Clean Car Standard "Emissions" CCS, accelerating EV uptake & reduce CO2.

A: Summary of the Policy in Simple Statement Form.

(Blue highlights key items fundamental to review & red highlights key items of concern)

The NZ Clean Car Standard policy proposal - is on ALL light vehicles imports, of passenger car (PC) & commercial (LCV) as one target and standard, (classes MA/MC & NA). Used imports are the same CO2 target and standard as new imports, same timelines for all LV classes, same timelines for new & used imports. It covers LVs entering the fleet from 2022 and is designed to increase the content of LEV (Low Emission Vehicles) & EV (Electric Vehicles) and reduce the content of HEV (High Emission Vehicles).
The importers of new and used are generally different company entities, except for the biggest importer who operates in new and used imports, (each have different sourcing and planning horizons capabilities and flexibility). It is envisaged there will be a penalty $ fine system on HEVs, and a credit $ for LEV/EV as a system to offset costs and drive a prioritisation to LEV/EV, the proposal is for new imports to have a (+/-$100/g charge) and different for used imports to have a (+/-$50/g charge) as new vehicles are believed to be higher margins.

B: Breakdown of Policy Key Implementations - CCS Policy

Table 1

	Proposal item	Effective	Simple & Practical	Cost	✖✖ ✖ ✖ ✓ Verdict	Implementation Note or Problem Statement	Suggestion (page 2+)
1	On *ALL* Light Vehicles	Y	Y	Y	✓ keep	Global stds proven need to include all LV segments, including PC & LCV. Add a limited niche derogation clause.	
2	Passenger *and* Light Commercial in one standard, targeted *by tare* mass.	N	Y	N	✖ adapt	All global stds separate PC & LCV, because of different product cycles, sourcing & function. Use/Purpose needs different power/fuel l/km features. Grouped together means small cars & utes penalised. Tare kgs don't match.	#S1
3	New *and* used imports use the *same* standard, targets; (*exception* for <3yr used imports)	Y	Y	Y	✓ Keep	NZ is a unique, open-no-tariff-border. Distortion will occur unless same standards ALL Imports, on N & U. ***No exceptions, not a single***, or an 'agency' will avoid..	
4	*Same* timeline for *ALL* classes, PC (MA) & LCV (NA).	N	Y	?	✖✖ Adapt	Passenger car LEV & EV tech are available earlier than Commercials. Passenger are a global platform, Utes in NZ are not, they are local Asia/PAC products of 7-9 yr cycles	#S2
5	*Same* timeline for new *and* used vehicles.	Y	N	N	✖ Adapt	***New*** product cycle plans mostly 4-7 years, priority of EV has dropped some LEV ICE updates, skipping fully to EV 2024/5. ***Used*** EV & LEV available UK & Japan, but scarce.	#S3
6	Penalties for non-compliance *new $100* & *used $50*, by entity weighted average.	N	Y	N	✖ Change	$100/g is a crippling $2b cost, some brands will leave. + Deloittes report used margins higher than new, not as stated. Used importers more profitable & agile.	#S4
7	*Plentiful supply* of cleaner, CO2 target compliant *NEW* models expected.	N	N	N	✖✖ Change	The model comparisons are flawed with products that are too low volume to be viable in NZ. The NZ range is a mix of compromise, function, demand & RHD *Auto* availability.	#S2
8	*Plentiful supply* of cleaner, CO2 target compliant *USED* models expected.	Y	Y	?	✓ keep	There are newer, cleaner & safer sed LVs immediately available, at higher kms, or younger & with minimal cost up.	

C: Revised Summary of Suggested Recommendations (following pages)

- NZ CCS proposal compliments the CCD Proposal.
- Cover ALL light vehicles, passenger (PC) & commercials (LCV) with one CO2-to-weight formula. Keep it simple.
- PC starts in 2021, before LCV in 2022, using two coefficients for CO2 reductions, reducing annually.
- Globally comparable, as 2 weighted average targets, with an Overall NZ target of 130g in 2028 - *tbc*
- One standard structure that covers Used imports & New entering the NZ LV fleet.
- Standards covering Used imports from 2021 & separately New imports from 2022, reflects sourcing capabilities.
- Due to the uniqueness of NZ market, tariffs and mix, LCV targets follow PC, 1 year later, and are higher CO2 targets, reflecting longer sourcing & planning lead times. They converge to a 30g CO2 gap by 2030.
- The process of $ 'LEV Credits' start in 2021, 'HEV Penalties' start a year later, to give the market time to comply.

> Passenger cars weighted average target standard of 105g in 2027, (2025 avg target on passenger is 124g).
> Commercials LCV weighted average target standard of 135g in 2029, (2025 avg target on LCV is 199g).

D: Key Point Suggestions for Change & Adaptation, and Why.

#S1: Targets

***Concern**: using tare as one weight std, mixes up design weight-to-function, and consumption/CO2 test data between categories, causing distortions in most bands between LV classes.*

Recommendations:

- **# use GVM (gross vehicle mass) measured in kgs in 2 class groups,**
- **# 1 formula & 2 different # factors: { GVM x #% = CO2g limit }**

Starting factors #% - PC = 7.25%; LCV = 7.75%. Reducing to PC= 4.25% in 2028; LCV= 4.50% in 2030.

Table 2&3 - band illustration only – note, as a formula there are not bands as such.

