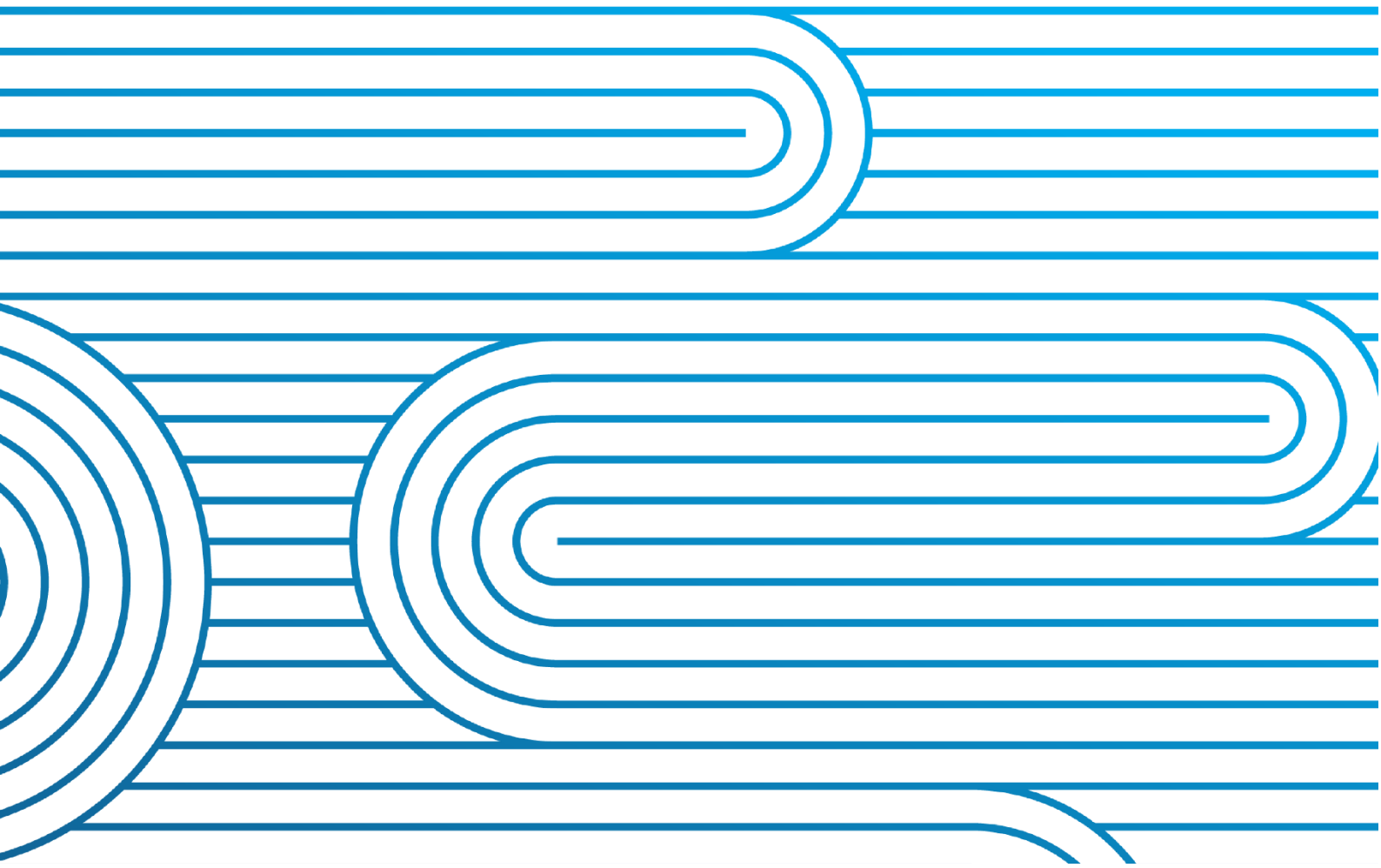


# Phasing out Fossil Fuels in Process Heat: National direction on industrial greenhouse gas emissions

Submission by Transpower New Zealand Limited

**Date: 20 May 2021**



## 1.1 Introduction

## 1.2 Structure of submission

This submission is structured as follows:

- Overview of submission: Transpower's comments on the policy objectives for the proposed national direction, as well as the need for aligned reform to the NPSET and NESETA to ensure those objectives can be met;
- Scope of the national direction: Transpower's position on the matters to be included within and excluded from the proposed national direction;
- Response to questions: Transpower's response to the questions set out in the Consultation Document.

