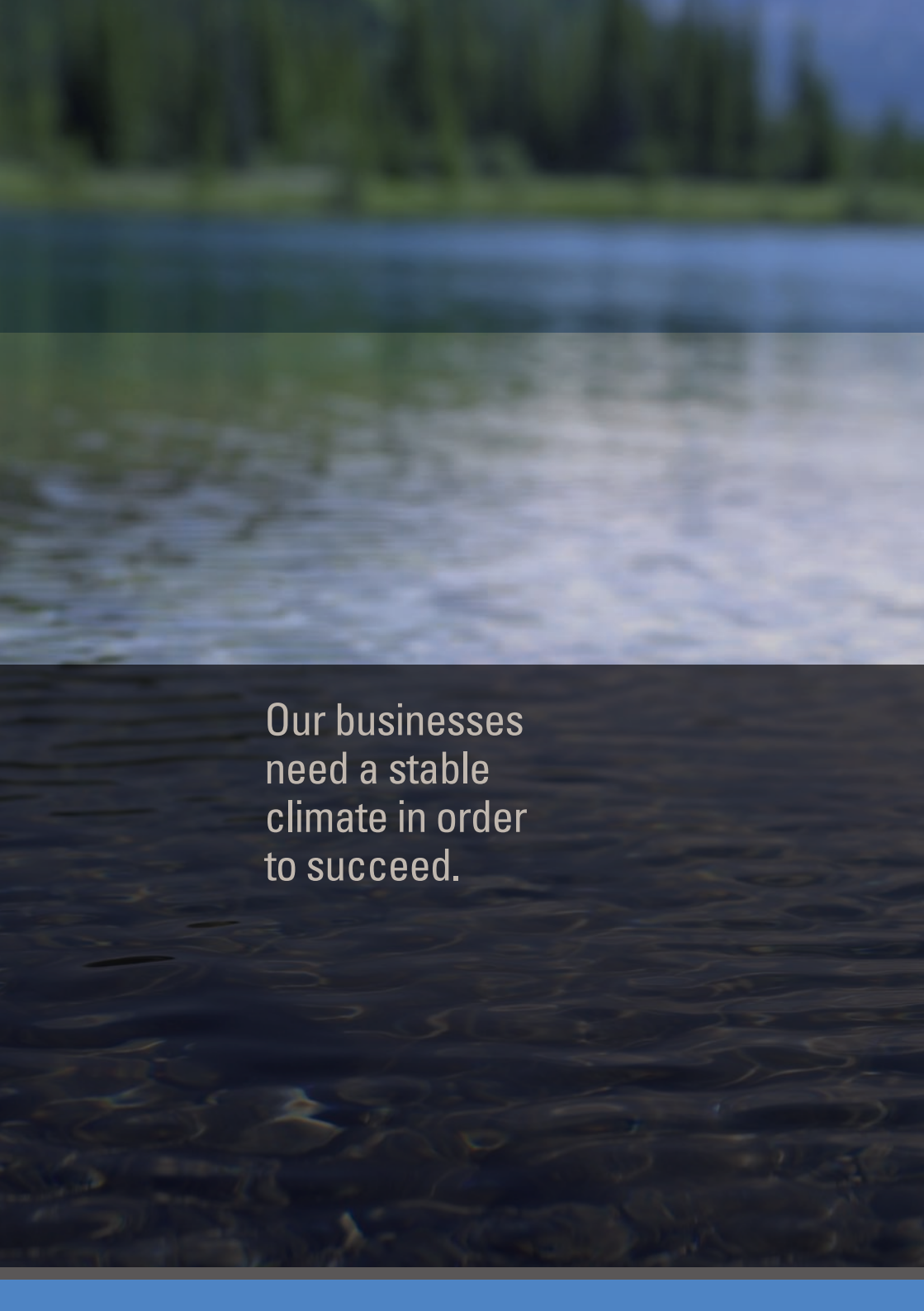




A STABLE CLIMATE FOR BUSINESS

A LOOK AT OUR CHANGING CLIMATE

BusinessNZ 



Our businesses
need a stable
climate in order
to succeed.

FOREWORD

How to face climate change is one of the most important national discussions this country has had for decades. It's also one of the most complex and certainly, the most politicised.

