AN EFFECTIVE NZ ETS: CLEAR PRICE SIGNALS TO GUIDE LOW-EMISSION INVESTMENT

Motu Note #27

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Smart investment needs Clear ETS price signals Set caps with price bands

Early in 2016 Motu Economic and Public Policy Research gathered together a group of participants from diverse backgrounds and sectors to engage in a deep dialogue on key issues that affect the New Zealand Emissions Trading Scheme (NZ ETS) in order to generate new insights and strategic options to improve its effectiveness. Backed by a series of four working papers and four meetings in Wellington, dialogue participants came together in March 2017 to discuss an integrated proposal for managing unit supply and prices in the NZ ETS in a way that generates more predictable price signals to guide domestic decarbonisation. This document presents the proposal that emerged from the group's work.

EXECUTIVE SUMMARY

New Zealand must reduce its domestic greenhouse gas emissions: Under the 2015 Paris Agreement, New Zealand has committed to join other countries in achieving net zero global emissions by the end of the century. This means that New Zealand now has to focus on long-term decarbonisation at the domestic level while also continuing necessary investment in international emission reductions as part of its global contribution. To achieve domestic decarbonisation cost-effectively over time, the policy framework needs to set the country onto a lower-emission pathway now. In order to progress efficiently and guide investment into low-emission technologies, New Zealand needs a credible long-term emission price signal through its ETS and predictable policy responses to changes in external conditions.

There is a practical way to deliver more predictable long-term price signals: This document outlines an integrated proposal for managing unit supply and prices in the ETS. Its objective is to generate a more predictable long-term emission price signal to guide efficient domestic decarbonisation and cost-effectively manage New Zealand's overall contribution to global emission reductions. The proposal provides a durable architecture that allows the government to manage the pace and cost of domestic decarbonisation through clearly defined processes in the face of uncertainty. The proposal does not address the desirable speed of the transition, the appropriate emission price, the other policies that may be required in ETS and non-ETS sectors or the amount of international versus domestic emission reductions sought; these are questions for Government. It simply outlines a mechanism that will make such decisions transparent and predictable in order to deliver constructive price signals.

Any purchasing of international emission reductions ito help meet New Zealand's future targets must be managed strategically: The New Zealand government expects to buy international emission reductions to help meet its 2030 target under the Paris Agreement. To preserve predictable investment signals generated by the ETS, the government will need to manage the quality and quantity of international emission reductions and how they enter New Zealand. This will enhance the effectiveness of the ETS and our domestic emission reduction pathway, while also ensuring the credibility of our global contribution.

A new approach to improve the effectiveness of the ETS: The proposal outlined below enhances the existing ETS structure and can largely be effected under the current legislative framework. The ETS needs to provide dependable investment signals now. New Zealand cannot afford to miss opportunities that may be lost if we leave the changes until 2021, when the Paris Agreement period commences.

This work was conducted under Motu's programme "Shaping New Zealand's Low-Emission Future" with funding support from the Aotearoa Foundation. The inclusion of the ideas in this document does not imply any recommendation, consensus or endorsement by ETS Dialogue participants or presenters, their affiliated organisations or the programme funder. All opinions, errors and omissions are the authors' own. First, this document summarises what is working with the ETS and the new global conditions that mean that aspects of New Zealand's ETS design must change.

Next, this document presents the core aspects of this proposal, namely:

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- 1. Near-term supply constraint to guide price: A "Cap" a fixed amount of emission reduction units distributed by auctioning and free allocation each year establishes the supply constraint which enables the market to generate pricing signals. The Cap is set annually for five years in advance and extended by one year each year.
- 2. Near-term price safeguards: A "Price Band" (Price Ceiling and Price Floor) enables adjustment of unit supply within the Cap via a Unit Reserve to safeguard against near-term price risk and allow gradual transitions to long-term price changes. The Price Band is set annually for five years in advance and extended by one year each year.
- **3.** Long-term signals: Future decisions on Caps and Price Bands are each guided by indicative ten-year trajectories (i.e. an upper and lower limit, or corridor, for emissions from ETS sectors and emission prices).
- 4. Independent review and advisory mechanism: An independent body reviews the ETS supply and price settings to inform government decisions.
- **5. Managed access to international emission reductions:** All international emission reductions applied toward New Zealand's targets will be quality assured to manage risks with environmental integrity and other considerations. They will be directly acquired by the government (the only option available for the foreseeable future under the Paris Agreement). In the longer term they may also be acquired by ETS participants (if this option is enabled under a future market mechanism). In this case, the quantity must be limited and displace other supply under the Cap.