Factor/Yr	7.25%	6.75%	6.25%	5.75%	5.25%	4.75%	4.25%	4.25%	4.25%
Passenger CO2	PC	PC	PC	PC	PC	PC	PC	PC	PC
GVM kg	2022	2023	2024	2025	2026	2027	2028	2029	2030
1300	94	88	81	75	68	62	55	55	55
1600	116	108	100	92	84	76	68	68	68
1800	131	122	113	104	95	86	77	77	77
2100	152	142	131	121	110	100	89	89	89
2400	174	162	150	138	126	114	102	102	102
2700	196	182	169	155	142	128	115	115	115
3000	218	203	188	173	158	143	128	128	128
Avg 2145kg	156	145	134	124	113	102	91	91	91
CCD Avg 1980kg	156	141	128	111	96	82	69	66	64

Factor/Yr	7.75%	7.50%	7.25%	6.75%	6.25%	5.75%	5.25%	4.50%	4.50%
LCVUteVan CO2	LCV	LCV	LCV	LCV	LCV	LCV	LCV	LCV	LCV
GVM kg	2023	2024	2025	2026	2027	2028	2029	2030	2031
1300	101	98	94	88	81	75	68	68	68
1600	124	120	116	108	100	92	84	72	72
1800	140	135	131	122	113	104	95	81	81
2100	163	158	152	142	131	121	110	95	95
2400	186	180	174	162	150	138	126	108	108
2700	209	203	196	182	169	155	142	122	122
3000	233	225	218	203	188	173	158	135	135
Avg 2750kg	213	206	199	186	169	152	139	119	119
CCD Avg 2550kg	213	206	194	176	155	134	116	93	90

Use of GVM kg instead of tare in the formula, (or payload + tare), allows for design principles of added weight & size for 7 seats, load & towing functions. Additionally, in real world LCVs generally overachieve CO2 test figures, as geared to high torque, which in standardised test regimes designed around passenger vehicles is not comparable between PC & LCV. NEDC/WLTP tests were never intended for 'cross-category' comparisons, only in-segment. (LCVs also run at lower avg speeds & rarely at full GVM).

#S2: Timing Passenger vs Commercial

***Concern**: PC's, LCV's, and new and used have different lead times for product cycles and planning model changes. Used has more choice and flexibility to adapt which shows in the variation of monthly sales data seasonality, whereas New is longer term set and commitments, also shown in a more undulating trend.*

This is easily illustrated by comparing any FX rate fluctuations with sales; used imports respond instantly the following month, adapting purchasing and sourcing, New does not, taking up to a year to react after production commitment orders arrive.

Note: There could be earlier benefit if used standard commences in 2021, while new still need notice to 2022. See #S3

Recommendations:

- **# start PC in 2022 reduce CO2 factor by 0.5% of GVM p/yr,**
- **# start LCV in 2023 reduce CO2 0.25% of GVM initially**
- **# LCV & PC converge by 2030 within 30g.**

#S1 & #S2 Supporting Notes: Target and Timing to Compliment Europe CO2 Trend

<u>Setting a target</u> – CO2 reduction intensity improvement factor (coefficient) x GVM (or Payload+Tare)

GVM kg is a better barometer for CO2 versus product purpose.
Plus, manufacturers & motor register have the GVM for each vehicle, so there is no additional data collation required.
This can also set a default factor for GVM over they are not declared

Recommendations:

- # **Recommended GVM kgs** (if necessary set a format kg limit as below)
- # **Alternative to GVM – is Tare + Payload**
  - PC micro/Light Tare + 400kg
  - PC medium Tare + 500kg
  - PC large Tare + 550kg
  - PC 7 seat Tare + 700kg.
  - all LCV Tare + 1,150kg, though currently all declare a GVM kg.
  - or LCV Tare + Payload + 150kg (driver & fuel).

<u>Target Timing & Coefficient</u>: 2022-26 near to Europe reduction: EU PC CO2 reduction rate 2009-2013 was 19%.

The suggested coefficient of target reduces each year, to achieve a 20% reduction rate over 4-5 years. 35% greater than NZ last 5 years CO2 reductions, by simply applying the rate to a higher starting point of NZ (ICCT recommended)

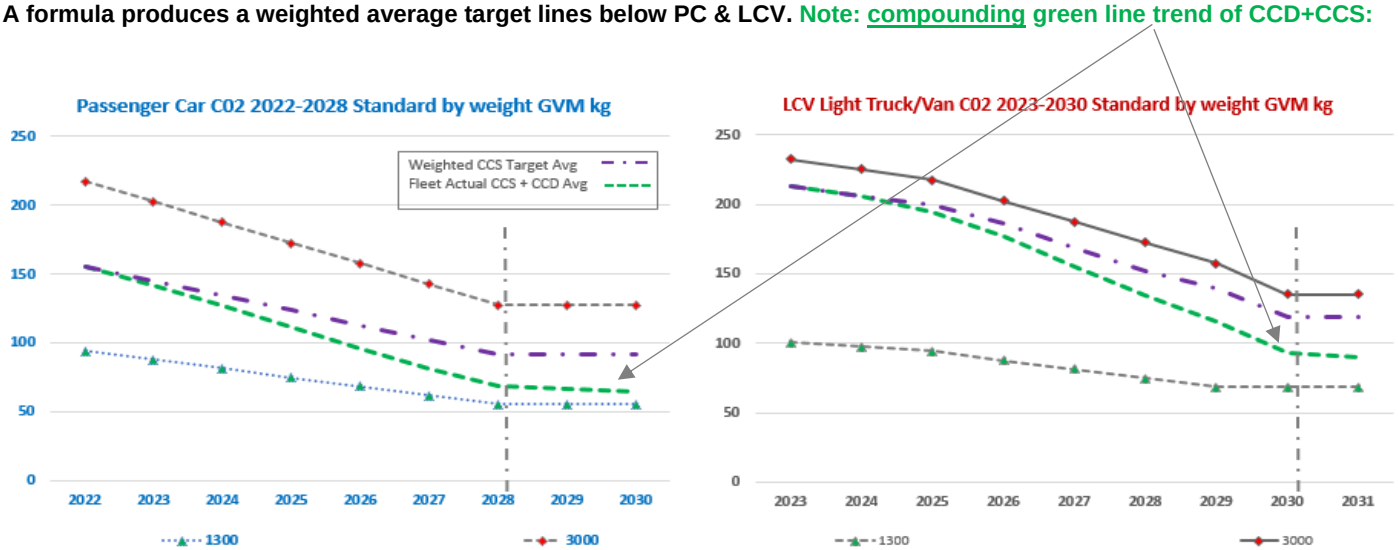
Noting Europe and Japan have operated other fiscal incentive and disincentive policies to reduce fuel consumption and CO2, that have contributed to achieving a 19% reduction for PC in Europe over a 5-year period.