Environmental groups are quick to shout down business when it dares to suggest caution in our response to climate change. Warnings are often misconstrued as a do-nothing approach or attempts by business to duck responsibility for polluting activities.

But that's far from the truth. Businesses are already taking bold steps to reduce emissions and become more energy efficient. Yet these initiatives, and the simple facts, often go unnoticed in the hype and hyperbole of the arguments.

We've found many New Zealanders genuinely don't understand the issues surrounding climate change and our obligations under Kyoto.

This booklet offers a simple explanation. It's not for the expert, but is designed to be a short, simple read for everyone in business and the community.

It sets out how emissions trading works, the costs we will face as carbon becomes a scare global commodity and how we can position

ourselves as a nation to minimise the risks and seize the opportunities of climate change.

Because there are plenty of opportunities if we get the policy right.

And a strong and sustainable economy will ensure we are best placed to take advantage of these.

That's why business is interested in cooperating with the government on its climate change policy.

Our environmental solutions must also be economically responsible, because our businesses and the communities they support need a stable climate in order to succeed.



Phil O'Reilly
Chief Executive – Business NZ

OUR CHANGING CLIMATE

In the 1970s scientists were concerned at the possibility of a new ice age. By the 1980s their concern was with global warming.

In the 1990s, this 'global warming' was blamed on higher levels of carbon dioxide in the atmosphere.

However, by the year 2000, the term had been replaced by 'climate change' since there was still some debate amongst scientists whether the temperature was rising or not.

The debate continues. But most governments now accept the findings of the Intergovernmental Panel on Climate Change (IPCC), suggesting climate change is a real issue requiring international action.



CLIMATE CHANGE IMPACTS

The predicted impacts of climate change this century vary from the politicised predictions in former US Vice President Al Gore's 2006 documentary *'An Inconvenient Truth'* to the more measured position of IPCC scientists.

None-the-less, if scientific predictions are correct, there should be reason for concern. The predicted impacts of climate change could include:

- » **Extreme weather events:** Including droughts, floods and changes in wind and rainfall patterns.
- » **Progressive melting of ice caps and rising sea levels:** Average temperatures could rise as much as 1.50°C – 4.0°C by the end of this century if no action is taken, causing ice caps and glaciers to melt. The IPCC predicts this could raise sea levels as high as 30cm – 50cm by the end of the century, causing inundation of low lying islands and coastline.

Although the IPCC predicts less severe environmental impacts for New Zealand, the impact of a warmer climate may require some transformation of our economy, given our strong reliance on agriculture.

Changes to rain and wind patterns could also threaten energy supply given our ever-increasing reliance on renewable energy.



WHAT'S CAUSING CLIMATE CHANGE?

The IPCC believes the main cause of climate change is the steady increase in carbon dioxide and other planet-warming greenhouse gases in the atmosphere since the industrial revolution. In the main, these gases are released when fossil fuels such as coal and oil are burnt.

To avoid catastrophic changes in climate, scientists warn that we need to reduce or stabilise the levels of carbon dioxide at about 450 parts-per-million of our atmosphere (ppm) by the end of the century. This would require halving the current level of global greenhouse emissions.

But for as long as developing countries such as China and India continue to increase their emission levels at an unprecedented rate, that's a significant task.

If developing countries do not join in the reduction efforts, developed countries would need to cut their emissions by up to 90 per cent to reduce greenhouse gas volumes to the predicted maximum safe level.

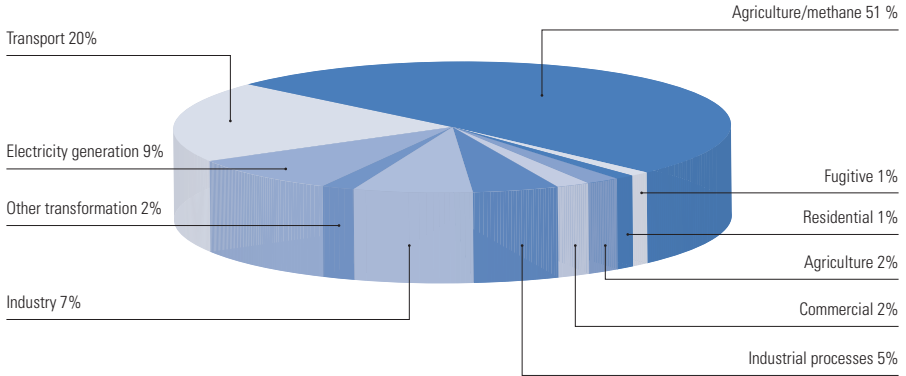
Let's look at New Zealand...

