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Improvements to the New Zealand Emissions Trading Scheme

Genesis Energy Limited (**Genesis**) welcomes the opportunity to provide a submission to the Ministry for the Environment (**MfE**) on the consultation paper *Improvements to the New Zealand Emissions Trading Scheme* (**consultation paper**) dated August 2018.

Genesis has been a participant in the New Zealand Emissions Trading Scheme (**ETS**) since it began. During that time, Genesis has retired 500 megawatts (**MW**) of thermal generation and cut coal use by 80 per cent, two other large thermal power stations have closed, over 1000 MW of renewable generation has been built, and 2000 MW of renewable generation has been consented. Emissions from the electricity sector now comprise just four per cent of the New Zealand emissions profile.

The wider policy framework is crucial and sequencing key

Noting this success to date, we broadly support the ETS continuing to play a key role in incentivising businesses to invest in low emissions solutions. However, we are of the view the consultation paper does not adequately consider the wider climate policy framework. Policy cohesion is crucial for the successful decarbonisation of the New Zealand economy.

We understand that the Government has agreed a framework for reducing New Zealand's emissions that focuses on showing leadership both locally and internationally, ensuring a productive and climate-resilient economy and a just and inclusive society. This guides the Government programme of work and initiatives, including:

- (a) the Zero Carbon Bill (**ZCB**) that sets long-term direction of travel and ambition through a 2050 emissions reduction target and an emissions budget (i.e. allowance) framework;
- (b) the establishment of an independent Climate Change Commission (**CCC**) via the ZCB to provide advice to the Government on ways to reduce New Zealand's emissions;
- (c) the current work of the Interim Climate Change Committee (**ICCC**) that is focused on two key issues relating to 100 per cent renewable electricity generation and inclusion of agriculture in the ETS;

- (d) the role of the dedicated Transition Hub that advises on the best transition pathways, supported especially by the work of the Productivity Commission (**the Commission**) in its *Low emissions economy* inquiry; and
- (e) the ETS as the key policy tool for reducing emissions, the settings of which *'needs to reflect the Government's decisions about how New Zealand is going to meet its targets'*.¹

Just how the settings of the ETS align with the remainder of the programme of work and initiatives currently underway is fundamental to the success of the ETS itself and the wider Government agenda. Accordingly, we are wary that this consultation paper may be out of sequence: that is, we should be considering proposed changes to the ETS *after* final policy decisions have been made relating to the ZCB and the Government has received and responded to policy advice from both the Commission and the ICCC in 2019.

We do appreciate some of the changes in the consultation paper have been signalled since the MfE ETS review in 2015/2016. However, some time has passed and the consensus for the need for a meaningful, economy-wide transition to a low emissions economy has gained momentum. This means we are driving towards a shared goal but are not yet clear as a country how we will achieve this.

What is clear is the elevated importance for *all* sectors to play their part in the transition, whether that is through emissions reduction (e.g. transport, agriculture), emissions offsetting (e.g. forestry), and (or) supporting other sectors to decarbonise (e.g. electricity generation playing a support role to transport and industrial processing).

The unique opportunity and challenge for the electricity sector

In our view, advice from the Commission and the ICCC could be very important to balance the Government policy response between drivers in the ETS, leveraging of other policy options, and setting the priority for opportunities to decarbonise at a broad, economy-wide level. For example, both the Commission and the ICCC have already acknowledged:

- (a) the key role of the electricity sector in supporting high emissions sectors including transport and industrial processing to decarbonise; and
- (b) the challenge in doing this while also further reducing emissions from an already highly renewable electricity sector.

To the second point, the challenge was articulated by the Commission as maintaining security of supply at a reasonable cost to consumers i.e. continuing to balance the energy 'trilemma' of providing sustainable, affordable and reliable energy. At its simplest, New Zealand currently meets a winter and dry year energy shortfall using coal and gas generation and there is no economic 'silver bullet' that can substitute for the thermal generation that currently fulfils this role. To retire that thermal generation today would require the significant overbuilding of renewable electricity generation at considerable cost to consumers.

¹ <http://www.mfe.govt.nz/node/23439>.

This challenge cannot be solved through a price signal from the ETS alone and will require a combination of falling costs of, and advances in, generation technology and improvements to the resource management policy framework. The Commission recommended *‘the Government should be cautious in specifying targets for emissions within the electricity sector, and make sure that technology is available to meet them without significantly increasing wholesale electricity prices above the levels achieved with current technology.’*²

It also recommended, *‘the Government should give priority to revising both the NPS-REG and the NPS-ET to ensure that local authorities give sufficient weight to the role that renewable electricity generation and upgrades to the transmission network and distribution grid will play in New Zealand’s transition to a low-emissions economy.’*³

We agreed and have provided considerable analysis to the Commission, the ICCC and on the ZCB on this matter, which is attached as Appendix B for your reference. We also note the first report published in the Electricity Price Review (EPR) acknowledges the analysis provided by the Commission, with the EPR panel commenting, *‘higher electricity prices could hinder switching from petrol to electric vehicles and the use of electricity for industrial processes. It would also exacerbate affordability problems.’*⁴

This is to the first point above; the role for our highly renewable electricity sector in electrifying other parts of the economy is a significant, world-leading opportunity. To maximise this opportunity, we need to think carefully about the future of the ETS in the electricity generation sector, particularly with the challenge of further decarbonising in mind:

- (a) if the increased emissions price is realised in wholesale electricity prices, will this act as both a cost to households consumers *and* a disincentive to businesses that would otherwise switch fuels?; and
- (b) does this suggest trade-offs will be required; for example, would it be better to accept a reduced burden on the electricity sector’s remaining emissions to maximise the benefit it can provide for other sectors looking to switch fuels and electrify?

In our view these are questions for the Government to consider on advice from the ICCC, the Commission and ultimately the CCC, once it has been established; and may in time influence the functioning of the ETS as it intersects with the wider climate policy direction.

The need for transparent decision making and well-signalled transition to changes

We have responded to the consultation paper below with the above lens in mind and, accordingly, highlight the need for a well-signalled transition to any new arrangements. This will allow ETS participants time to adapt and meet the change, particularly decisions related to changes to unit supply volumes, adjustments to the fixed price option (FPO) before 2020 and the extent of phasing down industrial allocation.

² Productivity Commission, [Low Emissions Economy Inquiry – Final Report](#), page 401.

³ Ibid.

⁴ Electricity Price Review, [First report for discussion](#), page 34.

We also note that the introduction of auctioning and the carefully managed re-linking to the international market will add considerable complexity and significant sophistication to the ETS. This necessitates the immediate strengthening of the ETS governance framework and was clearly noted by the Commission, who stated, '*Careful design of the governance of the NZU market is crucial to ensure this translation works efficiently and effectively.*'⁵

We consider the Government should regulate New Zealand carbon units (**NZU**) as financial products as defined by the Financial Markets Conduct Act 2013 (**FMA**) to ensure fit for purpose, robust market oversight as the ETS evolves to facilitate our low emissions transition. We also consider there should contractual and product standardisation and modernisation of the structures behind the ETS; for example, automating trades. This will improve the liquidity of the market and reduce barriers for market participants.

We look forward to further engagement on these and other matters in the coming months. In the meantime, if you would like to discuss anything further, please contact me by email: margie.mccrone@genesisenergy.co.nz or by phone: 09 951 9272.

Yours sincerely



Margie McCrone
Senior Advisor, Government Relations and Regulation

⁵ Above at 2, page 136.

