



National Direction for Greenhouse Gas Emissions from Industrial Process Heat

Council factsheet

Introduction

This factsheet informs regional council staff about the new national direction for Greenhouse Gas Emissions from Industrial Process Heat. It provides a summary of the requirements the [National Policy Statement \(NPS\)](#) and [National Environmental Standards \(NES\)](#) introduce for reducing greenhouse gas emissions from industrial process heat.

Refer to the NPS and NES for the wording of the policy and regulations.

This national direction is aimed at helping Aotearoa New Zealand achieve net-zero carbon emissions by 2050. It is part of our national response to mitigate climate change and its adverse effects on the environment and the wellbeing of people and communities.

Who should read this factsheet?

This factsheet is for regional council staff responsible for considering resource consent applications for industrial process heat activities under the NES and implementing the objective and policies of the NPS. A separate factsheet has been prepared for industry.

Why is this national direction needed?

The NPS and NES provide a nationally consistent framework for reducing greenhouse gas emissions from industrial process heat. The NPS and NES support the amendments made to the Resource Management Amendment Act 1991 (RMA) in November 2022. These amendments removed the statutory barriers that were previously in place that prevented regional councils from considering effects of greenhouse gas emissions when assessing resource consent applications.

Purpose of the national direction

The purpose of the NPS and NES is to reduce greenhouse gas emissions from industries that use devices to generate industrial process heat by:

- prohibiting discharges of greenhouse gases from new industrial heat devices that burn coal at low-to-medium temperatures (below 300 degrees Celsius) and phasing out existing heat devices that burn coal by 2037
- setting national policies and regulations to enable consistent assessment of resource consent applications for discharges of greenhouse gases from industrial process heat
- requiring regional councils to include a policy in their regional plans to:
 - consider the cumulative effects of industrial greenhouse gas emissions when assessing resource consent applications, recognising that regardless of volume, all greenhouse gas discharges from industrial process heat have an effect on climate change
 - consider the timing and content of updates to emission plans and how these updates will reflect changes in technology and best practice when considering an emissions plan as part of a resource consent application
- requiring resource consent applicants to submit an emissions plan with a consent application and to update emissions plans to reflect technological developments and best practice
- ensuring the best practicable option is applied to prevent or minimise any actual or likely adverse climate change effects from the discharge of greenhouse gases
- providing nationally consistent resource consent conditions, including monitoring and reporting requirements.

When does the national direction have legal effect?

Regional councils will be required to give effect to the NPS objective and policies and observe the NES regulations from 27 July 2023.

Defining industrial process heat

In this national direction, industrial process heat is defined as thermal energy used in industrial processes, including in the manufacturing of products and the processing of raw materials, and in horticulture when industrial heat is used to grow plants or other photosynthesising organisms indoors. Examples of process heat use include converting milk into powder and wood pulp into paper, and producing metals and chemicals (eg, methanol). These processes frequently involve burning fossil fuels, which produce greenhouse gas emissions.

Heat devices that burn fossil fuels to heat space and water in commercial buildings are not within scope of the NPS and NES.

Overview of the national direction

The NPS sets out the national objective and supporting policy framework to guide decisions on resource consents required under the NES. The NES sets nationally consistent rules for greenhouse gas emitting activities from industrial process heat. It also sets the matters of discretion to which decision-makers are restricted to when considering resource consent applications, and when imposing conditions under the NES.

NPS objective and policies

The objective of the NPS is to reduce greenhouse gas emissions by managing the discharge to air of greenhouse gases from the production of heat for industrial processes. This will help to mitigate climate change and its current and future effects on the environment and the wellbeing of people and communities.

Overarching policies in the NPS help achieve this objective, as set out below.

Policy 1 requires discharges to air of greenhouse gases to be reduced or eliminated by avoiding discharges from new heat devices and restricting discharges from existing devices where possible.

This policy direction supports NES regulations 6 to 10. The regulations prohibit discharges from new devices that burn coal to generate low-to-medium temperature process heat, and from existing coal devices from 2037. The policy also requires resource consent to be held for discharges from all heat devices generating emissions of 500 tonnes or more of CO₂-e per year per site.

Policy 2 requires regional councils to consider the cumulative effects of discharges of greenhouse gases when considering resource consent applications for discharges from heat devices.

Policy 3 requires holders of resource consents for discharges to air of greenhouse gases from heat devices to update relevant emissions plans to reflect technological developments and best practice.

These policies apply directly to decision-making on resource consent applications that are required under the NES, and also have the effect of prohibiting discharges from certain coal activities.

NPS implementation requirements for regional councils

The NPS objective and policies outlined above are supported by implementation clauses 3.1–3.4 in Part 3 of the NPS. These set out what regional councils must do to give effect to the NPS objective and policies, in addition to meeting the requirements of the NES.

The NPS requires regional councils to insert the following two implementation policies into their regional plans:

3.2: Cumulative effects

“Before granting a resource consent for the discharge of greenhouse gases to air from heat devices on a site, the regional council must:

- (a) consider the total discharges of greenhouse gases from all heat devices on the site that the application relates to; and
- (b) recognise that, cumulatively, all discharges of greenhouse gases resulting from the production of industrial process heat, regardless of volume, contribute to climate change, and any reduction in greenhouse gas emissions contributes to mitigating climate change.”

