

OC240920

04 September 2024

Tēnā koe

I refer to your email dated 29 July 2024, requesting the following under the Official Information Act 1982 (the Act):

*"All advice produced for the Climate Implications of Policy Assessment regarding the Clean Car Standard changes announced by the Government on 9 July 2024
<https://www.beehive.govt.nz/release/government-aligns-clean-car-importer-standard-australia-reduce-vehicle-prices-kiwis>)*

All modelling underlying such advice.

Any information on the projected impact on the uptake of zero and low emissions vehicles as a result of the changes"

Three documents fall within the scope of your request and are detailed in the document schedule attached as Annex 1. The schedule outlines how the documents you requested have been treated under the Act.

I am refusing some information under the following section of the Act:

18(d) the information requested is or will soon be publicly available.

Regarding document 3, the effects on emissions and EV uptake due to revisions to the Clean Car Importer Standard (CCS) settings have been estimated under a 'base' and 'fast' EV uptake scenario, given the uncertainty over uptake rates. The 'fast' scenario reflects our understanding of the motor vehicle industry's forward purchase plans, and the 'base' scenario reflects our understanding of global EV uptake trends.

The document first presents the modelling results for total emissions, emission reductions and EV uptake under both the current and revised (effective from 2025) CCS settings. Following this, changes in emission reductions and EV uptake resulting from the revisions to CCS settings are provided. Please note that the modelling results extend to 2050 and are associated with a high level of uncertainty due to the difficulty in projecting future EV uptake and the many factors influencing vehicle purchase behaviour.

You have the right to seek an investigation and review of this response by the Ombudsman, in accordance with section 28(3) of the Act. The relevant details can be found on the Ombudsman's website www.ombudsman.parliament.nz

The Ministry publishes our Official Information Act responses and the information contained in our reply to you may be published on the Ministry website. Before publishing we will remove any personal or identifiable information.

Nāku noa, nā



Nick Paterson
Manager Environment

Annex 1 Document Schedule

#	Title	Document type	Treatment under the Act
1	CCS – Ministry action from Officials	Email	Refused in full under 18(d) This document will be proactively released and available here: https://www.transport.govt.nz/about-us/what-we-do/proactive-releases/SearchForm
2	Table explaining the changed CCS modelling (<i>attachment to document 1</i>)	Word document	Refused in full under 18(d) This document will be proactively released and available here: https://www.transport.govt.nz/about-us/what-we-do/proactive-releases/SearchForm
3	The modelling results for the impacts on GHG emissions and EV uptake to support the CIPA for the CCS review	Modelling results	Released in full.

Light vehicle fleet gross (tailpipe) GHG emission projections, kg CO₂-e

With current CCS settings

Base EV uptake scenario

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Without CCS	8.604E+09	9.004E+09	8.949E+09	8.895E+09	8.817E+09	8.719E+09	8.598E+09	8.486E+09	8.352E+09	8.205E+09	8.029E+09
With CCS	8.604E+09	8.982E+09	8.9E+09	8.825E+09	8.707E+09	8.537E+09	8.329E+09	8.142E+09	7.948E+09	7.751E+09	7.529E+09

Fast EV uptake scenario

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Without CCS	8.604E+09	9.001E+09	8.943E+09	8.886E+09	8.802E+09	8.696E+09	8.562E+09	8.433E+09	8.277E+09	8.1E+09	7.886E+09
With CCS	8.604E+09	8.978E+09	8.89E+09	8.805E+09	8.68E+09	8.493E+09	8.254E+09	8.03E+09	7.803E+09	7.575E+09	7.322E+09

With revised CCS settings (based on review in 2024)

Base EV uptake scenario

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Without CCS	8.604E+09	9.004E+09	8.949E+09	8.895E+09	8.817E+09	8.719E+09	8.598E+09	8.486E+09	8.352E+09	8.205E+09	8.029E+09
With CCS	8.604E+09	8.982E+09	8.9E+09	8.825E+09	8.719E+09	8.579E+09	8.403E+09	8.232E+09	8.048E+09	7.859E+09	7.647E+09

Fast EV uptake scenario

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Without CCS	8.604E+09	9.001E+09	8.943E+09	8.886E+09	8.802E+09	8.696E+09	8.562E+09	8.433E+09	8.277E+09	8.1E+09	7.886E+09
With CCS	8.604E+09	8.978E+09	8.89E+09	8.805E+09	8.683E+09	8.521E+09	8.315E+09	8.11E+09	7.888E+09	7.658E+09	7.401E+09

Light vehicle fleet gross (tailpipe) GHG emission projections, kg CO2-e

With current CCS settings

Base EV uptake scenario

Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Without CCS	7.829E+09	7.612E+09	7.36E+09	7.079E+09	6.765E+09	6.424E+09	6.067E+09	5.695E+09	5.31E+09	4.921E+09	4.545E+09
With CCS	7.298E+09	7.06E+09	6.8E+09	6.52E+09	6.213E+09	5.883E+09	5.539E+09	5.181E+09	4.823E+09	4.47E+09	4.131E+09

