

Committee presentation Thurs 15th Aug 2019

At the heart of my submission was the idea of fairness and I d like to emphasise it more because it makes all the difference between people taking action and making sacrifices and people refusing to. We have already seen a barrage of complaint from the farming lobby about their perceived unfair treatment.

To recap

1. If the reduction burden is not shared fairly there will be resistance, and it is a burden. Any idea that by some technical miracle or smart economic trick we can just carry on as we have been and still stay under 1.5 degrees is a fantasy.
2. It is not NZ that needs to reduce emissions but the whole world, and because of our small size the only way we can have an influence is as an example. To be that example we need to do our fair share and more, which the zero carbon bill won't achieve. Secondly, to be this example we must have a clear pathway from now to an adequate target in 2050, and we need to be seen to be sticking to that target from the word go. My objection to the 5-year budgets is that they enable backsliding. As well they purport to be budgets but can't be because the 2050 target itself is not a budget for emissions over the period 2020-2050, but a emissions amount in a certain year (2050). My guess is that we will miss the first 5-year budget by a wide margin and say, "but we will catch up in the second 5 years" This failure to reach targets has been happening since the first targets were set in 1990. My RERP on the other hand is a clear straight line from now to the target with annual numbers. It will become immediately apparent if NZ is not being the example to the world that it should. As well, seeing that the RERP is the basis for businesses paying carbon tax or receiving carbon credits on an annual basis, it gives immediate incentives to reduce emissions in all sectors.

Today I'd like to look deeper at what fair means.

The crux of the problem is that methane emitters have been given a gross reduction target but other gases haven't. Even worse, other gases can take advantage of the sequestration by the forest sink, but methane emitters cant. Let's look at something fairer

Because NZ livestock farming emits 7x the world per-person average emissions of methane and other gases emitters in NZ are only 1.5 times the world per-person average, its obvious that for NZ to be fair to the world, farmers will have to reduce much more quickly than city folk and this is not fair within NZ and thus farmers will not do it. As long as we choose to separate methane and other gases this problem cannot be solved. Let's look at three scenarios:

- a. Other gases reduce at the same rate as required for methane (In total NZ exceeds our required national reductions)
- b. Methane reduces at the same rate as required of other gases (In total NZ falls short of our required national reductions)
- c. A pathway somewhere between a. and b. where we hit our national target, yet both sectors are treated fairly.

a. Methane, currently at 34.1 Mtms CO₂e, needs to reduce to 3.3 Mtms in 2050 (This is based on a per-person calculation, with NZ at 0.062% of the world population.). Now this represents a 90% reduction. If other gases made a similar (fair) reduction, our 46 Mtn would reduce to 4.6 Mtn in

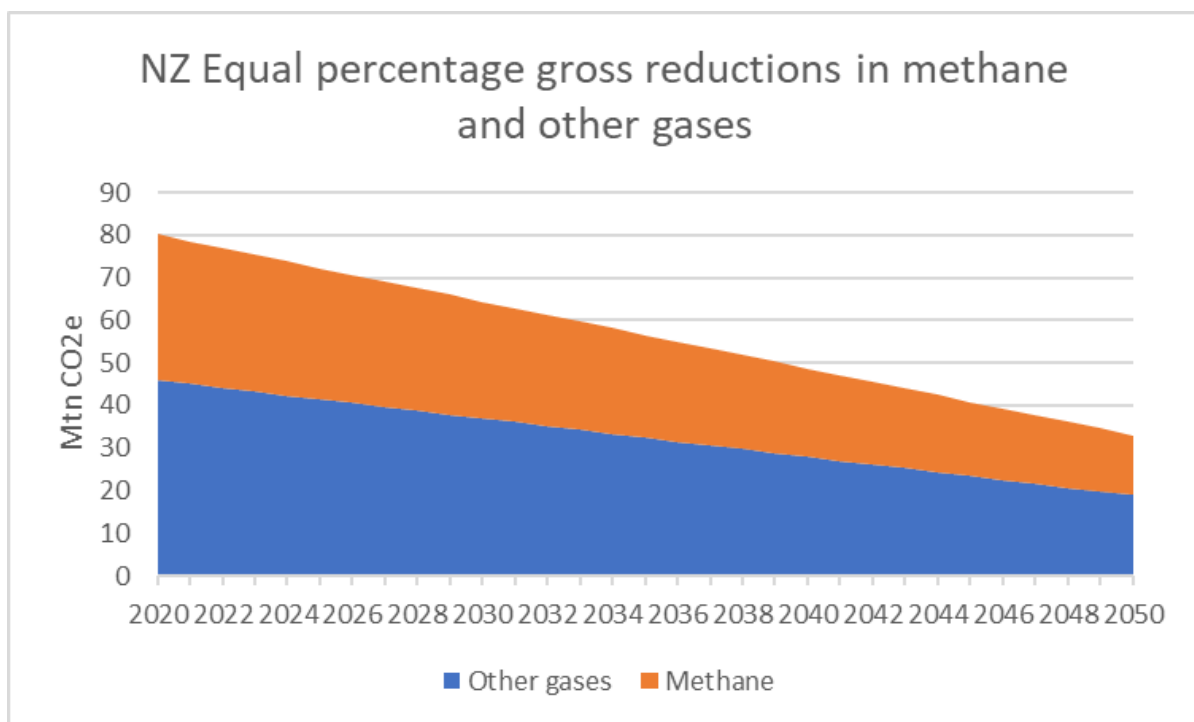
2050. But if we balance this with our forest sink of say 33 Mtms, our net emissions in 2050 will be $3.3 + 4.6 - 33 = -25.1$ Mtn – far below what NZ needs to achieve according to IPCC SR 1.5

