

Regulatory Impact Statement: New Zealand Emissions Trading Scheme regulation updates 2017

Agency Disclosure Statement

This Regulatory Impact Statement has been prepared by the Ministry for the Environment.

It provides an analysis of options to address an emissions pricing difference between importing goods containing synthetic greenhouse gases. A number of other administrative changes are also noted.

Consultation has taken place as part of the regulation process. In relation to the proposed regulations and amendments a consultation document was released. The Ministry for the Environment received very few submissions on the issues. This may be reflective of the minor and technical nature of these regulations. Submitters were sought out to provide comments on the proposals and all of the information contained in the submissions were analysed.

The analysis and options proposed are constrained by the lack of information on the number of people impacted and the additional amount of synthetic greenhouse gases likely to be priced. The few submissions received by the Ministry outlined very little information on the impacts of these policy options. Analysis of submissions provided limited information on which to base impact assessments of these options.

The analysis does not rely on any assumptions nor contain any dependencies. There are no significant constraints, caveats or uncertainties concerning the analysis, including time constraints. No further work is required before any policy decisions can be implemented.

Roger Lincoln, Director, Climate Change

Status quo and problem definition

A set of 11 regulations (and several orders of Parliament) govern the efficient and accurate operation of the New Zealand Emissions Trading Scheme (NZ ETS). NZ ETS regulations require amending from time to time to update technical factors, to keep the regime up-to-date, and address anomalies when they arise. This ensures the NZ ETS remains as accurate as possible. From engagement with the Environmental Protection Authority (EPA) and participants (particularly through submissions to the 2015/16 NZ ETS Review), a set of nine issues with the regulations was identified for 2017. New policy decisions are not required for resolving most of those issues because they can be dealt with by minor wording changes or as provision exists within already agreed policy. Such issues and solutions are covered in the appendix to this analysis.

The body of this analysis is concerned with the importing of goods containing synthetic greenhouse gases.

Synthetic greenhouse gases (SGGs) such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), also known collectively as refrigerants, are contained in air-conditioning units, refrigerators, motor vehicle air-conditioning units and many other goods. These refrigerants are characterised by very high global warming potentials and are released into the atmosphere as the product is used, serviced and disposed.

The Climate Change (Emissions Trading and Other Matters) Amendment Act 2012 removed the ETS obligation for the importation of HFCs and PFCs in goods and motor vehicles, and replaced it with a SGG levy linked to the carbon price.

Using a levy, rather than an ETS obligation, decreases administration and compliance costs and increases the certainty of the carbon cost placed on businesses. The trade-off is the loss in flexibility in the carbon price from not being able to purchase the cheapest units in the carbon market at the time of unit surrender.

The levy rates are set annually and refer to the type of SGG in each category of good, the quantity of that SGG, and the average price for an emission unit over the previous July-June financial year.

While many imported goods containing HFC134a and R404A are included in the SGG Levy system, goods containing other SGGs (such as R32) are not. This has created a price distortion for the import of often competing goods. For example, an importer of a medium sized domestic heat pump with floor value of about \$2600 must pay the SGG levy of approximately \$20 to the NZ Customs Service when the good is imported. The importer of a similarly sized heat pump containing R32, aimed at the same consumer market, does not.

It has also created a problem where the imported bulk gases are 'priced' by NZ ETS obligations (thus affecting any local purchasers and users of them), but importers of the gases contained some goods are not priced at all. New Zealand manufacturers are competing against importers who are not subject to emissions pricing. An example is New Zealand's manufacturer of polyol used for foam blowing who incurs NZ ETS costs in the purchase of HFC245fa, but the importer of a similar 'finished' product does not.

The list of goods also has a few omissions. For example, parts for air conditioning units containing R404A are included, but parts containing HFC134A are not. Aircraft imported for

domestic use are not listed, despite these having potentially large amounts of refrigerants in their air conditioning systems.

The amount of SGG imported in goods that isn't subject to the SGG levy is difficult to determine, given importers are not currently required to report this data at any point. Consequently, the scale of the problem is unclear. It is known that the five major domestic heat-pump providers all supply goods containing R32.

Therefore, the problem being assessed in this paper is that some SGG is imported without any emissions pricing, creating competitive distortions.

Objectives

The objectives of the regulations are to ensure the efficient and accurate operation of the NZ ETS. These have been interpreted for the objectives of the SGG levy regulations as to

- Ensure goods containing SGG face a carbon price that is equivalent, over the long term, to those importing SGG in the NZ ETS, and
- Minimise administration and compliance costs for importers of goods.

