

Z Energy Limited

FY22

Greenhouse Gas Inventory Report



IS FOR
NEW ZEALAND

Introduction

This document is the annual greenhouse gas (GHG) emissions inventory for Z for the period 1 April 2021 to 31 March 2022. Z's inventory has been calculated with guidance from the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (GHG Protocol). The GHG Protocol is the widely accepted methodology for organisational carbon accounting, and is supported by ISO 14064 (2018).

Table 1: Greenhouse gas emissions inventory summary for Z Energy FY22

| Scope | Category | CO2-e Emissions (tonnes) | | | | |
|-----------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------|-------------------|-------------------|------------------|--------------------|
| | | FY18 | FY19 | FY20 | FY21 | FY22 |
| 1 - Z offices, terminal & retail sites | Diesel | 1,749 | 1,559 | 1,526 | 1,445 | 2,051 ¹ |
| | HVAC (loss) | 1,502 | 1,502 | 1,502 | 1,502 | 1,471 |
| | Natural gas | 256 | 437 | 798 | 143 | 24 |
| | Petrol (premium & super) | 113 | 95 | 92 | 82 | 77 |
| | Petrol (regular) | 51 | 54 | 41 | 39 | 24 |
| | Refrigeration (loss) | 182 | 190 | 167 | 187 | 138 |
| Total Scope 1 | | 3,853 | 3,837 | 4,127 | 3,398 | 3,798 |
| 2 - Z offices, terminal & retail sites | Electricity – Corporate Offices | 96 | 56 | 76 | 64 | 64 |
| | Electricity - Retail | 3,807 | 3,650 | 2,869 | 2,841 | 2,858 |
| | Electricity - Commercial | 102 | 83 | 69 | 55 | 61 |
| | Electricity - Terminals | 218 | 405 | 358 | 231 | 172 |
| Total Scope 2 | | 4,223 | 4,195 | 3,371 | 3,191 | 3,156 |
| 3 - Z offices, terminal & retail sites | Air travel | 1,015 | 1,198 | 714 | 332 | 251 |
| | Rental car | 41 | 51 | 44 | 24 | 20 |
| | Taxis | 41 | 26 | 29 | 9 | 9 |
| | Waste to landfill | 2,404 | 2,827 | 2,234 | 1,788 | 1,631 |
| | Electricity (line losses) | 344 | 342 | 255 | 274 | 270 |
| | Natural gas (line losses) | 30 | 52 | 94 | 9 | 1 |
| Sub-total Scope 3 Offices & Retail | | 3,875 | 4,495 | 3,369 | 2,434 | 2,182 |
| 3 - NZ Supply Chain | AGO Bunker fuel | 2,095 | 1,498 | 1,507 | 3,034 | 2,068 |
| | HFO Bunker fuel | 13,022 | 11,863 | 13,330 | 12,254 | 13,634 |
| | Diesel for Awanuia ² | 2,060 | 1,665 | 2,059 | 1,301 | 0 |
| | Diesel for trucking deliveries | 13,833 | 13,474 | 12,148 | 11,776 | 12,353 |
| | Z DEC for deliveries | 32 | 57 | 44 | 43 | 43 |
| | Electricity from JV terminals ³ | - | 168 | 129 | 90 | 78 |
| | Upstream Electricity | - | 579 | 569 | 519 | 249 |
| Sub-total Scope 3 NZ Supply Chain | | 31,041 | 29,303 | 29,785 | 29,017 | 28,425 |
| Z Operational Emissions (excluding line losses & upstream electricity)⁴ | | 42,992 | 40,704 | 39,742 | 37,149 | 37,042 |
| 3 - Flick Electric | Flick Electric Scope 1,2 and 3 emissions | - | - | - | - | 13 |
| 3 - Share of Refinery | Crude processed at NZRC | 618,483 | 555,892 | 520,708 | 475,255 | 367,525 |
| 3 - Rest of supply | Crude extraction & transportation to NZ | 548,691 | 459,384 | 558,788 | 267,283 | 313,697 |
| | Offshore production of refined products | 435,248 | 442,831 | 472,521 | 584,952 | 562,061 |
| 3 - End Use | Sold fuel | 10,330,585 | 10,459,104 | 9,990,103 | 8,039,840 | 8,760,150 |
| Total Scope 3 | | 11,967,924 | 11,951,008 | 11,575,275 | 9,398,781 | 10,034,054 |
| Total Emissions (scope 1, 2 & 3) | | 11,975,999 | 11,958,268 | 11,582,773 | 9,405,371 | 10,041,008 |

¹ Due to a correction in the methodology used to calculate fuel consumption of Z's mini tanker fleet, an adjustment of 544 t CO2 was made to FY22 results.

² Awanuia ceased operations in FY21.

³ Electricity consumed from JV terminals and upstream were included in the Scope 3 NZ Supply chain category from FY19.

⁴ Z's FY-FY21 carbon reduction target is benchmarked against operational emissions - those domestic emissions of which Z has the most control and or influence over and can therefore take meaningful action to reduce.

All numbers are subject to rounding.

