

# Emission Critical

Issue 7: December 2008

## The state of New Zealand climate change policy



Following the election on 8 November 2008, the shape of New Zealand's climate change policies is once again uncertain. As part of a coalition agreement to provide confidence and supply to the minority National Government, John Key's Government agreed on 16 November to suspend the entering into force of the Emissions Trading Scheme (ETS) which received Royal assent and was passed into law on 24 September.

The scheme's fate will depend on the outcome of a review by a Special Select Committee of the New Zealand Parliament. The terms of reference of this special select committee were released on 9 December and are based on a draft supplied by ACT in negotiation of its coalition agreement with the National Party. The terms of reference include hearing evidence on (inter alia):

- the prospects for a post-Kyoto agreement;
- an assessment of the costs and benefits of New Zealand taking any action;
- the relative merits of New Zealand deciding to take mitigation steps or opt for adaptation;
- the relative merits of an emissions trading scheme or a carbon tax;
- the timing of any policy measures being introduced.

The Select Committee may also find its way into debating the science of climate change itself. ACT's proposed terms of reference had called for the Select Committee to "hear competing views on the scientific aspects of climate change from internationally respected sources and assess the quality and impartiality of official advice." The final terms of reference have shrouded this in less provocative language, calling on the Select Committee to "identify the central/benchmark projections which are being used as the motivation for international agreements to combat climate change and consider the uncertainties and risks surrounding those projections." This seems likely to lead to a full-scale debate about the reliability of the science on which future projections are based.

While the ETS is being reviewed, it is understood specific legislation will be enacted to delay the implementation of the ETS indefinitely and repeal the 10-year ban on new thermal generation projects. This will impact on pre-existing participants, particularly in the forestry sector. It is also likely to put a brake on those parties who had been preparing to enter the scheme in 2010 and 2011. Many believe that it makes little sense to introduce complex monitoring and reporting mechanisms if there is a reasonable chance that the system will be modified or even discarded. It has also put a halt to the purchase of emissions units by potential participants.



As a result, businesses affected by plans to put a price on greenhouse gas emissions in New Zealand will be in a holding pattern until they know whether an ETS or a carbon tax or some combination thereof will be the new Government's preferred policy instrument. The Prime Minister, John Key, has however been clear that his Government will still adhere to its commitments under the Kyoto Protocol and that he wishes to see carbon priced from 2010. He has signalled his Government's intention to introduce an ETS and that amending legislation is likely to be introduced later in 2009.

The immediate question arises: "What does this mean for New Zealand business now?"

This edition of Emission Critical sets out the current state of negotiations on New Zealand climate change policy, the differences between emissions trading and carbon taxes,

and the implications of these measures for business operators and investors. It also looks at the wider areas under review by the Special Select Committee.

## Price based measures and the Kyoto Protocol

It is reasonably clear that regardless of the outcome of the Select Committee review, New Zealand will have a price based measure to encourage emissions reductions. In whichever form the measure is designed, the costs will eventually flow through the entire New Zealand economy.

To review briefly, New Zealand ratified the Kyoto Protocol in 2002, committing New Zealand to a legally binding greenhouse gas target between 2008 and 2012 (the 'first commitment period'). New Zealand's target is to ensure that its average annual emissions over this period do not exceed 1990 levels. At this stage, assuming the ETS is introduced in its current form thereby resulting in domestic emissions reductions, New Zealand is approximately 21.7 million tonnes over its 1990 emissions levels. This means the country will be exposed to a significant liability in the absence of policy measures.

To meet its Kyoto obligations, the Government needs to introduce measures to reduce New Zealand's emissions. To the extent that any measures do not reduce emissions to 1990 levels, the Government will be required to purchase emissions units (alternatively called carbon credits) from abroad under recognised Kyoto Protocol mechanisms.

A wide range of policies and measures designed to reduce domestic emissions exist internationally. Key among them are the classic 'economic instruments' – emissions trading schemes and carbon taxes. Since New Zealand ratified the Kyoto Protocol, there has been significant debate over which of these instruments should be deployed. New Zealand has the dubious distinction of having spent very large sums of money elaborating both policy instruments but implementing neither of them despite over a decade of design work and consultation.

## Key Issues: how to set the carbon price?

Putting a price on greenhouse gas emissions assigns a cost to pollution, therefore creating a financial incentive to reduce emissions. Carbon taxes and emissions trading under a cap are two ways of achieving such an outcome.

