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Ministry for the Environment

Submission on Proposed Changes to NZ ETS limit and price control settings for units for 2022

Introduction

1. Energy Resources Aotearoa represents energy intensive businesses, from explorers and producers to distributors, sellers, and users, of energy resources like oil, LPG, natural gas, refined fuels, biomass, and hydrogen.

2. This document constitutes our submission on the Ministry for the Environment (**the Ministry**)'s *Proposed changes to NZ ETS limit and price control settings for units for 2022*, which are informed in part by the Climate Change Commission (**CCC**)'s advice on NZ ETS settings for 2023-27.

3. *Appendix One* provides a reference list for ease of access, indicating which parts of this submission respond to the questions posed in the consultation document.

Recommendations

4. We support existing (status quo) unit and price settings for the New Zealand Emissions Trading Scheme (**NZ ETS**) for 2023-2027, on the basis that:

    a. we have already seen a significant rise in emissions prices over the past 2-3 years (driven at least in part, we suspect, by speculation about regulatory change rather than supply and demand fundamentals);

    b. recent and ongoing material changes to the legislative framework and the release of the Government's Emissions Reduction Plan have yet to bed in;

    c. there is residual uncertainty about the role that afforestation (offsets) and offshore units will play in the transition, and this should be resolved – in a way that reflects our *net* emissions reduction targets – before further material changes to unit and price settings are made; and

    d. more stringent proposals could increase costs on households and businesses in an already inflationary economic environment and may undermine support for the transition.

5. Our analysis indicates that compared to the current emissions price of around $80, at an emission price of $170 (just short of the CCC's preferred Tier 1 cost containment reserve trigger price), the average household could spend:

   a. $200 (9%) more on electricity each year;

   b. $150 (12%) more for gas each year; and

   c. $300 (10%) more for petrol each year.[1]

6. We also note the Treasury's 2019 findings which suggest an increase from $80 to $170 a tonne could increase costs for households $12 per week (or $636 per year), and an increase from $80 to $210 a tonne could increase costs for households $18 per week (or $919 per year).

7. Our specific views are laid out in the table below and in full in *Appendix 1.*

Proposal	**Energy Resources Aotearoa recommendation**
Unit settings	We support the status quo. The upper end of options (Table 10 of consultation document) is otherwise preferable to the lower end of options.
Price settings – auction floor	We support the status quo.
Price settings – cost containment reserve	We support the status quo options, including maintaining a single tier, maintaining the current methodology for calculating the reserve volume, and the current trigger price trajectory.

8. We recommend the CCC's next unit and price control advice due in February 2023 addresses issues identified in this submission – including:

   a. providing a range of price and unit settings which align with different emissions abatement scenarios (using different combinations of net and gross reductions);

   b. building a more robust evidence base for any proposal to reduce the unit stockpile (including assessment of its economic impact);

   c. reflecting the current inflationary environment and cost-of-living pressures in considering what represents the lower and upper limit of acceptable emissions prices in the short-medium term; and

   d. potential issues with its modelling.

1 See pages 11-12 for further information.

Overarching comments

We support the NZ ETS, aligned with our net emissions targets, as the best tool to reduce emissions

9. We unequivocally support the objective of transitioning to a low emissions economy, and we agree on the end point of net zero emissions by 2050. We believe the NZ ETS is the best tool to achieve this, and that additional measures must address a clearly demonstrated market failure with a solution that is more desirable and/or help to unlock more efficient discovery of least-cost abatement under the NZ ETS.[2]

10. Updates to NZ ETS settings must align with requirements listed in the Climate Change Response Act 2002 (**the Act**). This includes that they must be in accordance with emissions budgets, the nationally determined contribution and the 2050 target. All of these are expressed in terms of net – not gross – emissions. This is important because a 'net' approach implies availability of all options (reductions, removals, and offsets) to enable an orderly and least-cost emissions reduction pathway.[3]

Durable climate policy is essential, so frequent material changes should be avoided

11. As a market-based instrument (**MBI**), the ETS is more delicate than a naturally arising market. An MBI only exists because government created the instrument and structure so, for it to enjoy confidence and take-up, participants must be confident that the government will not undermine it with unexpected policy changes. Avoiding this sentiment and concern is critical.