Recommendations:

- # **NZ target estimate for PC in this proposal is 20% reduction over 5 years (PC),**
  - An aggressive target and some brands will fail to achieve it, requiring a pass-on or absorption of $ penalties, which may further reduce the sale of some higher CO2 emission vehicles, (HEVs).
- # **Propose a lower penalty/credit $ rate and to include a "name and shame" aspect**
  - still an aggressive penalty for some by 2025/6 and aligns to NZ scale, allows time to forecast & plan risk.
- # **the CCD work alongside to compliment the CCS policy** – see below green line trend graphs

(The table of bands of GVM weights shown on page 1, is an artificial guide, to illustrate how the target progresses by weight and time. We don't propose bands. In the GVM formula method there are no stepped bandings, just a formula of CO2-to-weight.)

A formula produces a weighted average target lines below PC & LCV. Note: <u>compounding</u> green line trend of CCD+CCS:



GVM x 7.25% = CO2 target 2022 (156g)
GVM x 4.25% = CO2 target 2028 (91g)

GVM x 7.75% = CO2 target 2023 (213g)
GVM x 4.5% = CO2 target 2029 (139g)

Why are we not recommending banding of vehicles?

– a 'line formula', promotes the principle that ***any increase in safety or technology that may add weight is not a penalty and will not deter manufacturers*** from focusing on broader goals, or just to meet a CO2 credit/penalty band. This balances safety and other desired technology along with CO2 and reduced fuel consumption.

Note: The **ICCT**, **CSUSA, EC,** and the **IEA** have found bands encourages gaming to the limits.
The **EC** research shows bands rarely had more than 5-10% of vehicles just below a weight band, whereas 75% of the declared weights were just above the band limits, suggesting artificial weight-creative specifications, were more beneficial than CO2 de-tuning, to get just under a CO2 limit.

#S3: Timing - Used vs New

Concern*: Can new respond with product by 2022? In 2021, it is likely used market can 'buy-up' to prepare for 2022, but also stock -up on HEV if required too, defeating any long notice of a start. So, this poses the question: can used respond earlier in 2021?*

Evidence of sales, shows used can respond to FX rate quickly within a month, and adapted quickly to sourcing Nissan Leafs, sourcing 60% more Leafs in 2019 over 2018, and 2018 was 70% above 2017*?*

Recommendations:

adapt Used Import start year, to apply (*the separate)* PC & LCV targets a year earlier.
This will achieve 2 things:
i) avoid a Used Import 2021 'Q4 buy-up' of old/low price HEV stock
(Better to get this over with before targets start for new & used)
ii) allow Used Importers to stock-up earlier LEV/EV over time in 2021, build momentum well before 2022

The grey rows on the tables 2&3, shows there is opportunity, for upper-heavy PC and lower light LCV, that are not normally imported, so this presents the used market with an opportunity to purchase cleaner, lower CO2 used vehicles in these weight size areas, before an equivalent new product is available (and well beyond 2025).

#S4: Penalty Fees New Higher Than Used

Concern: *Assessment by MIA & Distributors on weighted CO2 capability 2022 & 2025 amounts to $1b-$2b, best & worst case. This will cripple some brands out of NZ. We believe the NZ Govt view of New Import margins is misguided.*

Deloitte data reporting shows used importers are more capable of paying fines than new as used make more $'s.

Japan have successfully adopted a *"name & shame"* policy as well as nominal fines.

NZ is a much smaller market, for fines to compete against European or US priorities they will be crippling for NZ. $100/g & $50/g will inhibit effect and availability, as too much will get passed on as a tax, forecasting capability will longer to re-settle, and the risk is too high. Some will decide not to source and wait and see market demand and price rises. Note - NZ is not first in queue for product and is late to production commitment and homologation lead times.

Used also is a more agile marketplace and able to adapt it's business model, sourcing & choice flexibility (for example its ability to respond to FX and demand for Nissan Leafs mentioned earlier).

Recommendations:

Used & new equal $'s.
Equality for used & new will reduce distortions between and also offsetting in one big player who is in both. For example; Toyota NZ, who, while not able to transfer credits/debits, will be able to alter business sourcing models to take advantage in one market or other, or rebalance.
Implement an alternative, *name & shame* & set lower fees $10-$50, progressively phased in.
commence credits 1 year before penalties start.

This will still have effect on importers, but allow smoothing and less distortion. Brands can forecast some effect in 2021/2 before having to commit 2022/3 production mix and HEV/LEV content. This will aid forecasting and availability.

Tables 4 &5: Start credits 2022, penalties 2023+. Phase up 23-30 to max $50p/gram

Passenger >>	2022	2023	2024	2025	2026	2027	2028	2029	2030
credit	$10	$15	$20	$25	$30	$35	$40	$45	$0
penalty	$0	$15	$20	$25	$30	$35	$40	$45	$50

LCV >>	2023	2024	2025	2026	2027	2028	2029	2030	2031
credit	$10	$15	$20	$25	$30	$35	$40	$45	$0
penalty	$0	$15	$20	$25	$30	$35	$40	$45	$50

Concern: *Fines – making it equitable*

We have been party to analysing three key brands capability to achieving 2025 targets and assessing the fees costs of failing to achieve the weighted average targets by brands. In all three cases, the three brands are UNABLE to achieve the targets by the time proposed and would incur $m's of cost.

Regardless of any weighted penalty fees distribution and inequitable market distortions – this will be a very public visibility, that New Zealand will NOT achieve its targets, reducing our credibility across other industries and abroad. We believe this will result in the standard will be labelled as ineffective, impractical, or a flawed policy and become an election tax topic, as it did in Australia.

The three manufacturers are in the Top 8 brands. All three have declared an honourable goal intent of "global electrification" and new technologies across their ranges, two have declared a driving strategy of 100% electrification. However, in the current policy proposal would result in all these manufacturers incurring offset fees, requiring a 'pass-on-tax' levy or absorption of an average of between $1,140 per unit and $2,385 per unit. This highlights the fees and standard is impracticable and inequitable.