Emissions trading is a market-based mechanism which limits the level of pollution permitted and leaves it to the buyers and sellers of pollution permits to establish a price for them. It is a mechanism explicitly designed to incentivise businesses and households to reduce their emissions. The market based nature of an ETS was a major factor in the 2005 rejection of a carbon tax in favour of an ETS. Under an ETS, participants are required to surrender emission units annually to cover their ETS liabilities.

In the ETS designed by the previous Government, there was no cap on the price of carbon. Permit scarcity was guaranteed by New Zealand's excess emissions over 1990 levels. However, access to permits in other countries or credits generated under UN approved schemes meant that the New Zealand price would ultimately be determined by international demand for credits.

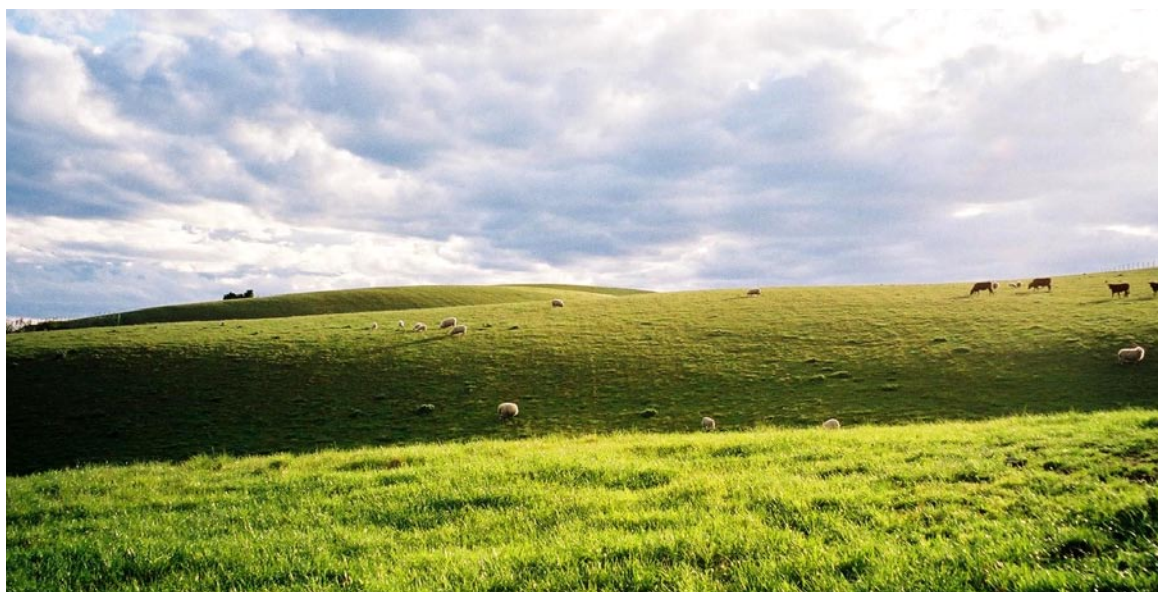
In contrast, taxes are a pollution price imposed by governments. Taxes seek to influence consumption and investment decisions by making pollution more costly. Taxes can certainly influence the price of emissions but it is very difficult to calculate in advance the quantitative reduction in pollution they will achieve. If a particular level of emissions is being sought, taxes may have to be repeatedly adjusted to secure the 'right' outcome, irrespective of the market price of carbon. This was one of the key concerns under the previously proposed carbon tax.

In short, a carbon emissions trading scheme secures the quantum of emissions reductions required at a market price that cannot be known in advance; a carbon tax provides security around the price of emissions reductions efforts but cannot guarantee that any particular level of reductions will be achieved.

New Zealand has managed successively to design first a carbon tax, then an ETS. Under the initial carbon tax policy, the previous Government proposed to set the carbon tax in the region of \$15 - \$25 per tonne of carbon dioxide equivalent, with exemptions for trade exposed industries and others. Had that been insufficient to reduce emissions to the required level, the Government would have had to purchase emissions permits on the international market from other countries with surpluses or from credits created by clean development projects in developing countries sanctioned by the UN. The latter have been trading at around \$34 per tonne.

