Ministry for the Environment
Manatū Mō Te Taiao

OIAD-390

s 9(2)(a)

Dear s 9(2)(a)

Thank you for your email of 16 August 2022 to the Climate Change Commission (CCC) requesting the following under the Official Information Act 1982 (the Act):

*1. As copied from the Report, Section 5 on page 16;*
*Section 5: How are emissions calculated?*
*The single centralised emissions calculator will enable a consistent calculation across all farms, and will be designed to integrate data from existing calculators and other farm data sources.*
*5.1 Emissions will be calculated using a single centralised calculator (or through existing tools and software that are linked to the centralised calculator).*
*5.2 Methane will be calculated by weight of gas and nitrous oxide and carbon dioxide emissions will be calculated in carbon dioxide equivalents (CO2 e).*
*5.3 The calculator will have two methods – simple and detailed.*
*5.4 Emissions and sequestration will be reported and paid for annually with a flexible year-end date that aligns with a farm's annual tax accounts.*
*5.5 Establishment of a process for updates to the centralised calculator including incorporation of new mitigations or sequestration opportunities.*
*5.6 Prior to implementation of the pricing system, further work is required on the emissions reporting methodology for the minor livestock sectors including, deer, dairy goats, pork, poultry, and sheep milking.*
*The proposed levy is not now based on a farms "foot print", but may be determined by calculation, using a 'single centralised calculator'.*
*Who will oversee the accuracy and fairness of the results of this 'calculator?*

*2. You confirm there is a green house gas inventory and that the next GHG inventory will be released in April 2023.*
*Who updates and maintains the inventory?*
*How does the CCC check and confirm that the inventory is accurate?*

*3. Please provide your physical evidence to confirm your statements, that;*
*a) "Every tonne of methane that is emitted contributes to global warming"?*
*b) "Methane emissions keep the planet a lot warmer than it would be otherwise"?*
*c) "Bringing global carbon dioxide emissions to net zero by 2050 is vital to limit temperature increases to 1.5°C"?*
*4. How will "all emissions from the Agriculture and Waste sectors" be determined?*
*As the emissions recorded for the GHG inventory.*
*5. Why if the emissions from ALL Agriculture sectors includes poultry and goats, why then not include the five million humans in NZ. Humans that breath out at least 4% CO2?*

*6. You have stated that the 23% difference noted in the Zero Carbon Act equates 'to 7708 kt CO2-e, or 308 kt of methane.*
*The Act refers to just methane so why do you also now include carbon dioxide?*

*7. Please confirm the source of your figures; "7708 kt CO2-e, or 308 kt of methane"*
*What then is the equivalence of these figures to either ppm (parts per million) of Kt.?*

*8. If the methane in our atmosphere changes by say 10% (ie 0.000019% of all GHGs), then what is the "major impact" of this 10%?*
*Plus what is your scientific based evidence that methane will have a "major impact"?*
*It is reported that by calculations, the sensitivity of methane is just 0.06°C.*
*This quote from the paper "The Impact of CO2, H2O and Other 'Greenhouse Gases' on Equilibrium Earth Temperatures", published on 23 August 2021 in the International Journal of Atmospheric and Oceanic Sciences, which paper has never been refuted, may help;*
*"The contribution of CH4 and N2O is miniscule. Not only have they contributed a mere 0.3Kelvin to current earth temperatures, their climate sensitivities to a doubling of their present atmospheric concentrations are 0.06 and 0.08 Kelvin respectively."*

*9. You have advised that it is not within the Commission's role to "independently audit valid information" from other than the IPCC.*
*Given that the IPCC is on record as having willfully ignored its own Error Reporting Protocol on four occasions, how then does the CCC confirm that the IPCC reports based on modeling is in fact scientifically accurate and valid before you make recommendations to Government?*

*10. How then can you also say that " we do not consider that any other organisation is likely to hold information" related to my final question?*

*Finally I add that Section 11 of NZ's Fair Trading Act 1986 states that 'no person shall, in trade, engage in conduct that is liable to mislead the public as to the nature, characteristics, suitability for a purpose, or quantity of services'. I believe that Section 11 of the NZ's Fair Trading Act 1986 applies to the Directors of CCC, a consulting organisation that advises the Government. If you disagree with me that this Act applies to the Climate Change Commission, please explain how and why you do not agree.*

On 24 August 2022, the CCC partially transferred your request to the Ministry for the Environment (the Ministry) in accordance with section 14(b)(ii) of the Act, as some of the information you requested is more closely connected with the functions of the Ministry. Question 1, the first part of Question 2, and Questions 3 – 8 were transferred to the Ministry.

Responses to your questions can be found on pages 4 - 7 of this letter.

You have the right to seek an investigation and review by the Office of the Ombudsman of my decision to withhold information relating to this request, in accordance with section 28(3) of the Act. The relevant details can be found on their website at: www.ombudsman.parliament.nz.

Please note that due to the public interest in our work the Ministry for the Environment publishes responses to requests for official information on our OIA responses page shortly after the response has been sent. If you have any queries about this, please feel free to contact our Ministerial Services team: ministerials@mfe.govt.nz.