12. We have stated previously that the NZ ETS needs time to 'bed in' following the significant reforms of 2020, and this remains our view. Further changes should meet a very high evidential bar to be justified, particularly for 2023 and 2024, wherein special circumstances are required (we do not believe this bar has been met in the CCC's advice and our submission provides more detail on this point). In 2020 the NZ ETS was reformed into a capped, quantity-based scheme, and we have since seen the emissions price rise from $30 in June 2020 to over $80 (+166%) in September 2022.

2 See page 2 of our 2021 submission on proposed changes to NZ ETS settings for further commentary on this point: https://www.energyresources.org.nz/dmsdocument/175

3 See our June 2021 Perspectives Series note on a 'least cost' approach to net zero emissions for further discussion on this point: https://www.energyresources.org.nz/dmsdocument/178

13. We underline this argument by noting the characteristics of gross emissions reduction investments:

    a. fuel-switching and other emissions reduction investments are made by a multitude of decentralised actors at the margin. For example, a petrol car user might not abandon it altogether in the face of emissions pricing, instead driving incrementally less and walking where practical. By the same token, industrial energy users will often make 'quick win' energy efficiency and energy reduction investments before more substantial capital switch-out; and

    b. these investments may take time – in the case of large capital-intensive fuel switching projects, they will often involve several years' planning, will need to coincide with the end of asset life, and will reflect a company's view of likely emissions prices over the life of the investment. They will also be subject to supply chain and labour constraints as we are currently experiencing.

14. These characteristics make it difficult to aggregate these decisions, particularly in real time, and therefore it is difficult to form a clear picture about the impact the emissions price is having. We caution against frequent changes to NZ ETS unit and price control settings without due consideration to the 'hidden' and time-lagged investments in gross reductions that are likely already occurring.[4]

It is critical to consider the impact of emissions pricing on households and businesses

15. The emissions price in the NZ ETS increased over 166% between June 2020 and September 2022. If New Zealand's emissions price and/or regulatory stringency regarding climate policy continue to increase faster than substitute fuels become affordable and available at scale, we anticipate the transition will be lumpy and disruptive. This could have significant impacts on households and businesses.

16. The cost containment reserve provides an essential 'pressure valve' in this respect. The impacts of emissions pricing on households and the economy should therefore directly inform NZ ETS unit and price settings. Page 12 of this submission provides our analysis of the potential energy cost implications to households of much higher emissions prices.

Cumulative cost pressure impacts on households and businesses

17. NZ ETS unit and price settings should not be considered in isolation from broader policy settings. Several extant or pending policies in the wider energy and fuels sector have energy cost implications for households and businesses including:

4 Our recent Fuelling the Energy Transition report provides specific examples of emissions reduction investments that leading oil and gas producers have made, or plan to make, in response to the rising emissions price: www.energyresources.org.nz/assets/Uploads/Fuelling-the-Energy-Transition-Full-Report.pdf

a. the imminent removal of the fuel excise reduction, and the pending Sustainable Biofuels Obligation and onshore stockholding requirements, in the liquid fuels sector; and

b. the aspirational 100% renewable electricity target and NZ battery project are undermining investment confidence in new generation, with long-term cost implications for all electricity users.

18. The global economy is currently experiencing inflationary pressures due to the post-COVID recovery and the Ukraine War. China's continued lockdowns have inhibited global manufacturing output (including in renewable energy technologies). Cost of living and cost of business pressures have become a rising issue, and this is also important context as we consider NZ ETS settings.

Emissions leakage

19. The consultation document flags the risk of emissions leakage, and the significant risk that a rising emissions price poses to our industrial sector (particularly our emissions intensive and trade exposed firms, many of which have strategic national value). The sector relies on sound, stable NZ ETS policy settings to manage the risk of premature closure and emissions leakage.

20. For example, if Methanex were to cease methanol production in New Zealand due to emissions pricing, it is most likely the supply gap would be filled by methanol produced in China using coal. This is because in the Asian market, Chinese coal-sourced methanol is the next cheapest on the cost curve after New Zealand's methanol production. New Zealand methanol is the swing producer in the region, so its closure would immediately be felt, and other regional participants would be able to seize the opportunity to fill the supply gap. The departure of Methanex would also have significant implications for the wider domestic gas sector, highly likely driving up gas prices (and by extension electricity prices).

21. Managing emissions leakage minimises the risks of our NZ ETS settings inadvertently increasing global emissions. It also ensures we avoid premature closure of these firms, which in turn preserves economic activity, jobs, and adaptive capacity. Adaptive capacity refers to the capability, capacity, capital, and infrastructure that incumbent industrial businesses have access to, which enhances New Zealand's ability to navigate the transition by seizing new opportunities in technologies and processes. Premature closure could undermine our adaptive capacity through the transition.