While the enacted ETS was clearly a very different instrument, the incentives to reduce emissions would have been not dissimilar to those created by a carbon tax. Once again, extensive free allocations of permits were planned to shield particular industries from whatever price the market sets on carbon. Access to permits on the international market would have provided an upper-bound to the price permit buyers faced. While the scheme was designed to guarantee compliance with New Zealand's Kyoto quota in the longer term, exemptions in the short term were anticipated to result in the Government purchasing 21.7 million compliance credits on the world market to enable New Zealand to meet its obligations.

While the compliance costs of the two policy approaches differed, broadly similar distributional burdens were implied through the use of tax exemptions and free allocations with taxpayers meeting any shortfall in the country's overall Kyoto obligations. Over time the ETS would have generated a consistent carbon price throughout the economy. But in both cases, the cost of carbon would have migrated towards the world price.



In the design of both schemes, one of the most contentious issues was the treatment of the Kyoto gases other than carbon dioxide. The initial carbon tax proposal was to apply only to carbon dioxide emissions from the consumption of fossil fuels, such as coal, gas, petrol and from industrial processes, such as chemical reactions involved in manufacturing. All other greenhouse gases were excluded, including methane and nitrous oxide which constitute almost 50% of New Zealand's greenhouse gas profile, with the cost of carbon being borne directly by the Government out of consolidated funds.



The ETS would have progressively extended to these other gases notwithstanding the measurement and management challenges posed, particularly in the agricultural sector. Conceptually, there is no reason why taxes could not also have been designed to apply to all greenhouse gases. The fundamental policy question is the same in both cases: will the imposition of a price on these emissions incentivise lower emission activities?

Continued coverage of agriculture in any amended ETS or revived carbon tax will be a key issue. While there are available means to reduce nitrous oxide emissions from agriculture, enteric methane remains a significant challenge for which a technical silver bullet does not yet exist. It is the intractability of the methane problem that has persuaded some to argue that agriculture should be excluded from the ETS. If that were to happen either taxpayers or businesses and consumers directly would have to pick up the bill which, given the weight of agricultural emissions in New Zealand's overall profile, is not small. While no other country has yet extended an ETS to agriculture, that simply reflects the fact that no other developed economy has such a high proportion of its emissions coming from agriculture. Whatever policy approach New Zealand takes, agriculture will not be able to be ignored.

### What should businesses do now?

The short answer to this question is that businesses should continue to develop the tools to measure and manage emissions. Both an ETS and a carbon tax will put a price on carbon that will flow through into the costs of goods and services. Businesses should be well aware that the implementation of either mechanism will have far reaching effects on both businesses and households, regardless of whether they are participants in any scheme.

To manage these impacts, increased attention to energy efficiency is vital and robust carbon management strategies should be implemented by all businesses to price carbon into all business decisions. To ensure long term sustainability, businesses will need to focus on how to carbon proof their operations and change business operations to take account of a future carbon constrained world.

While the precise accounting and taxation consequences of imposing a carbon price are once again in the melting pot, CFOs and their staff should continue to have a focus on accounting for carbon emissions in system development.

### Points of obligation for future ETS or carbon tax participants

The term 'point of obligation' refers to the point in the supply chain where the obligation for monitoring, reporting and offsetting of emissions arises. Under the ETS, mandatory participation is required for certain obligated parties within specific sectors. Anyone carrying out a listed activity for mandatory participation is a point of obligation and will either have to register as an ETS participant, or under a tax regime will be liable to a carbon tax on their emissions.

To minimise the administration and compliance costs of implementing an ETS or carbon tax, Governments have consistently advocated minimising the number of points of obligation by targeting emitters higher up the supply chain. This is unlikely to change but, until the Select Committee's review is completed, likely points of obligation will face significant uncertainty in the absence of clear guidelines about who is responsible for measuring, monitoring and reporting what.

Guidance from the previous Government's ETS regulations and carbon tax documents may still be useful in providing direction on future monitoring and reporting requirements. We suggest that businesses continue to capture data based on previous regulations and methodologies, and in cases where these methodologies are deemed inappropriate, we recommend businesses forward this information to the Select Committee by way of submission.

### Areas of Uncertainty

The Government's decision to suspend the implementation of the ETS creates uncertainty in many sectors.

