Enter date here

Enter company or organisation name here.

Emissions Plan.

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# Notes on how to use this document and industrial emissions consents

This document is intended to be used in conjunction with the user guide and the excel Calculations Spreadsheet. This document is the final step to assembling a plan, so if you have not already, start with the how-to guide for background information and a detailed walkthrough.

Italicised text is for instructions. All text added to this document should be done inside the boxes provided:

|  |
| --- |
| Example box: type here |

If you are using this document specifically for a resource consent, all of the text and information generally applies, but information specific to industrial emissions consents are highlighted green (like this sentence).

# Emissions Plan Summary

Write the summary details of your emissions reduction plan in the box below.

* What projects that you have considered do you intend to complete and when?
* What impact will that have on your overall emissions and what is the required investment?
* Briefly discuss why this approach was chosen (or otherwise summarise section 4).
* If applying for a resource consent, why were these projects selected as the best practicable option?
	+ Note: the purpose of an emissions plan for a resource consent is to reduce greenhouse gas emissions from devices used to generate process heat. The best practicable option is the project or group of projects, including energy efficiency, fuel switching, and process change, that are technically and financially viable and result in emissions reductions.

|  |
| --- |
| Our emissions plan is to…These projects combined will reduce our total site-level emissions by \_\_% for an investment of $\_\_.It was decided this was the best approach for our site because… |

Paste the Projects Table from the “Projects Table” tab of the Calculations Spreadsheet in the box below (replace the example graphic in the box):

For resource consents, the projects displayed in this table should make up your best practicable option.

|  |
| --- |
|   |

Paste Emissions Roadmap from the “Emissions Roadmap” tab of the Calculations Spreadsheet in the box below (replace the example table in the box):

|  |
| --- |
|  |

# Organisation, site, and process overview

Describe your organisation, your site, and what you do or make and how. Provide enough detail that a reader could understand your site without having to visit it in-person.

|  |
| --- |
| Enter company or organisation name here. is …Enter Company Name Here produces… |

# Equipment and operations

Describe all equipment at your site that has related or associated emissions. The example information in the box below is tailored to process heat consents but could be adapted for any plan. The goal is for the reader to understand your equipment, operations, and what you are trying to achieve that presently relies on fossil-fuels.

For resource consents, describe all equipment at your site that uses fossil fuels for process heat and describe the processes that require the heat. Be specific about the type of equipment, size(s) of equipment, temperatures, pressures, typical operating hours, etc. The more information the better here as there are many different types of processes and equipment. Note: if you have included a process flow diagram or other schematics in Appendix C, you can reference those here if they depict the information.

Note: copy/paste more equipment sections as needed or delete any extra sections- include all equipment and operations with associated emissions.

|  |
| --- |
| Equipment #1 name: (i.e. south room heat) Equipment type: (i.e. boiler) Equipment fuel type: (i.e. coal) Equipment age:(i.e. 27 years)Equipment rating: (i.e. 1,000 kW output) Equipment operating temperature, pressure, etc.: (i.e. 150°C) Equipment typical operating hours: (i.e. M-F 8-5 first shift, 6-12 second shift, occasional Saturday)Equipment typical load: (i.e. 100% fire for morning warmup each day then varies with production) [note: see load profile tab in the Calculations Spreadsheet for a more detailed way to answer this question] Describe the end use(s) of this equipment (i.e. canning line, pasteurisation, drying, etc.):End use temperature requirement:(i.e. what is the minimum theoretical temperature this could operate at?)Other end-use specifics as relevant: Equipment #2 name: Equipment type: Equipment fuel type: Equipment age:Equipment rating: Equipment operating temperature, pressure, etc.: Equipment typical operating hours: Equipment typical load: Describe the end use(s) of this equipment: End use temperature requirement: Other end-use specifics as relevant: |

#

# Energy usage and associated greenhouse gas emissions

This section summarises the energy usage and greenhouse gas emissions of the site.

## Energy consumption, costs & associated emissions

Paste the annual fuel usage and associated greenhouse gas emissions table from the Calculations Spreadsheet below (replace the example table in the box). The intent here is to list the total annual fuel consumption and associated emissions from all sources for the most recent year of available data.