For more information on the matters covered in this submission, please refer to:

- [\*Te Mauri Hiko – Energy Futures\*](#) (2018);
- Transpower's submission on the Resource Management Reform Panel's [\*Issues and Options Paper\*](#);
- [\*Whakamana I Te Mauri Hiko – Empowering our Energy Future\*](#) (2020);
- Transpower's submissions on MBIE's [\*Accelerating Renewable Energy and Energy Efficiency\*](#) discussion document;
- [\*A Roadmap for Electrification: Decarbonising transport and process heat\*](#) (2021); and
- Transpower's submission on the Climate Change Commission's [\*Draft emissions budgets and advice to the Government\*](#) (2021).

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## 1.3 Overview of Submission

Transpower supports the proposal to introduce national direction to address the current gap in RMA policy statements and plans that will result from the Resource Management Amendment Act 2020. Transpower agrees that clear national direction on GHG emissions is necessary to avoid unnecessary confusion, delay and cost for local authorities and resource users, as well as the significant litigation risk created by the RMA amendments.

The need for national direction was recognised by the Environment Committee at the time the 2020 amendments were made, as well as the regulatory impact statement at the time. The Committee stated:

*“We acknowledge that it will be vital to have direction at a national level about how local government should make decisions about climate change mitigation under the RMA. Otherwise, there could be risks of inconsistencies, overlap of regulations between councils and emissions pricing, and litigation. Therefore, we recommend a delayed commencement for these changes, of 31 December 2021, to ensure there is sufficient time to make the policy arrangements. This date would also align with the deadline for the first emissions reduction plan.”*

Transpower also generally supports the proposal to phase out the use of fossil fuels in process heat.

The Government has enshrined its commitment to decarbonisation through the Climate Change Response (Zero Carbon) Amendment Act 2019 (CCRA). The CCRA establishes a net zero target to be achieved by 2050 for all GHGs except biogenic methane. It is widely acknowledged that, if Aotearoa is to meet its commitments, we will have to accelerate emissions reductions from transport and process heat. The Interim Climate Change Committee (ICCC) and the Productivity Commission have both identified process heat as a key sector in which transitions are readily available to secure material emissions reductions.<sup>2</sup> The electrification of process heat provides one of the lowest cost opportunities to decarbonise New Zealand’s economy.<sup>3</sup>

Transpower acknowledges that the New Zealand Emissions Trading Scheme (ETS) remains a critical lever to drive emissions reductions. Nevertheless, it agrees that, at current unit prices, there is still insufficient incentive for businesses utilising fossil fuel process heat to switch to renewable energy sources.

There is a clear opportunity for electrification of process heat to make a material contribution toward New Zealand achieving its climate change targets. Transpower is committed to playing its role in this transition. As the operator of the National Grid, Transpower must directly support and

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<sup>2</sup> Interim Climate Change Committee *Accelerated Electrification* (2019) available from <https://www.iccc.mfe.govt.nz/>. New Zealand Productivity Commission *Low-emissions economy: Final report* (2018) available from [www.productivity.govt.nz/low-emissions](http://www.productivity.govt.nz/low-emissions).

<sup>3</sup> Ministry for the Environment *Marginal abatement cost curves analysis for New Zealand: Potential greenhouse gas mitigation options and their costs 2020* available from <https://environment.govt.nz/publications/marginal-abatement-cost-curves-analysis-for-new-zealand-potential-greenhouse-gas-mitigation-options-and-their-costs/>

enable rapid electrification. Both the transmission and distribution networks will need to rapidly and cost effectively connect new process heat customers to support process heat electrification. New lines, new substations, and upgrades to the existing networks will be required.

*Whakamana i Te Mauri Hiko – Powering our Energy Future* sets out the scale of the electrification transition. The scale of infrastructure investment is unlike anything we have seen in recent times. Our modelling forecasts a need for around 30 new customer connections to accommodate increased electricity demand due to electrification. 30-40 new generation connections will also be required to supply the additional electricity. 10-15 connections will be required between now and 2035. This modelling represents a significant increase above the connection workload that Transpower has delivered since the introduction of the RMA in 1991. Each of these projects are significant. It simply would not be possible to implement this scale of activity in the current regulatory environment.

It is important that electrification of process heat is not stymied by the delays in consenting National Grid or distribution connections. Transpower and distribution lines companies must directly support and enable rapid electrification. If one part of the supply chain is not prepared with either the equipment, expertise or planning, the essential electrification of our economy will stumble at the start, and key opportunities for decarbonisation will be undermined.