22. For example, a cluster of companies with chemical, process, electrical and geological engineering has evolved over decades in Taranaki to support the oil and gas and chemical manufacturing sectors. This cluster has capital, capacity, capability, and infrastructure that is highly transferable to 'new' energy, including offshore wind, hydrogen, and other low-emissions opportunities. By avoiding

premature closure of incumbent energy-intensive businesses, we ensure New Zealand continues to have access to global capital and expertise to bridge the gap to new industries and fuels.[5]

23. We urge policymakers to continue treating this risk with the seriousness it requires, both in considering the NZ ETS unit and price settings, and in its ongoing work around industrial allocation.[6]

Submission

The CCC's advice goes beyond its remit in prioritising gross emissions reductions over net emissions reductions

24. The Ministry's consultation document notes (our emphasis):

> "Unit settings are required to accord with net emissions reduction settings. The Commission's use of gross emissions reduction 'targets' as the fundamental input to its recommendations on price control settings is inconsistent with this." (p. 27)

25. We agree. The CCC's recommended approach risks a higher emissions price path than is otherwise necessary to achieve our national net emissions reduction targets. The CCC Chair has previously argued a least cost pathway creates poor outcomes – an argument we have refuted at length in a previous note.[7]

26. The Emissions Reduction Plan includes an action to review the NZ ETS to drive a balance of net and gross reductions, and no decisions have been made on this yet. Here we reiterate our view that it is better to address the undesirable impacts of afforestation at the margins through, for example, a National Policy Statement rather than through the NZ ETS itself. We do not agree that blanket disruption of the treatment of removals in the NZ ETS is necessarily the best approach, especially after it has already begun to inform long-term investment decisions.

27. We are concerned by recent public comments from the CCC Chair on this issue, who was reported as having noted that the NZ ETS allows companies to "plant and pollute" and that other countries are becoming increasingly sceptical about the use of offsets "at all".[8] In our view this is an unnecessarily damaging and unfair

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5 Energy Resources Aotearoa's recently released *Industrial Skills Action Plan* for the energy sector makes this case in further detail and lays out a joint sector plan to address the skills needs to incumbent and emerging energy businesses: https://www.energyresources.org.nz/assets/Uploads/Building-Energys-Talent-Pipeline-Skills-Plan-5-October-22.pdf

6 Our submission on *Reforming Industrial Allocation in the New Zealand Emissions Trading Scheme* provides more detail: https://www.energyresources.org.nz/dmsdocument/192

7 See our June 2021 *Perspectives Series* note on a 'least cost' approach to net zero emissions for further discussion on this point: https://www.energyresources.org.nz/dmsdocument/178

8 https://www.rnz.co.nz/news/national/475075/climate-change-commission-chair-dr-rod-carr-calls-for-reform-of-emissions-trading-scheme

characterisation of the intent and functioning of the NZ ETS, and it will have a chilling effect on investment confidence. These comments exacerbate ongoing uncertainty about the treatment of offsets in our climate policy framework – including not just forestry but also carbon capture, utilisation, and storage (**CCUS**).[9]

28. There is apparent inconsistency between calls to restrict production forestry for offsetting on one hand and calls for greater utilisation of domestic wood resource as part of a growing circular bioeconomy on the other.[10]

We do not believe the CCC's advice reaches a sufficient evidential threshold to justify the significant changes it recommends

Cost containment reserve triggers may indicate the market is following policy signals rather than market fundamentals

29. In justifying its recommendation to amend settings for all five years of 2023-27, the CCC states that:

> "While the cost containment reserve is intended to be used only rarely, it has been triggered three times in the last six auctions. This implies a major shift in market expectations about future prices over the past year, meaning the cost containment reserve trigger price is now below participants' future price expectations." (p. 11)

30. We anticipated this 'anchoring' issue in our 2021 submission on NZ ETS unit and price control settings:[11]

> "If the ETS is to be a genuine market-based instrument then actors need to be able to operate within its confines without having to constantly anticipate the next regulatory change [...] new statutory parameters relating to price risks becoming self-fulfilling in terms of upward high pressure on prices (especially under a capped regime). Changing the parameters may be seen to signal where Government wants carbon pricing to head, and the mere fact of doing this may mean participants rely on such changes rather than the genuine interaction of supply and demand."