Appendix A: Responses to Consultation Questions

QUESTION	COMMENT
<p>Q1: What issues should the decision maker consider when making unit supply decisions?</p>	<p>We consider all issues MfE notes in the consultation paper should be accounted for when making unit supply decisions, including emissions budgets, recommendations for the ICCC and non-ETS climate change mitigation policies.</p> <p>The Government should also have regard for the difference between the ETS and other jurisdictions' trading arrangements, so far as it considers other schemes have relevance to the ETS; for example, the different treatment of emissions intensive trade exposed (EITE) industries.</p>
<p>Q2: What, if any, restrictions should be placed on the NZ ETS decision maker when making unit supply decisions? (For example, currently one year's notice must be given for changes to unit supply volumes).</p>	<p>We consider it is important that unit supply volumes are signalled well in advance as regulatory certainty is crucial for participants that need to make long-term investment decisions. Accordingly, we support the protections currently available in the ETS legislation, including the requirement to provide one year's notice and consult with parties likely to be substantially affected.</p> <p>We would however expect these to go further once the emissions budget framework is in place, to provide a safeguard that emissions budgets will be aligned with unit supply volumes. We note that currently it is not entirely clear how decisions on unit supply volumes would fit within the five-year rolling framework for emissions budgets proposed in the ZCB, with the consultation paper simply noting it should be 'relatively straight forward' to align the ETS and the emission budget framework. In our view, unit supply volumes and emissions budgets must be aligned to protect the unit supply from political interference; if they are misaligned, there is a possibility a Government could bring forward units available within a parliamentary term, leaving the market short in the final two years of an emissions budget period.</p> <p>It could be a Government is required to justify its decision to change a unit supply volume if it is out of step with an emissions budget.</p>

<p>Q3: Do you agree with the proposal to implement a single-round, sealed bid auction format with uniform pricing? If not, why not?</p>	<p>Yes, provided the volumes auctioned are aligned to the liquidity in the secondary market.</p> <p>We consider this option is less complex and has a lower risk of collusion, but do strongly advise the Government strengthens the ETS governance framework.</p> <p>MfE sought advice on this matter in 2017, and the report from Covec Consulting noted there was an absence of market transparency.⁶ This included identifying information asymmetries in the publication of market information, the absence of a regulated exchange for trading and some evidence of poor advice.</p> <p>It recommended several options to address the issues, including that an NZU could become a Financial Product as defined in the FMA. We note the Commission also explored governance options for the ETS and recommended NZU are regulated as financial products.</p> <p>This is our preferred option, and we consider it should be progressed as a priority alongside the changes recommended in the consultation paper.</p>
<p>Q4: Do you think that auctioning frequency should be?</p>	<p>Monthly.</p> <p>We support monthly auctions because this will strike the right balance between frequency and supply volumes. In our view weekly auctions would replace the secondary market, reducing its liquidity; and quarterly auction volumes would be too large for the market to manage, with the secondary market unable to provide sufficient price discovery.</p>
<p>Q5: Do you agree with the proposal that all NZ ETS account holders should be able to participate at auction? If not, why not?</p>	<p>We agree, so long as NZU are recognised as financial products, as per our response to Q3 and cover letter.</p> <p>We consider that until these market governance rules are in place auction participation should be limited to ETS participants only i.e. emitters and foresters.</p>

⁶ Covec Consulting [Market Governance of the Emissions Trading Scheme: Options and Analysis](#) dated June 2018.

<p>Q6: Do you think that the Government should use the proceeds gained from the auctioning of NZUs for specific purposes? If so, please explain what those purposes would be.</p>	<p>We recommend the Government establishes a dedicated decarbonisation investment fund. We note the National Land Transport Fund, which sets a precedent for hypothecated taxation.</p> <p>The fund should be available to support low emissions investment; for example, low cost loans for electric vehicle purchases, and low emissions innovation; for example, the development and commercialisation of a methane vaccine.</p>
<p>Q7: Do you agree with the proposal to replace the \$25 fixed priced option with a cost containment reserve price ceiling implemented through the auctioning mechanism? If not, why not?</p>	<p>We agree that the current fixed price option could be replaced with a cost containment reserve (CCR), provided it is designed carefully to be fit for purpose. We consider the CCR should be sized to act as an effective 'cap' on NZU prices, but not such that it fails to provide for steady, well-signalled price adjustments over time.</p>
<p>Q8: How do you think the price level and number of units in the cost containment reserve should be managed over time?</p>	<p><i>Decision maker has discretion to determine the settings while having regard to certain factors.</i></p> <p>We support the decision maker to determine the price and level of the CCR provided it accounts for carbon price and volatility, market integrity, the ability for the economy to respond to price signals.</p> <p>Barriers do remain for some sectors to reduce their emissions; for example, in the electricity sector thermal generation is currently required to meet our winter energy shortfall in dry years. If the emissions price increases significantly before technology and storage options are available to replace coal and gas plant then consumers will bear the cost of the price paid for thermal generation in the wholesale market. See our cover letter and Appendix B for more on this.</p>
<p>Q9: What actions should occur if the price ceiling is struck?</p>	<p><i>Increase the price ceiling trigger level, if it was set on a too low or erroneous basis.</i></p> <p><i>Increase the limit on international units, if high domestic abatement costs are the cause of the excessively high prices.</i></p>

	<i>Undertake a fuller system review, if the high prices are seen as a sign of wider market dysfunction.</i>
Q10: Do you agree with the proposal to review the price ceiling if another significant event occurs (such as a decision to link the NZ ETS with another carbon market)?	We agree, provided the decision maker considers the impact on the wider economy and impact across all industries.
Q11: Do you agree that the \$25 FPO may not be appropriate for the short term, and may need to be adjusted before 2020? Please explain.	<p>We do not consider raising the FPO before 2020 will have any appreciable impact on the emissions reduction, so long as the ETS does not impose costs on all parts of the economy i.e. agriculture is excluded and industrial participants have free allocation.</p> <p>If the Government does proceed to make changes to the FPO before 2020, it is our firm view the FPO should be gradually increased; providing a clear signal of its intention to do so, and at what time. This will allow current ETS participants time to adjust and respond to the signals from the ETS, so much as is possible.</p> <p>In our view, there should not be a rapid equalisation to international market prices in the near-term due to the variability of international prices, the variability of international scheme coverage, and the lack of maturity in international schemes; for example, prices vary greatly between trading schemes in other jurisdictions, some schemes provide greater exemptions than others, and some schemes have been subject to potentially destabilising price rises as they have developed.</p>
Q12: Which mode of purchase for international units (direct or indirect) would be the best approach for the NZ ETS, acknowledging that there are other significant factors that will influence this decision? Please explain.	<p>In the near-term we consider that international units should be purchased indirectly to ensure the integrity of the units supplied. In our view the Government is best placed to determine the criteria for environmental integrity.</p> <p>When the criteria for unit integrity is well established, participants should be able to directly purchase international units that meet the criteria.</p>