In itself, the set up and need for a trading-scheme of penalties and credits would also show there is inequity in the proposals. Even if its desired to increase the cost of some HEVs and force global distribution of EV/LEV down to NZ, this is impractical and unlikely as the European/USA costs of non-compliance dwarf NZ!

We also have knowledge that three other brand entities will be able to offset and achieve break-even with year banking and no need for trading. Indicating inequitable imbalance by contrast to the other three brands. Two of these brands have a global partner policy view to avoid any credit trading - as the alternative competitive advantage has better longer-term benefits to compromise a competitor. We also expect them to propose the 'off-shore trade' to sister subsidiaries in Australasia.

Recommendation:

- # **Adopt alternative, *Name & Shame*,**
- # **Set the fees to a lower $ of approximately $10 - $50, build to 2029. New & Used the same.**
- # **Progressively phased in to enable brands to deal with the big changes required & Forecast Risk.**

E: Supporting information and other factors to consider

Stakeholder Effectiveness – low admin, easy, good, effective policy characteristics

All stakeholders, across the range of Consumers 'NZ Inc', Global Climate Change agreements, Political Governance responsibility, Motor Industry NZ and Global, *ALL* get something meaningful and acceptable out of these compromise adaptations and changes.

- overall this is a win-win, workable solution, with LOW Administration, easy application using existing class criteria.
- it adopts the best characteristics of a 'good emissions policy', (source ICCT), from Europe, Japan, China, USA.

Phased CO2 reduction philosophy:

Phase 1 2021: Drive reductions, in line with Europe on ICE CO2, focus on used imports, drive EV adoption.
Phase 2 2025: Catch-up & achieve global LV CO2 commitment, drive NZ climate change. EV @ 20% of imports
Phase 3 2030: On-track, ahead of Europe. Limit Exposure to LV CO2. EV @ 35%+ of imports.

Tracking & transition to limits/bans

- Passenger cars CO2 reduction vs 2019; (incl SUV) of 20% by 2025 & 45% by 2030. Limited Niche Derogations.
- Commercials LCV CO2 reduction vs 2019; (which is 80% Utes in NZ, 62% 4x4), 10% reduction in 2026 & 'catch-up' to 48% reduction by 2030. Limited Niche Derogations.
- 2029 CO2 mix LIMITS: set '% minimum of EV @25%' & '% maximum of HEV @ 35%' (*High Emission Veh >200g)*
- 2030+ Continue all fines/limits. Set a Ban if an Importer Entity fails to achieve both above limits 2 years in a row
- Added "***enabler pacesetter"*** proposals can and should be applied, see following page notes.

Derogations

Should be allowed for Niche, Hi-tech or Classic/specialist import, by applications under 10 units.

Additional 'Pace-setter' Enablers

To enable change in the LV fleet quicker, and to a lower CO2; within CC Standard

To achieve a faster reduction on Passenger car before 2030, or to achieve a reduced Fleet Actual Weighted Average of 95g to match Europe and Japan, we need some other ***pace-setting enablers***:

- # Implement a rolling used import age limit reduction of 7 years old or younger (+3-month transit time).
- # Introduce the EV minimum and HEV maximum mix concept later in Phase Two 2027>.
- # End life earlier in lifecycle, by emissions tests in WOF from 5 years old onwards with scrappage scheme.

Targeting imports alone is a weak disabled strategy, out of alignment with Europe and Japan.

Without changing the taxation and duty frameworks for Road Use, Registration, Fuel duty, FBT and Vehicle Depreciation allowances, we will need wider fleet activity.
We can achieve younger, cleaner, quicker, by targeting our whole NZ fleet, NOT just import limits. Use some of the fees and penalties in CCS / CCD, to part-fund scrap rebates, via enforcing emissions tests in WOF from 6 years old; (as used imports COF tests now). No WOF fail, no consecutive WOFs, no rebate, via registered 1st import entity only.

Note: UK MOT failures from emissions tests are now over 50% of test failures.1.2m LVs per year, nearly 4% of UK.
https://www.express.co.uk/life-style/cars/1048327/MOT-test-centre-emissions-failure-UK

These Added Pace-setters will enable three things to up the pace of change:

i) **Younger LV imports** are cleaner & safer broadly; especially 'Global platform' models launched since 2012.
ii) **Ensures "Shipping-miles Carbon footprint" is worth it**. Import a 'reasonable lifecycle' (3-4 owners / 10 yrs).
iii) **Drive failures for sub-par CO2 performance** & GHG liability alongside Safety issues. With scrappage rebate of $1,500-2,500, conditional on 2 consecutive WOFs and a failure, to incentivise owners to comply & change.

Plenty of used stock availability

For higher kilometre, over 100,000kms, younger cars and SUVs in UK & Japan. (Instead of focusing on the current sub 85,000kms, 8-10yr old hatchbacks being sourced ex-Japan).
> The credits/penalties and also CCD incentives will make higher km cars more attractive.

Part 1& 2 Background Notes

EV/LEV Availability in NZ - Demand and scale also limits availability – not just profit/loss

It is not a true statement that there are plenty of RHD EV & LEV available. Nor that manufacturers and distributors restrict NZ access to LEV/EV. The examples used in the proposal are misleading: of the top 15 EVs sold new in Europe, 10 of them are sold new in NZ. All 10 command lower market share in NZ, than in Europe or UK, making them unviable or just 'marketing exercises'. Others are not available, or the $ losses are unsustainable due to size of NZ.

Used imports are at much lower prices, exacerbating the problem for new importers by removing the ability to make any margin so they give up and so far have given the EV market to used.