31. We argue the recent shift in market expectations about future prices over the past year could just as readily be explained by a chorus of aggressive policy signals as it could be explained by market fundamentals of supply and demand. There is a significant risk that this rationale for further changes creates a self-fulfilling 'race

9 We further note experts have begun to call for the inclusion of offsets in the EU ETS to achieve its 2040 zero emissions target: https://carbon-pulse.com/174675/ (paywalled)

10 Increased use of biomass is (along with natural gas) among the most cost-effective abatement opportunities for industrial process heat. The Government's Emissions Reduction Plan signals the development of a bioeconomy strategy, and the recently released Forestry and Wood Processing Industry Transformation Plan identifies a growing forestry sector as a key opportunity through the low-emissions transition.

11 See https://www.energyresources.org.nz/dmsdocument/175

to the top', with market expectations of higher prices justifying sharper emissions price trajectory settings, which in turn increase market expectations (and so on).

32. Policy changes can lead to long run increases in the emissions price, and at a certain point this may begin to compromise businesses' profitability and competitiveness. Care must be exercised. The primary purpose of the NZ ETS is to discover the marginal price of abatement, not discover the preference of policymakers.

We have identified potential issues with the modelling underpinning the CCC's advice

33. The CCC's ENZ model does not capture the effect of emissions pricing on a range of significant abatement sources, instead treating these as CCC inputs to the model.[12] These areas include energy and transport demand; energy efficiency measures; and pace of EV uptake and household fuel switching. The CCC notes that this, among other things, means the ENZ model likely understates the mitigation response to significantly higher emissions prices. This raises the question of whether restricting the endogenous variables within the model drives the required emissions price higher.

34. The CCC notes that some of the abatement attributed to other policies in the Government's Emissions Reduction Plan, such as the Government Investment in Decarbonising Industry Fund, is instead driven by the emissions price in the CCC's modelling. Where this occurs, the abatement from the other policy may not reduce the level of emissions price required. This suggests the CCC is, to some extent, ignoring the emissions abatement and the price-moderating impact of non-NZ ETS policies. Again, this potentially drives the emissions price required in the CCC's model higher.

35. The CCC's scenarios appear to assume that at higher oil prices, the capital cost of new renewable generation decreases faster. We are not sure how this follows, given oil is, and will remain, a critical input to the manufacture, transport, and installation of capital components and infrastructure.[13] It is unclear what implications this has for the model's outputs.

Auction volume settings

Technical adjustments

36. In principle, we support technical adjustments if officials establish that a material discrepancy exists between emissions reported in the Greenhouse Gas Inventory and in the NZ ETS. We offer two additional comments:

12 See page 14 of the technical annex: https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/ETS-advice-July-22/Technical-annexes-and-supplementary-documents/Technical-Annex-2-ENZ-Modelling.pdf

13 See page 4 of the technical annex.

a. we question the rationale for a fixed quantity adjustment for liquid fossil fuels (0.8 Mt) rather than a percentage adjustment, as is proposed for coal. A fixed quantity adjustment may not be sustainable in the event of significant changes in liquid fossil fuel consumption; and

b. given the potential materiality of the overall adjustment (1.3–1.6 Mt less volume per year over 2023-26) we suggest undertaking targeted consultation with relevant stakeholders once the issue has been investigated and before final policy decisions are made.

Reducing stockpile volumes

37. We do not support the proposal to remove 35 million units from the volume to be auctioned over the 2023-27 period. We consider this level of regulated reduction in the stockpile is far too high, particularly given the dramatic uncertainty in the current estimate (which ranges from 33 to 66 million units). Much more work needs to be done to establish a robust measure of how many genuinely 'excess' units are in the stockpile. We understood gathering this information would be part of the ongoing work on governance arrangements in the NZ ETS.

38. It is important to recognise that these stockpile units may not even enter the market (in which case the units will obviously not be used). Removal of units deemed as surplus should not occur until greater depth and liquidity is realised in the carbon market, especially since the regime is only now subject to a cap and time is needed for the effects of that to bed in.

39. Aggressively reducing stockpile volumes creates greater investment uncertainty and upward pressure on the NZ ETS price. This should be done only once robust data and evidence is available to confirm the genuine 'excess' in the market. We also note that liquidity risk in the NZ ETS market will increase as industrial allocation is gradually phased out.