<p>Q13: If NZ ETS participants are able to purchase and surrender international units directly, do you think that there is justification for varying the percentage of allowable international units by participant type? If not, why not?</p>	<p>We consider there may be merit in restricting the percentage of international units available to participants with free allocation. For those participants with full surrender obligations, there should be no limit, subject to satisfying the integrity criteria.</p>
<p>Q14: How do you think decisions on a phase-down of industrial allocation should be made? Select all that apply.</p>	<p><i>Establish a decision-making process to determine industrial allocation rates over time.</i></p> <p>We consider that a test should be developed as per Q15, which clearly assesses the risk of carbon leakage. This test should be designed by experts, and not rely on formula alone. This will be particularly important in the near-term, with international competitors unlikely to face the same emissions factor as in the ETS.</p>
<p>Q15: If a decision-making process for industrial allocation is implemented, which of the following factors should the decision-maker taken into account?</p>	<p><i>The risk of emission leakage, with the aim of avoiding leakage driven by differential emission pricing policies, and based on economic analysis of the markets for emissions intensive and trade exposed activities and their products</i></p>
<p>Q16: If a phase-down is initiated in future, which of the following rates for phasing-down industrial allocation should be considered?</p>	<p>Please refer our response to Q14 and Q15.</p>
<p>Q17: What impact would changes to the levels of industrial allocation from 2021 have on your investment or business decisions?</p>	<p>As with other changes proposed in the consultation paper, regulatory certainty and a well-signalled timeline for transition are crucial factors for our business, and those directly subject to changes to levels of industrial allocation.</p> <p>In our view, we consider the long-term stability of energy intensive industries that are subject to industrial allocation drives investment in renewable electricity generation, which has been signalled as necessary as demand for electricity grows.</p> <p>The sudden exit of an industrial producer that had had its business activities undermined by international carbon leakage could destabilise the economy generally, and the electricity sector specifically. This goes to the points above on the complex interdependencies of New Zealand's economy, and should</p>

	absolutely be avoided by ensuring clear and stable policy decisions on this matter.
Q18: For each of the seven areas that we have identified as being sources of potential risk, what is your assessment of the level of risk that they create, both now and in the future? Please provide examples or evidence if possible.	<p>Risks of manipulation of the NZU price</p> <p>In the future we consider this is a risk, but provided there is both sufficient liquidity in the secondary market and reasonable market oversight, those risks are relatively low. Our view is that market conduct rules that apply to financial products should apply to NZU to improve market confidence (as above).</p> <p>Insider trading</p> <p>In the future we consider there is a low risk of insider trading, but this can be managed through better coordination of the disclosure of information to the market to avoid any chance of insider trading during times of regulatory reform. The single website for publication of information will help mitigate this risk, as will clarifying the role of government agencies that have responsibilities for the ETS.</p> <p>Credit and counterparty risks</p> <p>In the future we consider that credit and counterparty risks could increase, but improved market governance will protect from this. We also note that credit and counterparty risks are inherent in market trading; they are part of doing business.</p>
Q19: Do you think that there would be benefits from publishing individual emissions data reported by NZ ETS participants? (Please explain.)	Yes, and we would encourage historic emissions data to be published so it can be noted where participants have achieved significant emissions reductions, including ourselves as above.
Q20: Do you think cases of non-compliance should be published? (Please explain.)	No comment.
Q21: How would publishing these types of information impact you?	No comment.
Q22: Do you agree with the proposal to introduce strict liability infringement offences for low-level non-compliance? If not, why not?	No comment.

Q23: What are your views on the levels of the proposed fines?	No comment.
Q24: Has the excess emissions penalty for failing to surrender or repay units by the due date caused issues for you? If so, please explain.	No comment.
Q25: Should the excess emissions penalty for failing to surrender or repay units by the due date be changed? If so, please explain.	No comment.
Q26: What option do you see as most appropriate for the excess emissions penalty?	No comment.
Q27: Do you agree with the proposal to use approved units to repay any overdue unit obligation from a previous reporting period, before any remaining balance is transferred to the owner? If not, why not?	No comment.
Q28: Should large purchasers of coal, natural gas or obligation fuels have the ability to opt-in for only a portion of their obligations?	No comment.
Q29: As a mandatory participant that supplies this controlled fuel, what burden would it create if more of your large purchasers were to opt-in? Please explain.	No comment.
Q30: Do you agree with the proposal that all coal sold or used from a stockpile be reported, regardless of whether the participant meets the threshold for coal importing or mining in the year the coal was sold or used? If not, why not?	No comment.
Q31: Do you agree with the proposal that the Government should be able to amend UEFs from previous years? If not, why not?	No comment.
Q32: Do you agree with the proposal that participants should repay the same type of units, rather than the exact same unit? If not, why not?	No comment.

<p>Q33: Do you agree with the proposal to extend the general 30-day due date for repayments to annual allocation adjustment repayments? If not, why not?</p>	<p>No comment.</p>
<p>Q34: Do you agree with the proposal that the deadline for surrenders and repayments is 60 working days from the date a notice is sent? If not, why not?</p>	<p>No comment.</p>
<p>Q35: Do you agree with the proposal that industrial allocations can be transferred to a consolidated group account? If not, why not?</p>	<p>No comment.</p>
<p>Q36: Do you agree with the proposal that account operators continue to operate NZ ETS accounts until a succession plan is in place? If not, why not?</p>	<p>No comment.</p>
<p>Q37: Do you agree with the proposal that units should vest in the Crown if the account operator chooses to close the account? If not, why not?</p>	<p>No comment.</p>

Appendix B: Genesis Energy submissions on the Zero Carbon Bill; Productivity Commission Low emissions economy inquiry draft report

Genesis Energy backs the Zero Carbon Bill

Genesis supports the Government's intention to create a meaningful, economy-wide plan to guide New Zealand's transition to a low carbon future. To us, the question is how and in what order should New Zealand decarbonise, so that we act to maximise the benefits of investment in low emissions alternatives while minimising negative impacts on consumers.

The answer must lie in the clear prioritisation of decarbonisation efforts across the entire economy, with a strong focus on opportunities that have the greatest emissions reduction potential. In prioritising these efforts, consideration must be given to what is technically and commercially feasible; able to scale; and comes at least cost to consumers.

Prioritisation will require making trade-offs where necessary: for example, it may be of greater benefit to New Zealand to accept a lower renewable electricity target initially to accelerate the decarbonisation of transport, as this trade-off may deliver materially greater emissions reductions across the whole economy.

New Zealand has a range of unique opportunities and challenges in decarbonising that will require uniquely New Zealand solutions, and the importation of thinking and targets from other jurisdictions can only lead to detrimental outcomes. The foundations for success lie in appreciating the downstream effects on consumers of poorly targeted interventions, or a failure to prioritise our efforts appropriately from a New Zealand Inc. perspective.

In our view, the Zero Carbon Bill (**the Bill**) can provide a framework for prioritisation, but only if it breaks down siloed, at times protectionist thinking to understand what will most benefit consumers and what are the most economically rational interventions that will be required to get New Zealand from today to its 2050 goals. Accordingly, we support the Bill to:



It is a positive step for New Zealand that there is publicly stated cross-party support for decarbonisation. We must now see that translate to the actions of government departments to ensure that the transition is effective, consistent, predictable and stable. Regulatory silos cannot exist if we are to achieve a successful net zero economy that continues to grow and prosper with positive investment throughout the transition and beyond.

The uniquely New Zealand challenge for the electricity sector

New Zealand's current emissions profile is comprised of agriculture (49%), transport (19%), other (17%), industrial processing (6%), waste (5%) and electricity generation (4%).