Under the ETS as enacted, pre-1990 foresters were required to purchase permits to cover the emissions represented by any deforestation. While some free allocation had been provided for, costs would still have fallen on those who wished to clear pre-1990 forest and change the land use. Pre-1990 forest owners may now be wondering whether they will be able to undertake deforestation in the intervening period without incurring a liability. It is unclear whether the proposed suspending of legislation will seek to freeze the position for these landowners or, if not, whether any future legislation has retrospective effect on any deforestation undertaken in the interim. It is of course possible that the result of the Select Committee review might recommend allowing the clearance of pre-1990 forests without incurring liability. However, if this were the case, New Zealand's emissions overshoot are likely to rise thereby increasing the overall cost of meeting the country's Kyoto target.

The postponement will also affect post-1989 foresters who wished to enter the ETS and earn carbon credits. With the status of credits or rebates earned through carbon sequestration on hold, investment in forestry is likely to be deferred.

The position of trade-exposed emitters will be similarly in doubt although, in fairness, the treatment of this category of business had not been settled even under the amended ETS. From the very beginnings of policy development on meeting New Zealand's Kyoto commitments, there has been fierce debate over how and to what extent some firms should be exempted from the rigour of a universal carbon price. It has been particularly difficult to negotiate how large trade-exposed emitters would be allocated free units (under an ETS) or rebates (under a carbon tax), thereby limiting the impact of these schemes on their international competitiveness. Under both the carbon tax and the ETS, trade exposed entities in the stationary energy and industrial processes sector have been offered free allocations or assistance to cover the increased flow-on costs or increased electricity costs of these pricing mechanisms. The key issue has been whether this shielding was sufficient to maintain international competitiveness.



In the initial proposal for a carbon tax, the previous Government proposed negotiated greenhouse agreements (NGAs) as a way of shielding trade exposed activities. Where a carbon charge would reduce international competitiveness of domestic output relative to the output of foreign competitors, NGAs were intended to provide relief from the carbon tax on emissions arising from a firm's production activities. Specific criteria were required for firms to be eligible to negotiate for NGAs, including evidence that the



charge would significantly increase costs (due to more than 20% of the firm's expenses being energy and emissions related), or that the charge would reduce profitability of more than 10%, or move the firm significantly below the firm's weighted average cost of capital. Once a business had demonstrated it was competitively at risk, the next step was to demonstrate a path towards world's best practice in emissions management. An independent expert and independent validator were required. In return for meeting specific criteria, NGAs relieved participants from the obligation to pay the carbon tax on inputs and offered rebates on the tax content reflected in the prices of their inputs. The negotiation of NGAs proved difficult and cumbersome and only three were ever concluded before the carbon tax was scrapped.

Under the ETS that was recently enacted, the issue of trade-exposed businesses was dealt with by way of free allocations. The detail of these was to have been finally settled by way of regulation, but clear expectations had been raised in respect of a number of sectors including forestry, agriculture, trade-exposed industry, and fishing vessel operators. The process of eligibility and extent of protection was still contentious, but the regulations enable a more transparent path to shielding trade exposed entities.

No matter what policy instrument the new Government adopts, protection for trade-exposed businesses will be controversial and the subject of intense lobbying. It is in the interests of businesses to minimise their exposure to additional cost; it is in the interest of the Government to provide no more assistance than is absolutely necessary. Every tonne of free allocation to a trade-exposed business represents an additional tonne of cost that the rest of the economy must carry. Free allocations also create islands of activity that have little incentive to reduce emissions thereby making the overall emissions reduction target harder to achieve.

Businesses not entitled to shielding under either an ETS or carbon tax, who are able to fully pass on the cost of carbon to their customers, are likely to advocate a carbon tax. This is due to the reduced compliance costs from paying a tax rather than having to engage in potentially complex carbon credit trading. For others, compliance is likely to be simpler under an ETS. There is clearly an argument for carbon taxes in some circumstances but this needs to be balanced with the compliance complexities arising from a blended suite of price based measures and the impact on liquidity in the New Zealand market.

A further area of historic frustration has been the lack of incentivisation for accelerated emission reductions. Whilst carbon remains not fully priced, which would be the case under the recently enacted scheme under which free allowances are phased out in 2030 and country allocations remain far above the level they will need to be reduced to by 2050, many emission reduction initiatives will not be financially viable. This will slow the domestic rate of emission reductions. If deeper emissions reductions in New Zealand are likely but the current price does not signal that (owing to the slow pace of international negotiations), a good case can be made for complementary, non-price based measures ("carrots") that will accelerate the rate such reductions can occur. This may be particularly important if large emission-intensive investment would otherwise proceed.