Transpower's submission on the Resource Management Review Panel Transforming the resource management system: Opportunities for Change (*Issues and Options Paper*) identified the issues with the current resource management regime, and potential solutions to provide for the scale of infrastructure investment that is needed. Under the current system, it would not be possible to provide for the scale needed due to inadequate national direction and slow consenting processes. Rapid electrification will need to be approved quickly, at scale, for a sustained number of decades. It is therefore critical that the Natural and Built Environments Act (NBEA), Spatial Planning Act (SPA) and Managed Retreat and Climate Change Adaptation Act (MRCCAA) recognise and support the nature and pace of the electrification challenge set by the CCRA targets. The new legislation must avoid statutory frameworks that threaten, constrain or delay transmission and distribution projects. And, the frameworks must provide processes and consenting pathways that actively enable the prompt and flexible consenting of electrification projects. Transpower will continue to work with the Ministry for the Environment throughout the reform process to ensure these outcomes are achieved.

Transpower's submission on the Ministry for Business, Innovation and Employment (MBIE) Accelerating Renewable Energy and Energy Efficiency Consultation document focuses on the current deficiencies with the National Policy Statement for Renewable Electricity Generation (NPSREG), NPSET and NESETA. As noted in that submission, in the current regulatory environment, Transpower would struggle to provide the infrastructure necessary to support the electrification transition. The NPSET is not directive enough to clearly prioritise climate change mitigation over other interests. The NESETA is limited in scope, and has a number of gaps. As a result, the current national direction does not adequately facilitate climate change mitigation and electrification of the economy. Amending the NPSET and NESETA is therefore critical to achieve the phasing out of fossil fuels in process heat, as well as other electrification requirements. It will also be necessary for amended national direction to reconcile the conflict and barriers in other NESs (such as the National Environmental Standard for Freshwater 2020 (*NES Freshwater*) and the New Zealand Coastal Policy Statement (*NZCPS*)). The proposed national direction for process heat underlines the urgency of amendments to the NPSET and NESETA.

That legislative process is however unlikely to deliver change in the timeframes needed to support the rapid electrification of transport and process heat. Action is needed now to provide supportive planning frameworks and rules that will support Grid and distribution network projects that enable the transition of process heat to electrification. Transpower considers that the current proposed national direction represents an opportunity to provide that supportive framework, either through an expansion of the existing proposed national direction or through supporting amendments to the NPSET or NESETA. Were the proposal to provide not only for the restriction of fossil fuel usage in process heat, but also the enabling of more streamlined electricity transmission and distribution delivery, the policy would better support essential electrification. (The Climate Change Commissions draft Advice notes the need to build new electricity generation and transmission infrastructure throughout the 2020s to avoid construction bottlenecks and potential delays to wider decarbonization in the 2030s, at page 66.)

Transpower looks forward to working with the Ministry for the Environment (*MFE*) as it develops the proposed national direction for process heat. It also strongly encourages MFE and MBIE to urgently progress the updates to the NPSET and NESETA to ensure those documents can support the new national direction for process heat.

## 1.4 Scope of the national direction

### 1.41 Process heat

Transpower supports the focus of national direction on GHG emissions from the burning of fossil fuels for process heat. As noted earlier, process heat conversion is one of the 'lowest hanging fruit' available to help decarbonise the economy.

It is however noted that this narrow focus does not address the full scope of the planning policy gap (being no national or local policy direction on management of GHG-related effects) created by the Resource Management Amendment Act 2020.

### 1.42 Electricity generation

Transpower specifically supports the exclusion of electricity generation from the scope of the national direction. The review of the NPSREG is the appropriate mechanism to address electricity generation.

It is however, important that the phase out of fossil fuel generation does not create system security issues. Transpower notes that the National Policy Statement for Freshwater Management 2020 and the NES Freshwater will both affect hydro-electricity generation, which currently contributes around 60% of New Zealand's total electricity supply, and provides an essential security of supply role. Any reductions in the capacity of hydro schemes to provide flexible electricity generation will have cumulative impacts on the resilience and security of electricity supply and electricity prices. Without replacement renewable generation, it may require increased use of oil and gas-fired peakers. Accordingly, national direction to phase out fossil fuel generation needs to stand alongside national direction that provides stronger support for new renewable generation.

## 1.43 Transpower's GHG emission activities

As well as playing an important role in facilitating the electrification of process heat, Transpower is also responsible for GHG emissions in the operation and maintenance of the National Grid. Transpower currently holds 80 per cent of New Zealand's sulphur hexafluoride (SF<sub>6</sub>) stock. Transpower also operates back up fossil fuel generators. Emissions in relation to both of these activities are essential for the continued operation of the National Grid.