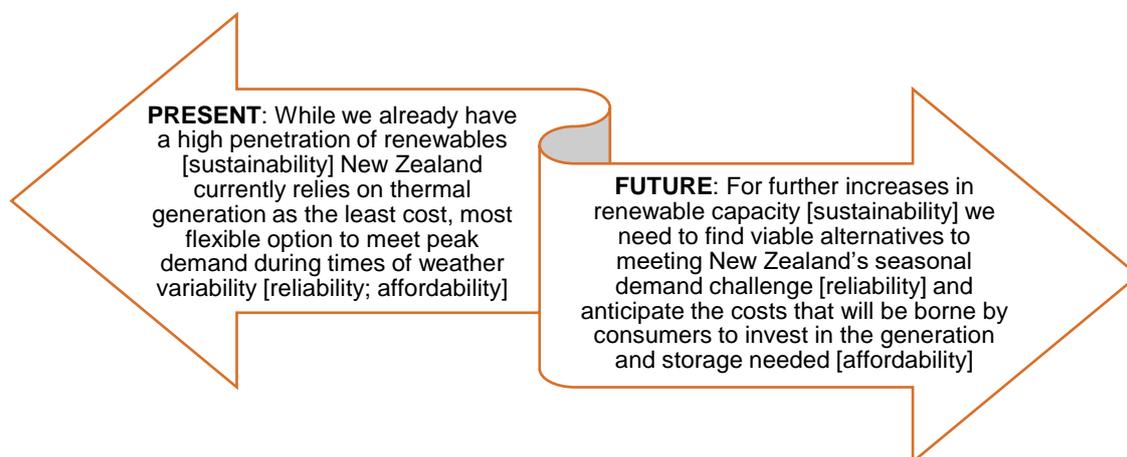
As an electricity generator that generates 60% of its electricity through renewable resources and 40% from thermal resources, we have already halved our emissions footprint and reduced coal use by 80%. We are now focused on working with the sector to address the broader market dependence on coal and meet our intention to exit coal-fired generation altogether by 2030 at the latest. We are also looking to develop new renewable electricity generation and providing future-ready energy tools for our customers to help them manage, monitor and control their energy use.

The electricity sector will play a critical role in the decarbonisation of other sectors (e.g. transport) by leveraging New Zealand's existing high penetration of renewable electricity generation, but it will be challenging to do so while also reducing its own emissions further until new technologies become available.

New Zealand's electricity sector is already the third most renewable in the world. Accordingly, as a mature renewable market, it has different challenges to most other markets that are at the beginning of their renewable journey (e.g. Australia, UK) and it is important we do not misconstrue or confuse other's challenges with our own.

The inconvenient truth for New Zealand is that with 60% of electricity generated from hydro-power stations, and with just six weeks of hydro storage, thermal plant (including at times coal) provides the crucial firming support that has allowed us to enjoy such a high level of renewable electricity. The multi-month 'seasonal risk' we face when the lakes are low is unique to New Zealand and will require longer-term technology solutions that are currently uneconomic.

This challenge can best be understood through the lens of the energy trilemma: providing sustainable, affordable and reliable energy to consumers:



In our submission to the Productivity Commission (**the Commission**) on its Draft *Low emissions economy* findings⁷, we highlighted there is no 'silver bullet' to replace gas and coal generation available today and it is likely we would need to significantly overbuild renewable capacity (at considerable consumer expense) to do so. This is because coal and gas have unique characteristics – they can be stored in large volumes, and turned on and off rapidly as needed. No other single technology option is currently available to match this flexibility.

These are not simple challenges that can be solved overnight, but a 'just transition' is not a 'transition, tomorrow'. Rather, we must work together as a sector to take the next steps to

⁷ [Genesis Energy submission](#) on Low emissions economy – draft report.

decarbonisation - to invest in building the right renewable generation and storage solutions as technologies become available and improve, and as costs continue to fall through to 2050.

The risk to energy consumers during this transition is if policy increases the cost of thermal firming (back-up for hydro risk) before the alternative technology solutions exist, the cost of providing secure and reliable electricity for consumers will increase; in turn increasing household bills and reducing New Zealand's competitiveness as a place to do business.

For investors to develop new renewable generation at the scale required we will need clear policy directives from Government with respect to resource management regulation. In our submission to the Commission we noted the challenges with the current planning framework, and urge the Government to consider whether changes are necessary to ensure new renewable projects can be appropriately consented and developed within reasonable timeframes.

Setting an emissions reduction target in legislation

We support legislating an emissions reduction target out to 2050 to send clear signals across the entire economy that collective action will be needed. In our view, any target must be supported by all sectors, with priority action in the transport, agricultural and forestry sectors as per the Commission's report. We have already noted the challenges of specific policies targeting the electricity sector.

Providing for consecutive emissions budgets

As stepping stones to the 2050 target, Genesis supports the Government, following advice from the Climate Change Commission (**CCC**), to set three consecutive five-year emissions budgets each time, including defining points in time at which those budgets can be reviewed and adjusted, if appropriate.⁸

Transparency and accountability as to the Government's progress in meeting each budget is critical. When it sets a budget, Government should clearly outline how it intends for it to be met and the timeline for doing so. The CCC should then monitor and report annually, by way of delivery reports, on whether Government is meeting those budgets. This will allow much needed transparency across Parliament and an opportunity for Government to reset how it will meet the budgets.

Establishing an independent Climate Change Commission

Genesis believes clarity around the role of the CCC from the outset is crucial. In our view, it should be established as the primary source of climate change advice to the Government but not make decisions in its own right; that is a role for elected law-makers who can balance cross-department advice. The CCC should, however, have scope to hold Government to account.⁹

The CCC's advisory role should include consideration of emissions budgets, whether the 2050 target should be revised over time, and the policy settings around the Emissions Trading Scheme. We also see an opportunity for the CCC to undertake targeted research projects as required that consider specific policy options.

⁸ For example, as technology progresses and comes available at scale and reasonable cost, emissions budgets could be adjusted to spur greater adoption; or in the event of a major natural disaster an emissions budget could be adjusted to reflect this change in circumstance.

⁹ Government should be required to publicly respond to advice received from the CCC and explain why it deviates should it choose to. The CCC monitoring function plays an important role here.

We support the members of the CCC being politically independent and possessing a broad set of skills and expertise.¹⁰ We see having a diverse range of voices at the CCC table as essential to generating multi-lateral support and achievable outcomes.

What is not clear is the extent to which (and how) the CCC will interact with government agencies currently tasked with climate change matters. We recommend the Government provides guidance on how stakeholders can best engage with officials, now and in the future, in the interest of efficiency and policy cohesion.

We are very happy to speak to any element of this submission and look forward to further engagement as the Bill progresses. If you would like to discuss any of these matters further, please contact Margie McCrone by email: margie.mccrone@genesisenergy.co.nz or by phone: 09 951 9272.

Yours sincerely



Marc England
Chief Executive

Low-emissions economy - Draft report

Genesis Energy Limited (**Genesis**) welcomes the opportunity to provide a submission to the Productivity Commission (**the Commission**) on the *Low emissions economy – Draft report (the report)*.

Collective effort and responsibility is needed to achieve climate ambition

Genesis shares the Government's ambition to tackle climate change head on by planning a transition to a lower emissions economy.

In our view, a successful transition that does not negatively impact New Zealand consumers will not be achieved through the efforts of a select few. Both collective effort and collective responsibility is needed: with effort we will move from ambition to action to make meaningful changes to our economy, and with responsibility we will appreciate the impacts these changes will have on all New Zealanders.