In a global sense, New Zealand is not a significant contributor to the problem, accounting for less than a quarter of a per cent (0.15%) of the world's overall greenhouse gas emissions.

Making significant reductions in New Zealand's emissions is complicated, with sheep and cows generating almost half our emissions. Although these animals do not produce carbon dioxide, they produce methane and nitrates from their digestive system – gases which are also been included in Kyoto.

New Zealand greenhouse gas emissions

Figures correct as at November 2007



New Zealand is a world leader in the generation of electricity from renewable sources, with more than 65 per cent of our electricity generated by hydro, wind and geothermal.

By comparison, Australia generates almost all its energy from low-grade coal-fired thermal power stations. This is a global trend in developed and developing nations, with China building the equivalent of one Huntly coal-fired power station a week.

New Zealand operates only one coal-fired power station. Carbon dioxide emissions from the burning of fossil fuels in our electricity, industrial and transport sectors account for only 0.075 per cent of the global total.

Our largest industrial emitters are directly responsible for only 28 per cent of the country's emissions from fossil fuels, which represents 0.02 per cent of the global total. By comparison, 40 per cent of fossil fuel emissions are generated from domestic transport and a further 18 per cent from thermal generation.

Further, it has been demonstrated that most large industrial emitters are maintaining their 1990 levels of emissions output or are operating within a few percentage points of world best practice for energy efficiency.

On this basis it seems unreasonable to blame the industrial emitters for our climate change problems.

KYOTO PROTOCOL

The Kyoto Protocol was the first attempt at a legally binding international agreement to reduce emissions and prevent further climate change.

Having ratified the Kyoto Protocol, New Zealand has accepted that for the first commitment period between January 2008 and December 2012 (CP1), emissions will not exceed our 1990 levels.

This means we are legally bound to reduce emissions as much as possible and then offset any excess emissions by buying carbon credits from other participants.

When the New Zealand Government ratified Kyoto in 1992 it was on the basis of a NZ\$500 million windfall. However, recent government estimates indicate we will now exceed our target by 45.5 million tonnes of carbon and consequently assesses the government liability to be NZ\$704 million.


It appears that most participants will have difficulty meeting their target reductions.

In addition, the world's largest emitter, China, has no obligation to reduce emissions. Neither have other large emitting nations such as India and the US.

It is clear participation will be required from developed and developing nations after 2012 if the target set by the scientists is to be achieved.

This means that many more countries would be required to accept legally-binding targets to reduce their emissions. However, there is some doubt as to whether this level of commitment can be achieved.

This means voluntary agreements may play a greater part in the post-2012 era.



It is clear participation will
be required from developed
and developing nations after 2012
if the target set by the scientists
is to be achieved.

WHAT CAN WE DO ABOUT CLIMATE CHANGE?

The only certain way to reduce the amount of greenhouse gases in the atmosphere is to burn less fossil fuel.

Although it's possible to remove greenhouse gases from the atmosphere by planting trees, there is a limit to how much carbon dioxide a tree can absorb and eventually, the carbon will be released back to the atmosphere if the tree rots or is burnt.

Technology is being developed that allows carbon dioxide to be captured and stored – known as sequestering – however it has not yet been commercialised.

So in the meantime, the best thing New Zealand households and businesses can do is use less energy or use it more efficiently.

It's internationally accepted that reduced energy use can be helped if a global price of carbon is introduced into the economy.

New Zealand has explored two methods to do this: Introducing a carbon tax or creating an emissions trading market where carbon 'credits' (the right to emit carbon) can be bought and sold.

These two methods are outlined below.