Clearly there is a risk that the new round of uncertainty will slow the readiness of all businesses in preparing for a carbon constrained economy. This extends to the development of systems for flowing the cost through financial statements. But it would be short-sighted for businesses to take their eye off the ball in the intervening period. Regardless of its form, it is very likely that the Government will be extending a price-based measure to the majority of the carbon emissions New Zealand generates. Companies need to understand how they can measure and reduce their liabilities, however they may arise. This applies equally to companies likely to be points of obligation for measurement under an ETS or a carbon tax, and to those that are not direct emitters but are heavy users of carbon-intensive resources such as fuel and energy.

## The impacts of climate change science

Revisiting the scientific understanding of climate change has the potential to significantly slow down and divert resources from the analysis of scheme design. It is hard to know what a New Zealand Parliamentary Select Committee can add after all that has been written by the Intergovernmental Panel on Climate Change (IPCC), the Stern review, the Garnaut Review and any number of statements by scientific academies. Even in its most sceptical phase, the Bush Administration did not seek to deny the risks of climate change. And that is what the world is dealing with – managing a risk. This is not – and cannot be – a case where definitive scientific predictions are available. There is a risk to be managed and the debate is around the level and timing of a response. Given that global emissions continue to soar, it seems unlikely that global action to date has been either precipitate or excessive.

Given that New Zealand has ratified the Kyoto Protocol (and the Government has indicated its intention to honour that commitment) it is hard to see what can be gained from a further analysis of the science by politicians. In any case, changes of Government in both Australia and the USA mean that New Zealand would be spectacularly isolated in the developing country camp if it were to attempt to justify minimal action on the basis of scientific argument. It is anticipated that this scientific review will not be prolonged.

If the Select Committee feels the need to examine the science then it would be more useful for it to draw on the vast amount of New Zealand specific analysis which has already occurred and focus on where New Zealand can benefit from the opportunities provided by future climate changes.

With changing climate patterns such as rising sea levels, more frequent extreme weather events and changing rain patterns, it will be necessary for New Zealand to adapt. For example, it is anticipated that the west coast will face increased rainfall, while the east coast will become drier and less suitable for agriculture. Agricultural productivity is expected to increase in some areas but there is the risk of drought in others and there will likely be a change in the pests and diseases our primary industries face. Examining the costs associated with changing land-use activities to suit a changing climate would be useful.

There would also be value in exploring the impact climate change will have on international water supply, particularly in Australia. New Zealand is a significant exporter of water due to the heavy reliance on water in both agricultural and forestry operations. As water will become a more valuable resource in the future, it will be important for businesses not only to consider the cost of future carbon prices, but the value of water in their business operations. New Zealand should be seeking to capitalise on the comparative advantage access to plentiful water supplies will confer in a water-constrained world.

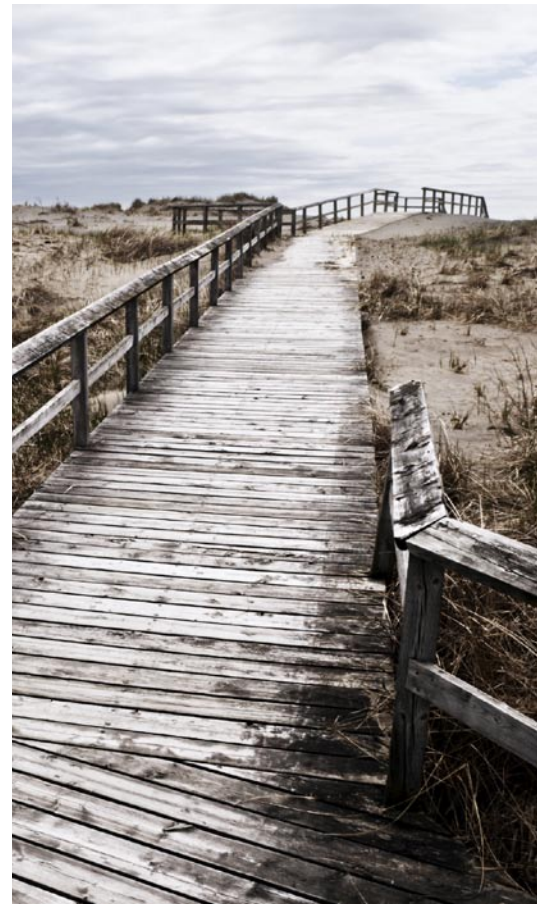
## Concluding Comments

Virtually all aspects of a company's operating environment – its supply chain, customers, operations, investors, regulation and even competitors – are exposed to carbon emissions and the uncertainties that have been raised by the need to respond to climate change. A carbon-constrained world will carry risks for those heavily dependent on emissions. It will also offer new opportunities.