Accordingly, we have looked forward to the Commission's draft findings, which provide a key signpost for New Zealand to fulfil this collective task. We appreciate the considered analysis

¹⁰ For example, it is essential to have both business and community represented on the CCC, particularly business leaders with experience in the transport, forestry, agriculture and energy sectors. Scientists could come from climate and behavioural disciplines. There should be community representation for Maori and Pasifika, and for the next generation.

provided in the report, which recommends that a cross-sector approach will set us on the right path to a low-carbon future. We agree:

- Increased afforestation, electrification of transport, and changes to agricultural production are the three key drivers that will be crucial in achieving New Zealand's emissions-reduction goals;¹¹
- A well-functioning and efficient electricity system – one that balances the trade-offs between cost, emissions-reduction and reliability - is central to the transition and will play a critical role in decarbonising other parts of the economy;
- In particular, we agree with the Commission's finding that with current technology and costs, further reducing emissions from electricity generation will increase wholesale prices. Higher wholesale prices will increase costs for consumers and diminish the role that electricity can play in supporting high-emissions sectors to decarbonise e.g. transport; and
- We fully support the recommendation that the Government should be wary of specifying targets for further emissions reduction from electricity generation **until** technology is available at a reasonable cost. We see a real risk to consumers if the transition is rushed; or fails to appreciate the downstream effects of a rising emissions price on household bills, or the unintended consequences of disproportionate intervention in one sector over proportionate interventions across the entire economy.

We also agree with the Commission that a stable, credible policy environment with the strength of cross political party support is needed to empower New Zealanders to plan for the transition in ways that will limit negative financial consequences for businesses and households.

In our view, achieving meaningful policy objectives will require an all-gasses emissions trading scheme (**ETS**) that sends the right signals to all sectors; a stable legislative framework that sets shared emissions-reduction targets; policy interventions that support the pace of change required, particularly in the agriculture, transport and forestry sectors where we stand to maximise emissions reduction gains; and funding commitments for the scale of investment and innovation required.¹²

How to read our submission

The remainder of our submission focuses on the report's recommendations in respect of:

- Electricity;
- Transport;
- Emissions pricing;
- Land use; and
- Short and long-lived gases.

¹¹ We note the recent comments from the Parliamentary Commissioner for the Environment that if the current Government wishes to be more ambitious [than the previous Government] then important policy decisions will need to be made sooner rather than later in the agricultural and transport sectors. See www.selectcommittee.news.com; Notes on the Environment Select Committee 17 May 2018.

¹² We welcome the Government's recent announcement to commit \$100 million over 10 years to the Green Investment Fund in the 2018 budget. See: <https://beehive.govt.nz/release/green-light-our-net-zero-emissions-future-sustainable-jobs-and-growth>.

We have commented on 16 of the Commission's recommendations, and answered three questions. We also provide some concluding remarks and our contact details should you wish to discuss any of these matters further.

The key role of a well-functioning and efficient electricity system

R12.1 'Given rapid changes in electricity-generation technology and potential effects of rising electricity prices on adoption of low-emissions technology in other parts of the economy, the Government should not use subsidies or regulation to favour particular technologies that generate low-emissions electricity'

- Genesis agrees with the recommendation in principle but provides some additional points for consideration

Genesis, like the Commission, sees the potential risk of subsidising specific technologies that may be superseded or create unintended technology lock-in; or create incentives that lead to unforeseen negative outcomes for consumers e.g. quality and security of supply issues as experienced in other jurisdictions.

This poses a shared problem for energy policy makers the world over: how do you enable consumers to maximise the benefits of new technologies without foreclosing the future on their behalf?

Generally, our view is that rather than attempting to predict the future or import 'other country thinking', it is better to have the right levers in place for all technologies to compete on an equal footing to best suit the needs of New Zealand's changing electricity sector. This includes providing equal access to connect to electricity networks for all generation technologies, and enabling national directives on the benefits of renewable energy generation.

That said, as New Zealand works towards a collective ambition for a lower emissions economy, there may be some circumstances where targeted policy intervention can be supported if there is a sufficient case for collective benefit that outweighs the risk of technology lock-in.

When considering the case for policy intervention, it would be useful to take lessons from other jurisdictions to avoid making the same mistakes, and understand how subsidies or incentives could be applied in a New Zealand specific context.

We note that the United Kingdom and some European countries (e.g. Spain, Germany) provide evidence of where subsidising renewable technologies has come at a high cost for consumers. We also note that in New Zealand our existing high penetration of renewables means we are much further on the path to electricity sector decarbonisation than many other jurisdictions.¹³

R12.2 'The Government should be cautious in specifying targets for emissions within the electricity sector, and make sure that technology is available to meet them without significantly increasing wholesale electricity prices above the levels achieved with current technology.'

- Genesis agrees with the recommendation and provides some additional points for consideration

¹³ We note that with renewables totalling up to 85 per cent of annual generation, this puts New Zealand in the top three countries in the OECD, compared with an average of just 24 per cent. Of the thermal generation we do have, our coal use is in the fourth lowest among countries with coal-fired generation in the OECD. Genesis itself has reduced coal use by 80 per cent in the past decade, and halved its emissions.

Genesis is pleased the Commission has acknowledged that a well-functioning and efficient electricity system is one that appropriately balances sustainability, affordability and reliability.

We are also pleased to see it recognise that New Zealand's biggest challenge to meet that balance as it further increases its renewable energy capacity is maintaining resource adequacy (i.e. reliability or security of supply) at reasonable cost to consumers. This is the biggest challenge we see as a large thermal generator planning the future of our generation portfolio when looking at the environmental sustainability and economic viability of coal and gas fired generation out to the 2030s. We explain further below:

The challenge

New Zealand has a significant seasonal demand challenge: it needs the most energy in winter, but has the best generation capacity in summer. According to Genesis' modelling, there is a need to account for around 2,000 gigawatt hours (GWh) of storage to meet demand, plus manage average seasonal inflow variation, between summer and winter.¹⁴

The current solution

New Zealand currently relies on thermal generation from gas and coal to bridge the summer-winter, supply-demand differential as the least cost and most flexible generation option. This is particularly true in 'dry years' following periods of low rainfall where the winter energy shortfall grows by a further 4000 GWh hours.

As evidence of this, the report notes that Genesis' Huntly Rankine units (coal/gas fired) provide cover to companies such as Meridian Energy under a 'swaption'¹⁵ agreement, and firm energy for Genesis' retail customers.

While this is true, it understates the key role the Rankines currently play in the wider electricity market. This was proven in 2017 when low lake levels saw thermal generation increase to meet demand from:

- Genesis' customers (approximately 17 per cent);
- Swaption customers (approximately 33 per cent);
- Wholesale market customers (approximately 50 per cent); and

Again, more recently, when the Rankines were quickly bought into operation to generate essential electricity through a storm event that had caused gas supply constraints.

Put simply, though it may be the sector's 'inconvenient truth', the whole of New Zealand's electricity sector currently relies, at least to some extent, on the availability of the coal and gas fired Rankine units

¹⁴ Genesis discussed its modelling with Sapare Research Group in its capacity as consultants to the Commission. We are happy to provide further details on request.

¹⁵ Genesis currently has two swaption agreements, which, when signed extended the life of the Rankines out to 2022. The agreements provide for thermal energy to be made available during the winter months as needed to maintain security of supply, with 150 MW available to Meridian Energy and 100 MW available to Contact Energy.

The future solution?

Unfortunately, there is no economic 'silver bullet' to replace gas and coal to fill the supply-demand gap right now, which is exacerbated in a future that demands more electricity generation in support of the decarbonisation of other sectors e.g. transport and industrial processing.¹⁶

Rather, unless we want to significantly overbuild renewable generation in the near term – which poses challenges for investors and consumers, so far as overbuilding is economically irrational and unlikely to generate investment returns; and is likely to require significant hydro spill and reduce the efficiency of existing renewables – it makes more sense to understand how to transition from coal to gas (or from baseload thermal to peaking thermal) as the first order priority, and out of thermal altogether in the longer term (as technologies improve and costs fall).