Organisational boundary

The organisational boundary for ZEL Group's carbon inventory is defined by those emissions over which we have operational control and which are relevant to our operations.

Z's organisational boundary encompasses the companies listed in the table below. Apart from where indicated, Z has operational control of these companies.

Table 2: Z's Organisational boundary FY22 as at 31 March 22

| List of all legal entities of facilities over which Z has equity share, financial control or operational control | % equity share in legal entity | Does reporting company have operational control? (yes/no) | Does entity or facility produce GHG emissions? (yes/no) If yes, are they included in the GHG inventory figures? (yes/no) |
|------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Z Energy ESPP Trustee Limited | 100% | Yes | No, No |
| Z Energy LTI Trustee Limited | 100% | Yes | No, No |
| Z Energy 2015 Limited | 100% | Yes | Yes, Yes |
| Joint User Hydrant Installation (JUHI) – Auckland Airport | 33.3% | No | Yes, Yes (based on usage) |
| Joint Interplane Fuelling Services (JIFS) – Auckland Airport | 50% | No | Yes, Yes (based on usage) |
| Jointly Owned Storage Facility – CCh Airport | 50% | Yes | Yes, Yes (based on usage) |
| Wiri to Auckland Airport Pipeline | 40% | No | Yes, No (based on materiality) |
| Loyalty New Zealand Limited (Loyalty) | 25% | No | No, No |
| Wiri Oil Services Limited (WOSL) | 44.45% | No | Yes, Yes (based on usage) |
| Coastal Oil Logistics Limited (COLL) | 50% | No | Yes, Yes (based on usage) |
| Flick Energy Limited | 73.56% | Yes | Yes, No (based on materiality) |
| The New Zealand Refining Company Limited | 12.90% | No | Yes, Yes (based on usage) |
| Mevo Limited | 31.82% | No | Yes, No (based on materiality) |

The inventory accounts for all direct Scope 1 and Scope 2 emissions and selected Scope 3 emissions of the six Kyoto Greenhouse Gases (CO₂, SF₆, CH₄, N₂O, HFCs, PFCs) and are expressed as CO₂-e (CO₂ equivalent).

Scope of emission sources

ZEL will include Scope 1, 2 and some Scope 3 emissions from all relevant Kyoto Protocol gases in its carbon inventory. As some of the Scope 1 and 3 emissions to be included in our inventory are only a small percentage of our emissions, a materiality test has been applied. We have prepared our footprint using best efforts to determine accurate emissions totals under each Scope relative to the materiality of each emissions source to the total footprint. For some small emissions sources, we have used estimation techniques to manage the trade-off between accuracy of the footprint and the cost of preparation. Certain small emissions sources have been excluded as indicated below.

Scope 1, 2 and 3 emissions are defined as follows:

Scope 1 emissions: are direct emissions from within an organisation's boundary. These emissions are from sources that Z Energy Limited owns or controls: natural gas combustion at the biodiesel plant, fuel combustion in corporate vehicles and mini tankers, fugitive emissions of refrigerants from office HVAC system and Z retail sites refrigeration equipment. Emissions of refrigerants from corporate vehicles AC and office fridges, as well as combustion of fuels in back-up generators were excluded due to low level of emissions (less than 0.005% of total emissions) and relative difficulty in collecting data.

Scope 2 emissions: are indirect emissions from electricity that is used by the organisation but is generated outside the organisation's boundary by another company such as an electricity provider. This includes electricity use at the Z Energy offices, retail sites, truck stops and Z managed terminals including the biodiesel plant.

Scope 3 emissions: are all other indirect emissions that occur outside the boundary of the organisation but that result from the activities of the organisation. This includes such sources as Cradle to Gate emissions for crude and refined product purchased, emissions from refining processes for ZEL product, indirect losses resulting from the transmission of electricity and other fuels, emissions from transportation of finished products to retail sites, truckstops and marine vessels, emissions from electricity at JV terminals, emissions from waste sent to landfill, business travel (air, rental cars and taxis), emissions from Flick Electricity, and emissions from the combustion of our sold products.

Summary of data sources, methodologies and key assumptions

Unless otherwise stated below, Ministry for the Environment emission factors¹ (2020 release) are used to calculate the tonnes of carbon dioxide equivalent generated.

Table 2: Z's Organisational boundary (to be updated by Legal)