40. We question the urgency in driving the surplus to zero by 2030 (and specifically question the rationale for an arbitrary target year). It bears emphasising that the surplus has existed for 6-7 years, in which time the emissions price has risen sharply.

41. Note we also opposed the 2021 proposal for stockpile reduction (now status quo) on the same basis.

Setting the approved overseas unit limit

42. We agree with the CCC that the question of international units, and the role the NZ ETS will (or will not) play in facilitating access to them, needs to be resolved. Our strong preference is for access to international units via the NZ ETS. Advancing bilateral or multilateral agreements for international trading is important and the Government should advance this work as a priority.

43. A fundamental reason to use the NZ ETS, compared to a carbon tax, is that it enables international trading to achieve global emission reductions at the lowest marginal cost, provided the international units are genuine and of high integrity. International units are a legitimate and important mitigation option, especially to avoid unreasonable domestic costs and impacts on firms.

44. Legislation requires that units released under the cost containment reserve are eventually backed by real units. In the situation that the cost containment reserve is triggered it is likely that affordable domestic abatement will be hard to come by, which means offshore mitigation is likely to be the most affordable option. Having a regime in place to access such units will therefore be important.

Price control settings

45. We agree in principle that a pricing corridor or window must be sufficiently wide to enable price discovery by the market. However, as raised in our overarching comments, we do not consider that government should be regularly making significant changes to the regime and its parameters. If the NZ ETS is to be a genuine market-based instrument, then actors need to be able to operate within it without having to constantly anticipate the next regulatory change. The NZ ETS should be focused on facilitating discovery of price to support a least cost emissions pathway rather than anticipating policy direction.

Auction price floor

46. We prefer the status quo treatment of inflation using an average inflation measure. We therefore oppose options 2-5 (which would see increases to the auction price floor) on the basis they will:

    a. increase complexity in the regime (particularly those with non-linear price setting);

    b. contribute to ongoing risks of frequent regulatory changes; and

    c. may create unintended speculative opportunities.

47. Again, the CCC's recommended auction price floor settings are predicated on delivering reductions in gross (rather than net) emissions in line with its own demonstration pathway. This necessarily implies a more aggressive trajectory than required by legislation (which focuses on net reductions).

Cost containment reserve trigger price

48. We support option one (status quo) as presented.

49. The CCC's advice appears to be driven by a preference that the cost containment reserve is never triggered. Its advice envisages Tier 1 and 2 trigger prices of $171

and $214 respectively in 2023. This again reflects the CCC's focus on gross reductions, and therefore represents the outer edge of stringency among the options floated in the consultation document.

50. The cost containment reserve acts as a proxy for the upper limit of the expected and acceptable range of emissions prices. It must, among other things, provide participants with a degree of predictability and stability. It should be set at a level that protects New Zealand households and businesses from the impacts of price spikes or sustained high prices that are beyond their ability to reasonably abate (in the case of businesses, without closing).

51. It is worth highlighting the Regulatory Impact Statement for the 2021 update to NZ ETS unit and price control settings:

> "A $100 trigger price option was assessed in 2020 and not recommended. [This] would risk very high auction clearing prices, which are well-above the abatement costs the Commission has forecast to meet their recommendations for the first emissions budget [...] it could impose significant and unnecessary costs on businesses and households at this time" [14]

52. In our view, the information available does not warrant a departure from this position only two years on. We do not agree with the CCC's implied position that the emissions price could, in theory, double to $170 in the next calendar year and that this would or should be broadly acceptable to households and businesses.

53. Our indicative analysis indicates that, compared to the current emissions price of around $80, at an emission price of $170 (see Figure 1 below):

    a. average annual household electricity bills would be around $200 (9%) higher;

    b. average annual household gas bills would be around $150 (12%) higher; and

    c. average annual household regular petrol bills would be around $300 (10%) higher.