This is because coal and gas have some special features that are of immediate benefit: they can be stored at low cost in large volumes, and offer flexible generation i.e. gas- and coal-fired power generation can be turned on and off as needed, and used interchangeably in the Rankine units.¹⁷ It should also be noted that thermal generation currently provides important ancillary services support e.g. voltage and frequency keeping services across the transmission system.

Any single current technology option – including solar, batteries, wind, geothermal, occasional gas peaking and hydro - is limited in its ability to match these capabilities, notwithstanding the cost to do so:

Geothermal	Geothermal generation is typically more suited to baseload operation than peaking. While it can be turned off in summer and back on in winter, this would increase the effective per unit cost of investment. It is also important to note geothermal is not emissions-free.
Wind	Wind generation is intermittent, meaning it can only operate when there is sufficient wind resource available. It cannot be stored.
Hydro	Hydro generation can be stored and it is flexible but there is limited scope for new build at the scale required to provide seasonal storage. If existing hydro storage is used more conservatively in order to get through dry periods, then this will lead to significantly increased hydro spill when it is not dry.
Solar	Solar generation, like wind, is intermittent and can only operate when the sun is shining. The monthly solar generation profile is similar to hydro inflows: it is lowest in winter so would increase the winter energy shortfall. While it can be stored in batteries (see below) it is not commercial at the scale required as yet.

¹⁶ Modelling, including our own, the report's and that recently published by Transpower, is clear – to different extents - that increases in electricity demand will require new generation to be built in addition to that needed to phase out current thermal generation. See: <https://www.transpower.co.nz/resources/te-mauri-hiko-energy-futures> for Transpower's modelling.

¹⁷ This means coal can provide an alternative to gas if there are constraints on the gas network e.g. pipeline or upstream outages.

Batteries	Battery technology is currently viable at a consumer level only e.g. when combined with solar. While grid-scale trials are underway, our modelling shows it is difficult to see batteries being commercial to manage seasonal storage (estimated cost of \$2-3 trillion).
Occasional gas peaking	Retaining some form of discretionary gas peaking capacity is possible but there needs to be consideration of both the logistics (access to flexible gas supply contracts; expanded gas storage facilities) and economics (cost of increased storage and limited operating use).

These are not simple challenges that can be solved overnight so it is essential that as a sector we get past the rhetoric and work towards the creation of a plan that allows the sector to undertake the next steps to decarbonisation. For example, Genesis has announced its ambition to exit coal by 2030, which has provided a timeframe for industry and government stakeholders to work together to replace that capacity with suitable alternatives.

This kind of forward-planning, combined with price signals from the ETS, advances in (and falling costs of) technology, and improvements to planning tools that enable renewable energy projects will trigger the necessary response from industry in the coming years as we look to what options will best balance sustainability, affordability and reliability in the future.¹⁸

Q12.1 Does decision making under the Resource Management Act 1991 (RMA) unduly constrain investment in renewable electricity generation, particularly wind and hydro generation? In what ways could the National Policy Statement on Renewable Electricity Generation 2011 (NPS-REG) be strengthened to give clearer direction to regional, district and unitary councils to make provision for renewable electricity generation in their regional and district plans, regional policy statements and resource management decisions?

Genesis believes that there is confusion among some decision makers as to how the NPS-REG should be applied to activities under the RMA, including how it should be understood alongside other planning tools e.g. local and regional plans. This means despite its best intentions, the NPS-REG fails to send sufficiently clear signals about the significance of renewable electricity generation and further clarity e.g. directive language is needed to give it more teeth.

A 2016 report published by the Ministry of Business, Innovation and Employment (MBIE) and Ministry for the Environment (MfE) made similar observations. It found the NPS-REG had not resulted in nationally consistent approaches to drafting of local or regional planning instruments, and had not made it any easier to obtain consent for renewable energy projects.¹⁹

It is our view that the Government should strengthen the weight local and regional councils give to the NPS-REG by providing specific directives in the wording of the NPS-REG itself e.g. how to

¹⁸ As per the recently published World Energy Issues Monitor 2018, the future climate framework is an 'action priority' that is keeping energy leaders busy at work: the industry is already advancing its plans for a lower carbon future. See: https://www.bec.org.nz/data/assets/pdf_file/0018/146430/World-Energy-Issues-Monitor-2018.pdf

¹⁹ See: <http://www.mfe.govt.nz/publications/rma/report-of-outcome-evaluation-of-national-policy-statement-renewable-electricity>. We provided a submission to MBIE and MfE that included a case study from our consenting of the Castle Hill Wind Farm project. While the NPS-REG was useful to provide a basic policy framework that supported renewable electricity development, and we did in fact gain consent, it had little influence over the consent conditions relevant to the local, site specific concerns. Essentially, once consent was granted in principle, the NPS-REG failed to stand up against more directive language used in local and regional plans when it came to imposing consent conditions (of which there are over 400).

balance consideration of other planning documents such as the National Policy Statement on Fresh Water Management (**NPS-FM**). This should be considered a priority for action so that new renewable projects can be consented without undue constraints.

We also consider more directive language in the NPS-REG should provide for consents that have been granted but not exercised to be varied appropriately. Market commentary²⁰ shows there is an expectation among policymakers that 2,500 MW of already consented wind projects are ready to go to help New Zealand increase its renewable generation.

We urge caution here because these consents may need to be varied if the projects, some of which were consented 10 years ago, are to remain economic due to several factors e.g. a requirement to adjust to international advancements in wind turbine technology; a need to consent and build the transmission infrastructure that will enable development.

In addition, guidance should be provided on how to deal with consent renewal applications, particularly for hydro schemes. This is of particular relevance so far as we all can agree 'New Zealand's largely decarbonised electricity sector is a major advantage,'²¹ which could be eroded over time if existing renewable energy operators are unable to re-consent power schemes appropriately.²²

On a related note, the continued operation of nationally significant hydro-electric generation must be explicitly recognised and provided for in the NPS-FM by populating 'Appendix 3'. This has been anticipated since the NPS-FM was first amended in 2014, but it should be considered a greater priority in the context of mapping the transition to a lower carbon economy.

*R12.3 'The Electricity Authority (**the Authority**) should continue its programme of work to update pricing and regulation to facilitate the integration of distributed energy resources (**DER**) and demand response (**DR**) into the electricity system.'*

➔ Genesis agrees with the recommendation and considers this should be a priority for sector regulators

The Commission advises that fundamental changes to the current regulatory framework, including distribution pricing structures, access terms to electricity networks and rules surrounding data exchange between parties are needed to enable DER and DR.

Genesis has been advocating for some time that existing policy settings will inevitably fail to cope with rapid changes in the electricity sector and will not deliver in the best interests of consumers.²³

As the way we generate, store and consume electricity changes, it is crucial that there is a level playing field for competition in the emerging technology space, which can be achieved by drawing

²⁰ Dr Megan Woods on the Nation: <http://www.newshub.co.nz/home/shows/2018/05/interview-megan-woods.html>;
Energy News coverage: <http://www.energynews.co.nz/news-story/wind/37552/bigger-turbines-may-halve-nz-wind-costs>;
<http://www.energynews.co.nz/news-story/electricity-retailers/36639/govt-should-set-energy-not-electricity-targets-whineray>.

