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ENERGY FOR BETTER LIVES

CHOICES AND PATHWAYS AS WE TRANSITION

December 2020

INTRODUCTION

The new Government has a strong mandate to rebuild New Zealand from the impacts of Covid-19. To achieve this, affordable, reliable and sustainable energy is essential.

Energy is a means to an end. We use it to create better lives and wellbeing for people, underpinning our society and economy and making everything we do possible.

We are fortunate to have renewable energy providing around 40% of our total energy needs. However natural gas and oil still provide over half of New Zealand's total energy, providing vital and specialised roles to our homes, businesses, schools and hospitals. Our export industries rely on this energy to create well-paid, highly-skilled jobs and essential products like food and building materials.

In doing so we are helping to create an inclusive, prosperous and sustainable society. At the same time, we are changing as a society and an industry by supporting the transition to lower emissions.

The energy trilemma

This means we face choices on how to ensure we have energy that is *affordable*, *reliable* and *sustainable*. This is known as the "energy trilemma" and is globally recognised as the best way to consider the balance required between these three priorities. All are essential, but trade-offs within and across them are inevitable.

The Government has made important progress through the Zero Carbon Act, establishing the

Climate Change Commission and reforming the Emissions Trading Scheme (ETS).

However, there is more work to do. Now more than ever, the new Government faces important choices on policy settings to create jobs and prosperity, and rebuild the economy in a fair and sustainable way.

We also face major choices in developing a pathway to new fuels while managing declining natural gas reserves. Without new investment soon, production of natural gas is forecast to be 60% lower by 2030.

With the right settings, our sector can support the transition while creating jobs and exports and generating income to pay for things like health, education, infrastructure and housing.

As a sector and an industry we are part of the solution, and want to help the Government achieve their goals through well-informed choices.



TACKLING THIS TRANSITION TOGETHER IS ONE OF THE MOST IMPORTANT PIECES OF WORK WE HAVE AHEAD OF US... THE CHANGE WE NEED TO MAKE IS UNPRECEDENTED... SO WE HAVE TO WRITE IT, AND WE HAVE TO WRITE IT TOGETHER.

Hon Dr Megan Woods, Minister of Energy and Resources, October 2019





PRINCIPLES TO DELIVER BETTER OUTCOMES FOR NEW ZEALAND

Energy underpins our economy and society, which means it is vital we get energy policy settings right. Given we don't have unlimited resources, we need to make careful decisions to ensure the most efficient allocation of resources and achieve the energy trilemma.

This is especially true for policies to reduce emissions. While there is widespread support for this goal, the transition will inevitably be difficult and costly. The challenge is finding the most effective ways to achieve this at least cost to New Zealanders, while ensuring that energy remains affordable and reliable.

Here are some key principles based on decades of best practice from around the world that can help achieve this.

- We need stable, simple, and durable policy settings that give the wider energy sector long-term confidence to invest and deliver affordable, reliable and sustainable energy. Well-signalled policies are important because the energy sector invests and operates over long time periods. We are also in a competitive world with many other countries vying to attract investment.
- Governments should focus on what they do best setting the right conditions in which business can operate, such as rules for trade, employment, health and safety, tax, environmental regulation and overseas investment.
- Clear price signals are crucial because they allow investors and consumers to form their own views on future demand, supply costs and technologies. Government interventions which cloud price signals are likely to lead to inefficient decisions and/or deter investment.
- This is why the *private sector should take the risks* in developing new technologies rather than the taxpayer.
- Where possible we should rely on open and competitive markets as the best way to deliver secure, affordable and reliable energy. This is because competition drives firms to innovate and offer the best services at lowest cost to consumers.
- 'Picking winners' and backing certain fuels or technologies with subsidies should be avoided. Governments have a poor track record of guessing which industries will be successful in the future because they rarely have information as good as the wider market. New Zealand cannot subsidise our way to prosperity – this has been tried in the past without success.

- Governments should *respect private property rights*. Undermining this can deter much needed private-sector investment.
- Our policy choices should be *calibrated with our international partners*. If energy costs in New Zealand rise, companies may shift overseas where there are less strict rules on emissions and/or use higheremitting energy sources. This would mean increased global emissions as well as local job losses.

The best approach to climate change policy

It's important to use the right tools for the right job. This means that emissions should be managed within climate policy, rather than using policy tools or legislation designed for different purposes.