Fast EV uptake scenario

Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Without CCS	7.641E+09	7.368E+09	7.053E+09	6.705E+09	6.332E+09	5.942E+09	5.551E+09	5.151E+09	4.748E+09	4.347E+09	3.967E+09
With CCS	7.048E+09	6.757E+09	6.437E+09	6.098E+09	5.741E+09	5.37E+09	4.999E+09	4.622E+09	4.251E+09	3.889E+09	3.548E+09

With revised CCS settings (based on review in 2024)

Base EV uptake scenario

Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Without CCS	7.829E+09	7.612E+09	7.36E+09	7.079E+09	6.765E+09	6.424E+09	6.067E+09	5.695E+09	5.31E+09	4.921E+09	4.545E+09
With CCS	7.418E+09	7.176E+09	6.91E+09	6.624E+09	6.312E+09	5.976E+09	5.626E+09	5.263E+09	4.9E+09	4.541E+09	4.195E+09

Fast EV uptake scenario

Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Without CCS	7.641E+09	7.368E+09	7.053E+09	6.705E+09	6.332E+09	5.942E+09	5.551E+09	5.151E+09	4.748E+09	4.347E+09	3.967E+09
With CCS	7.124E+09	6.829E+09	6.506E+09	6.163E+09	5.802E+09	5.427E+09	5.052E+09	4.671E+09	4.297E+09	3.931E+09	3.586E+09

Light vehicle fleet gross (tailpipe) GHG emission projections, kg CO2-e

With current CCS settings

Base EV uptake scenario

Year	2044	2045	2046	2047	2048	2049	2050
Without CCS	4.194E+09	3.868E+09	3.564E+09	3.282E+09	3.022E+09	2.777E+09	2.552E+09
With CCS	3.815E+09	3.522E+09	3.251E+09	3.001E+09	2.77E+09	2.553E+09	2.354E+09

Fast EV uptake scenario

Year	2044	2045	2046	2047	2048	2049	2050
Without CCS	3.616E+09	3.293E+09	2.994E+09	2.718E+09	2.465E+09	2.229E+09	2.015E+09
With CCS	3.234E+09	2.947E+09	2.683E+09	2.441E+09	2.219E+09	2.012E+09	1.823E+09

With revised CCS settings (based on review in 2024)

Base EV uptake scenario

Year	2044	2045	2046	2047	2048	2049	2050
Without CCS	4.194E+09	3.868E+09	3.564E+09	3.282E+09	3.022E+09	2.777E+09	2.552E+09
With CCS	3.873E+09	3.575E+09	3.298E+09	3.042E+09	2.806E+09	2.584E+09	2.381E+09

Fast EV uptake scenario

Year	2044	2045	2046	2047	2048	2049	2050
Without CCS	3.616E+09	3.293E+09	2.994E+09	2.718E+09	2.465E+09	2.229E+09	2.015E+09
With CCS	3.269E+09	2.978E+09	2.71E+09	2.464E+09	2.239E+09	2.029E+09	1.838E+09

GHG emission reduction of CCS, Kilo tonnes CO2-e

With current CCS settings

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Base EV uptake	0	22	48	71	110	183	269	344	404	454	500
Fast EV uptake	0	23	52	81	122	203	309	403	474	524	564

Cumulative emission reduction

	2022-25				2026-30			
Base EV uptake	141				1,309			
Fast EV uptake	156				1,511			

With revised CCS settings (based on review in 2024)

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Base EV uptake	0	22	48	71	98	140	196	254	304	345	382
Fast EV uptake	0	23	52	80	119	175	247	323	388	442	485

Cumulative emission reduction

Year	2022-25				2026-30			
Base EV uptake	141				992			
Fast EV uptake	156				1,252			

GHG emission reduction of CCS, Kilo tonnes CO2-e

With current CCS settings

Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Base EV uptake	531	551	560	559	551	541	528	513	487	451	414
Fast EV uptake	593	611	615	607	591	572	551	529	497	458	419

Cumulative emission reduction

Year	2031-35			2036-40		
Base EV uptake	1,642			2,692		
Fast EV uptake	1,819			2,851		

With revised CCS settings (based on review in 2024)

Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Base EV uptake	412	435	450	454	453	448	441	431	410	380	350
Fast EV uptake	517	539	547	542	530	515	499	480	451	415	381

Cumulative emission reduction

Year	2031-35			2036-40		
Base EV uptake	1,297			2,228		
Fast EV uptake	1,603			2,566		