NZ ETS: SUCCESS AND WHAT NEEDS TO CHANGE

The New Zealand Emissions Trading Scheme (ETS) has sound policy architecture with many material design and operational strengths. Operating since 2008, the ETS has in place clear policies, rules, and procedures. The full sectoral coverage for reporting and compliance (with the exception of biological emissions from agriculture which have reporting obligations only) and the processes for free allocation to support particular activities are well established, although the future pathway for free allocation is not fully clear. Points of obligation are clear and flexibility to share these has been successful. Monitoring and reporting are broadly effective and the registry infrastructure has maintained its integrity. The overall architecture and functionality of the NZ ETS are fundamentally sound and adaptable to changing circumstances.

However, global and domestic policy and market conditions have changed and the context in which the ETS was designed no longer exists. To adjust to these new conditions, the ETS needs an enhanced framework fit for purpose.



The old ETS market paradigm under the Kyoto Protocol is no longer relevant

The underlying principle driving New Zealand's climate policy has been compliance with incremental near-term global responsibility targets at global least cost. The 1997 Kyoto Protocol set up a top-down carbon market framework for managing international unit supply and prices. Consistent with this, the ETS was designed to expose the New Zealand economy to international emission prices through unlimited linking to international Kyoto units. However, as a result of the global financial crisis and unstable international climate politics, those prices turned out to be extremely low and international units with poor environmental credibility were extensively used. Since the ETS was put in place, New Zealand has not reduced its net emissions in response to the ETS. Officials have concluded the ETS will have little impact on New Zealand's gross emissions in the future if current settings continue (Ministry for the Environment 2015).

Since the prospect of de-linking from the Kyoto market was first raised in late 2012, the ETS has not provided any certainty on the future supply of units into the domestic market. The market has not been able to set efficient emission prices relative to demand and there is no dependable emission price signal upon which sectors can have confidence and make long-term investments. It has been challenging for business to manage these uncertainties and determine their emission-reduction investment response.

The Paris Agreement requires a new mindset

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In Paris in December 2015, New Zealand agreed to a Nationally Determined Contribution (NDC) to reduce net greenhouse gas emissions by 30 per cent below 2005 gross emission levels (11.2 per cent below 1990 gross emission levels) by 2030. While this will be met in part through investment in emission reductions overseas, the Paris Agreement also calls for global emission neutrality in the second half of the century. The government has acknowledged there is an expectation of progressively more ambitious NDCs in the future. While enabling countries to invest in emissions reductions overseas and develop a new central market mechanism, the Paris Agreement does not provide a top-down carbon market framework. Instead, a mosaic of market arrangements and international emission prices is likely to emerge. In this context, we cannot rely on international markets to set efficient emission prices for New Zealand. The ETS needs to provide constructive price signals appropriate to our national circumstances to move the domestic economy toward longer-term decarbonisation.

The current ETS design does not deliver policy certainty or a long-term price signal

The ETS does not provide certainty on the domestic supply of units into the market or the Government's intentions for long-term prices. The fixed-price option of \$25 is set without reference to the government's targets, unit supply into the market, or international emission prices, and is not reviewed in a predictable way. The government acknowledges that uncertainty about future emission prices and ETS policy settings is contributing to businesses delaying investments in emission reductions and planning for an emissions-constrained future (Ministry for the Environment 2015). If domestic prices reach the current \$25 fixed-price option without a mechanism for adjustment, more arbitrage opportunities for ETS participants will emerge at taxpayer expense.

We are at a pivotal point in the ETS's evolution and need a new approach to address these shortcomings and better position New Zealand for a low-emission future.

PREDICTABLE POLICY AND THE RIGHT PRICE SIGNALS

The ETS proposal outlined below delivers a clear policy pathway for ETS unit supply, more effective price signals, more credible and effective funding of international emission reductions, and greater overall environmental effectiveness and credibility of the New Zealand ETS.

The proposal comprises five core components that work in harmony to deliver predictable policy and desirable price signals:

- 1. Near-term supply constraint to guide price
- 2. Near-term price safeguards
- 3. Long-term signals for unit price and supply
- 4. Independent review and advisory mechanism
- 5. Managed access to international emission reductions.

