



## **Restricting the production of fossil fuels in Aotearoa New Zealand:**

### **A note on the ban on new petroleum permits outside onshore Taranaki**

#### **Frequently asked questions**

##### **What is this note about?**

In 2018, the New Zealand Government decided not to grant any new petroleum exploration permits, with the exception of onshore Taranaki. This decision effectively banned future oil and natural gas exploration in Aotearoa New Zealand, though companies can continue to look for and extract oil and natural gas under existing permits. This note assembles the available evidence for and against the ban.

##### **Why did you write this note?**

There was not a strong evidence-based case for the ban when it was first announced. This note aims to provide a measured analysis of what can or can't be claimed about the environmental effectiveness and likely economic impacts of the ban.

Climate policies require careful scrutiny and broad cross-party support if they are to last and have a meaningful impact on the timescales that are required for action on climate change. The Climate Change Response (Zero Carbon) Amendment Act 2019 illustrated the importance of achieving cross-party support on such issues. The aim of this note is to promote a better-informed debate on the ban by helping policymakers to understand its relative merits and shortcomings.

##### **Is the Parliamentary Commissioner for the Environment for or against the ban?**

The purpose of the note is not to advocate for or against the ban. Instead, it is designed to examine the arguments both for and against the ban, to assist readers to make up their own minds based on a detailed analysis of the policy.

### **What are the main findings?**

**Those who support the ban** can claim that:

- It reduces the risk of New Zealand appearing hypocritical by calling for ambitious action to reduce domestic emissions while seeking to profit for as long as possible from exporting fossil fuels overseas.
- It strengthens the credibility of New Zealand's negotiating position in international climate change negotiations. If other countries do likewise it will put pressure on large fossil fuel producing countries to follow suit.
- It can help New Zealand to break its dependency on fossil fuels and reduce the risk of the transition to a low-emissions economy being further delayed.

**Those who support the ban** must however acknowledge that:

- The ban will have a tiny impact on global emissions and could even slightly increase them if production of oil and methanol in New Zealand is replaced by more emissions-intensive production overseas.

**Those who oppose the ban** can claim that:

- It will impose costs on the New Zealand economy in the billions of dollars, mostly in the Taranaki region.
- It will probably only slightly reduce New Zealand's domestic emissions.
- The New Zealand Emissions Trading Scheme (NZ ETS), if made more effective, has the potential to achieve greater domestic emissions reductions at lower cost than the ban.

**Those who oppose the ban** must however acknowledge that:

- The NZ ETS does not account for emissions overseas as a result of New Zealand's fossil fuel exports and as such, the ban addresses sources of emissions that the NZ ETS cannot.

### **What impact will the ban have on domestic and global emissions?**

The ban is unlikely to have a significant impact on domestic emissions. It will probably cause a reduction in gas leaks from oil and natural gas infrastructure, which currently account for about two per cent of New Zealand's total gross emissions. It could also reduce domestic emissions from methanol production using natural gas.

The direct impact of the ban on global emissions will be tiny. Nearly all the oil and methanol produced in New Zealand is exported, and emissions occurring overseas from consuming this is not counted towards our domestic emissions reduction targets.

The broader impact of the ban on global emissions will depend on the ambition of climate action taken by other countries, the extent to which oil and methanol production in New Zealand is replaced by increased production overseas, and whether this substituted production is more or less emissions intensive than production in New Zealand.

**Will the ban cost New Zealand nearly NZ\$40 billion as indicated in the media?**

The ban can be expected to cost the New Zealand economy billions of dollars by 2050 in the form of lost royalties and taxes from oil and natural gas production, as well as flow-on impacts to the wider economy, including job losses.

According to a report commissioned by the Petroleum Exploration and Production Association of New Zealand, the cumulative real gross domestic product losses were estimated to be between NZ\$15 billion and NZ\$38 billion (three to seven per cent) by 2050. However, the higher cost estimates are based on unrealistic assumptions and are likely to be overestimates.