> *The top model, Outlander P-HEV, doubled sales in any country when incentives launched. Indicating Incentives are the most important tool to accelerate demand. Sales in NZ are higher proportion of Business/leased than normal. Private buys Used.*

> *The 2nd top EV model in Europe is the Renault Zoe. The small hatchbacks also happen to be the largest market segment across Europe and UK, (our Micro segment in NZ). With low price points, tight street parking, less off-road parking, and smaller families in UK, the incentives are a high % benefit on smaller cars, along with the other benefits/attractions, (not valued in NZ).*

> *In NZ, Micro is less than 3% of the new vehicle market sales, Small less than 8%. If we could get Zoe, or slightly larger in volume and even $10,000 less, NZ families don't buy small-new. Zoe would still cost more than a Hyundai Ioniq, or base used Prius or Gen 3 Leaf, poor value as a new vehicle. Despite low priced used ex-UK stock, Used Importers don't bring in Zoe.*

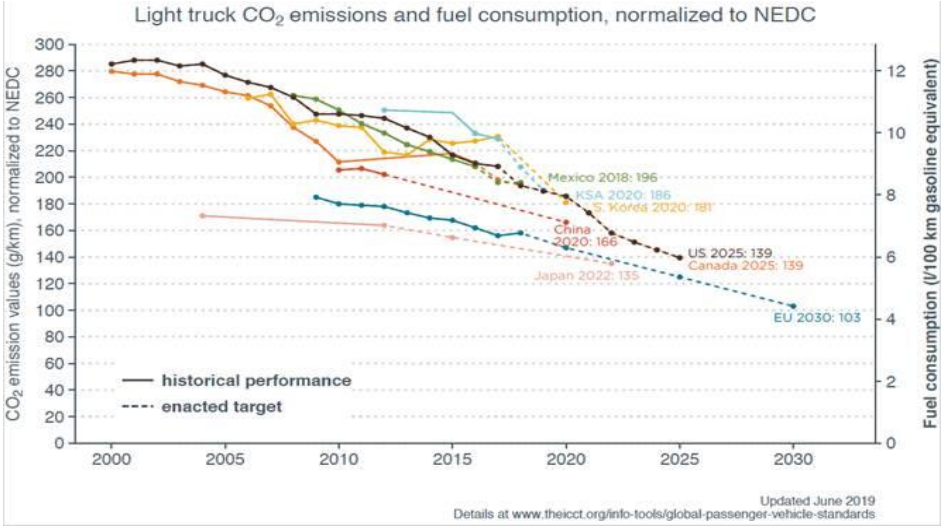
> *Some models fundamentally will not be sold into NZ, so some of the fees (and Standards penalties), will still not attract some Euro/Japan used stock. Suzuki & Holden can explain how they struggled to sell Alto, Ignis and Spark despite lowest prices in the World!!*

All models have some limits to acceptance, NZ scale dictates lower limits go below viability, whereas a low volume may comparatively still be viable in UK or Japan. Even if it's cleanest & cheapest in world, NZ is uniquely different.

Global Standards Policy (ICCT) & Fuel ratings
- Global Emissions Standards have Passenger and Commercials LCV split out.

It is hard to find common differentials, or formulas, or datums, that wouldn't cause distortions.
In analysing both *tare* and *footprint* methods, we found distortions in NZ not apparent in UK or Europe, because of a high ute mix, low small vans volume, and low small car volume.
To prevent market and treatment distortions between the two categories we believe ***GVM*** or ***Payload*** the best denominator that fits ICCT, IEA and CCA advice on designing *Good* LV Emissions Policy & Targets.

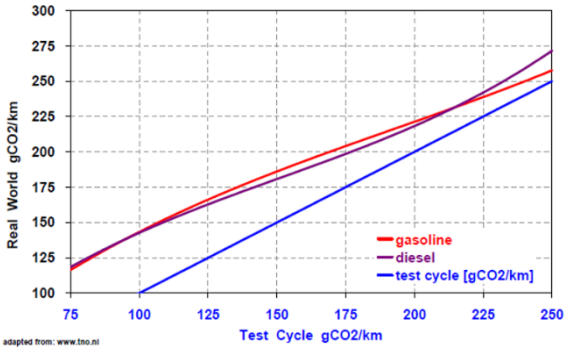
Below graph is the Light Commercial ICCT graph of Global Standards Targets omitted from Part 2, which is more appropriate for NZ LCV. It indicates separation from passenger cars is key and makes a market target of 105g unrealistic and a heavy burden to fail. NZ being 80% Utes and 20% Vans/other just amplifies this issue further.



Fuel Ratings are not all created equal - careful.

(Referring to Fig 2, above issued by the EC).

Figure 2 Illustration of discrepancy between the test-cycle and real-world emissions; data sourced from TNO[10]



As well as differences in purpose design limiting comparison grouping without causing distortion, there is also a factor that the NEDC and WLTP fuel consumption accuracy varies. Testing was derived for passenger cars - it ignores the hi-torque high capacity diesel benefits at higher CO2, in real-life, real-time efficiencies of larger vehicles like commercials, or when applied to individual country's road mix, especially NZ compared to larger scale UK/Euro road use. The tests were applied to commercials in isolation, noting limitations of comparability to passenger, (even though same tare weight principles used). Within any one segment, product grouping, the relative performance of one car to another car, or one commercial vehicle to another, is comparative, it's equally inaccurate or accurate. However, the accuracy varies, as the EC graph just on diesel versus petrol shows. It was accepted for commercials for in-category comparison tests. This has shortcomings though for across category comparisons.

Mansplained: It is not scientifically appropriate to compare the test result of a commercial at say 8.0litres/100km to a passenger vehicle achieving 8.0litres/100km, as the design purpose and torque/load characteristics are so different in real life motoring. An example is that a diesel ute will frequently use less fuel than the rating, when operated at lower speeds and only lightly loaded, as would be exhibited in commuting or open-road inter-community use. This contrasts to a medium/large passenger car or SUV, which may struggle to achieve the fuel ratings in those common conditions, but outperform on longer national highway journeys, (less frequent!) This means it's inappropriate to group together for this reason, as well as the size/weight categories not matching.

Supporting reference data for each of these proposals was sourced from ICCT, IEA, CCA, European Commission, UK SMMT and colleagues across the globe.