14 https://www.treasury.govt.nz/sites/default/files/2022-01/ria-mfe-upul-jul21.pdf

Figure 1: Analysis of indicative impact of rising emissions prices on household bills

	No ETS	**NZU $80** *(current)*	**NZU $170** *(CCC Tier 1)*	**NZU $210** *(CCC Tier 2)*
Electricity[15]				
Residential price (per kWh)	$0.282	$0.024	$0.051	$0.063
NZ ETS share of annual household bill	-	**$174**	**$370**	**$457**
Total average annual household bill	$2,048	**$2,222**	**$2,418**	**$2,505**
Gas[16]				
Residential gas (per kWh)	$0.168	$0.016	$0.034	$0.042
NZ ETS share of annual household bill	-	**$132**	**$279**	**$345**
Total average annual household bill	$1,059	**$1,191**	**$1,339**	**$1,404**
Petrol (regular)[17]				
Regular petrol (per litre)	$2.29	$0.21	$0.45	$0.56
NZ ETS share of annual household bill	-	**$265**	**$564**	**$696**
Total average annual household cost[18]	$2,858	**$3,122**	**$3,421**	**$3,553**

54. We also note the Treasury's 2019 findings (quoted in the Ministry's consultation document) which found that a $25 increase in the emissions price would increase costs for middle-income households by $3.40 per week, or $176.80 per year. Taken as a rough rule of thumb, this suggests an increase from $80 to $170 a tonne could increase costs for households $12 per week (or $636 per year), and an

15 Assumes average household consumption of 7,261 kWh (year to March 2022). See https://www.mbie.govt.nz/assets/Data-Files/Energy/nz-energy-quarterly-and-energy-in-nz/qrss-august-2022.xlsx. Emissions price impact (c/kWh) is derived from the median of the 'low impact' and 'high impact' scenarios in the Ministry's consultation document (see Table 20). Note this indicative analysis does not reflect any reduction in the share of thermal generation over time which may moderate these cost impacts in the medium-long term.

16 2022 gas figures, including emissions price impact, are based on the Commerce Commission's Consumer Price Bill Model: https://comcom.govt.nz/__data/assets/excel_doc/0029/276536/Consumer-Price-Bill-Model1.xlsx. Emissions component includes GST. Note the average household gas bill is based on gas-connected households (not averaged across entire population) so is not directly comparable with electricity and petrol average bills. Gas-connected households will likely see a smaller than average electricity price impact as gas substitutes electricity for heating and cooking.

17 Discounted retail price of $2.502 as at 16 September 2022 from https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/weekly-fuel-price-monitoring/ and assuming emissions price impacts (c/l) based on 2.31kg carbon emissions per litre. All figures are GST inclusive.

18 Assumes average household weekly regular petrol consumption of 24 litres.

increase from $80 to $210 a tonne could increase costs for households $18 per week (or $919 per year).

55. The price corridor envisaged by the CCC's advice – taken in tandem with a rising chorus of policy signals that are driving speculative expectations of increasing emissions prices – creates a material risk of eroding the broad social and political support the NZ ETS relies on to function effectively. It does so in an inflationary economic context of global cost and supply chain pressures.

56. We believe a more gradual, orderly progression of the cost containment reserve would serve New Zealand better. This would strike a better balance between the breadth required for price discovery and the need for stable, predictable settings to inform long-term investments by households and businesses in a challenging economic environment.

Enabling carbon capture, utilisation, and storage (CCUS) through the NZ ETS

57. We again highlight the need for a review of the NZ ETS as it applies to CCUS to address any barriers to the development and deployment of this technology in New Zealand. It could form a critical part of our emissions reduction efforts and significantly reduce the net emissions profile of some of our industrial activities that are otherwise hard to abate. This technology is already being used overseas.[19]

58. CCUS is a 'removal activity' under the Climate Change Response Act. A removing entity (i.e., an operator of a facility injecting CO_2 into a suitable geological formation for permanent storage) could receive one ETS credit for every tonne of CO_2 removed and stored. However, this clause of the Act (Schedule 4, Part 2, Subpart 2) only applies 'on or after a date determined by Order in Council', so it currently remains inactive. This should be activated as a priority.

59. Further, it is not clear whether this only applies where the capture and storage relate to a given operator's activities, or if it also covers a situation in which carbon is stored on behalf of a third party. This framework should be amended so that an entity performing CCS can receive ETS credits, regardless of whether that entity was the source of the CO_2.

60. While now somewhat dated, this issue and other barriers to CCS are covered in detail in *Carbon Capture and Storage: Designing the Legal and Regulatory Framework for New Zealand*.[20]

19 For example, see: https://australia.chevron.com/-/media/australia/publications/documents/gorgon-carbon-capture-and-storage--fact-sheet.pdf and https://www.santos.com/news/santos-announces-fid-on-moomba-carbon-capture-and-storage-project/

20 https://www.waikato.ac.nz/__data/assets/pdf_file/0011/179570/University-of-Waikato-CCS-Report-2013-web.pdf

Closing remarks

61. We strongly support the NZ ETS as New Zealand's best tool to reduce net emissions in line with our national targets. Its 2020 reform into a genuinely quantity capped mechanism has unlocked its potential to drive meaningful progress over the coming decades.