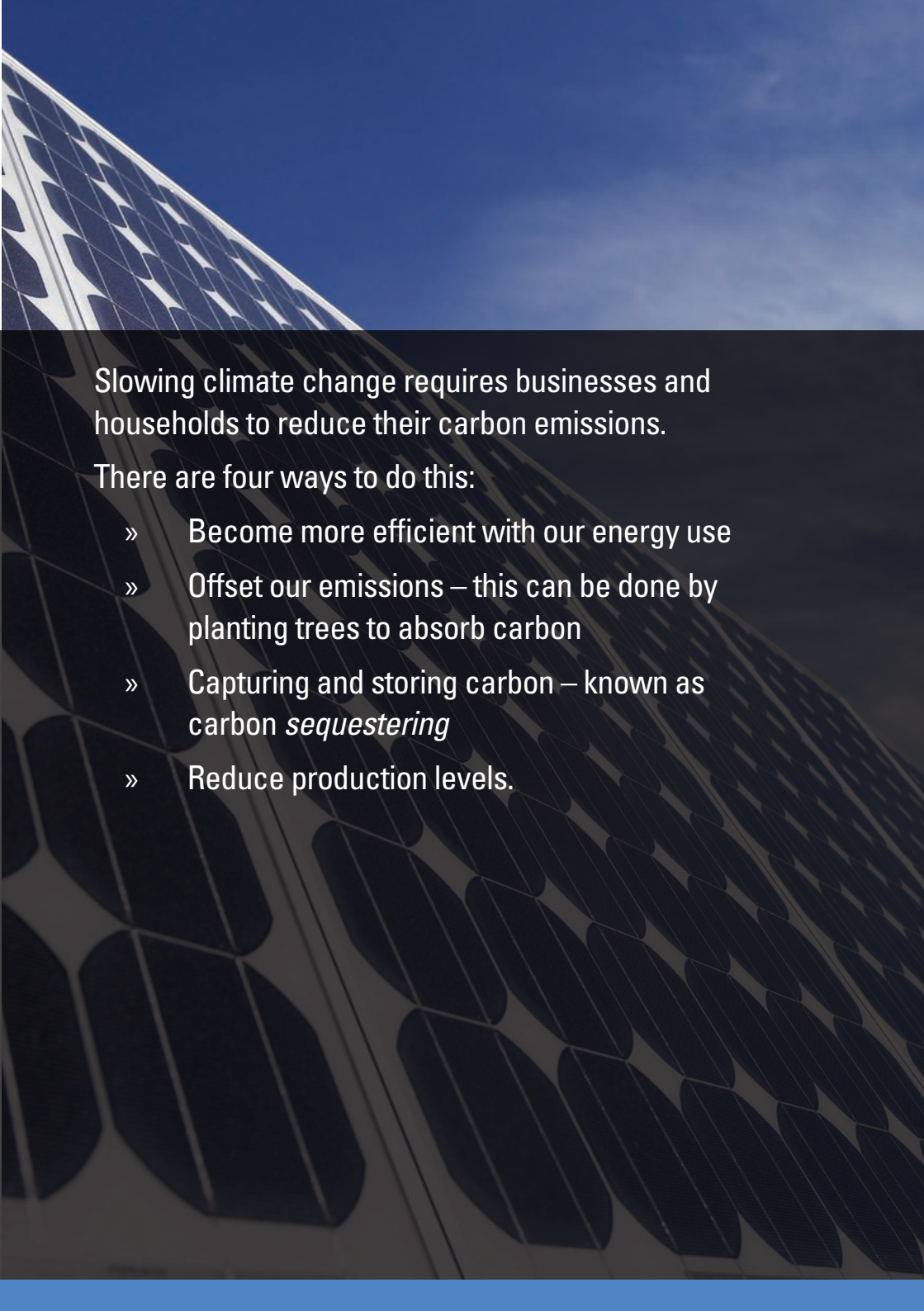
Carbon tax

- » A carbon tax would apply to every unit of fossil fuel that's burnt to create energy.
- » In the same way as other taxes, the revenue generated would be collected by the government and redistributed into the economy.

- » Because the tax would only apply within New Zealand, there's no opportunity for businesses to take advantage of other countries which may be able to reduce emissions at a lower cost.

Emissions trading scheme

- » Under Kyoto, the acceptable level of emission is 'capped' or set at an agreed level.
- » Participating countries are allocated carbon credits, equal to their agreed target. This allows trading to occur where one country reduces its emissions and another country exceeds its target. (Trading will only occur when it is cheaper to buy credits than to reduce emissions.)
- » Each country can choose to replicate this trading scheme internally, which means individual businesses would have to either reduce their emissions or buy credits from someone who has.
- » Ultimately, it would be possible for New Zealand companies to trade carbon credits with companies in other countries, thereby establishing a global price for carbon.