| Inventory Category | Summary of Data Source and Methodology |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scope 1 | |
| Stationary combustion | <ul style="list-style-type: none"> Supplier invoices for monthly consumption (natural gas). |
| Mobile combustion | <ul style="list-style-type: none"> Fuel purchased through Z Business Card accounts. Exclusions: Fuel purchased without Z Business Card. |
| Fugitive emissions | <ul style="list-style-type: none"> Ministry for the Environment ("MfE") methodology used to calculate HVAC and refrigerant emissions. Estimates based on property specifications. Exclusions: Emissions from HVAC in vehicles and office fridges. |
| Scope 2 | |
| Electricity | <ul style="list-style-type: none"> Supplier invoices/third party reporting for monthly consumption. An estimate for a very small number of sites has been extrapolated from third party reporting. An estimate for a small number of sites has been extrapolated from third party reporting. |
| Scope 3 | |
| Downstream indirect scope – Z offices, terminals & retail site | <p>Line losses</p> <ul style="list-style-type: none"> Electricity data used as a basis to apply the MfE methodology. Natural gas data used as a basis to apply the MfE methodology. <p>Waste</p> <ul style="list-style-type: none"> Third party waste data extrapolated to represent all retail sites and terminals. Third party waste audit data extrapolated to represent all office sites. <p>Business travel</p> <ul style="list-style-type: none"> Supplier reporting for annual air and rental car travel. Taxi travel is based on ZEL purchase card spend. |
| Downstream indirect scope – New Zealand supply chain | <p>Transportation and distribution</p> <ul style="list-style-type: none"> Third party report from supplier on fuel usage for fuel distribution via truck using Z Business Card data. Third party report from supplier on fuel usage for fuel distribution via coastal shipping. Third party report on electricity use for non-Z operated terminals (WOSL). The Awanua ceased operations at the end of FY21. |
| Upstream indirect scope – outside New Zealand | <p>Raw material and finished product acquisition</p> <ul style="list-style-type: none"> Sales reports. Emissions calculated using factors based on product life cycle data (GaBi 2012). Emissions factors under review to be updated in FY23 due to changes in supply chain to import only refined product. |
| Upstream indirect scope – inside New Zealand | <ul style="list-style-type: none"> Sales volumes obtained from New Zealand oil industry exchange reporting for share of refinery. Emissions calculated using factor supplied by Refining New Zealand. New Zealand based refining emissions cease end of FY22. |

¹Emission factors contained in MfE's recent release of its 2022 detailed guide Measuring emissions: A guide for organisations will be applied to Z's FY23 reporting.



Independent Reasonable Assurance Report to the Directors of Z Energy Limited

Opinion

Our reasonable assurance opinion has been formed on the basis of the matters outlined in this report.

In our opinion, Z Energy Limited's Greenhouse Gas statement ('GHG statement') has, in all material respects, been prepared in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) requirements (the 'Protocol') for the period 1 April 2021 to 31 March 2022.

Information subject to assurance

We have performed an engagement to provide reasonable assurance in relation to Z Energy Limited's GHG statement for the period 1 April 2021 to 31 March 2022.

Standards we followed

We conducted our reasonable assurance engagement in accordance with International Standard on Assurance Engagements (New Zealand) 3000 (Revised) *Assurance Engagements other than audits or reviews of historical financial information* and International Standard on Assurance Engagements (New Zealand) 3410 *Assurance Engagements on Greenhouse Gas Statements*. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion. In accordance with those standards we have:

- used our professional judgement to assess the risk of material misstatement and plan and perform the engagement to obtain reasonable assurance that the GHG statement is free from material misstatement, whether due to fraud or error;
- considered relevant internal controls when designing our assurance procedures, however we do not express an opinion on the effectiveness of these controls; and
- ensured that the engagement team possesses the appropriate knowledge, skills and professional competencies.

How to interpret reasonable assurance and material misstatement

Reasonable assurance is a high level of assurance, but is not a guarantee that it will always detect a material misstatement when it exists.

Misstatements, including omissions, within the GHG statement are considered material if, individually or in the aggregate, they could reasonably be expected to influence the relevant decisions of the intended users taken on the basis of the GHG statement.

Use of this assurance Report

Our report should not be regarded as suitable to be used or relied on by any party's other than the Directors of Z Energy Limited for any purpose or in any context. Any party other than the Directors of Z Energy Limited who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk.

To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than the Directors of Z Energy Limited for our work, for this independent reasonable assurance report, or for the opinions we have reached.

Our report is released to the Directors of Z Energy Limited on the basis that it shall not be copied, referred to or disclosed, in whole (save for Z Energy Limited's own internal purposes) or in part, without our prior written consent.



Management's responsibility for the GHG statement

Management of Z Energy Limited are responsible for the preparation of the GHG statement in accordance with the Protocol. This responsibility includes such internal control as Management determine is necessary to enable the preparation of the GHG statement that is free from material misstatement whether due to fraud or error.

Our responsibility

Our responsibility is to express an opinion to the Directors on whether the preparation of the GHG statement has, in all material respects, been prepared in accordance with the Protocol.

Our independence and quality control

We have complied with the independence and other ethical requirements of Professional and Ethical Standard 1 International Code of Ethics for Assurance Practitioners (Including International Independence Standards) (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Professional and Ethical Standard 3 (Amended) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our firm has also provided financial audit services and other assurance services to Z Energy Limited. Subject to certain restrictions, partners and employees of our firm may also deal with the Z Energy Limited on normal terms within the ordinary course of trading activities of the business of the Z Energy Limited. These matters have not impaired our independence as assurance providers of the Z Energy Limited for this engagement. The firm has no other relationship with, or interest in, the Z Energy Limited.

A handwritten signature of the KPMG firm, written in blue ink, appearing as 'KPMG.' with a period at the end.

KPMG
Auckland
26 May 2022