Whatever the outcome of the Select Committee's enquiry, businesses are likely to remain under pressure to protect and enhance shareholder value by minimising downside risks and maximising the upside opportunities of climate change. We rank the chances of New Zealand walking away from taking steps to reduce its greenhouse gas emissions as very low. One way or another, emissions will become the subject of increasing scrutiny and most likely become more expensive.

While we consider that price-based policy instruments are most likely to be deployed, their precise shape must once again wait further examination. Australia's decision to adopt a cap-and-trade scheme and the new US Administration's declared preference for cap-and-trade make it likely that New Zealand will stay with some form of the ETS that has already been developed. Given the complexion of the new Government, it would not be a surprise if there was a strong case made to exclude agriculture from the scheme. On the other hand, the sheer weight of agricultural emissions in New Zealand's profile would make their exclusion a costly one for the rest of the economy. In the event that agricultural emissions were excluded, we would expect significant alternative policies and measures to be imposed to deal with them.



An ETS or carbon tax with reduced coverage would not necessarily mean less cost. To the extent that these instruments did not reduce emissions sufficiently, the Government would be forced to consider other regulatory mechanisms. Standards to influence the demand side of the energy equation could be equally extensive and similarly costly to implement.

In this environment a robust carbon management strategy that addresses the foreseeable impacts of emissions reduction requirements and the effects of climate change itself remains essential. While astute companies have long ago realised the need for managing carbon in their business operations, the case for all businesses to prepare for a carbon-constrained world remains compelling. The proposed suspension of New Zealand's ETS is more a reflection of the way New Zealand's political and policy development environment operates than any fundamental question mark over the need for emissions reductions.

The only question is the extent to which another round of navel gazing will see New Zealand scrambling to catch up if the momentum for more ambitious emissions reductions picks up at the global level. New Zealand exports are already at risk from increasing consumer and retailer vigilance about the carbon footprint of goods and services. If this spilled over into regulatory requirements to account for the emissions embedded in our exports, New Zealand businesses that had failed to manage carbon could find themselves in difficulty. Similarly, if some trading partners decided to take more ambitious measures but protect their own producers through border tax adjustments, New Zealand exporters could find themselves disadvantaged to the extent that domestic action was lagging behind the rest of the world.

These risks are even harder to assess than those surrounding the final shape of New Zealand's regulatory environment. All businesses can do, in the meantime, is get on with taking sensible steps to measure and minimise their emissions. The policy makers will eventually enact something. Those who have delayed taking action could find any short-term savings outweighed by the speed with which they then have to react.

# PricewaterhouseCoopers' Climate Change Team

## **Julia Hoare**

Partner

Phone: +64 9 355 8593

Mobile: +64 21 222 2985

Email: [julia.hoare@nz.pwc.com](mailto:julia.hoare@nz.pwc.com)

## **Chris Taylor**

Partner

Phone: +64 9 355 8600

Mobile: +64 21 617 045

Email: [chris.e.taylor@nz.pwc.com](mailto:chris.e.taylor@nz.pwc.com)

## **Alex Cutler**

Associate Director

Phone: +64 9 355 8170

Email: [alex.j.cutler@nz.pwc.com](mailto:alex.j.cutler@nz.pwc.com)

## **Lesley Anderson**

Partner

Phone: +64 4 462 7114

Mobile: +64 274 831 461

Email: [lesley.j.anderson@nz.pwc.com](mailto:lesley.j.anderson@nz.pwc.com)

## **Duncan Scott**

Director

Phone: +64 4 462 7160

Mobile: +64 21 945 423

Email: [duncan.p.scott@nz.pwc.com](mailto:duncan.p.scott@nz.pwc.com)

## **Murray Harrington**

Partner

Phone: +64 3 374 3094

Mobile: +64 21 946 780

Email: [murray.d.harrington@nz.pwc.com](mailto:murray.d.harrington@nz.pwc.com)

[www.pwc.com/nz/emissioncritical](http://www.pwc.com/nz/emissioncritical)

[www.pwcclimatechange.co.nz](http://www.pwcclimatechange.co.nz)