All enquiries on the content of this document should be directed to:
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[redacted]

Response to Part 3/3B Clean Car Discount CCD "Feebate", accelerating EV uptake & reduce CO2

A: Summary of the policy as a statement

(Blue highlights key items fundamental to review & red highlights key items of concern)

The NZ Clean Car Discount policy proposal - is on First Registration in NZ of ALL Light Vehicles Imports, (classes MA/MC Passenger & NA Commercial LCV), to apply at point-of-sale. New vehicles has one table of discounts by CO2 bands; passenger & LCV combined. Used imports up to 3 years old are classed as New. Used imports over 3 years old also has one table of discounts by CO2 bands; passenger & LCV combined, around half the New import $ amounts. Importers of less than 3 vehicles would be exempt. Same timelines for all classes and for 'New' & Used. Discounts and Fees start together, from 2021, designed to incentivise demand for 'LEV' Low Emission Vehicles & 'EV' Electric Vehicles, and disincentivise demand for 'HEV' High Emission Vehicles, unless absolutely necessary for a buyer to choose HEV, e.g Ute/4x4 SUV. Retailers display discount/fees on each model and retailers apply the credits or charges. Discounts reduce each year, covering fewer vehicles, only on EV/PHEV by 2028. Fee amounts stay the same, but apply to lower CO2 bands each year, neutral is around 120g in 2028. EV RUC exemption ceases 2021.

B: Breakdown of Policy Key Implementations - CCD Policy

Table 1

	Proposal item	Effective	Simple	Cost	✖✖ ✖ ⚠ ✓ Verdict	Implementation Note or Problem Statement	Suggestion (page 2+)
1	On *ALL* Light Vehicle Imports *first* sales.	Y	Y	?	✓ keep	Global Incentives proven to be more effective when applied technology agnostic to all LV segments. HEV Fees is a new untested element, global adopt Fuel/Use/CoO disincentives.	
2	Passenger *and* Light Commercial in one discount table. $'s split *solely by CO2* band increments.	Y	Y	N	⚠ adapt	All Global incentives include PC & LCV, because LEV & EV commercials choices exist for vans too. Grouped together shows clear HEV offset. Suggest apply some 'relief'.	#D1
3	New *and* Used Imports *different* tables of discount/fees $ amounts.	Y	?	Y	✓ Keep	NZ is unique with no used tariffs. $'s proportional to value makes sense, Used Avg sales $ value is 35-40% of New. Buyers in Europe & USA finance fund more LEV/EV.	#D2 #D3
4	*Same* Introduction Timelines for New *and* Used. Starts to *2021*.	N	Y	Y	⚠ Adapt	2021-24 phase is all about incentives to promote EV & 'downsizing'. HEV Fees are about neutral funding offset. New and Used timing is not a factor. No Global comparators.	
5	Rebates *and* Fee Penalties start at same time *2021*.	Y	Y	N	⚠ Adapt	Fees as an overt disincentive - require an alternative. For some, a practical alternative takes time. **Delay Fees 1 yr.**	#D4
6	*Plentiful supply* of compliant RHD *NEW* and *USED* models expected.	?	Y	Y	✓ PC yes	Used provides the most opportunity for alternative LEV & EV Without alternatives, *some will see fees as a tax*.	#D1 #D4
7	Incentivising *uptake of EV* and *smaller LVs*, through *lower purchase price* .	?	Y	?	✓ PC yes	EVs over 7 yrs old are limited appeal, so prices are still 25% above ICE equivalents. Going smaller or newer to get an LEV is possible. Prices of LEV & EV's are rising slightly. This action will result in 3-7% increases, however the fees will do the same for HEV models. **So on balance, will be effective.**	
8	The purchase cost of an LEV or EV will be lower than before the policy applied. Customers will get a cost benefit and justify any price difference to a HEV.	?	Y	?	✓ PC yes	In UK, Europe, Japan and USA the % of sales Finance funded, versus outright cash buy, has risen dramatically to get newer and higher tech. NZ uses less Auto Finance and uses released home equity in re-mortgages. Incentivise Finance as part of CCD. **On balance will add volume.**	#D3

C: Revised Summary of Suggested Recommendations (following pages)

The NZ Clean Car Discount policy proposal - is on First Registration in NZ of ALL Light Vehicles Imports, (classes MA/MC Passenger & NA Commercial LCV), to apply discounts and fees at point-of-sale.

New vehicles $ amounts are around double a Used import – reflecting lifetime cost/benefit. Same eight CO2 bands for passenger & eight for LCV on New & Used. Same timelines for all classes and for New & Used. Discounts are to start in 2020 and Fees start in 2021, to incentivise early demand for 'LEV' Low Emission Vehicles & 'EV' Electric Vehicles.

Fees on HEV High Emission Vehicles are approximately 35% of Discounts $ amounts. Retailers display discount/fees on each model SIN card. Fees/discounts are applied by the Registration Licencing Agent. Discounts reduce each year, covering fewer vehicles, on only EV/PHEV by 2028. Fee amounts stay the same, but apply to lower CO2 bands each year. Neutral band is around 120g by 2028. EV RUC exemption changes in 2021 to be $20/1,000kms.

D: 4 Key point Suggestions for Change & Adaptation, and Why?

#D1: Should there be relief for users who have to have a HEV as a tool of work for now…

***Concern**: Contrary to stated in the discussion document, more utes aren't sold to townies.*
Sales data shows 54% of Ute sales are outside the 3 Main Metros, where some buyers could arguably choose an alternative. Of the 46% sold in Metros, 32% are bought by head offices and lease companies for regional operations.

Also, less than half of utes are 4x2, which could in theory transfer to a 'smaller/cleaner' passenger car. Businesses buy 69% of utes. The transfer opportunity is less than perceived and needs-purpose based buying higher than perceived. However, a 4x4 ute is on average $9,500 more than a 4x2 ute and +25g CO2, a 4x2 ute being +20g above SUV.

> The benefit and opportunity are not as clear as summarised.

