



Australian Government



Price floor for Australia's carbon pricing mechanism

Implementing a surrender charge for international units

December 2011

This paper does not necessarily represent the views of the Government or any Government Minister. It is a discussion paper prepared by the Climate Strategy and Markets Division of the Department of Climate Change and Energy Efficiency. The positions presented in this paper are preliminary only and are intended to promote discussion as part of the process of finalising the international unit surrender charge policy.

Commonwealth of Australia 2011

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without prior written permission from the Commonwealth. Requests and inquiries concerning reproduction and rights should be addressed to the:

Commonwealth Copyright Administration
Attorney General's Department
Robert Garran Offices National Circuit
BARTON ACT 2600

Or posted at: <http://www.ag.gov.au/cca>

A copy of this document and other Department of Climate Change and Energy Efficiency information appears on the department's website at: www.climatechange.gov.au.

Disclaimer

Material in this discussion paper is made available on the understanding the Commonwealth is not providing professional advice. Before relying on any of the material, readers should obtain appropriate professional advice. While reasonable care has been taken in preparing this discussion paper, the Commonwealth provides no warranties and makes no representations that the information contained in the discussion paper is correct, complete or reliable. The Commonwealth expressly disclaims liability for any loss, however caused and whether due to negligence or otherwise, arising directly or indirectly from the use or reliance on information contained in the discussion paper by any person.

Information for respondents

Key Date

9 February 2012	Submissions on discussion paper close
-----------------	---------------------------------------

Submission Guidelines

These guidelines outline the requirements for submissions on this discussion paper:

- Submissions are invited from all interested stakeholders.
- Where possible submissions should be lodged electronically at the email address below, preferably in Microsoft Word or other text-based formats. Alternatively, submissions may be sent to the postal address below to arrive by the due date.
- **Submissions will not be treated as confidential unless this is specifically requested**, and may be made publicly available. If a submission (or extracts of a submission) is to be kept confidential, please indicate this in the submission.
- All submissions are due by **close of business on 9 February 2012**

Submissions should be sent to:

Email: SMLB.pricefloor@climatechange.gov.au

Postal address:

Strategy Team
Strategy and Market Linkages Branch
Department of Climate Change and Energy Efficiency
GPO Box 854
Canberra ACT 2601

Contact details

Copies of this paper are available on the Department's website at www.climatechange.gov.au.

Hard copies are available on request via telephone 1800 057 590 or email SMLB.pricefloor@climatechange.gov.au.

Contents

1. Introduction.....	5
2. Assessment criteria	5
3. Implementation Options.....	6
3.1. Option 1: A charge based on the actual price paid for each unit	7
3.2. Option 2: A charge based on the price observed at the time of entering into a contract to purchase international units	8
3.3. Option 3: A charge based on the price observed at the time of surrender	10
3.4. Option 4: A charge based on the market price observed at the time the unit is surrendered, with the option for liable entities to undertake to surrender units in the future.	11
4. Design issues.....	13
4.1. How to define a class of unit.....	13
4.2. Which exchanges to use.....	14
4.3. How to observe market prices.....	15
4.4. Exchange rates	16
4.5. Whether to take into account futures prices.....	16
4.6. The use of an uplift factor when setting the surrender charge	17
5. Next steps.....	17

1. Introduction

The Government announced on 10 July 2011 that the carbon pricing mechanism will include a price ceiling and price floor for the first three years of the flexible price period (2015-16, 2016-17 and 2017-18). The price floor is intended to help reduce downside carbon price risk for investors in low emission technologies by establishing a minimum carbon price in Australia over the period.

The *Clean Energy Act 2011*, and related legislation, implement the price floor by combining a minimum auction reserve price for domestic carbon units with a surrender charge for international units. The surrender charge will be imposed by the *Clean Energy (International Unit Surrender Charge) Act 2011*. Paragraphs 3.82 to 3.88 of the *Revised Explanatory Memorandum to the Clean Energy Bill 2011* describe how the price floor is implemented in legislation.