62. While we appreciate NZ ETS settings need to be updated periodically to reflect changes in the market, we question the frequency and materiality of tactical changes advanced by the CCC advice. Emissions reduction investments take time and rely on stable long-term price signals. Changes to the parameters of the regime therefore need to reach a high evidential threshold, particularly for the short term.

63. We do not believe the CCC advice that underpins the Ministry's proposals meet this threshold – particularly in the current inflationary economic environment. Households and businesses are facing rising cost pressures, and the legislative framework is clear that this should be factored into decisions on NZ ETS settings.

64. Government must be sensitive to the significant risk of creating unintended opportunities for speculative behaviour that is driven by policy signals rather than supply and demand fundamentals. The NZ ETS relies on – and currently enjoys – broad social and political support. In considering the optimum unit and price settings to drive an orderly transition to net zero, this support should not be taken for granted.

Appendix 1: Response to consultation document questions

Question		Our response
1	What do you think of the criteria we have chosen to assess options?	Without weighting of criteria, we are concerned that the cost implications of options for households and businesses is 'drowned out' by the other four criteria. We note this means that the most stringent options recommended by the CCC score highest or equal highest across the board.
2	Do you think alternative options should be considered for parts of the advice other than the settings that this consultation document focuses on?	We recommend future advice from the CCC consider a range of pathways, reflecting not only a gross-reduction focused pathway but also a least cost pathway (among others).
3	What are your views on the estimates of the 'surplus' or 'excess liquid' component of the unit stockpile?	We believe much more robust evidence is required before decisions are taken on how to address any 'excess' unit stockpiles. See paragraphs 37-41.
4	What level of 'surplus' or 'liquidity' do you think is required for a functional market?	As above, this cannot be answered with confidence without further evidence from the market. See paragraphs 37-41.
5	What do you think of the methodology used to calculate auction volumes, including on each specific step?	We support the stepwise methodology. Again, noting the uncertainty around unit stockpile surplus, we should avoid unnecessarily constraining volumes while uncertainty persists.
6	What do you think the main drivers of market demand for NZUs are?	Demand for units is driven by compliance by participants and by speculation (arbitrage). Our concern is that policy signals from the CCC will begin to drive demand more than compliance.
7	What do you think of the approach of setting price controls with reference to prices required to deliver gross emissions reductions?	We think this represents a departure from the CCC's remit. See paragraphs 24-28.
8	Do you think it is appropriate to consider inflationary impacts in adjusting settings?	There is an argument for doing so to keep the settings 'real'. Another argument could be made that inflation-adjusting the cost containment reserve in the context of economy-wide inflation undermines its purpose of protecting households and businesses from price spikes beyond their ability to reasonably abate. On balance we support the status quo treatment of inflation for reasons of administrative simplicity and predictability.

Question		Our response
9	What do you think of the proposed auction price floor settings? What impacts do you think will result from different settings?	See paragraphs 46-47.
10	Do you think the cost containment reserve should consist of one or two tiers?	One. We do not consider the added complexity is justified by the evidence presented by the CCC.
11	What do you think of the proposed cost containment reserve trigger price settings? What impacts do you think will result from different settings?	See paragraphs 45-56.
12	How do you think of the cost containment reserve volume should be calculated?	We support the status quo methodology in absence of information to justify a change.
13	Are there further impacts at these prices that should be considered?	Broad political and social support for the NZ ETS hinges on its remaining predictable and driving an orderly least cost emissions price trajectory. This support cannot be taken for granted and we expect the CCC's recommended price settings would undermine it.
14	Is it appropriate to rely solely on complementary measures to manage impacts?	No. The price control settings can be calibrated based on a least cost emissions trajectory, thereby limiting the distributional impacts that necessitate transfers and other complementary measures.
15	What role should price controls play in containing the level of impacts, and what price control settings would be required for this?	As above.
16	If prices reached those presented in the cost containment reserve trigger price options above, do you feel that you have options to change behaviours or make new investments to address the impacts?	This will differ between firms. We agree with the consultation document that if prices reached these levels this would begin to undermine the economic viability of EITE firms.
17	Could you change behaviours or make new investments to mitigate the impact of higher prices on yourself?	As above.