3.3: Updating emissions plans

“When considering an emissions plan as part of an application for a resource consent for a restricted discretionary activity relating to discharges to air of greenhouse gases from heat devices, the consent authority must consider:

- (a) the timing and content of updates of the emissions plan to be made by the holder of the consent; and
- (b) how those updates will reflect changes in technology and best practices.”

Under clauses 3.2 and 3.3, these policies are to be inserted into regional plans by regional councils under section 55 (2)(A)(a) of the RMA, meaning that regional councils will not need to undergo a full RMA Schedule 1 process to include these policies in their regional plans.

3.4: Progress towards achieving national goals – reporting requirements

The NPS requires regional councils to report to the Minister for the Environment when requested on specific matters, including:

- (a) the number of resource consents granted for, and the consented volume of greenhouse gas emissions from, the production of industrial process heat in the region; and
- (b) the extent to which the discharge of greenhouse gases from the production of industrial process heat has been reduced through emissions plans and other conditions of consents; and
- (c) the extent to which emissions plans have been implemented; and
- (d) compliance with any other conditions of consents for the discharge of greenhouse gases into air.

The purpose of this clause is to enable the Minister for the Environment to request information when required to inform a review of the NPS and NES.

NPS on cumulative effects

NPS **Policy 2** directs regional councils to consider the cumulative effects of greenhouse gases from industrial process heat devices. **Implementation clause 3.2** provides direction for regional councils when considering the cumulative effects by requiring a policy to be directly inserted into a regional plan to guide decision-making.

Under the policy and implementation clause, the cumulative effects of one or more discharges at a site level are to be considered. The implementation clause also provides direction to recognise that all discharges of greenhouse gases from industrial process heat contribute to climate change, regardless of the scale of the discharge, and all reductions contribute to climate change mitigation. The NPS and NES are designed to achieve greenhouse gas emission reductions from all activities within scope, and any reduction is regarded as contributing positively to mitigate climate change.

NES for discharging activities

Part 1 of the NES sets the following activity regulations for industrial process heat activities:

Discharges of greenhouse gases from heat devices that burn coal:

- New heat devices that burn coal and produce low-to-medium temperature industrial process heat (below 300°C) are **prohibited**.
- Heat devices that burn coal and produce high-temperature industrial process heat (at or above 300°C) and discharge at or above 500 tonnes of carbon dioxide equivalent (CO₂-e) or more per year, per site are **restricted discretionary** activities.
- Existing heat devices that burn coal and produce low-medium temperature industrial process heat (below 300°C) and discharge at or above 500 tonnes CO₂-e or more per year, per site, are restricted **discretionary activities** until 2037. From 2037 this activity is **prohibited** unless operating under an existing resource consent that was granted before the date of enactment of the NPS and NES (27 July 2023).

Discharges of greenhouse gases from heat devices that burn fossil fuels (not coal):

- New and existing heat devices that burn fossil fuels (not coal) and discharge at or above 500 tonnes of carbon dioxide equivalent (CO₂-e) per year, per site are **restricted discretionary** activities.

Back-up devices used for planned maintenance or in emergencies do not need a resource consent. New low-to-medium temperature back-up heat devices that burn coal are prohibited, and any existing low-to-medium temperature back-up heat devices that burn coal are prohibited from 2037.

Resource consent can be granted for a maximum of 20 years for new heat devices and 10 years for existing heat devices.

NES requirements for granting resource consents

Part 2 of the NES sets out requirements for regional councils to meet when granting resource consents for discharges of greenhouse gases from industrial process heat devices.

Determining a site-wide approach

Regional councils must decide if they will apply a site-wide approach to assessing an application for resource consent when a proposed activity involves two or more heat devices on a site. If a site-wide approach is applied, regional councils are required to consider the total climate change effects of discharges from all relevant heat devices on the site when assessing the application. If a resource consent is granted, the consent conditions must apply to all relevant devices on the site.

Emissions plans as part of a consent application

Applicants are required to submit an emissions plan that sets out actions and methods to reduce greenhouse gas emissions from the proposed activity. The purpose of an emissions plan is to encourage best practices in energy efficiency and reduce greenhouse gas emissions over time.

Regulation 15 states that emissions plans must include:

- the proposed activity and number of heat devices, and the thermal energy that is produced for an existing heat device or is to be produced for a new heat device, their age, and fuel source
- actions and methods to reduce greenhouse gas emissions from the activity and meet any specified emission reduction targets, including any timeframes set to achieve this
- an assessment of any energy efficiency improvements that are available for the activity, and how improvements could be made
- an assessment of any technically feasible and financially viable lower emissions alternatives, if a new heat device is proposed
- an assessment of the best practicable option to prevent or minimise any actual or likely adverse effects on climate change.

Emissions plans for heat devices on high-emissions sites (that burn fossil fuels emitting more than 2,000 tonnes of CO₂-e each year) must be reviewed by a suitably qualified person who is approved by the regional council.