The surrender charge will be established through regulations and be based on the difference between the estimated international price for a unit class and the floor price, such that:

- If the price for a class of eligible international unit is equal to or above the floor price the charge will be equal to zero.
- If the price for a class of eligible international unit is below the floor price, the charge will be set at a level in regulations so that it is equal to the difference between the floor price and the estimated price for that class of unit.

This paper discusses options for implementing the international unit surrender charge. It includes options that have been put forward by stakeholders during early consultations. Feedback on the issues raised in this paper will be used in the development of the final design of the charge.

In the first half of 2012, stakeholders will also be given the opportunity to comment on draft regulations to implement the international unit surrender charge.

2. Assessment criteria

In analysing the options to implement the international unit surrender charge, the following criteria have been used:

Effectiveness: the mechanism should impose an effective floor price on surrendered international units. This means that when liable entities make decisions about whether to abate or surrender eligible units, they face an opportunity cost of surrendering units that is equal to the floor price.

Efficiency: the mechanism should support the efficient operation of the market. This includes minimising transaction costs for market participants, encouraging efficient price discovery, and supporting the development of products for the purposes of risk management and trading.

Workability: It is essential that the international unit surrender charge is workable for the Regulator and for liable entities, and that it manages complexity and minimises implementation risk.

3. Implementation Options

A range of options have been raised in early discussions with stakeholders. The four options for implementing the surrender charge on international units that are considered in this paper reflect discussions to date.

- The first option sets a surrender charge for a particular international unit based on the actual price paid for that unit. For example, if a person surrendered an international unit purchased for \$14, they would pay an additional \$1 charge if the floor price was \$15 on the day the unit was surrendered. To account for any time differences between when the unit was purchased and when the unit was surrendered an adjustment could be made to reflect the carrying costs associated with the time value of money.
- The second option sets a surrender charge for a given class of international units based on the market price of that class of units, at the time that the contract to purchase the unit was entered into. For example, if the observed market price of a particular class of units was \$14 on the day a person entered into a contract to purchase a unit, the person would pay a \$1 surrender charge if the floor price was \$15 on the day the unit was surrendered, regardless of the price they actually paid for the unit. To account for any time differences between when the contract was entered into and when the unit was surrendered an adjustment could be made to reflect the time value of money.
- The third option sets a surrender charge for a given class of international units based on the market price for the particular class of units at the time of surrender. For example, if the observed market price of a class of units was \$14 when the unit was surrendered, a person would pay an additional \$1 fee if the floor price was \$15 on the day the unit was surrendered, regardless of the price actually paid for the unit.
- The fourth option would also set a surrender charge for a given class of international units based on the market price of that class of units at the time of surrender. However, liable entities would also be able to enter into a binding legal undertaking to surrender international units on a particular date in the future with the surrender charge determined by the observed price at the time of making the undertaking adjusted for the time value of money. For example, on 8 August 2014, a liable entity could enter into an undertaking with the Regulator to surrender 25,000 CERs on 1 July 2015, with a pre-specified surrender. The surrender charge would be determined by the market price for CERs on 8 August 2014 adjusted by an uplift factor for the time value of money.

This section will assess these implementation options against the assessment criteria set out in Section 2.

Stakeholder feedback

Stakeholder feedback is sought on alternative models for implementing the price floor that better address the assessment criteria set out in Section 2.

3.1. Option 1: A charge based on the actual price paid for each unit

Option 1 would be implemented by charging a surrender fee based on the actual price paid for each individual unit. The fee would only be charged on the surrender of individual units purchased for a price lower than the floor price. For example, if a person surrenders an international unit on a date at which the floor price was \$15, and had paid an actual price of \$14 for that international unit, then they would pay a surrender charge of \$1.

Because entities may acquire units in advance of their surrender, possibly years in advance, an uplift factor to account for the time value of money (carrying costs) could be applied to the unit purchase price to better reflect the full cost to the entity of surrendering the unit. A larger uplift factor would lead to a higher estimated cost of the international unit, and a lower surrender charge. Any uplift factor would need to be set carefully in order to ensure it reflected a realistic estimate of the time value of money. The application of an uplift factor is discussed in detail in Section 4.

Option 1 would require liable entities surrendering international units to demonstrate to the Regulator how much they paid for each unit, even if the purchase price was above the floor price. This information would be used by the Regulator to calculate the international unit surrender charge for each international unit surrendered.