Yours sincerely

Katherine Wilson
**Director – Climate Adaptation and Evidence**

**Responses**

| Question | Response |
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| 1.The proposed levy is not now based on a farms "foot print", but may be determined by calculation, using a 'single centralised calculator'.<br>Who will oversee the accuracy and fairness of the results of this 'calculator? | As the New Zealand Government has not yet determined how agricultural emissions will be priced, including how a farm's emissions would be calculated, I must refuse this part of your request under section 18(g)(i) of the Act, as the information requested is not currently held by the Ministry and I do not believe it is held by another department. The Government is currently considering the advice of He Waka Eke Noa - Primary Sector Climate Action Partnership (HWEN Partnership), as well as the advice of the CCC. Policy decisions will be informed by public consultation. This consultation will be an opportunity for you to provide feedback to the Government on the calculator and other aspects of the proposed policy.<br><br>If you would like further detail on the HWEN recommendations themselves, please contact the HWEN Partnership at yourfeedback@hewakaekenoa.nz. |
| 2. You confirm there is a green house gas inventory and that the next GHG inventory will be released in April 2023.<br>Who updates and maintains the inventory? | The Ministry is the lead agency responsible for producing the greenhouse gas inventory annually. Preparing and compiling the inventory, however, is a cross government effort, with key contributions from the Ministry for Primary Industries, the Ministry of Business, Innovation and Employment, the Environmental Protection Authority, the Ministry of Foreign Affairs and Trade, and the Government of Tokelau. |
| 3. Please provide your physical evidence to confirm your statements, that;<br>a) "Every tonne of methane that is emitted contributes to global warming"?<br>b) "Methane emissions keep the planet a lot warmer than it would be otherwise"?<br>c) "Bringing global carbon dioxide emissions to net zero by 2050 is vital to limit temperature increases to 1.5°C"? | A, B: "While methane is a short-lived gas, breaking down in the atmosphere after approximately 12 years, every tonne of methane that is emitted contributes to global warming. Even if stable, ongoing methane emissions keep the planet a lot warmer than it would be otherwise." The evidence for this statement can be found in the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report |

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| | on the Physical Basis of Climate Change, which has reported methane has contributed an estimated 0.5°C to global warming in the period 2011-2020 relative to 1850-1900. More information on this can be found here: https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/.<br><br>C: The evidence for this statement comes from the IPCC Sixth Assessment Report on the Physical Basis of Climate Change, which states: "From a physical science perspective, limiting human-induced global warming to a specific level requires limiting cumulative CO2 emissions, reaching at least net zero CO2 emissions, along with strong reductions in other greenhouse gas emissions." Further evidence comes from the IPCC Special Report on Global Warming of 1.5°C, with modelled pathways showing to limit temperature increase to 1.5°C global net anthropogenic Co2 emissions reach net zero around 2050 (2045-2055 interquartile range). |
| 4. How will "all emissions from the Agriculture and Waste sectors" be determined? | Agriculture and Waste sector emissions will be determined as the emissions reported in New Zealand's Greenhouse Gas Inventory, in the standard reporting format set out by the Conference of the Parties. New Zealand's inventory is prepared under the United Nations Framework Convention on Climate Change. The quality of greenhouse gas inventories relies on the integrity of the methodologies used, and completeness of reporting, and the procedures for compilation of data. To ensure this, the Conference of the Parties has developed standardised requirements for reporting national inventories, which New Zealand adheres to. |
| 5. Why if the emissions from ALL Agriculture sectors includes poultry and goats, why then not include the five million humans in NZ. Humans that breath out at least 4% CO2? | The carbon dioxide exhaled by humans does not contribute to warming because we take in the equivalent amount of carbon dioxide through food. The carbon in the food we eat originally comes from photosynthesis, where plants use sunlight and carbon dioxide to produce energy. For |

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| | this reason, carbon dioxide exhaled by humans is not included in the national greenhouse gas inventory.<br><br>In contrast, ruminant animals such as cows and goats contribute to warming because they produce methane in their digestive system as part of a process called enteric fermentation.<br><br>Emissions in the agriculture sector from poultry are from manure management, rather than what the animals exhale. Poultry are not ruminants, and so have no emissions from enteric fermentation. |
| 6. You have stated that the 23% difference noted in the Zero Carbon Act equates 'to 7708 kt CO2-e, or 308 kt of methane.<br>The Act refers to just methane so why do you also now include carbon dioxide? | Carbon dioxide equivalent (CO2-e) is a metric that enables comparisons to be made between different gases that have different warming impacts. Based on the IPCC's Fourth Assessment Report, methane has a warming effect equivalent to 25 times that of carbon dioxide. As a result 308kt of methane has the warming equivalent of 7708 kt of carbon dioxide. |
| 7. Please confirm the source of your figures; "7708 kt CO2-e, or 308 kt of methane"<br>What then is the equivalence of these figures to either ppm (parts per million) of Kt.? | The biogenic methane reduction target under the Climate Change Response Act is a 24 to 47 per cent reduction below 2017 biogenic methane emissions by 2050. In 2017, biogenic methane emissions were 33,518kt CO2e, as reported in the 2020 inventory. A 47 per cent reduction on 2017 levels would bring biogenic methane emissions to 17,762 kt CO2e, and a 24 per cent reduction would be 25,670 kt CO2e. The difference between the 47 per cent and 23 per cent values is 7708 kt CO2e. |
| 8. If the methane in our atmosphere changes by say 10% (ie 0.000019% of all GHGs), then what is the "major impact" of this 10%?<br>Plus what is your scientific based evidence that methane will have a "major impact"?<br>It is reported that by calculations, the sensitivity of methane is just 0.06°C. | New Zealand continues to ensure that our policies and decisions are founded in the most up to date science and evidence. The science behind the warming effects of methane is well-accepted in recent literature. The most recent IPCC report, released in August 2021, was subject to a comprehensive global and open review process by experts and governments. This report estimates methane has contributed |

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| | 0.5°C to global warming in the period 2011-2020 relative to 1850-1900, compared with 0.75°C of warming from carbon dioxide emissions. Further increases in methane will therefore contribute to additional increases in temperature. More information on this report can be found here: https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/. |