**Is New Zealand the only country implementing a ban?**

Several other countries have adopted or are planning policies that restrict fossil fuel production. For example, Denmark has banned all onshore (land-based) oil and natural gas exploration, Canada has banned exploration in Arctic offshore (seabed) areas, France and Costa Rica have banned offshore and onshore exploration and extraction and Belize has banned offshore exploration.

**Will the ban increase electricity and natural gas prices, and reduce the security of our energy supply?**

If New Zealand's production of natural gas were to remain at its current level, remaining natural gas reserves would last around 12 years.

The ban is unlikely to have any significant impact on electricity and natural gas prices in the near term. This is because natural gas production under existing permits would have declined anyway over the next few years, as several existing fields reach the end of their productive lives.

Predicting the impact of the ban on electricity and natural gas prices in the future is difficult. This is because there are many interconnected factors that influence energy prices in New Zealand. These include the global oil price, the NZ ETS price, the possible discovery of new oil and natural gas fields under existing exploration permits and limits on the rate at which petroleum reserves can be extracted.

The NZ ETS is likely to have a greater impact on future electricity prices than the ban. This is because a rising NZ ETS price will encourage switching from coal and natural gas to renewable energy sources such as wind and geothermal for baseload electricity generation. This is likely to happen even without the ban.

For energy security, coal- or gas-fired power plants are likely to continue to be needed in the short term to meet peaks in electricity demand — especially during extended dry periods when hydro generation is reduced. In the longer term, inter-seasonal energy storage using clean energy technologies might become viable, particularly if combined with energy efficiency and smarter demand-side management. However, these technologies are currently significantly more expensive than using natural gas during peak demand with current pricings.

### **Why do we need the ban if we have the New Zealand Emissions Trading Scheme (NZ ETS)?**

The NZ ETS is designed to reduce New Zealand's domestic emissions by putting a price on them. The NZ ETS does not cover emissions occurring overseas as a result of New Zealand's exports of oil and methanol. The ban can therefore complement the NZ ETS by covering some sources of emissions that the NZ ETS cannot.

A higher NZ ETS price would be expected to reduce domestic production and consumption of natural gas. However, the NZ ETS price has so far been too low to have a significant impact. Reforming the NZ ETS so that the future emissions price is higher than its current level would significantly reduce New Zealand's domestic emissions.

### **What difference will the ban make given how small New Zealand's share of the global oil market is?**

Since the 1990s, New Zealand's share of the global oil industry has been between 0.02 and 0.08 per cent. Therefore, the ban's direct impact on global oil production and its associated emissions will be very small. Of course, the same is true of any climate action New Zealand takes.

As a relatively small country, the best way for New Zealand to make a difference is to place pressure on larger emitters by demonstrating the changes that other countries also need to make. If New Zealand and other like-minded countries succeed in persuading large fossil fuel producing countries to also restrict their production, the overall impact on global emissions would be significant.

### **Oil and natural gas sector activity was already declining before the ban was announced in 2018 – did the ban simply formalise what was already happening?**

Investment in the oil and natural gas industries plummeted globally in 2014 following a slump in global oil prices. New Zealand was particularly affected as oil and natural gas exploration activity dropped sharply in the following years. Some oil and natural gas companies left New Zealand altogether prior to the announcement of the ban.

Exploring for oil and natural gas in New Zealand's offshore areas is technically challenging and relatively expensive, which makes continued investment less attractive when oil prices are low. Besides, any new oil or natural gas field would probably need to be comparable in size to Maui (historically, the largest natural gas field in offshore Taranaki) to be economic to develop.

Exploration efforts in offshore areas outside the Taranaki basin have so far been unsuccessful. Unless a major new oil or natural gas field is discovered soon, exploration efforts in offshore areas outside the Taranaki basin could be curtailed indefinitely, irrespective of the ban.