Effectiveness

In general this option would mean that liable entities would pay at least the floor price for surrendering an international unit provided that the purchase price was transparent. The expected opportunity cost of surrendering an international unit at the time of purchasing the unit would therefore also be equal to the floor price. The actual opportunity cost of surrendering a unit would depend on the price the liable entity would receive for the unit on that day regardless of what they paid for the unit.

Liable entities would generally make decisions about whether to abate or surrender eligible units before they surrender, in which case, their decision would be based on their expectations of the opportunity cost at that time. If this decision is in effect taken at the time they purchase the unit, and the purchase price is transparent, then this option would implement an effective floor price.

The effectiveness of the price floor would be reduced if there are problems determining the price paid for the unit. For units purchased through over-the-counter trades, it would be difficult to determine if the contract purchase price was the true cost of the unit. There is a risk that liable entities would have an incentive to inflate the reported unit price to avoid paying the surrender charge. For example, a business could pay the seller a high price for the unit, and then receive a 'side payment' from the unit seller, for example through payment of a higher price for some other good or service.

It would also be difficult to determine the 'purchase price' of units generated on the primary market (for example, through international offset projects such as under the Clean Development Mechanism). This is because investments in the project are generally made well before the actual units are issued and often face significant risks. Some project investors might invest in a number of projects, but only receive units from some of these. The total cost of each unit could then actually be the full sum of investment in all the projects. In other circumstances, the units might only account for part of the return on the investment.

Efficiency

This option provides liable entities with the ability to manage risk, which will lead to more efficient market outcomes. This is because it allows liable entities to lock in a particular surrender charge when

they purchase a unit. This is desirable for liable entities because they would not be exposed to any price risk if the international price falls after purchasing a unit. This would help liable entities to engage in forward trades to manage their carbon liabilities without the additional risk of not knowing what the surrender charge would be.

However, if the international price goes up, they could sell the unit at a profit, purchase another unit at a similar (or the same) price, and pay a lower surrender charge. This could mean that the total amount paid would be less than the floor price; it would also mean that international units would be preferred to domestic units, because purchasing a domestic unit would not provide the same advantage.

Workability

This option would present a significant administrative burden for both liable entities and the Regulator because liable entities would be required to report information about their unit transactions to the Regulator. This would be a requirement even where the observed international market price was well above the floor price and all liable entities purchased units at a price above the floor price.

Summary

While Option 1 is intuitively appealing, the assessment against the criteria indicates that is not viable in practice due to the difficulty in determining the price paid for certain units, which cannot practically be overcome.

Stakeholder feedback

Stakeholder feedback is sought on implementing the international unit surrender charge by charging a surrender fee on the actual price paid for each individual unit.

3.2. Option 2: A charge based on the price observed at the time of entering into a contract to purchase international units

Under Option 2, the international unit surrender charge would be based on the price of the class of unit, observed on one or more exchanges, on the day the contract to purchase the unit was entered into. As entities may enter into the contract well in advance of the surrender of the unit, possibly years in advance, an uplift factor to account for the time value of money could be applied to the unit purchase price to better reflect the price of the unit at the time of surrendering the unit.

For example, suppose that the spot price for a class of international unit was \$13 when a given unit was purchased. Suppose also that, on the day the unit is surrendered, the floor price is \$15 and a pre-determined uplift factor is applied to account for the time value of money so that the cost of the unit is assessed as equal to \$14. Then, in this example, a surrender charge of \$1 would apply to that unit, and that surrender charge would be known at the time of purchasing the unit.

Under Option 2, liable entities would not be required to tell the Regulator how much they paid for each unit. They would instead only be required to tell the Regulator the date on which they purchased the unit or entered into a contract to purchase the unit. The Regulator's determination of the price paid for each unit surrendered would be based on clear and publicly available information—prices observed on one or more exchanges.

The Government would need to set a methodology for determining the observed market price for different classes of international units. Issues associated with designing a methodology are discussed in Section 4.