It is important that the scope of the national direction is clearly defined so that it does not result in unnecessary or unintended regulation. There are three elements that Transpower considers should be excluded from the scope of the national direction:

- Emissions from transmission infrastructure, including substation infrastructure (SF<sub>6</sub>);
- Substations; and
- Back-up generators and mobile substations.

### Emissions from transmission and substation infrastructure

Transpower uses SF<sub>6</sub> gas for the operation of the National Grid. SF<sub>6</sub> is predominantly used in outdoor circuit breakers and high voltage gas insulated substations.

There are currently no viable alternatives for SF<sub>6</sub> in our high voltage outdoor equipment. Alternatives are worse performing (in terms of GHG emissions) than SF<sub>6</sub>. Alternatives exist for some other equipment, but they are either cost prohibitive and/or the size of the relevant equipment prevents their use.

Notwithstanding this, Transpower is focussed on minimising its SF<sub>6</sub> usage. Transpower has a SF<sub>6</sub> reduction working group actively managing Transpower's leakage reduction and transition programme. Transpower currently has 14 non-SF<sub>6</sub> high voltage circuit breakers being deployed on the 66kV and 110kV systems, as part of a trial programme. Transpower is also seeking to transition its fleet as it comes up for replacement, as new high voltage (66/110/220/400kV) non-SF<sub>6</sub> equipment becomes readily available (noting there are currently no viable alternatives at the higher voltages).

However, there is currently no 'drop-in' alternative to SF<sub>6</sub> that allows existing equipment to be retrofitted. New assets that are designed for the SF<sub>6</sub> alternatives (and allow machinery to operate at a different pressure or be of a different dimension) are required.

If new equipment is physically bigger, major infrastructure build may be required. For some sites, this build could be in the order of \$40-50M. As a result, even once SF<sub>6</sub> alternatives are readily available, it will take many years for Transpower to completely transition medium voltage and high voltage switchgear from SF<sub>6</sub>.

Transpower understands similar issues arise regarding the use of SF<sub>6</sub> for the electricity sector more broadly.

Accordingly, Transpower considers SF<sub>6</sub> should be expressly excluded from management under the RMA through the national direction insofar as it is used in the above-mentioned essential

electricity activities. In particular, we consider that the national direction should direct councils to recognise that any adverse effects on climate change of unavoidable GHG associated with development, maintenance and use of electricity generation, transmission or distribution are not relevant considerations.

### Substations

In places, the discussion document refers to industrial emissions being phased out. The definition of 'industrial or trade premises' in the RMA arguably captures Transpower's or other electricity distribution substations.

Transpower understands the Ministry for the Environment (*MFE*) does not intend the scope of national direction on 'industrial emissions' to cover electricity substations.

Transpower requests that the national direction expressly refers to process heat conversions, rather than the more generic language used in the discussion document.

### Temporary generators / substations

Transpower relies on generators, largely powered by diesel, to provide back-up power supply to its control centres and offices. Some field work also requires generators (for example, if a pump needs to be operated without an available electricity source, or if cable testing is required). Transpower also operates a mobile substation, which allows us to carry out work at substations where there is a power outage.

There are no practical alternatives, and this use of fossil fuels is of a very small scale.

Transpower understands similar issues arise for the electricity sector more broadly.

It is acknowledged that the intention is to ensure back-up energy plants are out of scope of the requirements and that other small-scale discharges do not unnecessarily require resource consent. Accordingly, Transpower considers GHG emissions from generators should be expressly excluded from management under the national direction.

## 1.5 Response to the consultation document

### Question 1: Do you agree with the characterisation of the status quo? If not, please provide evidence to support your views.

Transpower agrees that the ETS is currently the primary lever to drive emissions reductions. The ETS, on its own, will not stimulate the degree of change needed for New Zealand to meet its climate change targets. Transpower agrees that there are significant opportunities to reduce greenhouse gas emissions by focussing on process heat. The ICCC and the Productivity Commission have identified electrification of process heat as one of the 'lowest hanging fruit' available to decarbonise the economy.