These objectives are combined below to provide a set of evaluation measures.

Objective	Administrative and compliance costs	Equivalency of carbon pricing
Criteria	Cost of implementation, administration and compliance to Government and participants	Consistency of policy treatment of people performing similar activities

These criteria are used below to measure options to address the problem against the status quo.

Options and impact analysis

Options analysis

The following two options were assessed against the status quo to address the lack of emissions pricing for SGG imported in some goods:

- 1) Amend the Climate Change (Synthetic Greenhouse Gas Levies) Regulations 2013 to include the goods and gases in the scope of the SGG levy; or
- 2) To amend policy settings in a way that requires importers of SGG in goods to have obligations under the NZ ETS to report emissions and surrender emission units.

Option 1: To update the schedule to include known goods and gases currently not listed but known to contain SGGs. The current schedule was prepared in 2012 and since then many

new refrigerant chemicals and related technologies have been developed, mostly for air conditioning and heat pump equipment. As identified above, this emissions pricing gap has led to a market price distortion between those subject to the levy and those that are not.

There will be new participants as a result of this option, although it is unclear how many, as the majority of the new goods that would be subject to the levy scheme are being imported in bulk by well-established importers who also import goods that are subject to the SGG levy.

The additional administrative costs from the option for participants would be minor, given their familiarity with import procedures including declarations and prior experiences with levies.

This option will increase administrative costs for the NZ Customs Service due to collecting levies from additional importers. These costs would be able to be absorbed through existing Departmental baselines.

The impact of this option would be to increase the cost of particular goods supplied to the NZ market. For example, a domestic heat pump containing R32 with 5kW heating capacity would have a SGG levy applied to it of approximately \$15, compared to the shelf price of \$2600.¹ While importers would be those incurring the levy, those costs would be recovered through adjustments to retail prices if not absorbed by the importer.

It will also increase the cost of some products used in manufacturing. The sole importer of formulated polyol containing HFC245fa will pass their SGG levy costs of approximately \$35,000 per year onto local manufacturers of foam insulation, which is used in goods such as hot water cylinders.

This option does not include updating the SGG levy schedule relating to motor vehicles despite new SGG technologies being imported. The only available alternative is known to have a very low GWP and any SGG levy applied to these would have no net benefit. For example, with a GWP of 4, a vehicle imported containing the blend R1234yf in its air condition system would incur a levy of \$0.02 using current levy rates. The alternative SGGs for other goods have considerably higher GWPs.

The fiscal impacts of this option are difficult to determine, given there is no information on the quantity of goods imported with SGG other than those already listed in the schedule.

The EPA reported the total amount of money collected from the levy on goods in financial year 2014-15 was approximately \$200,000. It is expected that this amount will substantially increase for 2016-17 because the underlying carbon price used in setting the levy rates has risen from \$0.64 to \$9.85. This rate is likely to double again for 2017-18, thereby suggesting total revenue from the levy to be over \$5 million in that period. These figures exclude any possible revenue from levies recovered from the import of the goods not currently subject to the SGG levy.

¹ At an emissions unit price of \$25. In contrast, a similar heat pump using R410a (which is already listed in the schedule of SGG goods) would have a levy of approximately \$50.

Option 2:

The other option would be to require importers of HFC in the goods listed to be participants in the NZ ETS. This would be impractical, given the often small amounts of HFC in the goods, and unfair as the administrative costs for importers and regulators would outweigh the benefits. It would be a reversal of policy, as this approach was removed in favour of the levy scheme in 2012.

A table summarising the assessment of options is included below:

Summary of options to address the gaps in emissions pricing of SGG in goods

	Status Quo	Option 1 – extend SGG levy	Option 2 – adopt NZ ETS obligations
Administration and compliance costs for Government	None	Some small initial cost	Significant
Administration and compliance costs for participants	None	None	Significant
Consistency of policy treatment	Poor	Improved	Improved

Option one has some administration and compliance costs for the Government in changing the Working Tariff Document and communicating the changes to participants. These would be less than \$5,000. There would be some fiscal benefit from increased SGG levy revenue.

In contrast, option two would create high costs in developing changes to primary legislation and regulations as well as new administration and compliance measures, especially if all importers of motor vehicles are mandatory NZ ETS participants. Participants would incur administrative costs that could be out of proportion with the quantities of SGG imported.