GHG emission reduction of CCS, Kilo tonnes CO2-e

With current CCS settings

Year	2044	2045	2046	2047	2048	2049	2050		
Base EV uptake	379	346	313	281	251	224	199		
Fast EV uptake	382	346	311	277	246	218	192		
Cumulative emission reduction									
Year	2041-45					2046-50		2022-50	2022-35
Base EV uptake	1,352					1,268		5,686	1,642
Fast EV uptake	1,374					1,243		6,044	1,819

With revised CCS settings (based on review in 2024)

Year	2044	2045	2046	2047	2048	2049	2050		
Base EV uptake	321	293	266	240	216	193	172		
Fast EV uptake	347	315	284	254	226	201	177		
Cumulative emission reduction									
Year	2041-45					2046-50		2022-50	2022-35
Base EV uptake	6,126					1,086		22,418	1,297
Fast EV uptake	1,140					1,143		4,665	1,603

GHG emission reduction of CCS, Kilo tonnes CO2-e

REDUCED emission reduction due to the changes to CCS

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Base EV uptake	0	0	0	0	11	43	74	90	100	108	117
Fast EV uptake	0	0	0	0	3	28	62	80	86	82	79

Cumulative reduced emission reduction due to the changes to CCS

Year	2022-25	2026-30
Base EV uptake	0	318
Fast EV uptake	0	259

REDUCED emission reduction due to the changes to CCS

Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Base EV uptake	120	116	110	104	98	93	87	82	77	70	64
Fast EV uptake	76	72	69	65	61	57	53	49	46	42	38

Cumulative reduced emission reduction due to the changes to CCS

Year	2031-35	2036-40
Base EV uptake	0	464
Fast EV uptake	0	285

GHG emission reduction of CCS, Kilo tonnes CO2-e

REDUCED emission reduction due to the changes to CCS

Year	2044	2045	2046	2047	2048	2049	2050
Base EV uptake	59	53	47	41	36	31	27
Fast EV uptake	34	31	27	23	19	17	15

Cumulative reduced emission reduction due to the changes to CCS

Year	2041-45	2046-50	2022-50	2022-35	
Base EV uptake	112	182	1,994	0	35%
Fast EV uptake	65	100	1,971	0	33%

Light electric vehicle registration projections

With current CCS settings

Base EV uptake scenario

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ZEVs	26,354	12,937	16,649	27,463	40,949	46,907	47,146	51,433	57,356	66,145	73,766
PHEVs	12,026	6,432	11,589	16,601	24,913	28,540	28,499	29,572	31,113	34,970	31,896

Fast EV uptake scenario

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ZEVs	27,789	14,672	19,004	28,638	48,540	56,841	58,683	59,913	67,263	78,633	93,455
PHEVs	12,951	8,838	15,199	20,768	31,761	35,435	35,760	35,105	38,670	41,124	39,445

With revised CCS settings (based on review in 2024)

Base EV uptake scenario

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ZEVs	26,354	12,937	16,631	23,923	32,289	39,031	43,216	47,232	52,850	61,428	73,164
PHEVs	12,026	6,432	11,580	14,350	19,676	23,892	26,563	27,653	29,158	33,037	32,063

Fast EV uptake scenario

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ZEVs	27,789	14,672	18,983	28,162	39,210	48,195	54,259	59,483	66,763	78,037	92,693
PHEVs	12,951	8,838	15,185	20,461	25,617	30,257	33,701	35,301	38,892	41,285	39,695

Light electric vehicle registration projections

With current CCS settings

Base EV uptake scenario

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
ZEVs	88,235	104,295	124,484	146,377	169,364	192,657	214,085	226,959	241,676	245,444	240,596	241,875
PHEVs	32,351	28,140	22,826	20,808	17,674	18,076	9,259	7,565	7,330	7,219	6,793	6,219

Fast EV uptake scenario

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
ZEVs	109,842	129,957	152,928	173,929	194,480	216,641	234,750	246,699	258,486	260,254	253,950	254,421
PHEVs	39,746	36,098	27,061	23,679	20,585	11,230	8,811	7,072	6,752	6,520	6,190	5,696

With revised CCS settings (based on review in 2024)

Base EV uptake scenario

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
ZEVs	87,511	104,201	124,400	146,307	169,310	192,599	214,049	226,866	241,587	245,379	240,571	241,857
PHEVs	32,447	28,445	23,046	20,952	17,765	18,159	9,306	7,652	7,423	7,286	6,818	6,238

Fast EV uptake scenario

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
ZEVs	109,696	129,783	152,777	173,808	194,392	216,634	234,715	246,618	258,405	260,199	253,931	254,406
PHEVs	40,209	36,522	27,372	23,886	20,714	11,240	8,854	7,151	6,834	6,575	6,210	5,710

Light electric vehicle registration projections

With current CCS settings

Base EV uptake scenario

Year	2046	2047	2048	2049	2050
ZEVs	242,834	243,558	243,859	243,107	244,351
PHEVs	6,208	6,260	6,305	6,281	6,295