Note: for resource consents, electricity should not be included in emissions totals.

|  |
| --- |
|  |

Other information (as relevant)

Add any other relevant information regarding fuel usage or emissions here. For example, if your usage has gone up in recent years or is expected to significantly decrease for some reason, describe that. If you expect your usage to increase in the coming years explain why. If the Calculations Spreadsheet was not able to accurately capture your emissions for some reason, explain why and what they should be here.

|  |
| --- |
|  |

# Greenhouse gas reduction opportunities explored

Note: for resource consents, a technically feasible option is one that provides an equivalent level of service.

Note: for resource consents, a financially viable option considers capital costs and any operational savings over a 20-year period.

## Process change opportunities

For many sites, it will not be practical or possible to change parts or entire processes to decarbonise, however, for some specific industries this will be a key step. For example, a steel mill could replace a coal-fired furnace with an electrically powered arc furnace, or a process could be adjusted to send a hot finished product for further processing rather than letting it cool down first and heating it back up later.

If you have no process change opportunities, state that in the box below.

|  |
| --- |
| The process change options that were considered were:1:2:3: |

Briefly describe why each option was selected or not to be included in your emissions plan.

For resource consents, if an option was not selected, be specific about why not. You need to prove that is not technically feasible or financially viable with a detailed explanation, calculations, quotes, etc.

|  |
| --- |
| * 1:
* 2:
* 3:
 |

## Energy efficiency opportunities

Energy efficiency opportunities are the first step to providing immediate and financially attractive emissions and opex reductions. Implementation of these opportunities can lead to reduced fuel switching project costs by reducing process heat demands.

For resource consents, the EECA Emission Plan Guidance is for a process heat thermal energy audit performed within the last four years. This will ensure the NES requirement of assessing the best practices in energy efficiency over time is met.

|  |
| --- |
| The energy efficiency opportunities that were considered include:* 1:
* 2:
* 3:
 |

Briefly describe why each option was selected or not to be included in your emissions reduction plan.

For resource consents, if an option was not selected, be specific about why not. You need to prove that is not technically feasible or financially viable with a detailed explanation, calculations, quotes, etc.

|  |
| --- |
| * 1:
* 2:
* 3:
 |

## Demand Reduction opportunities

Demand reduction opportunities are the first step to providing immediate and financially attractive emissions and opex reductions. Implementation of these opportunities can lead to reduced fuel switching project costs by reducing process heat demands.

|  |
| --- |
| The demand reduction opportunities we considered include:* 1:
* 2:
* 3:
 |

Briefly describe why each option was selected or not to be included in your emissions reduction plan.

For resource consents, if an option was not selected, be specific about why not. You need to prove that is not technically feasible or financially viable with a detailed explanation, calculations, quotes, etc.

|  |
| --- |
| * 1:
* 2:
* 3:
 |

## Fuel switching opportunities

Fuel switching opportunities to lower greenhouse gas options include things like electrification via heat pump or electric resistance heaters, biomass (including equipment conversions or replacements), biogas, etc. Paste the fuel switching options table from the “Fuel Switching Project Tables” tab of the Calculations Spreadsheet in the box below (and replace the example table in the box):

|  |
| --- |
|  |

Briefly describe why each option was selected or not to be included in your emissions plan.

For resource consents, if an option was not selected, be specific about why not. You need to prove that is not technically feasible or financially viable with a detailed explanation, calculations, quotes, etc.

|  |
| --- |
| * 1:
* 2:
* 3:
 |

# Projects tab

Paste the Projects Table from the “Projects Table” tab of the Calculations Spreadsheet in the box below (replace the example graphic in the box):

For resource consents, the projects displayed in this table should make up your best practicable option.

|  |
| --- |
|   |

# Emissions roadmap

Paste Emissions Roadmap from the “Emissions Roadmap” tab of the Calculations Spreadsheet in the box below (replace the example table in the box):

For resource consents, the projects displayed in this roadmap should make up your best practicable option and should form the basis of any emissions targets set.

|  |
| --- |
|  |