Preferred option and recommendation

The preferred option is to update the schedule of goods subject to the SGG levy (option 1). Additional administrative costs are negligible for regulators and importers, while the proposal will address the inequitable treatment of different imported goods containing SGG.

Consultation

There were two sets of public consultation. Consultation was run in December to February on the issue of importing formulated polyol containing embedded HFC245fa. Three submissions were received and the Ministry subsequently directly communicated with the stakeholder affected to gain a better understanding of impacts and options.

Public consultation was carried out over May 2017 for the rest of the changes in this analysis. Notices were sent to all registered NZ ETS participants. Importers were made aware of the consultation through notices sent by the NZ Customs Service. Consultation material was available at the same Ministry for the Environment webpages that have carried NZ ETS regulation update consultation materials in previous years.

Four submissions were received on the policy change to the SGG levy regulations. Three supported the change (all from industry groups) and one was silent (from a large importer). The submissions on this proposal have not changed the preferred approach as described in the consultation document.

Many Government agencies have been consulted through this work, from preparing materials for consultation to developing decision papers for Ministers. These have included the Environmental Protection Authority, the Treasury, and the NZ Customs Service, the Ministry for Business, Innovation and Employment.

Implementation plan

The amendment to the schedule of goods subject to the SGG levy would be implemented through amendment to the New Zealand Customs Service Working Tariff Document. Amendments to the existing SGG levy rates are already performed annually through Order in Council, as those rates need to reflect the price of emission units over the previous year. The drafting of those changes would be combined with proposed additions of new goods to the schedule.

Changes to the schedule must be published in the New Zealand Gazette before 30 September 2017 in order to come into effect from 1 January 2018. Communications materials will be developed and delivered as soon as the changes are published in order to assist importers with contractual and pricing arrangements. The EPA will begin implementing changes to the Emissions Trading Register at the same time.

Communicating the additions to the SGG levy schedule after they are published is an opportunity to remind and clarify importers of their obligations. The approach taken to communications will be designed to reach as many importers as possible.

Monitoring, evaluation and review

The Ministry for the Environment will work closely with industry, the EPA, Customs and the NZTA to effectively monitor and review the SGG levy. The EPA is the main agency responsible for monitoring and reporting on compliance with the levy.

The EPA collects and publishes data on activity under the SGG levy scheme. In order to protect commercial confidentiality where only a small number of importers are involved, this data will not be provided at such a granular level as to define the impact of the preferred policy on activities.

The NZ ETS itself is reviewed and evaluated when external contexts change. For example, the most recent review was driven by the need to ensure the NZ ETS will contribute meaningfully to the achievement of New Zealand's 2030 commitments under the Paris Agreement. Consultation performed through that review led to several administrative issues coming to light that have been reviewed above. The Ministry will continue to work with agencies, participants and stakeholders to identify NZ ETS operational policy and administrative issues and develop appropriate responses.

Appendix

A range of minor and administrative changes to regulations were consulted on alongside the proposal above to increase the number and types of goods subject to the SGG levy. These changes will adjust operational and administrative parameters within existing policy as already agreed by Cabinet. None of the administrative changes will increase costs for participants, other than for those who are taking unfair and unintended advantages of a lack of clarity in regulation wordings. The exception was the proposal to extend ETS coverage to sulphur hexafluoride emissions from non-operational equipment and stores. This would increase costs for existing participants and be a policy change. However this proposal will not be implemented for reasons that are explained below.

Issue 1: Natural gas default emission factors

Table 10 of the Stationary Energy and Industrial Processes Regulations (SEIP Regulations) in Schedule 2 includes field specific and national average default emissions factors (DEFs).

Field specific DEFs are provided in the SEIP regulations to ensure that an opt-in purchaser and users of gas storage facilities could report on their emissions without requiring detailed information from the gas miner. This potentially lowers administrative costs for both parties and increases certainty.

This table has been regularly updated so that it reflects current field operations and remains accurate. For the purpose of these updates, a formalisation of data exchange procedures has been completed by contacting gas mining participants to establish data access arrangements. New DEFs have been calculated for most of the fields, but some field specific DEFs will be unchanged where participants have not returned approval forms for data sharing.

Aside from the returned data access approval forms, two submissions were made on this proposed change. One submission requested timely notice of changes to DEFs for business planning reasons, and suggested working with other regulators and industry bodies to broaden communications with stakeholders. The other submitter was concerned with data privacy and noted the financial impacts on participants from their decisions to share emissions return information, or not.