The ideas in this document were developed through, informed and inspired by discussions among ETS Dialogue participants which were undertaken in their personal capacity. Dialogue participants included: Josh Aird, Phil Brown, Nigel Brunel, Sharron Came, Lizzie Chambers, Sandra Cortes-Acosta, David Crawford, Tim Denne, Mark Franklin, Stuart Frazer, Sally Garden, Trish Hall (facilitator), John Hancock, Jo Hendy, Dayle Hunia, Suzi Kerr, Catherine Leining, Adrian Macey, Moana Mackey, Emmeline Rushbrook, Guy Salmon, Joanna Silver, Linda Thompson, and Paul Young. Officials from the following government departments also participated in the ETS Dialogue: Ministry for the Environment and the Treasury. Each of these enhancements is elaborated below. They can be implemented in the near term independent of future rules under the Paris Agreement and through a combination of regulation and amendment under the existing framework of the Climate Change Response Act 2002.

Near-term supply constraint to guide price: Cap

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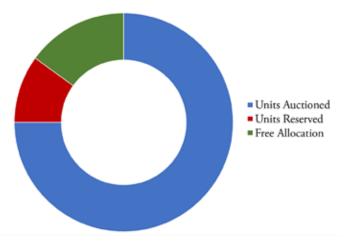
In an ETS, price is managed by defining the supply of emission units into the ETS. At present, the government issues units into the market by:

- issuing free allocation units to eligible emissions-intensive, trade-exposed producers on an output basis; and
- issuing units earned for emission removals by forestry and industry.

However, this volume covers only a portion of total annual market demand. For at least a couple of years, further supply requirements could be met by the volume of banked units but the government has provided no indication of future supply. Maintaining a sizable bank is also valuable for market stability.

The Cap is a near-term limit on units issued by the government and sent into the emissions trading marketplace. In choosing the Cap, the government considers New Zealand's international targets, domestic emission reduction ambition and opportunities, the cost of credible international emission reductions and the viability of purchasing them, and other emission reduction policies.

Figure 1: Model for an NZ ETS Cap



The Cap does not apply to units from forestry or industrial emissions removals. It comprises units:

- regularly *auctioned* into the marketplace by government;
- held in a *reserve* pool for future use to manage unforeseen changes in price ("Unit Reserve"); and
- *freely allocated* by the government to emissionsintensive, trade-exposed producers.

The Cap is fixed in the near term: The government sets a Cap for each year over a five-year period to constrain emissions in ETS sectors. Once set, the Cap cannot be changed (subject to the review mechanism below). Each year, a new final year is added so there is always a five-year cap in place.

Banking is not affected: The Cap does not limit the use of units already "banked" by ETS participants prior to the Cap being put in place. Units issued under the Cap can be banked for future use.

Free allocation is part of the Cap: Changes in the level of free allocation (e.g. due to eligible producers entering or exiting the market, changes in output levels, or phase-out provisions) are accommodated within and bound by the Cap. Changes in levels of free allocation mean changes in units available for auctioning.

Auctioning under the Cap is the primary source of unit supply into the market: Auctioning efficiently distributes units into the marketplace as part of the Cap, and provides the basis for price management (below). The amount to be auctioned and the date of auctions are known to the marketplace.



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ETS supply aligns with domestic emission reduction ambition and international target compliance: Units issued under the Cap are backed by a combination of:

- the portion of the government's "emission budget" allocated to ETS sectors; and
- expectations for purchases of international emission reductions.

A key decision for the government in setting the Cap is the sharing of domestic emission reduction responsibility and cost across sectors inside and outside of the ETS. When determining this, the government takes into account:

• projected emissions;

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- the relative technical and economic emission reduction potential in ETS and non-ETS sectors;
- the interaction between the ETS and other policies and measures; and
- the supply and cost of international emission reductions.
- The government can also take into account the size of the pre-existing bank of units held by participants.

Access to international emission reductions is constrained by the government: All international emission reductions applied toward New Zealand's targets must meet prescribed quality standards. For the foreseeable future, international emission reductions will be acquired directly by the government (the only option available at this stage of the Paris Agreement), and can be used alongside the government's emission budget to back NZUs issued into the ETS under the Cap.