b. All gases, currently at 46 Mtms reduce to net zero by 2050. If we take the forest sink as 33 Mtms again, then all gases need gross to reduce from 46 to 33, a fall of 28%, If, to be fair, methane also reduced by that %, (almost the bottom of the IPCC suggested range for 2050), it would fall from 34.1 to 24.55. This would give total net emissions in 2050 of 24.55 Mtms, not enough.

c. If we asked the question, ‘by what would both other gases and methane have to reduce, if they both had the same percentage reduction and NZ was to achieve net zero emissions in 2050?’ The answer, shown by the chart below, would be a 58.8% reduction in gross emissions of both. Note that both gases share the sequestering by the forest sink, in exact proportion to their emissions, a solution ruled out by the Zero Carbon Bill.

The advantages of scenario C are

- NZ reaches net zero all gases by 2050
- Both the methane and other gases sector make equal and fair percentage reductions
- New Zealand exceeds the IPCC SR 1.5 report’s requirement of 24-47% reduction in methane and net zero other gases by 2050
- There are clear gross reduction pathways for both gases and for NZ as a whole, therefore, NZ could be a transparent role model for the world.



Note that scenario C is not strong enough for NZ to be doing its fair share on a per person basis. To do this as explained above methane has to drop from 34.1 Mtn to 3.3 Mtn and other gases from 46 Mtn to 33 Mtn. This, as emphasised above is totally not fair on methane emitters in NZ.

The next step of course is to incentivise the reductions and the RERP, following the principle that all sectors of the economy and all businesses should make reductions in proportion to their emissions in the start year (2020), provides that incentive. But that is another topic.

Table for scenario 'C'

Emission reduction scenarios for methane and other gases					
	other	methane	total	less sink	total
	58.8%red	58.8%red	gross	est	net
2020	46	34.1	80.1	21	59.1
2021	45.098	33.432	78.53	20	58.53
2022	44.196	32.764	76.96	19	57.96
2023	43.294	32.096	75.39	18	57.39
2024	42.392	31.428	73.82	17	56.82
2025	41.49	30.76	72.25	16	56.25
2026	40.588	30.092	70.68	17	53.68
2027	39.686	29.424	69.11	18	51.11
2028	38.784	28.756	67.54	19	48.54
2029	37.882	28.088	65.97	20	45.97
2030	36.98	27.42	64.4	21	43.4
2031	36.078	26.752	62.83	22	40.83
2032	35.176	26.084	61.26	23	38.26
2033	34.274	25.416	59.69	24	35.69
2034	33.372	24.748	58.12	25	33.12
2035	32.47	24.08	56.55	26	30.55
2036	31.568	23.412	54.98	27	27.98
2037	30.666	22.744	53.41	28	25.41
2038	29.764	22.076	51.84	29	22.84
2039	28.862	21.408	50.27	30	20.27
2040	27.96	20.74	48.7	31	17.7
2041	27.058	20.072	47.13	32	15.13
2042	26.156	19.404	45.56	33	12.56
2043	25.254	18.736	43.99	34	9.99
2044	24.352	18.068	42.42	35	7.42
2045	23.45	17.4	40.85	36	4.85
2046	22.548	16.732	39.28	37	2.28
2047	21.646	16.064	37.71	36	1.71
2048	20.744	15.396	36.14	35	1.14
2049	19.842	14.728	34.57	34	0.57
2050	18.94	14.05	32.99	33	-0.01

This essay can be found on my website

www.climatefirstnz.org

les@evnz.org