Fast EV uptake scenario

Year	2046	2047	2048	2049	2050
ZEVs	255,082	255,738	255,946	255,012	256,151
PHEVs	5,803	5,931	6,057	6,138	6,275

With revised CCS settings (based on review in 2024)

Base EV uptake scenario

Year	2046	2047	2048	2049	2050
ZEVs	242,825	243,553	243,856	243,106	244,350
PHEVs	6,217	6,265	6,308	6,282	6,296

Fast EV uptake scenario

Year	2046	2047	2048	2049	2050
ZEVs	255,074	255,734	255,944	255,011	256,151
PHEVs	5,812	5,936	6,060	6,140	6,276

Light electric vehicle registration projections

Change in EV registrations due to changes to CCS settings

(-ve numbers mean reduction in registrations, +ve numbers mean increase in registration)

Base EV uptake scenario

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ZEVs	0	0	-18	-3,540	-8,660	-7,875	-3,930	-4,200	-4,507	-4,717	-602
PHEVs	0	0	-9	-2,251	-5,237	-4,648	-1,936	-1,919	-1,955	-1,934	167

Fast EV uptake scenario

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ZEVs	0	0	-21	-476	-9,330	-8,646	-4,424	-431	-501	-596	-762
PHEVs	0	0	-13	-308	-6,144	-5,178	-2,059	196	223	162	250

Relative changes in EV registrations due to the changes to CCS settings

(-ve numbers mean reduction in registrations, +ve numbers mean increase in registrations)

Base EV uptake scenario

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ZEVs	0%	0%	0%	-13%	-21%	-17%	-8%	-8%	-8%	-7%	-1%
PHEVs	0%	0%	0%	-14%	-21%	-16%	-7%	-6%	-6%	-6%	1%

Fast EV uptake scenario

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ZEVs	0%	0%	0%	-2%	-19%	-15%	-8%	-1%	-1%	-1%	-1%
PHEVs	0%	0%	0%	-1%	-19%	-15%	-6%	1%	1%	0%	1%

Light electric vehicle registration projections

Changes in EV registrations due to changes to CCS settings

(-ve numbers mean reduction in registrations, +ve numbers mean increase in registration)

Base EV uptake scenario

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
ZEVs	-724	-94	-84	-70	-54	-58	-36	-93	-89	-65	-25	-19
PHEVs	96	306	219	144	91	82	47	87	93	67	26	19

Fast EV uptake scenario

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
ZEVs	-147	-174	-152	-120	-88	-7	-35	-81	-81	-54	-19	-14
PHEVs	463	424	311	206	130	9	43	79	82	55	19	14

Relative changes in EV registrations due to the changes to CCS settings

(-ve numbers mean reduction in registrations, +ve numbers mean increase in registrations)

Base EV uptake scenario

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
ZEVs	-1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PHEVs	0%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%	0%

Fast EV uptake scenario

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
ZEVs	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PHEVs	1%	1%	1%	1%	1%	0%	0%	1%	1%	1%	0%	0%

Light electric vehicle registration projections

Changes in EV registrations due to changes to CCS settings

(-ve numbers mean reduction in registrations, +ve numbers mean increase in registration)

Base EV uptake scenario

Year	2046	2047	2048	2049	2050
ZEVs	-9	-5	-3	-1	-1
PHEVs	9	5	3	1	1

Fast EV uptake scenario

Year	2046	2047	2048	2049	2050
ZEVs	-8	-4	-3	-1	-1
PHEVs	8	4	3	1	1

Relative changes in EV registrations due to the changes to CCS settings

(-ve numbers mean reduction in registrations, +ve numbers mean increase in registrations)

Base EV uptake scenario

Year	2046	2047	2048	2049	2050
ZEVs	0%	0%	0%	0%	0%
PHEVs	0%	0%	0%	0%	0%

Fast EV uptake scenario

Year	2046	2047	2048	2049	2050
ZEVs	0%	0%	0%	0%	0%
PHEVs	0%	0%	0%	0%	0%

Notes

1. Light vehicles are car, SUVs, vans, utes and small trucks with a gross vehicle mass up to 3.5 tonnes.
2. Zero emission vehicles (ZEVs) include battery electric vehicles (BEVs) and hydrogen fuel cell vehicles.
PHEVs = plug-in hybrid electric vehicles.
3. With accelerated EV uptake overtime due to advancement of EV technology, we assume the CCS would only be need to be in place until 2040.
4. These are estimated **gross** tailpipe greenhouse gas (GHG) emissions, meaning only the emissions from fuel combustion. The estimated gross emission reduction might not be translated into **net** emission reduction due to waterbed effect.

RELEASED UNDER THE
OFFICIAL INFORMATION ACT 1982