Effectiveness

In general this option will mean that the effective price upon surrender of a unit will be equal to the floor price. That is, provided a liable entity purchases a unit at a price close to the observed market price for that day, they will pay the floor price when surrendering the unit. The expected opportunity cost at the time of purchased would therefore be the floor price. As with option 1, this option could therefore implement an effective price floor.

The effectiveness of the option could be reduced if the uplift factor used did not reflect a true estimate of the liable entity's time value of money. If the uplift factor is not an accurate estimate of this, then there is a risk that the opportunity cost that liabilities face when making decisions about whether to abate or surrender may be less than the floor price (Section 4 discusses the uplift factor in more detail).

As with Option 1, if a liable entity purchases an international unit and its price goes up, it could sell the unit at a profit, purchase another unit at a similar (or the same) price, and pay a lower surrender charge. This could mean that the total amount paid would be less than the floor price. While this would not affect the opportunity cost of surrendering a unit, it would mean that international units would be preferred to domestic units, because purchasing a domestic unit would not have the same advantage.

Efficiency

The ability to manage risk will lead to more efficient market outcomes. Option 2 allows liable entities to know at the time of purchasing a unit the total cost of surrendering that unit, provided they know the date on which the unit will be surrendered and the uplift factor to be applied. This would facilitate advance purchase of units by liable entities to manage their carbon liabilities without the additional risk of not knowing what the surrender charge would be.

By knowing the final cost of surrendering an international unit at the time of purchase, Option 2 supports efficient investment decision making by liable entities.

Workability

Liable entities would need to demonstrate to the Regulator the date they purchased the international unit. This would create administrative costs for both liable entities and the Regulator.

Summary

This option avoids the major drawback of Option 1, which is the capacity to hide the true cost paid by entities for units. However, Option 2 also has significant drawbacks given its potential to create a preference for international units and given the sensitivity of its effectiveness to particular parameters such as the uplift factor.

Stakeholder feedback

Stakeholder feedback is sought on implementing the international unit surrender charge by charging a surrender fee on the price of the unit on the day the contract to purchase the unit was entered into.

Feedback is also sought on the expected value of the preference for international units created by the ability to sell and purchase another international unit if the price subsequently increases, and thereby reducing the surrender charge payable.

3.3. Option 3: A charge based on the price observed at the time of surrender

For Option 3, the surrender charge for each class of international unit would be based on the observed market price for that class of unit at the time of surrender. Regulations would specify the methodology that the Regulator would use to determine the market price for each class of international unit, which would be updated daily.

For example, if on a particular day when the floor price was \$15 the Regulator, using a methodology specified in regulations, determined that the market price for a particular class of unit was \$14, all units of that class surrendered on that day would face a surrender charge of \$1.

The Government would need to develop a methodology for determining market prices of different classes of units (discussed in Section 4).

Effectiveness

Under this option, the opportunity cost of surrendering the unit will be equal to the spot price at the time of surrender. This is because the liable entity can either surrender the unit or sell it at the spot price and abate. Given that the observed market price on the day of surrender is the best estimate of the price for that unit, basing the surrender charge on the observed market price on that day will mean that the opportunity cost of surrender is equal to the price floor.

Liable entities will generally make decisions about whether to abate or surrender eligible units before they surrender, in which case, their decision would be based on their expectations of the opportunity cost at that time. Assuming the liable entity has accurate expectations about the price of the unit at the time of surrender, which the entity should have in order to determine its willingness to pay for the unit, then this option would implement an effective floor price.

Some liable entities may wish to hedge at the time of purchasing the unit against the surrender charge going up in order to lock in a carbon price (discussed under ‘efficiency’ below). Any hedging costs that may exist would increase the incentive to abate.

Option 3 would not require decisions to be made about the choice of an uplift factor. This would avoid the risks associated with setting the uplift factor at a rate that doesn’t reflect liable entities’ time value of money.

Efficiency

If a liable entity purchases an international unit in advance, it will not know with certainty the international price on the surrender date. However, the price they pay for the unit will reflect their expectations about the price of the unit at the time of surrender. The entity should, therefore, also have expectations about the cost of surrendering the unit.

Nonetheless there would be a risk that the international price is higher than expected, in which case they will pay a lower surrender charge; or if the international price is lower than expected, they will pay a higher surrender charge. Financial markets will likely be able to assist liable entities to hedge against this risk by providing products such as options.