²¹ The report, page 7.

²² We note that statements in the preamble of the NPS-REG regarding the prioritisation and allocation of freshwater has meant that in a number of cases, RMA decision makers have given less weight to the NPS-REG provisions when making decisions that have to balance the competing and often conflicting uses of freshwater. The water utilised for hydro-electricity generation accounts for more than half of New Zealand's annual electricity generation, and the use of water for this purpose should be provided for in RMA statutory planning documents to ensure that freshwater management decisions do not adversely affect New Zealand's lower carbon ambitions.

²³ Genesis Energy submission on Enabling Mass Participation: <https://www.ea.govt.nz/dmsdocument/22334>.

clear lines under what are contestable and non-contestable activities for regulated monopolies e.g. electricity distribution businesses (**EDBs**).

We also consider it is crucial EDBs move to provide simplified national standards of access for service, standardised and simplified pricing models and standardised access for DER and DR. In our view, a focus on simplified standardisation will reduce the current state of complexity and inefficiencies in the distribution sector, and provide the necessary foundations for enabling future products and services, including low-emissions DER and DR.²⁴

The Authority should prioritise its work programmes focused on *Equal access; Data and data exchange; Default distribution agreement and Distribution pricing*,²⁵ while collaborating with the Commerce Commission (**ComCom**) and MBIE to deliver flexible yet certain policies that enable DER and DR.

R12.4 *'The Electricity Authority should...undertake a review of and develop measures to raise the capabilities of the electricity distribution businesses.'*

→ Genesis agrees with the recommendation and considers this should be a priority for sector regulators

The Commission raises concerns that EDBs may not have the capability to match the scope or speed of the required regulatory change needed to fully support future innovation that will benefit customers and reduce emissions. This includes recognising the work of the International Energy Agency, which suggested changes to the governance of some EDBs would help harness economies of scale.²⁶

Genesis has shared similar views in various other forums; encouraging sector regulators to move past a view that incrementalism will suffice and reflect on the ability of networks to adapt or scale up to meet the future.²⁷ We agree it is time for a 'fresh look at EDB capabilities,'²⁸ and support the Authority considering how it can work with ComCom and MBIE to progress this as a priority.

Electric vehicles offer some of the most promising mitigation opportunities

Q11.1 *How could New Zealand signal a commitment to a widespread transition away from fossil-fuel vehicles? For example, should New Zealand explicitly aim to phase out the importing of fossil-fuel vehicles by some specified future date?*

The Commission notes a rapid uptake of low emissions vehicles – primarily electric vehicles (**EVs**) - is one of the three key drivers to reducing New Zealand's emissions and that to achieve this, there will need to be a widespread transition away from fossil-fuel vehicles (**FVs**.)

We consider the Government should signal the transition by providing a specific target date by which New Zealand will have phased out the importing of FVs. In our previous submission to the

²⁴ Another recent example of where there would be demonstrable benefits from standardisation across EDBs comes from lessons learned during the April 2018 storm event in Auckland. With widespread damage across its network, Vector would have benefited from the support of 40 qualified tree-cutters who were available to help. Unfortunately, EDBs have different pre-qualification requirements for tree trimming across different networks, so those 40 ready and willing tree-cutters were unable to provide their services.

²⁵ Genesis Energy submission on Multiple Trading Relationships: <https://www.ea.govt.nz/dmsdocument/23197>.

²⁶ See: <https://www.iea.org/publications/freepublications/publication/energy-policies-of-iea-countries---new-zealand-2017-review.html>

²⁷ Genesis Energy submission on Priorities for the electricity distribution sector: <http://www.comcom.govt.nz/dmsdocument/16116>.

²⁸ The report, page 344.

Commission²⁹, we highlighted the leadership of countries like Norway and the Netherlands that have set similar targets and advocated for New Zealand to adopt a bold target.

Following modelling completed since then, Genesis recommends that if New Zealand wants a domestic light vehicle fleet that is predominately EVs by 2050, we should work to phase out the importing of FVs no later than 2030.³⁰

This is because there is a need for a long and sustained build-up in our domestic vehicle market of EVs, the majority of which will need to come from import markets such as Japan. Carefully accelerated phasing out of importing FVs will be critical to send the right signals to offshore EV suppliers and the New Zealand public that we are serious about transitioning our fleet.

We also note that while the focus in the near term is primarily on enabling the uptake of EVs, we should be wary of locking out other technologies that may become available at reasonable cost and at scale in the future e.g. hydrogen and biofuel. Accordingly, the Government's transition should send signals for a transition away from FVs to low emissions vehicles generally, to balance the intention to provide a viable plan for emissions reduction in the transport sector with the risk of 'backing the wrong horse'.

R11.1 *'The Government should introduce CO2 emissions standards for light vehicles entering the New Zealand fleet.'*

→ Genesis agrees with the recommendation and provides some additional points for consideration

The Commission highlights a concern that New Zealand is one of the few developed countries without vehicle emissions standards, and that unless we develop these as a matter of urgency, we risk becoming a 'dumping ground' for high-emitting vehicles imported from overseas markets.

Genesis supports the development of a carefully designed emissions standard, particularly if it can be sufficiently dynamic so as to operate in sync with the phasing out of importing FVs.

R11.2 *'The Government should introduce a price feebate scheme for vehicles entering the fleet.'*

→ Genesis agrees with the recommendation and provides some additional points for consideration

The Commission considers an appropriately designed feebate scheme is one component of the four-part package required to incentivise EV uptake. Genesis agrees; we consider a well-designed price feebate scheme would provide the right signals to consumers to purchase low emissions vehicles.

In our view, the feebate should be upfront only, and have no recurring component at annual registration. This is because, as noted by the Commission, private owners heavily discount future savings so the most benefit would be achieved from up front discounts.

We see there is a risk that a fixed per vehicle fee – e.g. one that is the same for a zero-emission second hand import and a more expensive New Zealand-new vehicle - would bid up the price of Japanese second-hand vehicles and do little to build a domestic market. Instead, a percentage

²⁹ Genesis Energy submission on Low emissions economy inquiry: <https://www.productivity.govt.nz/sites/default/files/sub-low-emissions-118-genesis-energy-limited-372Kb.pdf>.

³⁰ Genesis is happy to share further details of this modelling on request.

feebate at the point of import with a cap is preferable. This would target the local market more effectively, while not overly subsidising the most expensive low-emission options.

Genesis also considers the Commission could explore additional policy add-ons including low-interest, revenue neutral loan schemes for some consumers (e.g. small businesses, low-income households) to help reduce the upfront cost of EVs and spread the cost over the life of the asset. This would also ensure that EV incentives are targeted to those with the highest need, supporting the 'just' transition.

Q11.2 'Should a price feebate scheme cover vehicles within the heavy vehicle fleet? What other policies are appropriate for incentivising the uptake of low-emission heavy vehicles?'

Genesis considers heavy vehicles could be included in the price feebate scheme but this is less essential in the initial design of the scheme, where light vehicles should be a priority.

We note that businesses discount future cost savings less aggressively than households so once total cost of ownership for a low emission heavy vehicle (EV or other) is below that of a FV, businesses with capital could be expected to respond. Businesses that lack capital (e.g. small businesses) could benefit from the policy add-on suggested in our response above to R11.2.

R11.3 'The Government should provide financial support for charging infrastructure projects to support the uptake of EVs.'