- This approach helps us take a **holistic view** of emissions, avoiding interventions in one sector (e.g. the 100% renewable target for electricity) which can cause unintended consequences in other areas (such as hindering decarbonisation for transport and industrial heat by increasing the price of electricity). Sectoral targets are inappropriate for systemic problems as they lead to the misallocation of resources.
- The focus for climate change policy should be on *net emissions* rather than punishing or promoting certain fuel sources – i.e. "fuel agnostic". This is because only emissions directly contribute to climate change, and there any many uses of energy that do not involve burning and releasing emissions.
- Putting a *price on emissions* through the Emissions Trading Scheme (ETS) is the most effective and efficient way to reduce emissions because it incentivises innovation and encourages the cheapest reductions to be found, wherever they are.
- Any *alternative policies* to the ETS to reduce emissions should explain clearly how much they will reduce emissions and at what cost. If they cannot achieve reduction at the same price as using the ETS, they should be abandoned as an inefficient use of resources making society worse off.

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THE ROLE OF OIL AND GAS IN NEW ZEALAND





Household and commercial use

400.000 **HOUSEHOLDS, BUSINESSES E.G.RESTAURANTS, SCHOOLS** AND HOSPITALS USE NATURAL GAS OR LPG

GLOBAL DEMAND FOR NATURAL GAS EXPECTED TO GROW



NATURAL GAS HAS

OUR INDUSTRY

REATES

1,000

OBS

ROYALTIES **FROM OIL AND GAS EARN** THE GOVERNMENT 650m 5 PER YEAR

OIL AND GAS WORKERS EARN THE NATIONAL AVERAGE SALARY

Sources

1. Where NZ gets energy from: Energy in New Zealand 2020, www.mbie.govt.nz/dmsdocument/11679-energy-in-newzealand-2020).

Zealand", Gas Industry Company Limited (GIC) (https://www.gasindustry.co.nz/about-the-industry/nz-gas-story).

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4. Global demand to rise 30%: World Energy Outlook 2020, 5. 11,000 jobs: 11,000 jobs: Venture Taranaki The Wealth Beneath Our Feet (2015) (https://www.martinjenkins.co.nz/

6. Royalties and taxes averaging \$650m: New Zealand Petroleum minerals/minerals-data/industry-statistics/), and Parliamentary Commissioner for the Environment (www.pce.parliament.nz/ media/197019/report-restricting-the-production-of-fossil-fuels-in-aotearoa-new-zealand.pdf).

7. Twice the average salary: New Zealand Petroleum and Minerals

\$ AFFORDABLE

Energy needs to be affordable for users. This is especially important as we rebuild our economy from the impacts of Covid-19.

Energy intensive industries like dairy plants, meat works and timber processing all use large amounts of natural gas to create products for export, earning New Zealand a living and sustaining well-paid skilled jobs in the regions.

The price of energy for users is likely to increase if our natural gas production continues to decline and no cost-effective alternatives emerge, which would cost jobs and hurt communities. The cost of energy is already directly threatening the future of major industries in New Zealand like aluminium production, petroleum refining, and steel and paper manufacturing.

Choices

- Should New Zealand encourage affordable energy prices through direct interventions or market-based solutions?
- Should affordable energy be encouraged by making the regulatory system easier for producers and explorers to develop their remaining natural gas resources, or fast-track uneconomic renewable alternatives?

Responding to these choices

- Continue to allow petroleum exploration permits for onshore Taranaki and provide flexibility for remaining exploration and production permits, which could include extensions of both geographic area and time limits. This would encourage more exploration and give us more options, helping protect our energy security and put downward pressure on energy costs.
- Careful reform to the Crown Minerals Act which sets broad legislative arrangements for the industry. Caution is required around changing the purpose of the Act and adding wider non-economic priorities as this could lead to regulatory duplication, increased costs and undermining the smooth transition we all want.
- Reform to the Resource Management Act (RMA) is also needed because it adds significant cost, uncertainty and time to projects. The RMA should have reduced scope and better decision-making processes.
- Workable decommissioning rules for when oil and gas wells reach the end of their productive lives.
 We need to ensure companies pay their fair share of costs in this process, while not making requirements too onerous or unrealistic which could lead to premature field closures.

In New Zealand we often take energy security for granted and that the lights will work when we turn the switch on.

Renewable sources provide around 84% of our electricity supply but there are times when they cannot keep up, such as when demand is high (on cold winter nights) and/or when hydro lakes are low. Natural gas provides a relatively small but important back-up in these times, acting as an enabler to renewable energy.