Slowing climate change requires businesses and households to reduce their carbon emissions.

There are four ways to do this:

- » Become more efficient with our energy use
- » Offset our emissions – this can be done by planting trees to absorb carbon
- » Capturing and storing carbon – known as carbon *sequestering*
- » Reduce production levels.

NEW ZEALAND'S PATH OF ACTION

Having rejected a carbon tax in 2005, the New Zealand Government has chosen to pursue an emissions trading scheme as its preferred method to introduce a price of carbon into the New Zealand economy.

The NZIER report 'Emissions Trading System for NZ', sponsored by Business NZ, recommends a broad based emissions trading market as the best way for New Zealand to minimise greenhouse gas emissions in the long term. A copy of this can be viewed at www.businessnz.org.nz

However, the report clearly advised it would be unwise for New Zealand to introduce a price of carbon into the economy ahead of its trading partners or before 2012.

The premature pricing of carbon is likely to place a disproportionate burden on some businesses.



WHAT DOES EMISSIONS TRADING MEAN FOR BUSINESS

There's no doubt the introduction of an emissions trading scheme is going to see the everyday costs of doing business increase.

Not only is an emissions trading scheme intended to transform New Zealand to a low-carbon economy long-term, it is also designed to devolve the government's liability in Kyoto CP1. Treasury estimates this liability to be \$704 million for the period, based on the government's ability to buy carbon credits on the international market at a relatively low cost. However, analysis by other parties indicates the cost of devolving the liability to business could be as high as \$3 billion, based on the fact they will only be able to buy the most expensive credits in order to meet their obligations under the scheme.

The government is limiting the number of firms who can participate in emissions trading. Therefore for the vast majority of New Zealand businesses, these costs will be passed on in their energy bills.

Smaller firms are likely to feel the greatest pressure in the transitional period because they are less able to absorb the extra costs and often can't afford the investment required to become more energy efficient.

The higher price of transport fuel will place additional pressure on businesses throughout the economy and there are few ways this can be avoided.

For transport-based businesses, higher petrol prices could force behaviour that may in fact have perverse environmental outcomes. Trucking companies, for example, may have to operate longer hours to maintain margins in

the face of the carbon charge on petrol. But these extra hours on the road would ultimately increase emissions.

As the price of carbon raises energy prices in New Zealand, all businesses will reach a "tipping point" at which they can no longer afford to consume energy at historic levels.

Businesses will react to this in different ways, depending on ownership structures, benefits of remaining in New Zealand and availability of investment funding to facilitate growth. Options may range from reducing production to relocating offshore.

Risks:

Introducing a comprehensive emissions trading scheme ahead of our major trading partners and competitors would expose some New Zealand firms (particularly commodity producers such as timber, aluminium, steel, cement, paper and dairy processors) to 'competitiveness at risk'. This means they will be vulnerable to competition from international competitors not subject to a price on carbon.

The major risk is that our largest companies will shift offshore to avoid these higher domestic costs, increasing unemployment and slowing economic growth as a result.

Relocations also create the problem of carbon 'leakage'. If a company moves to China or Australia, which have more coal-fired power stations than New Zealand, not only would we lose the economic benefit of having the

company operating here, on a global scale, emissions are likely to be increased rather than reduced.

Smaller communities would see a big impact if a large employer in their area decided to relocate. The loss of jobs and business the company brought to the area could strip the community of income for vital infrastructure such as schools, hospitals and roads.

Indeed, many large companies will be assessing the risks from New Zealand's climate change policies before approving significant investments here. Therefore, if we want our economy to keep growing, these policies must provide long-term certainty for companies or we may miss out on investment opportunities.

It is essential that businesses accurately measure and monitor emission levels in order to demonstrate that emission reductions have been achieved and to gain credit for them. All sectors should be required to commence monitoring, measuring and reporting to international standards from January 1, 2008.

Costs to consumers:

Households will also pay for their carbon use as businesses pass their costs of emissions reduction on through a wide range of commodities.

The power bill is one of the most immediate places this will be felt, as energy companies incorporate the costs of emissions reduction into their charges for electricity and gas. Based on the latest* Kyoto Clean Development Mechanism price for carbon credits on the

secondary market of about NZ\$34 a tonne, we can expect household power prices to rise about 11.5 per cent.