## Question 2: How would you describe the status quo? What other factors should be considered?

Transpower considers the following additional factors need to be considered:

- **The mechanics of electrifying process heat:** Transpower expects that a large proportion of process heat conversions will connect to distribution networks rather than as 'direct connects' to the National Grid. This increased demand may require upgrades to distribution networks. In turn, these upgrades could require Transpower to build new Grid Exit Points (a substation where distribution networks connect to the National Grid) or deliver upgrades to existing Grid Exit Points. A small number of very large process heat users will also connect directly to the National Grid. These new or upgraded substation connections may also require Transpower to build new lines or upgrade existing transmission lines.
- The current consenting and land access timeframes for large transmission projects are as long as 3-7 years. Without improvements to resource management and related approvals process, National Grid connections/upgrades may become a barrier to process heat electrification (in terms of both time and cost). Local distribution networks are likely to be affected in similar ways, at a smaller scale.
- **The supply chain needed to convert from fossil fuels:** The fuel type cannot be considered in isolation. In order to convert, businesses need certainty that there will be enough supply of that fuel in the long term. In our Electrification Roadmap, we detail some of the barriers that businesses currently need to overcome in order to switch to a low carbon fuel. These barriers include capital costs, operating costs, information availability and workforce capability. For conversions to electricity, businesses will need to ensure they are connected to the electricity network (local or National Grid) and that network has sufficient capacity to handle the additional electricity demand from the plant. If one or both of those criteria isn't satisfied, the industry owner will incur additional cost and process delay in building and/or upgrading local electricity infrastructure. These costs and additional procedures have a material impact on the attractiveness of conversion from fossil fuels.
- **The current prohibitive cost of electrifying process heat:** Many businesses already stand to make significant savings on their energy bills by improving their energy efficiency and moving to heat pumps. These are very significant opportunities in the process heat space and barriers in access to capital need to be rapidly removed or addressed. For plant owners for which heat pumps are not technically feasible, operating costs need to reduce in order for electrode boilers or biomass to be attractive alternatives to coal, gas or diesel. The available levers are the carbon price, the electricity price and the biomass price.
- **Existing national direction:** As discussed above, the NPSET and the NESETA need to be amended to provide a more directive and enabling framework for electricity industry works needed to progress process heat electrification (and other components of the electricity transition). They also need to be extended to cover distribution networks.

## Question 3: Do you agree with the characterisation of the problem regarding the regulatory gap in the RMA? If not, why not?

Yes, Transpower agrees with the characterisation of the regulatory gap created by the Resource Management Amendment Act 2020. This regulatory gap relates to all GHG emissions, and is not limited to process heat.



It is important the national direction provides clarity as to the position for other industrial emissions (i.e. they are outside the scope of the national direction). Transpower considers that some national direction as to the treatment of out of scope emissions is necessary to avoid uncertainty, overlap and litigation. The scale and urgency of the necessary electrification task cannot withstand any of those risks causing additional delay or cost that would undermine electrification.

#### Question 4: Do you agree with the characterisation of the problem regarding the regulatory backstops to support the NZ ETS? If not, why not?

Transpower agrees that the ETS remains a 'critical lever' to achieve decarbonisation of the energy sector. However, as discussed above, we do not consider emissions pricing alone will drive the full realisation of the decarbonisation opportunity presented by process heat electrification. Transpower supports the creation of regulatory backstops to further require process heat decarbonisation.

However, the Consultation Document is focussed on measures that will ban, discourage or seek to minimise the further use of fossil fuels. Transpower suggests that future national direction should also provide measures that will positively enable fossil fuel process heat users to switch to lower carbon fuels, as well as the infrastructure needed to support process heat conversion (e.g. electricity lines). As discussed earlier, improvements to existing national direction (the NPSET and NESETA) is needed to ensure that relevant lines connections can occur *where* they are needed and *when* they are needed. Without improvements to the planning system to enable all parts of the electricity system, other elements of the system may become a barrier to the decarbonisation of process heat. This change is needed urgently and cannot be delayed until the RMA is replaced and the National Planning Framework is prepared with supporting revised national direction. That timing would take us to approximately 2024-2025 and the Climate Change Commission has already identified action being needed pre-2025.

#### Question 6: Do you agree with the scope of industrial emissions proposed to be subject to national direction instruments? If not, why not?

Transpower's position on the scope of the national direction is discussed in further detail at 1.4 above. In summary, Transpower supports the exclusion of the following emissions from the national direction:

- Electricity generation;
- SF<sub>6</sub>;
- Electricity substations and mobile substations; and
- Fossil fuel generators used as a back-up and mobile electricity supply.

### Question 7: Should commercial sector water and space heating (above an appropriate size threshold) be included in the scope of national direction? If not, why not?

Transpower notes that the inclusion of commercial heating within the scope of the national direction will help drive down the price of non-fossil fuel heating requirements, and therefore potentially accelerate the decarbonisation of these areas compared to the status quo. However, any unintended consequences of broadening the scope of any national direction would need to be carefully worked through.

### Question 8: What is your view on the proposal to exclude emissions from other sectors in the current scope (note: intention is for a more fulsome package of national direction on climate change to be developed through the new resource management system).