If a future market mechanism enables purchases by private actors, this option could be introduced subject to a quantity limit on the surrender of international emission reductions for ETS compliance and a provision that international supply would displace other domestic supply under the Cap. This approach will provide the same level of confidence about ETS supply regardless of whether the government or ETS participants purchase of international emission reductions. It will also enable the government to manage ETS prices and influence the relative priority given to domestic emission reductions within New Zealand's NDC.

Time is of the essence: The Climate Change Response Act 2002 enables auctioning under an overall limit on auctioning plus free allocation, but this has never been implemented. Given the Paris Agreement and the need for New Zealand to commence a decarbonisation pathway, this proposal can and should be implemented as soon as possible. Waiting for commencement of auctioning under an overall limit until 2021 would be a risky strategy for New Zealand; relying on a finite bank to meet market demand does not offer the long-term supply certainty needed by the market to set an efficient price, and overly depleting the bank could undermine market stability.

There are many functioning ETS auctions overseas that we can learn from. Auction rules and infrastructure can be developed reasonably quickly. One option is to enlist third-party support. Third-party auction infrastructure capability already exists in New Zealand and offshore and a third party can efficiently and credibly expedite the introduction of emission auctions in 12-18 months.

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Near-term price safeguards: Price Bands

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Unlike other financial markets, the purpose of an ETS market is more than price discovery, resource allocation and liquidity. It is also to create a change in behaviour to reduce emissions. An ETS market is also different in that it is politically created under legislation and participants have to purchase units. Prices are driven by both current policy decisions and emission reduction opportunities, given that units are a bankable asset, expectations about future decisions and opportunities.

Private actors have divergent interests in terms of price. Some market proponents oppose government intervention in how the market sets prices. A company with high emissions and little or no ability to invest in lower-emission options in the short term may desire as low an emission price as possible and resist a prescribed minimum price. On the other hand, other sectors (such as cleantech and forestry) want to encourage a higher emission price so that their emission reduction or removal investments generate a solid return. These sectors tend to support a prescribed minimum price yet may resist upper price limits so they can maximise their return on investment as emission reduction ambition increases.

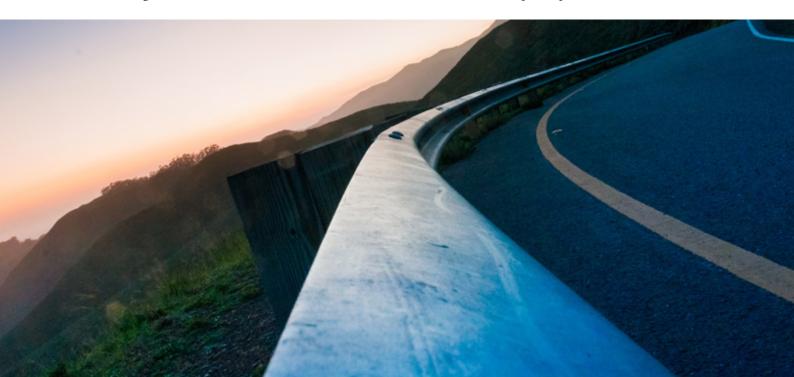
No emission price suits everyone and unconstrained price fluctuation can have harmful consequences for participants and for the overall objectives of the ETS policy.

A *Price Band* is a minimum and maximum emission price set by government for an ETS. In this model, the Price Band is implemented at auction and does not affect units banked before auctioning commences. A Price Band truncates the possible range of emission prices in the marketplace and therefore can limit price volatility. It helps to establish a predictable pricing range for behaviour changes and send clear and dependable investment signals for participants and investors. A Price Band helps maintain investor confidence by protecting the market from price shocks relating to expectations around policy shifts. A Price Band also transitions prices more smoothly as emission constraints change or as new technology or economic information shifts demand for emissions. Price predictability helps contain ETS system costs at politically acceptable levels, and provides greater assurance to regulators about the system's outcomes.

A Price Band has two components:

- 1. The *Price Floor*, the lower limit of the Price Band. This is the engine of decarbonisation as it guarantees a minimum return on low-emission investment. A Price Floor can also be useful for forecasting minimum government revenue from ETS auctions.
- 2. The *Price Ceiling*, the upper limit of the Price Band. This serves as the safety valve of emissions trading as it limits the risk that emission prices exceed acceptable levels. A well-designed Price Ceiling helps insulate the market from upside price shocks that could harm New Zealand's performance and economic competitiveness.