As oil companies assume liability for their emissions, every litre of fuel purchased will also include the price of carbon. This would increase the price of petrol by as much as 10c/litre at the pumps, based on the price for carbon credits in the international market of about NZ\$34 a tonne*.

Carbon costs will also flow through to the retail and grocery sectors as firms add on to the price tag what it costs them in carbon to produce the product and deliver it to the store.

Although these costs will drive change in our energy use, we can not just rely on the price of carbon to put New Zealand on the path to reduced emissions. It must be complemented by other measures, and there are many simple things households can do to reduce emissions that carry low or no cost. Some include behavioural changes such as turning off appliances when they are not in use. Others make use of readily available technology such as energy efficient light bulbs,

Some programmes are already in place to do this, such as the Electricity Commission's light bulb and electric motor programme. However, overall government policy needs to ensure more effort is focused in this area over the next few years, provided unnecessary regulation for business is avoided.

* Figures correct as at November 20, 2007.

CLIMATE CHANGE: THE OPPORTUNITY

Ingenuity and innovation is something Kiwis are good at.

Applying this in developing the technology the world needs to combat climate change could see it transformed from an environmental threat to a market opportunity for New Zealand.

This will require significant investment in research and development. Refocusing government research funding on the most viable opportunities in this area would help.

Business NZ believes this requires an ongoing review of all government funded energy-related research, with a view to increasing the available funding pool through partnership with industry.

Prime opportunities exist in the agricultural sector where we are already market leaders. Enhanced feed stocks and other new developments in this area will ultimately provide further manufacturing and processing opportunities.

Taking action against climate change is essential to protect our “clean, green” image. This image will also work to our advantage in

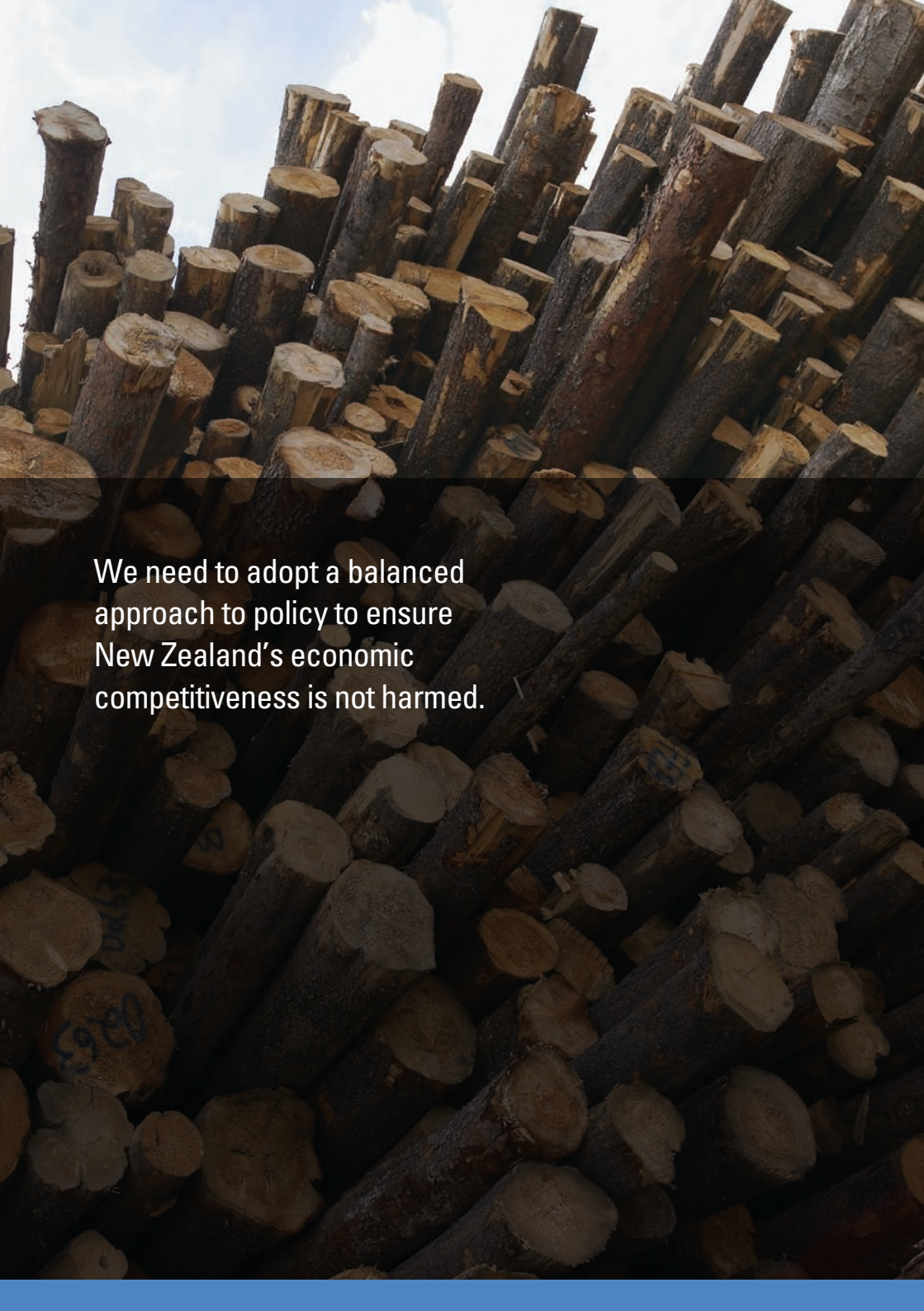
the international market place as sustainability becomes an important selling point for goods.