Recommendations:

Offer a CCD % relief for certain Business sales on 4x4 Ute and Vans of high GVM kg.
NA class, GVM over 3,000kg to attract a credit relief -35%, on HEV Fees at point of sale.
Category of business in 'Primary Industry': Agriculture, Aquaculture, Forestry & Dairy. Transport & Logistics.

Reasoning: global disincentives have proved unpopular and difficult to legislate, when applying to ALL classes and buyers of LVs *when there are not ample alternatives*, or limited availability of EV and LEV fit for purpose. It looks more like a tax disincentive, more than a GHG innovation incentive. To gain support of National and NZ First and Federated Farmers then make a concession. Our calculations show there will still be enough Fee offset for discounts.
Other businesses like builders and tradies still have a choice of LEV vans instead of HEV Utes – as the UK found.

#D2: Used amounts versus New amounts

***Concern:** Is half amount valid for Used? Or double for New? Average Used import is now 10yrs old, but it does a lot less kms in its subsequent 10 years, Used imports average less than 12,000kms per year. NZ New vehicles do 21,500kms per year, higher over the first 4 years, then reducing to closer to a used import. NZ New has the potential of cost benefit of 3x Used, not 2x.*

Globally, in the UK and the USA the incentives value was set in bands and has been most effective on the smaller lower priced vehicles. This conversely suggests that a higher priced vehicle needs a higher incentive to be effective. However, a higher priced EV/LEV implies a greater buyer ability to purchase and so an unnecessary support in affordability terms. Globally, incentives are set to attract the lowest denominator of boosting smaller EV uptake.
+ Few apply an upper purchase cost limit!

Used EV imports in NZ are approx 35% of a New EV value. EVs of N&U are average 25-30% more than an ICE LEV and we have low uptake. This suggest a 15-20% value incentive offset is required.

Recommendations:

Leveraging EV buyers: a $8,000 credit on a *new* EV equates to around $3,2000 credit on a Used EV.
Reasoning: On balance the effectiveness of an incentive is relative to the sales price (value) of a product.

An upper limit of $100,000-120,000, a limit compromise for New *and* Used.
Reasoning: Luxury buyers can also choose HEV or EV – everyone chooses, and NZ families still get a cost/benefit for a buyer choosing a $160,000 Telsa or $120,000 Jaguar or Lexus.

#D3: Funding Finance of a purchase is higher globally for EV/PHEV than ICE.

***Concern:** across UK, Europe and USA, more EVs are finance/lease funded, than outright cash purchase. Can Kiwis afford newer and cleaner, even with a discount? Many buyers in NZ often use equity release from a re-mortgage to fund the cost of change to trade-up to a new or newer vehicle, often gaining access to the latest tech SUV.*

Global EV sales show, Finance penetration of EV/PHEV is higher. In UK it is 86% of new vehicle sales, *it's 72% of total market, suggesting ICE is a bit below 70%.* USA is similar differential. After the global economic crisis in 2008, and since global platforms have launched the increased safety and CO2 reducing technology has pressured average prices up for a new vehicle. In the UK the average went up 31% from 2009 to 2015. In the UK the equivalent EV is still 15% higher after incentives and a standard.

This also lead to some downsizing, not just electric adoption. Small hatchback is now the biggest segment of sales in the UK and Europe. Buyers turned to finance to help them get newer, safer, cleaner, smaller or into a next-gen SUV.

However, NZ private buyers of newer or new vehicles (41% of sales), are geared to using home debt to trade up to newer vehicles and suit their lifestyle. Not more flexible direct finance. It looks low interest, but lasts 10 years longer!

Recommendations:

Incentivise EV/Hybrid Finance through deposit support ***(to total less than $8,000 total incentive).***

EV/Hybrid Finance deposit -$1,500 New & Used *(Specific Contract structure + authorised agent + FCC/AML)*
> Finance Rules: Private/Personal only. <10% APR interest, <$400 fees, final payment 20-35% sold price, <5yr term)

Reasoning: it would be wise to avoid increasing re-mortgaging equity release further, and instead support Finance deposits using some of the credit. Auto financing is now low cost and more flexible, (also see PCP lease-purchase Guaranteed Value Finance). Apply a specific contract criteria as above – agree with key Auto Finance Co's.

#D4: When to Start?

Concern: *sales of EV and PHEV have slowed in anticipation – in the case of discounts it would suggest ironically earlier the better. Additionally, the benefit of the EV/LEV incentives is being spoiled by the cost spread of disincentives cost offsets on HEV. It is also arguable that many HEV buyers have a real choice. The Fees are being labelled Tax and unlikely to get agreement to legislate.*

No global examples overtly combine incentive and disincentive as a Fee-bate – but it's widely expected.

Recommendations:

EV/ULEV/LEV Discount Rebates 2020/21, but delay HEV Fees a year, phased out a year later.

Reasoning: this will reduce the claim of a tax grab or wealth redistribution. It gives more time for the market to offer alternatives and owners to get their heads around change for the benefit of families. Disincentives in other countries are separate from Incentives, so no other country has precedence of success or uptake data, so take a punt, be clear there is 'Feebate' offset in the programme, but Govt or Agency's to cross fund. There are many NZ Inc benefits to less fuel consumption, health and wealth – sell those as reasoning.

#D2 & #D3 & #D4: Combined > Proposed Starting Discounts & Fees, still phase down by year to 2029

Recommendations:

$ tables as below as starting points and combining Finance Deposit support with Discounts
Reasoning: Less bands, 8, are appropriate to more memorable $'s & clearer understanding of what low CO2 looks like. Starting Fees later allows the publication of an Incentive-only table to start, and finalise Fees are too high to offset fund.