→ Genesis agrees with the recommendation so far as it is efficient to do so

The Commission notes that investment in charging infrastructure has been relatively strong with current levels of government support (e.g. the Low Emissions Vehicles Contestable Fund) but there are some gaps emerging. Genesis supports the Government to provide financial support to fill those gaps only where it is commercially viable to do so.

Efficiently investing in public charging infrastructure is crucial to avoid both over-investment (i.e. New Zealand's high proportion of off-street parking, opportunities for workplace charging and increasing vehicle range could result in wasteful investment at consumers' expense) and technology lock-in (i.e. other low emissions vehicle opportunities may emerge at scale and provide equal or greater benefits to EVs that should not be discounted).

R11.4 'The Government should encourage government agencies where practical to procure low-emission vehicles.'

→ Genesis agrees with the recommendation and considers this should be a priority for the Government

The Commission highlights that many previous submitters called for the Government to play a greater leadership role in promoting the uptake of EVs as one of our greatest current emissions reduction opportunities. Genesis echoes this call for action, because we see a strong uptake in commercial fleets will be essential to building a deep second-hand market for consumers. We note that we are ourselves in the process of transitioning our light commercial fleet to EVs.

R11.6 'The Government should make emissions reductions a stronger strategic focus in transport investment.'

→ Genesis agrees with the recommendation and provides some additional points for consideration

Genesis notes the Commission's findings that road vehicles have been the primary driver of emissions growth since 1990. Currently, at 19 per cent of total emissions, transport emissions are some 300 times larger than those from the electricity or waste sectors. To turn the dial back on transport emissions, it is our view the Government should undertake a stronger strategic focus in transport investment for the future, which includes supporting low emissions vehicles – EVs and other - as discussed above.

Sending the right investment signals via emissions pricing

R4.1 *'The Government should reform the NZ Emissions Trading Scheme (ETS) rather than replace it with a carbon tax. The reforms should provide a good balance between control over unit supply (i.e. an effective emissions cap) and protection against excessive volatility in the price of emission units.'*

- ➔ Genesis agrees with the recommendation in principle, but provides some additional points for consideration

Genesis is pleased to see the Commission clearly state the ETS should not be replaced with a carbon tax. We consider the ETS should [continue to] be the central policy lever that aims to incentivise businesses and households to make decisions that lead to emissions reductions.

We note the Commission considers the ETS has been ineffectual to-date in reducing emissions due to low prices driven by international exposure, sector exclusions and policy uncertainty. We do not agree.

In the electricity sector, we would argue carbon prices have had an influence on retirement of thermal generation and investment in new renewables. Since the ETS was introduced in 2008, for example:

- Genesis has retired 500 MW of thermal energy and reduced coal use by 80 per cent;
- Two other large thermal power stations – Otahuhu B and Southdown – have been decommissioned;
- Over 1000 MW of wind and geothermal generation capacity has been built; and
- Over 2000 MW of wind generation capacity has been consented.

Where the ETS has failed to influence behaviour is in sectors that are currently excluded e.g. agriculture. The exclusion of agriculture, which accounts for half of New Zealand's total emissions, cannot continue. Agriculture, albeit with initial free allocation, should face the burden of carbon costs without delay to ensure the ETS includes all sectors and all gases as initially designed.

Moving forward, Genesis considers the focus should be on providing more stability, transparency and forward guidance on emissions prices to support participants' decision making; and that a broad-based scheme (i.e. with no or few exemptions) is needed to send the right signals to those market participants.

Accordingly, we support MfE to continue to review the ETS and in principle support a price cap and floor that will reduce excessive volatility to protect consumers and enable long-term investment decisions from participants. We look forward to the opportunity to comment further on this later in the year during consultation with MfE.

Land use needs to change substantially to enable New Zealand's transition

R10.3 *'Agricultural emissions should be fully included in the ETS.'*

→ Genesis agrees with the recommendation – please see our response to R4.1 above

R10.4 *'To address potential effects on emissions leakage and international competitiveness resulting from including agriculture in the ETS, the Government should provide free allocation of New Zealand units (NZUs) to cover a large majority of agricultural emissions, based on their historic level. The Government should withdraw these allocations over time as the stringency of agricultural emissions policies increases overseas and the availability of mitigation options increases; and to be consistent with New Zealand transitioning to a low-emissions economy by 2050.'*

→ Genesis agrees with the recommendation

R10.7 *'The Government should continue to refine the ETS for forestry to make it easier and less risky for small foresters to participate.'*

→ Genesis agrees with the recommendation, particularly noting that increased afforestation is a key driver to meeting our emissions-reduction goals

R10.8 *'The Government should increase its yearly funding for research on agricultural mitigation technologies to a level that better reflects the potential value of successful outcomes. Funds could, for instance, be allocated from the proceeds of auctioning NZUs.'*

→ Genesis does not agree with the recommendation as it stands and provides some additional points for consideration

Genesis agrees that complementary policies [to the ETS] are necessary to enable the scale of change required to New Zealand's land use. This includes policies to support research and development (R&D) of technologies that will reduce agricultural emissions.

We also agree that funding for R&D could be provided from the proceeds of auctioning NZUs. We do however consider this funding should be shared across multiple sectors i.e. not limited to agriculture. Investment should be made into low emissions vehicle opportunities, renewable energy generation technologies, waste reduction opportunities et cetera.

To share R&D funding to projects that can best reduce emissions, there should be a tender system designed. R&D funding for low emissions initiatives could also be redirected from the former Crown Irrigation Fund, which was previously allocated to incentivise farm conversions.

The collective effort requires single all-gases target in legislation

R8.1 *'The Government should establish separate long-term domestic targets for short- and long-lived gases, together with a regular series of reviews of progress against these targets...The Government should support these separate targets with a single all-gases target. The all-gases target should be set in primary legislation.'*

→ Genesis agrees with the recommendation and provides some additional points for consideration

Genesis considers setting a single all-gases target in primary legislation is an important step in the right direction towards sharing the burden of climate change mitigation across all of the New

Zealand economy. In our view, this is crucial in the collective effort that is needed to reduce emissions overall.

We support setting separate domestic targets for long and short-lived gases, provided both gases are exposed to the emissions price as per the ETS. We agree that differential treatment for methane, for example, would lead to over-prescribed emissions reduction pathways, limited scope to link to international markets and increased complexity.

Ambition becomes action in the transition to a low emissions economy

Now is the time for New Zealand to take the next steps in the transition to a low emissions economy and we consider the Commission has provided a useful platform from which we can plan our pathway.

The report is clear that a cross-sector approach is needed to achieve our emissions reduction goals, while calling for action in the transport, agricultural and forestry sectors to maximise our chance for success. Genesis supports this recommendation and those that relate to our sector [the electricity sector] particularly.

We agree that the electricity sector stands to play a crucial role in the decarbonisation of other sectors, and that accordingly, the Government should be wary of setting targets for emissions reduction. It should also be careful not to pick technology winners and losers; walking the line between risking unintended consequences e.g. technology lock-in, and identifying cases where targeted intervention is sufficiently convincing to justify the risk.

The focus from this point must be on how to make the meaningful change that is needed, while ensuring the transition is 'just' for New Zealand businesses and households. Designing the stable and credible policy environment the report outlines will be key and Genesis looks forward to further engaging on this with other stakeholders.

In the meantime, if you would like to discuss any of these matters further, please contact Margie McCrone by email: margie.mccrone@genesisenergy.co.nz or by phone: 09 951 9272.

Yours sincerely



Marc England
Chief Executive