From its own experience of using and contributing to national direction policies and standards under the RMA, Transpower considers that national direction should be prepared holistically to ensure consistency and integration and to resolve competing tensions. As the Consultation Document acknowledges, the 2020 amendments will have immediate and significant impact when they come into force for many planning and consenting processes.

Having said that, Transpower considers that the costs and benefits must be carefully assessed within the context of other industries, and therefore require a need for separate work streams. It is also acknowledged that there is an urgent need to 'get started' given the rapidly developing climate change crisis and to meet international obligations. The more fulsome national direction will need to both *enable* decarbonisation activities and *discourage* GHG-emitting activities. Further national direction on matters not covered by the present document will need to be progressed very quickly.

Transpower's position on the scope of the Consultation Document is discussed in further detail at 1.4 above.

## Preferred RMA national direction instrument

### Question 9: Do you agree that the preferred option (a NES supported by a targeted NPS) will be the most effective way to achieve the policy objectives and to reduce implementation costs and uncertainty for local authorities, applicants and consent holders? If not, why not?

Transpower supports the preferred option. A comprehensive NPS and NES is likely to be the most effective way to achieve the policy objectives, and to provide clarity and consistency across local authorities.

The key benefit of an NES is the immediate certainty of the rule framework applying to activities, which avoids the delays and resources required to implement NPSs into local plans.

A NPS alone is not supported. Transpower's experience of implementing the NPSET suggests that such an approach can lead to a long and resource intensive process to ensure that all relevant planning documents give effect to the NPS. For example, the NPSET addresses third party activities, but a NES on the topic was not progressed. This gap has required Transpower to invest considerable time and effort in ensuring local plans give effect to the policy direction in the NPSET regarding third party activities. Since 2008, Transpower has participated in over 50 policy and plan reviews and changes to give effect to the NPSET. Despite that level of involvement, only 66% of district plans have given effect to the NPSET corridor approach.

A NES alone is also not supported. Providing a targeted NPS to complement the NES will also provide policy guidance for decision-makers considering applications for GHG emitting activities, and reduce debate about the interpretation of the NES. Transpower considers the NPS should provide policies that are required to be directly inserted into plans. Without that directive approach, significant resource will be required to translate the NPS into local policy.

As noted above, a number of plans have still not been amended to fully give effect to the NPSET. Some plans that gave effect to the NPSET early on are now being reviewed, requiring Transpower to advocate for the provisions again. A requirement for policies to be directly inserted into planning documents should be considered to minimise the implementation burden.

**Question 11: In your view, what is a fair and reasonable duration for consents that would balance the need for investment certainty with the need to improve energy efficiency and reduce emissions over time?**

Transpower does not consider that a 5-10 year maximum duration will be fair and reasonable in all cases. A site-by-site assessment is more appropriate to determine a fair and reasonable duration for re-consenting existing fossil fuel process heat. For example, if new lines or connections needed for the relevant process heat conversion are unlikely to be available in time, a longer transition period and therefore consent duration may be warranted. (Consent terms could include a back-stop expiry date, together with a date at which the electricity connection is available (whichever is the sooner).)

## **Preventing discharge of GHG emissions from new fossil fuel assets**

**Question 12: Should the ban on new coal-fired assets for low and medium temperature requirements be implemented through a prohibited activity rule in national direction? Should there be any exemptions for small-scale coal-fired assets (for example, below 50kw, 2MW or 100 tonne/year) or flexibility to consider site specific constraints through consenting processes?**

Transpower supports the proposal to phase in a ban on new coal-fired boilers for low and medium temperature requirements. There are technically and economically feasible low-to-medium temperature electrical process heat technologies now available, as well as gas and biomass alternatives.

Transpower does not have a particular view on a prohibited activity rule for new coal-fired assets, acknowledging that it may have a severe impact on some industries. It is imperative that national direction provides strong and clear guidance. The key benefit of a NES rule is the immediate impact it will have on the rule framework applying to activities. In contrast, a NPS ‘avoid’ policy would result in significant delay while that policy direction is translated into local plans.

Transpower does not support wholesale exemptions for small-scale coal-fired assets. Any exemptions for small-scale coal-fired assets should be limited to circumstances where it is currently technically infeasible or economically unviable to install a non-fossil fuel or lower emissions alternative.

**Question 13: Do you agree with the approach to avoid new fossil fuel assets (excluding coal) unless it can be demonstrated that there are no feasible alternatives, and where the applicant prepares a GHG emission plan, and complies with relevant best practices? Are there more effective and efficient ways to achieve this outcome?**

Transpower has no comment on this question. It notes that the Consultation Document lists, at various times during this section, the types of fossil fuels it intends to be covered by this approach (including natural gas, diesel, oil, and LPG). The national direction will need to explicitly state which fossil fuels are covered by this requirement to avoid confusion.