The Price Band operates within the Cap and is implemented at auction: The Price Band works by shifting unit supply between a Unit Reserve contained within the Cap and the market in response to price triggers. The Price Floor serves as the government's reserve price at auction. Surplus units not sold at auction are returned to the Unit Reserve. If the Price Ceiling is triggered at auction, additional units from the Unit Reserve are sold following a schedule of increasing prices until exhaustion of the Unit Reserve. If the auction price passes a given price threshold (indicating that exhaustion of the Unit Reserve has become a risk), a review of the Cap and the Price Band is automatically triggered (see below). In this model, the Price Ceiling does not offer hard (guaranteed) price protection once the Unit Reserve is exhausted. It therefore limits the fiscal risk to the government relative to the current feature of an unconstrained fixed-price option.



The Price Band is fixed in the near term: The government sets an upper and lower price limit for each year across a fiveyear period, effectively creating a corridor for incentivising behaviour change while insulating participants and the economy from unduly low or high prices. The Price Band is set with reference to domestic emission reduction costs in the context of domestic decarbonisation goals, international emission reduction supply and costs, and the value of emission price stability. The level of price within this band provides valuable information on long-run price expectations.

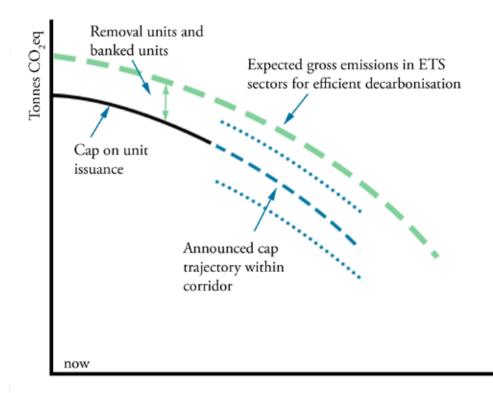
Long-term signals: Trajectories of future supply and prices

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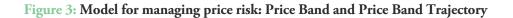
In addition to fixing the Cap for five years, the government signals longer-term supply in the form of an indicative *Cap Trajectory*, reflecting the government's intended path towards decarbonisation. The Cap Trajectory is issued for a ten-year period beyond the time period of the fixed Cap and extended by one year each year, giving businesses a 15-year horizon to guide future planning.

Similarly, government decisions on the future level of the Cap, Price Floor, and Price Ceiling are guided by a ten-year indicative Price Band Trajectory which is extended by one year each year.

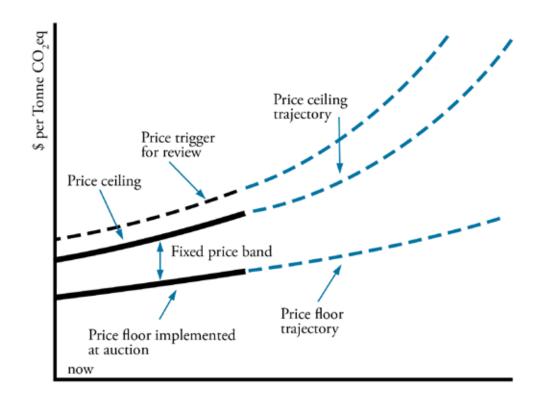
Figure 2: Model for managing unit supply: Cap and Cap Trajectory







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The Cap and Price Band (together with their trajectories) work together to deliver clear messages around supply and pricing expectations for the longer term. They provide tools to guide predictable policy responses to the shocks that will inevitably occur. Together they increase policy certainty, contain the impact of policy speculation on prices, and build confidence in the price signal that emerges from the ETS.

Independent review and advisory mechanism: Neutral and transparent assessment

The ETS operates in the context of an emerging international dialogue on global decarbonisation. The legislative framework needs to balance policy certainty with flexibility to respond to changing international and domestic circumstances. This proposal provides automatic and predictable levers for adjusting supply to manage prices: a Price Band mechanism which alters supply within the limits of the Cap, and the annual sixth-year extension of the Cap and Price Band guided by their Trajectories.