Alternatively, liable entities could lock in a carbon price by purchasing a domestic unit in advance. It is also expected that liable entities will be able to enter into forward contracts to purchase domestic units. This is more likely under Option 3 than under Options 1 and 2, as the lack of capacity to ‘swap out’ of international units means that no preference will emerge for international units over domestic units.

Note that if a liable entity purchases an international unit on the same day that it is surrendered, there would be no uncertainty about the surrender charge.

Workability

This option is likely to have the lowest administrative costs for liable entities and be the most workable because entities would not need to keep track of, nor report the purchase price or contract date for international units.

Summary

This option implements an effective price floor without needing to assign an uplift factor. It also avoids creating a preference for international units over domestic units and has a minimum of administrative requirements for both liable entities and the Regulator.

Stakeholder feedback

Stakeholder feedback is sought on implementing the international unit surrender charge by setting a charge based on the observed market price at the time of surrender.

Feedback is also sought on whether stakeholders would want to hedge against the international surrender charge, what strategies they would use to do such hedging, and how much any hedging would be expected to cost.

3.4. Option 4: A charge based on the market price observed at the time the unit is surrendered, with the option for liable entities to undertake to surrender units in the future.

Under Option 4, the surrender charge would be based on the market price for the particular class of international unit at the time of surrender, as with Option 3. However, liable entities would also be able to enter into a legal undertaking to surrender international units on a particular date in the future. The surrender charge would be specified in the undertaking, and would be determined based on a forward price curve that would be published by the Regulator each day.

The forward price curve could be based on actual international forward curves for the class of international unit being surrendered, where such information were available. Where such information were not available, expectations of future prices could be based on those for similar unit types. Alternatively, a forward price curve could be determined using an uplift factor based on the time value of money (see Section 4).

The specific nature of the undertaking would need to be very clear. For example, it would need to address the implications if the liable entity failed to surrender the units and/or pay the surrender charge as specified in the undertaking. It would also need to address any exceptions, such as where an entity no longer had a liability under the carbon pricing mechanism, or where surrendering the required number of units would result in an over surrender.

Effectiveness

As discussed above, liable entities will generally make decisions about whether to abate or surrender eligible units before they surrender, in which case, their decision would be based on their expectations of the opportunity cost at that time. As with Option 3, assuming the liable entity has accurate expectations about the price of the unit at the time of surrender, which the entity should have in order to determine its willingness to pay for the unit, then this option would implement an effective floor price.

Under this option, liable entities who are worried about the price at the time of surrender being different to what they expect when they purchase a unit would have the option to enter into an undertaking at that time and lock in the surrender charge. However, the choice of the forward price curve (or uplift factor) used to determine the surrender charge specified in the undertaking could lead to the cost of surrendering the unit being above or below the floor price.

For example, if the uplift factor were greater than a liable entity's time value of money, the entity would have an incentive to enter into the undertaking. This is because the entity's cost of buying and holding a unit would be less than assumed in determining the surrender charge in the undertaking, so their total cost of surrendering is less than the floor price.

If the uplift factor is greater than the rate of increase in futures prices the liable entity would also have an incentive to enter into the undertaking. A higher uplift factor would mean that the price assumed in the undertaking would rise at a greater rate – and would therefore be higher – than the futures price in the market. A liable entity could then purchase an international unit through a futures contract at a price that is lower than assumed in determining the surrender charge in the undertaking, so their total cost of surrendering is less than the floor price.

Efficiency

This option provides liable entities with the option to enter into an undertaking to lock in a surrender charge in advance. This would stop them from having to hedge the risk of movements in the surrender charge.

Workability

As with Option 3, the Regulator would need to monitor the prices of different classes of international units.

The Regulator would not need to know when anyone purchased any particular class of unit—it would not require the Government to audit the trade records or contracts of the emitters. The Regulator would require the details of any undertaking to be clearly established.

In order to implement this option, the legislation would need to be amended, so that liable entities could enter into statutory undertakings to surrender international units and lock in a surrender charge. There would be potential compliance issues if a liable entity entered into an undertaking to surrender units then did not surrender them.