**Question 14: How can national direction and guidance best assist applicants and consent authorities to assess economically and technically feasible alternative fuel options?**

The issues with existing national direction are described above. Improvements to national direction applying to the electricity system as a whole (and in particular transmission and distribution) are necessary to ensure decarbonisation of process heat is economically and technically feasible.

**Question 15: Should the policy approach for new process heat assets target specific fossil-fuel sources or should it take a fuel neutral approach? In your view, what is the best approach to define thresholds and requirements?**

Transpower considers that a fuel-based approach will be administratively efficient and clear to regulators and users. Broadening the national direction to be fuel neutral could have unintended consequences that would need to be carefully worked through.

Transpower does not have any view on the definition of thresholds and requirements.

## Question 16: Referring to each option, what are the likely compliance costs and impacts on your firm? Who are the small to medium size industry users that could struggle to meet the requirements?

For the reasons set out at 1.43 above, Transpower considers the following activities that should not be captured by the proposed national direction: SF<sub>6</sub> for electricity transmission, substations, and generators. There is no benefit in imposing regulation where there is no practicable alternative option available.

In relation to process heat, as discussed above, there may be significant costs associated with connecting new process heat customers to electricity transmission or distribution systems.

## Question 17: What supporting initiatives are needed to transition away from fossil fuels in new industrial sites?

In our Electrification Roadmap, we detail the six most material steps we believe can help drive process heat emissions reductions via electrification:

- Alleviate capital cost barriers for those ready to benefit from decarbonising;
- Establish and scale markets to drive clean energy costs down (biomass and electricity);
- Rapidly transition public sector coal, diesel and LPG boilers to clean energy;
- Accelerate clean heat audits and site decarbonisation strategies and improve fossil fuel boiler information;
- Build process design and process heat decarbonisation capabilities; and
- Improve electricity network planning, coordination and connection processes.

As discussed above, it is important that regulation *enables* decarbonisation activities as well as *restricts* GHG-emitting activities. Incentive and disincentive based regulation is needed, to enable every part of the electrification system. In particular, amendments to the existing national direction on electricity transmission, and amendment to include large scale distribution is urgently needed to enable process heat conversion.

Improving network planning, coordination and connection processes will also require wider reform to the resource management system. Transpower is currently engaged in the consultation on the National and Built Environments Act, the core piece of legislation that will replace the RMA. Transpower suggested a number of changes in its submission to the Resource Management Reform Panel on the [Issues and Options Paper](#). As noted in that submission, the process for obtaining approvals for major projects has become significantly more onerous over the lifetime of the RMA. Consenting and access timeframes for large transmission line projects could be as long as 3-7 years to gain approvals. Following approvals, a project might take Transpower 2-3 years to deliver. “Fast-tracked” processes have been introduced under the RMA, but they have resulted in extremely resource intensive condensed processes, rather than any material streamlining of regulatory requirements or increased certainty of outcome.

Without improvements to approvals timeframes, it will not be possible to obtain the necessary approvals for the number and extent of National Grid connections that will be required for the electrification transition. Transpower supports the new regime providing a bespoke process for nationally significant infrastructure that properly responds to the challenges faced in obtaining approvals for such projects.

**Question 18: Is there anything that you feel has been overlooked in this section with regards to the reality of your businesses' industrial practices? Or for local government: is there anything you feel has been overlooked in this section with regards to the reality of consenting practices?**

See Transpower's submission on the scope of the proposed national direction at 1.4 above.

### **Phasing out fossil fuels in process heat**

**Question 19: Is 2037 an appropriate 'phase-out' date for low and medium temperature coal process heat requirements? Is it necessary to include a review date within the national direction instrument (potentially around 2025) to assess the development of alternative fuel markets closer to the phase out date?**

Transpower considers the year 2037 is an appropriate phase out date for low and medium temperature coal process heat requirements. This date aligns with the projected emissions price trajectory and provides sufficient time for Transpower and industrial users to plan for the transition.

Transpower does not consider it is necessary to set an interim review date. Setting a phase out date with a reasonable lead time signals alternative fuel markets to progress with development. For Transpower, this provides adequate time to plan and reduce compliance costs for line connections (distribution and transmission as required). In addition, setting a review date will introduce uncertainty, and may encourage industrial users to 'wait and see' whether transition will be necessary.