However, in some cases unforeseen changes may require a faster policy response to ensure the integrity of the Cap and Price Bands. The desired speed of domestic decarbonisation may change dramatically, major emitters may enter or exit the market, or new technologies might be introduced which radically change emission reduction opportunities or costs. When the automatic levers are not sufficient to accommodate such changes, special reviews are triggered, e.g. by passing a price threshold at auction (as noted above), or following a specified *force majeure* event. While enabling special reviews is essential, it also increases policy uncertainty for ETS participants. Two important steps can help to reduce the risks from policy uncertainty:

- 1. providing predictable triggers and systematic processes for reviews in legislation, and
- 2. engaging independent and transparent expert advice to inform decision making by government (and/or Parliament).

In this proposal, an independent body is tasked with regularly reviewing the ETS supply and price settings and providing advice to the government on setting the near-term Cap and Price Band as well as the long-term Cap and Price Band Trajectories. Advice also includes confirming the need for a special review of ETS settings and recommending changes. Legislation is used to set out the Terms of Reference of the independent body and the government's processes for considering and disclosing its recommendations.

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In order to keep the market informed, thereby reducing market volatility, the independent body releases regular (e.g. quarterly) reports to the market on the conditions that may necessitate a change at the upcoming annual review period. The independent body potentially also has a role in monitoring the environmental effectiveness of ETS and advising more broadly on emissions policy and the role of the ETS.

Managed access to international emission reductions

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The government set the ambition of New Zealand's 2030 target under the assumption it would be achieved through a combination of domestic action and investment in emission reductions overseas. The Paris Agreement enables three options for transferring emission reductions between countries:

Option 1	A new <i>centralised market mechanism</i> whose design has yet to be negotiated
Option 2	Internationally transferred mitigation outcomes through <i>ETS linking</i>
Option 3	Internationally transferred mitigation outcomes through <i>government-to-government transactions</i>

At this stage of rulemaking, international transfers of emission reductions can happen only between governments. Options 1 and 2 above are not viable for New Zealand in the short to medium term. A new centralised market mechanism for emissions (Option 1) will take many years to establish and may be vulnerable to the same problems that affected the Kyoto "flexibility mechanisms." There are also material challenges with ETS linking (Option 2) which would need to be addressed by government before any ETS linking is established:

- 1. A **smart linking option doesn't currently exist.** Our ideal linking partner is a net seller with a stable, credible and wellestablished ETS compatible with New Zealand's strategic interests for managing unit supply and prices.
- 2. New Zealand **loses control of the ETS price signal.** New Zealand would become a "price taker" in any linking arrangement so the linking partner's price needs to be compatible with our own decarbonisation needs.
- 3. The **current ETS design poses barriers to linking.** The inclusion of forestry and price management mechanisms in the ETS are not attractive to all other ETSs and can create challenges with two-way linking.

International units are currently not accepted in the ETS and New Zealand has neither the rationale nor the required international mechanism to change this at present. If in the future a credible market mechanism (Option 1) or a viable linking opportunity (Option 2) makes it possible for ETS participants to access international emission reductions, then the government could consider exercising this option in a way that supports its objectives for predictability of unit supply and price in line with domestic decarbonisation. Distinctive options for managing government-led and participant-led purchasing of international emission reductions merit careful consideration. In all cases, stringent quality standards would need to apply to any international emission reductions applied toward New Zealand's targets and/or traded within the ETS.



A novel collaborative approach for government purchase of international emission reductions

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Option 3 creates an opportunity for the government to purchase international emission reductions through an innovative and collaborative mechanism. "Climate clubs" are an emerging idea that small groups of countries can work together with commonly agreed levels of emission reduction ambition and harmonised rules for monitoring and accounting for domestic emissions and international transfers. Agreement and enforcement of meaningful reductions are easier to achieve in small self-selected groups than at the UN level so these can facilitate the growth of global action. The idea of a "climate team" outlined below is a variant on climate clubs. A group of like-minded countries which need to buy international emission reductions could negotiate an agreement with one identified "seller" (a "climate team") which could either stand alone or be part of a club. It provides a transitional step for including new countries with developing economies in a club and focuses on the relationship between "buyers" and "sellers" rather than among countries with similar ambition.

To meet the needs of New Zealand and protect New Zealand's credibility and leadership reputation internationally, its climate team strategy must:

- 1. involve purchasing emission reductions from countries with low-cost emission reduction opportunities that they cannot finance alone and that go beyond that country's own Paris target;
- 2. be based on monitoring of "seller" emissions that uses standard UN national inventory methods recognised within the Paris Agreement and meet any internationally recognised social or environmental safeguards;
- 3. be attractive to the seller of units, encouraging them to focus on emission reductions that are transformative, not investment in incremental change; and
- 4. generate enough units to meet New Zealand's needs when combined with other international sources of units.