Summary

Option 4 avoids creating a preference for international units as well as the workability issues of Options 1 and 2. It raises complexity and compliance issues and may be less effective than Option 3 due to the need to assign an uplift factor.

Stakeholder feedback

Stakeholder feedback is sought on implementing a surrender charge in such a way that liable entities can enter into undertakings to surrender units on particular date.

Feedback is also sought on what factors would influence decision making about whether to enter into such an undertaking.

4. Design issues

In addition to the choice of an implementation option a number of design considerations need to be resolved. These include:

- How to define a class of unit;
- Which exchanges to use to determine the market price;
- How to observe market prices;
- Which exchange rate to use;
- Whether to take into account futures prices;
- Time value of money considerations; and
- What auditing arrangements would be required.

Many of these relate to more than one of the implementation options. Stakeholder views are sought on these issues.

4.1. How to define a class of unit

Three of the implementation options described above (Options 2, 3 and 4) contemplate a different surrender charge for different classes of international units. A key design consideration for those options therefore is how to define a class of unit.

Classes of international units could be defined according to a range of characteristics such as:

- the project type;
- the location of the unit's origin;
- the date that the unit was issued;
- the mechanism that generates the unit – e.g. whether the unit is an EUA, NZU, or CER etc; and
- the nature of the unit – e.g. whether it is an allowance or an offset.

Having a relatively large number of classes of international units, based on a large range of characteristics may be beneficial. It would make it more likely that the surrender charge is equal to the difference between the cost of the unit and the floor price, increasing the effectiveness and efficiency

of the approach. However, it could be difficult to determine the price for a class of unit for which relatively few units are traded, affecting workability.

The approach to defining different classes of units would need to be consistent with Australia's international trade obligations. There may be some approaches to defining a new class of unit for the purposes of the surrender charge that would not be consistent with our international trade obligations.

A natural way to define a class of international unit is according to the mechanism that generates it. This is because units generated under different mechanisms often have unique characteristics and trade at different prices. For example, CERs and EUAs have usually differed in price by between 2 and 3 Euros and on past trading data, NZUs usually trade at around \$2AUD more than CERs.

However, for some schemes, there will be different units generated under the same mechanism that have different prices. For the purposes of setting the international unit surrender charge what is of interest is the price of the international unit. Therefore another way for determining whether or not a new class of unit should be defined is if those units are trading at a different price to other units. For example, CERs that are accepted under the EU ETS are likely to have a different price to CERs that are not.

In many cases, spot and futures contracts are for a particular sub-class of unit that can be accepted by a particular jurisdiction. For example, ICE ECX CER Futures have a contract specification for CERs "only to the extent such CERs are eligible, as of the time of delivery to the Clearing House, to be surrendered to a Competent Authority in exchange for an equal number of EUAs under the Directive or the Linking Directive" and "CER Types not eligible for delivery include those generated by hydroelectric projects with a generating capacity exceeding 20MW, LULUCF activities and nuclear facilities". The basis of these different contracts could form the basis of a class of unit for the international surrender charge.

It may be the case, especially in the early years of the carbon pricing mechanism, that there are no obvious exchanges upon which to determine the price of some sub-classes of units. In these circumstances, a similar class or sub-class of unit may need to be used as a proxy.

Over time there may be a need to define a new class of unit, for example, if some units start trading at different prices to the rest of the units in their class. If this were done, it should not be done retrospectively because that would reduce certainty for business and make it difficult for them to hedge carbon prices. If a new class of unit were to be defined, then it could either be implemented relatively quickly, or implemented after a period of notice is given to the market. However, having a delay could lead to large numbers of international units being bought and surrendered with a lower effective floor price.

Stakeholder feedback

Stakeholder feedback is sought on how to define different classes of units, and on the timing for introducing any new classes of unit.

4.2. Which exchanges to use

Several of the options would require a decision on which exchanges to use to estimate the market price.

Currently there are a number of exchanges operating that trade international units, including the Intercontinental Exchange (ICE), BlueNext and Nordpool. These exchanges would likely be candidates for determining the market price for units. However, because the price floor regulations

will be used from 2015—when current exchanges may not be operating and new exchanges may have emerged—the regulations will need to specify a rule or set of rules for determining which exchanges to monitor.