However, keeping the lights on will be harder if our production of natural gas continues to decline. Alternative new storage technologies such as batteries and pumped hydro remain extremely expensive and unproven. Importing LNG is emerging as a future option which would make us less self-sufficient.

Choices

- Should New Zealand directly subsidise and/or support new energy sources and technologies, or set the conditions to allow the private sector to develop these?
- Should we provide more regulatory flexibility for natural gas producers and explorers to increase our energy security options?
- Should we aim to produce our own energy or import from overseas?

Responding to these choices

- Continue to allow onshore exploration in Taranaki and provide flexibility for existing permits, as outlined earlier. This would give New Zealand more options for keeping the lights on and provide long-term security of supply.
- Clear and durable regulatory frameworks to encourage the investment needed into our energy system, including reform of the Exclusive Economic Zone (EEZ) Act.
- Be cautious of policies which could deter private sector investment into renewable electricity generation, such as Government support for pumped hydro. Private operators are much less likely to develop new generation if the Government could potentially enter the market with a major new supply.
- Follow the recommendation of the Interim Climate Change Committee not to prioritise 100% renewable electricity. As well as being very expensive and having only a minor impact on emissions, it would create big challenges in providing enough electricity at all times required.
- Ensure New Zealand has access to the skills we need to maintain and grow our energy system through safe and sensible border policies, and in the longer term through training and skills development.

🥖 SUSTAINABLE

Society and business support the transition to lower emissions to reduce the worst impacts of climate change. Our sector can help this happen in the most efficient way possible at least cost to New Zealanders, so that energy is still affordable and reliable.

The challenge is that New Zealand's emissions continue to rise and the cost of the transition will be high. Renewable energy sources are not affordable, reliable or practical enough yet to meet our energy needs and won't be for some time.

Choices

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- Should New Zealand use emissions pricing (with the ETS) as the primary tool for reducing emissions, or other regulatory interventions?
- Should New Zealand calibrate our efforts to reduce emissions with what our economic competitors are doing, or move ahead of them?

Responding to these choices

- The ETS should remain the primary policy tool for reducing emissions, given it is the most effective and efficient tool to achieve this. It should cover all emissions (including agriculture) and be calibrated alongside our trading partners.
- Allow international trading of quality carbon credits. This would benefit both the environment and economy by allowing the most efficient emission-reduction activities, irrespective of which country they take place in.
- Carbon capture and storage is a reality and will be critical to meeting our climate goals. There are proposals for a project in New Zealand but it is unclear if this technology can be developed under our current regulatory settings. The Government should create an enabling regime to expressly allow it.
- Hydrogen has potential and we should be open to producing it with natural gas and carbon capture storage, resulting in zero emissions. This is likely to be much more affordable than hydrogen created with renewable electricity and could help establish a market for when green hydrogen is economic.
- Support research and development, especially for agriculture. This is the single biggest source of New Zealand's emissions and we are far more likely to be a world-leader in this area than in energy technology.

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A BETTER NEW ZEALAND FOR EVERYONE

The choices and options we've highlighted here are simplified and the reality will always be more nuanced. But if we work together and get the settings right, we can achieve great outcomes for all New Zealanders:

- Lower energy costs, making families and businesses better off.
- **Encouraging businesses** to stay in New Zealand (like Methanex, New Zealand Steel and Refining New Zealand) and attracting new industries.
- More jobs: highly skilled, well-paid jobs and many of them in the regions. Employment leads to improved well-being.
- Taxes and royalties: can help pay for better health and education services and reduce poverty and inequality. The oil and gas industry earns the Government around \$650 million per year in taxes and royalties, and there is great scope to increase this with the right settings.
- Improved energy security: by producing more of our own local energy we become less dependent on

foreign markets and supply chains, which can be fragile as we've seen this year. Producing our own local natural gas could avoid the need to import LNG from Australia.

- **Lower domestic emissions**: as highlighted by the Interim Climate Change Committee, natural gas helps keep electricity prices down and therefore encourages electrification of transport and industrial heat processes.
- **Lower global emissions**: Given the world is still going to use products like steel, aluminium and methanol, it is much better to produce them here in New Zealand using natural gas rather than with coal as many other countries do. We could also export natural gas to replace higher emitting sources overseas, and New Zealand oil has 20% lower emissions than the global average.