These changes to DEFs will create no new fiscal or participant costs.

Issue 2: “Bulk” imports of synthetic greenhouse gases

Any importer of HFCs or PFCs is a mandatory participant in the NZ ETS, except for those gases contained in goods. Regulation 44H of the SEIP Regulations then adds the condition that emissions must be calculated if these gases are imported in bulk.

Using the wording of the SEIP Regulations, it is not clear if an importer of non-bulk amounts of such gas that is not contained in goods is obliged to report on emissions, for example, an importer of these gases contained in small cans for recharging systems, or an importer who for any other reason, does not consider their import to be ‘in bulk’. This wording artificially and incorrectly implies an exemption for non-‘bulk’ imports.

It was proposed to add an interpretation of 'bulk' in the SEIP Regulations that aligns with the existing interpretation in the Ozone Layer Protection Regulations 1996. This will remove the ambiguity. The five submissions were received on this proposal; one from a bulk importer, another from a goods importer, and the other three from industry groups. They were all supportive, and further refinement will be developed through drafting. This added clarity will not lead to new fiscal or participant costs.

Issue 3: Natural gasoline from processing purchased gas

Natural gas processing results in the production of some natural gas liquids, including natural gasoline, a low octane liquid usually blended into other liquid hydrocarbons. Where this is done by a gas miner, the natural gasoline (and condensate) does not incur an NZ ETS obligation.

A situation has arisen where a gas purchaser further processes gas for which the NZ ETS obligation has been covered by the upstream gas miner. The natural gasoline by-product is on-sold to a third party (not the upstream gas miner) for export or possibly as an input to the Marsden Point Refinery.

If the natural gasoline is exported then the emission occurs outside New Zealand and thus is not part of our inventory and should not incur an emission charge. If the natural gasoline enters the Marsden Point Refinery, a possible double NZ ETS obligation would arise, since liquid fuels enter the NZ ETS when 'removed for home consumption'.

Consultation was performed on a proposal to add natural gasoline, produced from purchased natural gas (i.e. for which an NZ ETS cost has been incurred) to the list of 'Other Removals' activities. This enables the emission cost of the natural gasoline to be refunded by a corresponding allocation. This is similar to the addition of LPG exports to the regulations in a 2011 amendment. One submission was received, from a natural gasoline producer. The submitter was supportive of the proposal. Ministry for the Environment officials have been engaging on the issue with this submitter for several months to ensure the proposal addresses the problem and is implementable.

This change will create a new participant cost as it will require the participant to submit applications under the other removal activities regulations in order to be issued with units. It is not clear how the administrative costs of that process compares to the negotiation costs of the previous commercial arrangements.

Issue 4: Exporting polyol

Polyol formulations along with isocyanates are constituents of polyurethane foams, which are widely used in insulation. Some polyol formulations include HFCs as blowing agents. Polyol is either formulated in New Zealand or imported directly.

Locally formulated polyol can include imported HFCs which has incurred an NZ ETS cost, since bulk importation of SGGs triggers mandatory NZ ETS participation. Some New Zealand formulated polyol is exported, meaning the emission of any HFCs occurs outside New Zealand.

The proposal consulted on was to include formulated polyol containing HFCs to the list of activities in the 'Other Removals' activities. The one submission that addressed this issue, from a bulk importer of refrigerants, was supportive of the proposal. Ministry for the

Environment officials have been engaging on the issue with a NZ manufacturer of polyol that imports bulk HFCs and this proposal arose from those discussions. The proposal will affect one known importer, who will incur SGG levy costs of approximately \$30,000.

Issue 5: including new blends of synthetic greenhouse gases to an informational table

Table 2 of Schedule 2A of the SEIP regulations provides a breakdown of the composition of common synthetic greenhouse gas blends. This allows participants who import bulk SGGs to quickly calculate the global warming potential (GWP), and therefore the potential emissions, of those blends.

A person who imports a blend not listed in the table still has NZ ETS obligations for any hydrofluorocarbon (HFCs) and perfluorocarbon (PFCs) components in the blend through regulation 4 (definition of 'class'). However the importer may be uncertain about the amount of emissions to be reported without individual calculation of the GWP of the gas blend through referring to the proportions of chemicals and their individual GWPs.