Thanks to our natural advantages, New Zealand products are already seen to be safe, reliable and environmentally responsible. Further opportunities will be found in making these products the most carbon efficient in the world.

Many of these will be high quality, niche products and even our largest industries thrive in this market. For example, Rio Tinto Alcan Aluminium New Zealand is best known internationally for its high quality, high purity aluminium product.

Climate change presents plenty of opportunities for New Zealand, if government gets the policy right.

And our companies will be best placed to seize these opportunities on the back of a strong economy. That's why it's important to ensure our approach is balanced and that our environmental solutions are also economically responsible.

A large pile of cut logs, likely for export, under a cloudy sky. The logs are stacked in a way that shows their cross-sections, which are light-colored and show some internal grain patterns. The bark is dark and rough. The sky is blue with some white clouds.

We need to adopt a balanced approach to policy to ensure New Zealand's economic competitiveness is not harmed.

BUSINESS NEW ZEALAND'S POSITION ON CLIMATE CHANGE POLICY

Even though New Zealand produces only 0.15 per cent of the world's greenhouse gas emissions, we will be affected by the impacts of any climate change in the same way as everyone else. Therefore it's essential we do our part to minimise emissions.

DOING NOTHING IS NOT AN OPTION. THE QUESTION IS, WHAT'S THE BEST SOLUTION TO ENSURE OUR ECONOMY REMAINS SUCCESSFUL?

Business NZ strongly supports the government in choosing emissions trading as the most effective way to minimise climate change long term and believes improved energy efficiency and reduced emissions make sound business sense.

However, this action should not come at the expense of our ability to do business with the world and compete on international markets.

The introduction of emissions trading should be timed so that it does not impose costs in the New Zealand economy far in advance of our trading partners.

The scheme must be designed to ensure robust outcomes, otherwise businesses stand to lose significant value. Effective methods of measuring and monitoring emissions will be critical to this.

Climate change policies must also be fair and equitable across all sectors and well coordinated in order to minimise costs to the economy as a whole.

Because climate change is a long-term problem, flexibility will be essential to meet new requirements or changes in direction without penalising participants.

We believe we should be promoting New Zealand's economy as carbon efficient, thus delivering goods to the global market with the lowest possible emissions intensity.

This means we do not support absolute limits on emissions at a national level. If global efforts are to have any impact, there needs to be a focus on carbon efficiency delivering an absolute level of global emissions.

SUMMARY

New Zealand could benefit from a climate change policy that does the following:

- » Meets our commitment to Kyoto CP1 at the lowest overall cost to New Zealand.
- » Provides certainty for future business investment.
- » Introduces measuring, monitoring and reporting in all sectors of the economy now.
- » Puts us on a path to reduced emissions/ improved efficiency.
- » Times the introduction of a price for carbon to be in line with our major trading partners, or provides adequate protection to firms facing international competition as a result of being ahead of our trading partners.
- » Utilises an emissions trading scheme to ensure accountability.
- » Has no overall adverse impact on the economy or employment.
- » Targets increased research funding into areas of expertise.