Regional councils have discretion to determine if a proposed emissions plan for a site meets the mandatory requirements in the NES regulations. Emissions plans are a key tool to inform regional council decision-making as they will help regional councils understand:

- the total greenhouse gas emissions proposed by a resource consent application to determine its activity status under the NES
- how greenhouse gas emissions will be prevented and minimised and what energy efficiency improvements are available for the activity
- emissions reduction targets for the site over time
- if a proposal is the best practicable option, and how it meets the objective and policies of the NPS.

Conditions must be included in the consent decision when granting a resource consent requiring the consent holder to comply with a site's emissions plan and to monitor and report on this compliance to the regional council. This includes reporting on progress towards achieving any emissions reduction targets. Regional councils must also consider the timing and content of updates to emissions plans to be made by the consent holder and how those updates will reflect changes in technology and best practice.

Independent review of emissions plan for high emitting sites

Emissions plans for heat devices on high-emitting sites (sites emitting more than 2,000 tonnes of CO₂-e equivalent of greenhouse gas emissions per year) must be reviewed by a suitably qualified person at the applicant's cost. A suitably qualified person will need to be qualified to provide the independent review and recommendations to the regional council on the emissions plan. The regional council must determine if the practitioner is suitably qualified and if they accept the recommendations proposed when determining an application. Attributes for determining a suitably qualified person are outlined in a [separate factsheet](#) as guidance for consent authorities.

Ensuring the best practicable option has been applied

When considering resource consent applications, regional councils must assess whether an applicant is adopting the best practicable option to prevent or minimise any actual or likely adverse climate change effects from the activity. This includes greenhouse gas discharges from other heat devices that burn fossil fuels on the site that are not back-up devices. The best practicable option (as defined in the RMA) the applicant has put forward in their consent application is a matter of discretion for the regional council to consider. It should also be incorporated into the emissions plan and actions and methods set out in the plan to reduce emissions.

In determining the best practicable option, consent applicants and consent authorities may consider the best available techniques and technologies as set out in the best available technology (BAT) guidance to be published on the Energy Efficiency and Conservation Authority (EECA) website. Conditions must be included in the consent decision when granting a resource consent requiring the consent holder to adopt the best practicable option as assessed by the consent authority.

Considering the technical feasibility and financial viability of lower emissions alternatives for new heat devices

When assessing resource consent applications for new heat devices regional councils have discretion to consider any technically feasible and financially viable lower emissions alternatives to the proposal. As part of the resource consent application and content of an emissions plan, consent applicants will need to demonstrate that a lower emissions alternative is not technically feasible or financially viable.

The matters to consider are set out in Regulation 16 of the NES, including whether the device can provide the equivalent service to heat devices that burn fossil fuels, the current state of technical knowledge and application of the technology, and the capital and operating costs of the alternative over a 20-year period.

Monitoring and reporting on resource consents and emissions plans

NES Regulation 19 enables regional councils to set consent conditions that require the consent holder to comply with an emissions plan, and to monitor and report on their compliance with the emissions plan to the regional council. In considering the consent holder's reporting, the regional council is also able to consider the timing and updating of the emissions plan and whether the updates reflect changes in technology and best practice under NPS **implementation clause 3.3**. This clause requires regional councils to insert a policy into a regional plan on these matters.

The NES regulations and NPS policy are also to be considered alongside the general monitoring and reporting requirements for resource consents prescribed in the RMA.

Where to find more information about the national direction

- Best available technologies guidance. EECA is preparing information on the BAT for industry to include in consent applications, to be published on their website.
- Emissions plan guidance. EECA is producing guidance on emissions plans. This guidance will be published on their website.
- The Ministry for the Environment has released guidance on the **attributes of a suitably qualified person** for reviewing emissions plans.
- Ministry for the Environment guidance on **measuring emissions and emission factors**.

Timing of implementation

Table 1: Timing of implementation

Milestone	Timeframe
Commencement of NPS and NES	27 July 2023
Prohibited activity regulation for new coal devices used in low to medium temperature processes	Immediate effect
Restricted discretionary activity regulations for new fossil fuel devices (other than coal) in all temperature processes	Immediate effect
Restricted discretionary activity for existing fossil fuel devices operating under permitted activity rules in regional plans, including coal and other fossil fuels in all temperature processes	From 26 January 2025
Restricted discretionary activity for fossil fuel devices (coal and other fossil fuels) that are operating under existing consents	Regulations will apply when existing consents expire
Release of non-statutory guidance	Continuing throughout implementation process

Where to find more information on the NPS and NES

To find information on the decision-making process for the NPS and NES, and to read further details on the NPS and NES themselves, follow the below links:

- [Discussion document](#)
- [Summary of submissions and recommendations](#)
- [Section 32 report](#)
- [Regulatory impact statement](#)
- [2021 Cabinet paper](#)
- [National Environmental Standards for Greenhouse Gas Emissions from Industrial Process Heat](#)
- [National Policy Statement for Greenhouse Gas Emissions from Industrial Process Heat 2023](#).