**Question 20: Should there be a longer lead-in time for existing coal-fired assets that are currently permitted before these are subject to the NES consent requirements?**

Transpower acknowledges that section 20A of the RMA only provides a six month period for asset owners to apply for a resource consent for activities that are no longer permitted as a result of a rule in a regional plan becoming operative. This timeframe will result in significant burden for asset owners and consent authorities. Transpower supports the proposed 12-18 month lead-in period.

### Question 21: Is it appropriate to phase out other (non-coal) fossil fuels in existing industrial assets through consenting processes and best practice requirements?

Transpower generally supports measures to incentivise decarbonisation. We restate the position set out above in relation to SF<sub>6</sub>, substations and temporary generators for the reasons set out at 1.43 above.

### Question 22: Is a more flexible approach for the re-consenting of other (non-coal) fossil fuel-fired assets warranted/needed?

Transpower generally supports measures to incentivise decarbonisation. However, as noted at 1.43, it is necessary to clarify that “all industrial sites” does not include substations.

### Question 23: Should there be a set phase-out date for other (non-coal) fossil fuels, including natural gas? What are the potential benefits and risks?

Transpower generally supports the setting of a phase out date for other fossil fuels to incentivise decarbonisation. If New Zealand is to meet its net zero carbon targets, then non-coal fossil fuels should also be phased out in a timely manner. The ETS will play a central role in this transition, but a phase out date would act as a regulatory backstop.

As with coal, setting a phase-out date signals to the market that users need to consider a switch to non-fossil fuels in their long-term asset planning. It also sends an early market signal to fuel suppliers that they need to be shifting their businesses away from fossil fuels.

It is acknowledged that there are challenges with setting an appropriate phase-out date. A date that is too early (for example, because alternative technology is not commercially viable) will disadvantage New Zealand businesses. A date that is too late will not send the necessary signals.

An additional consideration is existing infrastructure that could be retrofitted in the future for the use of zero carbon fuels (e.g. natural gas pipes used for hydrogen). Setting a phase out date too early could cause businesses to make decisions that would prevent them from using a more suitable zero carbon fuel in the future.

As previously discussed, other fossil fuels are also important for back-up or peaking services (e.g. generators). A phase-out date for these fuels should not be set until suitable alternatives can be found.

### Question 24: Should the NES require regional councils to review consent conditions of significant GHG emitters with long-term permits to help reduce emissions? What are the benefits and risks?

Yes, all significant emitters should be required to address their emissions, regardless of their existing permit duration.

Question 27: Is there anything that has been overlooked in this section with regards to the reality of business practices? For local government: is there anything that you feel has been overlooked in this section with regards to the reality of consenting practices?

See Transpower's submission on the scope of the proposed national direction at 1.4 above.

## **GHG emissions and best practice requirements**

Question 28: Do you agree with the proposed thresholds for small sites being between 100 and 2,000 tonne CO<sub>2</sub>-e/year and large sites, being over 2,000 tonne CO<sub>2</sub>-e/year, in the preparation of a GHG emissions plan?

The proposals in this section appear to apply to all industrial sites. As discussed earlier, Transpower does not consider the proposed requirements should apply to its 170+ substations. There is currently no alternative for the fossil fuels used at these sites.

Question 35: Is there anything that has been overlooked in this section with regards to the reality of business practices? For local government: is there anything that you feel has been overlooked in this section with regards to the reality of consenting practices?

As noted above, it is necessary to clarify that this requirement does not apply to substations.

## **Non-statutory guidance on non-industrial emissions**

Question 36: Do you support the development of non-statutory guidance on how to consider wider GHG emissions (direct and indirect) through RMA planning and consenting processes?

As noted earlier, the Resource Management Amendment Act 2020 will result in a policy gap that applies to all GHG-emitting activities, not just process heat. It is therefore important that guidance relating to all GHG emissions is provided.

Transpower considers non-statutory guidance has limited value. It does not have any legal effect and will not minimise litigation risk. Transpower therefore prefers that statutory guidance, in the form of national direction, be provided as quickly as possible.

It is acknowledged that developing statutory guidance within the required timeframe set under the Resource Management Amendment Act 2020 will be challenging. With that constraint in mind, it is suggested that non-statutory guidance should be prepared in a manner and format that allows for it to be easily converted to statutory guidance at a later date (following appropriate consultation and engagement with users).



As already discussed, some of Transpower's assets emit GHG. The approvals process for National Grid activities under the current resource management system is already complex, slow and costly. The changes to the RMA will introduce new information requirements that may lead to additional barriers that risk slowing the consenting process further. This is simply not an option if the electricity system is to deliver the electrification transition needed to meet New Zealand's climate change targets in time.