The first two points ensure that reductions are, and are perceived to be, additional and environmentally credible. The third and fourth points ensure that the agreement meets the needs of both buyers and sellers while incentivising transformative change.

The agreement includes a negotiated crediting baseline for emissions at the level of the country or sector (e.g. forestry). The crediting baseline is defined in tonnes per year to 2030 and is more ambitious than the seller's NDC. The agreement allows negotiation of actual prices during the course of the baseline period so evolving market conditions can be accounted for. However, it specifies a price band up front so the seller receives a guaranteed minimum price while the buyers never pay more than a fixed maximum. Units are transferred only after emissions are monitored and verified. If monitored emissions are below the agreed crediting baseline, the difference defines the number of units to be sold. The group of buyers has the right to purchase all these units. This provides a degree of security of supply to buyers and an incentive for them to facilitate and support emission reductions, for example through provision of investment capital or expertise. This process occurs annually if the monitoring process allows, mimicking the process in the successful Amazon Fund. The total amount of funds available from the buyers to purchase units is defined and contractually committed in advance. This pool of funds is large enough to motivate significant emission reduction action by the seller.

This novel approach offers distinct advantages to New Zealand:

- New Zealand can strategically identify "seller" countries to work with based on income, complementarities with New Zealand in trade or sectoral expertise, and the ambition and clarity of their Paris target and strategy to meet and potentially exceed it.
- An agreement at a national or sector scale allows use of existing, accepted monitoring methods, minimises leakage, and reduces issues of additionality.
- The pre-commitment of prices and total funds provides security to the sellers and encourages them to pursue riskier and more structural emission reduction options that make a large difference rather than incremental small changes. This generates more reductions to sell and increases assurances of additionality.

To protect against failure of supply from any one source, New Zealand needs to implement arrangements with several seller country governments which can offer credible international emission reduction opportunities. This could entail participation in several "climate team" agreements.

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Enabling ETS participants to purchase international emission reductions from a central market mechanism

If future international rules and market conditions support direct purchases of international emission reductions by ETS participants from a central market mechanism, it could become possible to enable their use for compliance in the ETS. To provide policy certainty and guard against risks to supply management and disruption of long-term price signals, legislation should provide that if the ETS re-opens to international emission reductions in the future:

- 1. a quantity limit will apply on the amount of international emission reductions that can be surrendered by each participant (e.g. as a percentage of that participant's total surrender amount);
- 2. that amount will displace other NZU supply under the Cap so prices continue to be managed under the mechanisms outlined above; and
- 3. NZUs will not be eligible for export.

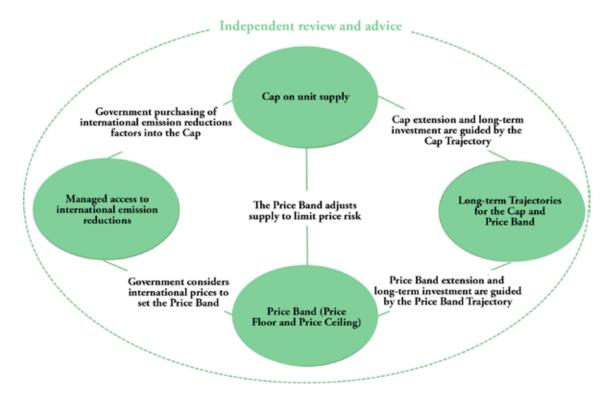
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As an alternative (or complement) to opening the ETS to international emission reductions purchased by participants, the government could contract with private actors to purchase international emission reductions on the government's behalf.

CONCLUSION

The Paris Agreement has established a new context for global emission reduction efforts and carbon markets that necessitates changes to the operation of the NZ ETS. Driving efficient low-emission investment in New Zealand requires a credible, stable and predictable long-term emission price signal which is aligned with our domestic emission reduction ambition. This proposal presents an integrated package of adjustments to the design of the NZ ETS which can be implemented in the near term to deliver on that requirement. Figure 4 summarises how the five core components of the proposal operate in concert to make the NZ ETS a more powerful tool for managing the pace of domestic decarbonisation while reducing risk and uncertainty for low-emission investors, emitters and government.

Figure 4: How the NZ ETS can send clear price signals to guide low-emission investment



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