A proposal to update the relevant table to include the new gas blends was consulted on and four submissions were received; one from a bulk importer, another from a goods importer, and the other two from industry groups. They were all supportive and noted the possible referencing of the custodian of refrigerant designation (ASHRAE) as a way to ensure the regulations are continuously up to date.. These additions to the table will not create any new fiscal or participant administration costs, although there will be small implementation costs to the Environmental Protection Authority arising from this and other changes to its emissions registry.

Issue 6: Acceptable instruments for measuring geothermal steam flow

People who use geothermal fluid above a threshold are able to apply for a unique emissions factor (UEF) based on the gases associated with the steam and the quantity of steam used. There are 12 mandatory geothermal participants in the NZ ETS, several of which hold UEFs.

UEF Regulation 16(3)(a) specifies that venturi meters or equipment with similar accuracy must be used to measure steam flow. We understand that other technologies typically used for measuring steam flow include orifice plates and annubar meters.

Participants have been asked by UEF verifiers to demonstrate that the instruments they use to measure steam flow are as accurate as venturi meters. This is in accordance with the wording of the regulation. However, for multiple UEF applications, providing such information becomes costly and of little additional value.

The proposal consulted on was to generalise UEF Regulation 16(3)(a), by explicitly listing commonly used technologies for steam measurement such as orifice plates and annubar meters. This would remove the need for participants to score their accuracy against that of venturi meters and bring the regulations into line with common industrial practice for measuring steam flow. The policy intention was to reduce the transaction costs of obtaining a UEF, not lower the accuracy of the data behind a UEF.

Two submissions were received from geothermal power station operators on this proposal. Both were supportive. One noted concerns with the threshold used to determine when material change had occurred that would indicate a UEF was no longer accurate. This matter

is being managed separately to the proposals in this paper. This change will reduce administrative costs for participants in managing their UEF obligations.

Issue 7: Estimating the efficiency of a landfill gas collection system

Landfill operators that collect and destroy landfill gas are able to apply for a UEF. The landfill gas collection UEF is based on the measurement of methane in the gas flowing through to destruction equipment, compared to the modelled emissions of the landfill in the year.

There is ambiguity in the wording of the UEF regulations regarding the counting of potential (modelled) emissions which could, if matched against actual emissions destroyed, result in an artificially large collection efficiency and hence a lower UEF. It is possible for a person to only model emissions from active and open landfill cells, but measure emissions collected and destroyed from all landfill cells.

The proposal consulted on was to clarify in the regulations that the landfill facility from which landfill gas is collected and measured must be the same as that modelled for potential emissions and the same as applying for the UEF. One submission was received on this proposal, from a landfill operator. The submission did not address the issue or proposal directly, but instead discussed various other parameters used in estimating emissions from landfills. Those concerns will be discussed with the submitter outside the proposals in this paper. No fiscal or participant costs will be incurred from the proposed clarification.

Issue 8 (Policy change 1): Scope of reported sulphur hexafluoride (SF₆) emissions

Users of SF₆ in electrical switchgear are mandatory participants in the NZ ETS if they have more than 1 tonne of SF₆ installed in operating equipment. These participants are required to collect and record information about the amount of SF₆ added into switchgear being operated, the capacity of the switchgear, and the amount of SF₆ in installed or removed switchgear. This means these users only have to report the emissions from equipment being operated. Some users may have stores of SF₆ contained in equipment under repair or in bulk form in containers.

The storage of SF₆ in bulk and in equipment and the repair of equipment are known to be sources of emissions, for example, through accidental handling errors during equipment repair. These sources are currently outside the scope of the regulations despite the responsibility and management of these emissions being within the control of the user of electrical switchgear.

The largest user of SF₆ estimates that up to 10% of its SF₆ emissions are from sources other than operational equipment. Total emissions reported to the EPA in the 2015 calendar year were 5775 tonnes of carbon dioxide equivalent (tCO₂e). Therefore there are approximately 578 tCO₂e emissions potentially within scope.

The five submissions on this proposal were unanimously in opposition due to ongoing new administrative costs. A medium sized participant stated that annual cost for measuring the additional sources of SF₆ emissions would be \$14000, suggesting economy-wide costs of over \$100,000, compared to the total value of the emissions of roughly \$15,000. All the submissions also noted that the proposal would not reduce emissions, given participants are already incentivised to avoid wastage of SF₆ for cost and safety reasons.

For those reasons, this proposed change will not be implemented.