PC class MA/MC	**from 2020**			
EV PHEV disc.	-$6,000 New	-$3,000 Used	*with Finance deposit= $7,500 N / $4,500 U*	
Hybrid disc.	-$3,000 New	-$1,500 Used	*with Finance deposit= $4,500 N / $3,000 U*	
ICE Incentive disc.	-$2,000 New	-$1,000 Used	class MA/MC CO2	<125g
ICE Incentive disc.	-$1,000 New	-$500 Used	class MA/MC CO2	126-150g
No Incentive/Fee	nil $		class MA/MC CO2	>151g+
	From 2021 start……			
No Incentive/Fee	nil $		class MA/MC CO2	151-175g
ICE Penalty	+$1,000 New	$500 Used	class MA/MC CO2	176-190g
ICE Penalty	+$1,500 New	$750 Used	class MA/MC CO2	191-205g
ICE Penalty	+$2,000 New	$1,000 Used	class MA/MC CO2	>206g+

LCV class NA	**from 2020**			
EV PHEV disc.	-$6,000 New	-$3,000 Used	*with Finance deposit= $7,500 N / $4,500 U*	
Hybrid disc.	-$3,000 New	-$1,500 Used	*with Finance deposit= $4,500 N / $3,000 U*	
ICE Incentive disc	-$2,000 New	-$1,000 Used	class NA LCV CO2	<150g
ICE Incentive disc	-$1,000 New	-$500 Used	class NA LCV CO2	151-170g
No Incentive/Fee	nil $		class NA LCV CO2	171g+
	From 2021 start…..			
No Incentive/Fee	nil $		class NA LCV CO2	171-185g
ICE Penalty	+$1,000 New	$500 Used	class NA LCV CO2	186g - 199
ICE Penalty	+$1,500 New	$750 Used	class NA LCV CO2	200- 219g
ICE Penalty	+$2,000 New	$1,000 Used	class NA LCV CO2	>220g+

Note: Selected Business sales on NA class, GVM over 3,000kg to attract a credit relief -35

PTO for Supporting Information and other proposal notes >

E: Supporting Information and other proposals to consider

RUC is also introduced to all EV at a standard rate of $20/1,000kms.

Within 2023 we would also advocate ALL Light vehicles move to e-RUC, so petrol moves away from pump-duty.

Introduce CO2 to the Fuelsaver vehicle labels

Incentives make a big difference

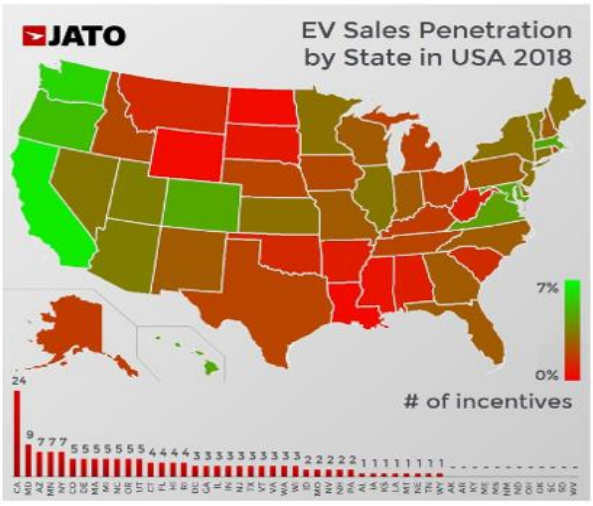
Global intel - Europe & USA sales volume is affected by variances in the incentives.

European countries new plug-in passenger car registrations and market share[223]

Country	PEV registrations 2017	PEV registrations 2016	Change 2016–2017	PEV market share 2017	PEV market share 2016	BEV/PEV 2017
Norway	62,170	44,888	39%	39.2%	29.0%	53%
Germany	53,561	24,626	117%	1.6%	0.7%	46%
UK	48,395	39,044	24%	1.9%	1.5%	28%
France	36,888	29,205	26%	1.8%	1.5%	69%
Sweden	20,031	13,415	49%	5.3%	3.6%	21%
Belgium	14,654	9,390	56%	2.7%	1.7%	18%
Netherlands	9,190	22,875	-60%	2.2%	6.0%	87%
Switzerland	8,029	5,432	48%	2.6%	1.7%	58%
Spain	7,448	3,662	103%	0.6%	0.3%	53%
Austria	7,265	5,063	43%	2.1%	1.5%	75%
Italy	4,827	2,831	71%	0.2%	0.2%	41%
Portugal	4,237	1,873	126%	1.9%	0.9%	42%
Finland	3,055	1,432	113%	2.6%	1.2%	16%
Iceland	2,990	1,158	158%	14.1%	6.3%	29%
Hungary	1,126	310	263%	1.0%	0.3%	67%
Luxembourg	992	306	224%	1.9%	0.6%	36%
Ireland	946	673	40%	0.7%	0.5%	66%
Denmark	913	1,402	-35%	0.4%	0.6%	77%
Poland	907	270	236%	0.2%	0.1%	52%
Czech Republic	630	363	74%	0.2%	0.1%	62%
Slovenia	528	272	94%	0.7%	0.4%	64%
Slovakia	394	55	616%	0.4%	0.1%	53%
Romania	374	162	131%	0.4%	0.2%	62%
Greece	163	47	247%	0.2%	0.1%	21%
Turkey	108	127	-15%	0.0%	0.0%	71%
Latvia	101	46	120%	0.6%	0.3%	70%
Cyprus	99	39	154%	0.8%	0.3%	44%
Lithuania	70	81	-14%	0.3%	0.4%	69%
Estonia	52	56	-7%	0.2%	0.3%	50%
Bulgaria	61	12	408%	0.2%	0.1%	18%
Malta	53	17	212%	0.4%	0.1%	91%
Croatia	23	88	-74%	0.1%	0.2%	35%
Europe	290,279	209,220	39%	1.7%	1.3%	46%

A breakdown of the US EV market by State shows more incentives equals more sales

The electric vehicle and plug-in electric vehicle market (EV) by state in the US confirms the correlation between an **increase in incentives and an increase in sales**. This is also the case in Europe where Norway leads the market, thanks to its strong incentives programme. Our latest research shows that the current Tax Credits and Other Incentives structure in the US is not only unequal among states, but it also shows where demand is growing at the fastest rate.



Supporting reference data for each of these proposals was sourced from ICCT, IEA, CCA, European Commission, UK SMMT and colleagues across the globe.

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