



6 March 2025

OIAD-1447

9(2)(a) [REDACTED]
[REDACTED]
[REDACTED]

Dear 9(2)(a) [REDACTED]

Thank you for your email of 14 January 2025 requesting the following under the Official Information Act 1982 (the Act):

- 1. Information on the natural gas supply, demand and price assumptions and outputs in the ERP ENZ modelling (for both the updated Baseline and "New Measures" scenarios). I am interested in understanding the rationale for how these assumptions were chosen as well as the final outcome. I am particularly interested in how officials ensured that gas demand and price were made consistent with available supply in the short term (pre-2035 when new domestic gas will not be available) and over the long term (to 2050).*
- 2. Modelling of the planting and deforestation rates for exotic and native forestry and resulting removals, from the ERP policies of 1) partnerships for afforestation on Crown-owned land, and 2) Land-use class entry restrictions in the ETS. It is unclear from the documentation published how these two policies contribute to the difference between the Baseline and New Measures scenarios.*
- 3. Could I please have a copy of the annual times series of projections for LULUCF in inventory basis (e.g. as shown in Figure 2.5.20 of New Zealand's first Biennial Transparency Report) for the WEM Scenario, and also the WAM scenario, including the high and low variants for each.*

On 13 February 2025, you were notified of an extension to the timeframe to respond to your request of 15 working days, as consultations necessary to make a decision on the request were such that a proper response could not reasonably be made within the original time limit.

Question One

The Ministry for the Environment has identified two documents in scope of this part of your request, listed as documents 1 and 2 in the attached table.

Process of modelling

For modelling to inform ERP2, officials used the standard assumptions for domestic gas supply built into the Emissions in NZ Model [ENZ] by the Model's developers.

These assumptions are based on MBIE's Petroleum Reserves data and the Model developer's own analysis.

During the development of ERP2 MBIE compared results from ENZ and their own in-house modelling and generally the models aligned / were within the bounds of uncertainty.

Inputs into ENZ gas modelling

In general, gas demand for ERP2 was modelled endogenously using the ENZ model. The drivers of changes in the model depend on the sector:

- The residential and commercial sectors are driven by changes in population.
- Food processing is driven by projected agricultural output from the land and waste module.
- Mining and construction are driven by GDP and population growth, respectively.
- The other industrial sectors (Metals, Cement, Wood processing) are projected to have flat underlying demand for the service

The exception to this is gas demand relating to Methanex, which was assumed to close its Motunui trains at the end of 2027 and 2029. This assumption was based on MBIE modelling, which considers the level of natural gas demand across the economy in comparison to the supply outlook. It was also assumed that the Balance urea plant never closes.

In terms of gas prices – these were set exogenously at \$7/GJ (constant over time).

The attached output file, document 2, includes the model outputs on gas reserves and gas supply. This have reserves (and domestic production) reach 0 in 2030, which is based on expectations of future reserves.

ENZ outputs relating to gas

Document 2 contains the ENZ outputs relating to gas for the New Measures and Baseline scenarios.

Question Two

In response to this part of your request, we are releasing two technical workbooks outlining the economic analysis for afforestation on Crown Land and Land Use entry restrictions in the NZ ETS. These are listed as documents 3 and 4 in the attached table.

The analysis for afforestation on Crown-owned land included an assumption that there is at least 320,000 hectares of Crown-owned land available that has the biophysical factors required for afforestation (e.g., altitude/slope/rainfall) and is free of other constraints that may limit the Crown's ability to offer it for partnership. The forest types and planting rates outlined are one potential scenario – actual planting rates will depend on the level of private sector interest and final policy settings.

Question Three

The WEM projections are already publicly available. However, calculations for WAM projections on an inventory basis were never made therefore I am refusing this part of your request under section 18(g) as the information is not held by the Ministry and we do not believe it is held by any other department.

You have the right to seek an investigation and review by the Office of the Ombudsman of my decisions 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



Meredith Davis
Manager – Climate Priorities and Forecasting
Ministry for the Environment | Manatū Mō Te Taiao

Document schedule

Document no.	Document date	Content	Decisions	OIA sections applied
1	17 December 2024	File Note: ERP2 Modelling of Methanex	Release in full	N/A
2	January 2025	Spreadsheet: ENZ outputs – gas (baseline and NM)	Release in full	N/A
3	January 2025	Spreadsheet: Afforestation economic analysis AOCL	Release in full	N/A
4	January 2025	Spreadsheet: LUC ETS restriction calculations and data	Release in full	N/A