An administratively simple approach would be to base the observed market price for a class of unit on the exchange that trades the largest volume of that class of unit. A disadvantage of selecting one reference exchange is that, should the exchange experience problems that affect prices or result in trade being suspended, the Regulator’s calculation of the surrender charge could be compromised.

Using the largest exchange as a reference may also be problematic because the exchange that is largest may change on a daily basis and be difficult to predict for market participants, reducing the predictability of the surrender charge. In addition, it is possible that the largest exchange may not in itself have sufficient trade volumes to accurately predict unit prices. Such volumes may only be able to be obtained by looking at a number of exchanges. A further issue is that a single exchange could be more easily manipulated than a number of exchanges.

An alternative approach would be to determine an average price across a number or all exchanges that trade the class of unit. A methodology would need to be determined to estimate the average price, for example, it could be the weighted average (weighted by volume) of the relevant exchanges. Such an approach would be marginally more administratively complex than using a single reference exchange, but would generate a closer approximation of the price actually paid by entities.

Stakeholder feedback

Stakeholder feedback is sought on a method for determining which exchanges to use to set the international unit surrender charge.

4.3. How to observe market prices

For those options that require the Regulator to observe international prices, a decision would need to be made as to how the market price should be observed.

One option is to take the market price on the day before the contract day under Option 2, the surrender day under Option 3 and 4, or the day the liable entity enters into an undertaking to surrender units under Option 4. Such an approach would allow entities to know the full cost of surrendering a unit when making their decision.

A second option is to take the average of the previous month’s prices. This would be a monthly rolling average updated daily. This approach would reduce risk of short-term price movements for liable entities. It would also reduce the risk of an entity trying to manipulate the market to move prices immediately before surrender.

A concern with these two options is that they would give entities an incentive to wait until a day when the international price drops relative to the day before, or relative to the monthly average, to act and thereby reduce the price they pay to below the floor price.

Another option is to take the market price on the day. This approach would provide less certainty to investors because they would not know the surrender charge when making their decision to purchase or surrender.

A further consideration is which price to take as the market price for a class of unit on the relevant day or set of days. Possible approaches include using the average price over the day; the closing price on the day; and the minimum price for the day.

Using the closing price would have the advantage that there is better data availability. It may be the case that for some exchanges, or classes of international unit, the closing price is the only data available.

Stakeholder feedback

Stakeholder feedback is sought on the most appropriate method for observing market prices.

4.4. Exchange rates

International units may trade in a currency other than Australian dollars. To convert prices to Australian dollars under all three options, a decision would need to be made as to what exchange rate to use and when to convert the international price into Australian dollars.

The appropriate time to convert prices to Australian dollars will depend on the implementation option chosen. To align with the point in time the Regulator sets the purchase price, the purchase price could be converted to Australian dollars: on the purchase date under Option 1; on the contract date under Option 2; on the surrender date under Option 3; and on either the surrender date or date the undertaking was entered into under Option 4.

The approach to convert prices to Australian dollars will also depend on how the international price is observed. For example, if a monthly rolling average is used to determine the international price then a consistent approach would need to be used for exchange rates.

The currency price used to convert international unit prices to Australian dollars could be the WM/Reuters Australian Dollar Fix at 4.00 pm (Sydney) on the day concerned. RBA exchange rate data is based on the rates reported by WM/Reuters.

Stakeholder feedback

Stakeholder feedback is sought on when to convert international unit purchase prices into Australian dollars and which exchange rate to use.

4.5. Whether to take into account futures prices

For some classes of international unit, it may be that there is very little trading on spot markets, making it more difficult to observe the price. In many cases there may be much more trading of futures contracts than spot contracts.

In addition to spot trades, consideration could also be given to using futures markets to help determine the market price, and if so, in what circumstances might this be done. One approach would be to take into account futures contracts whenever it is practical to do so. Another approach would be to only use futures when it is impractical to use spot prices, such as when trading is thin. Another approach would be not to use futures at all. If futures were used, their price would need to be adjusted to take into account their time of expiry.

Stakeholder feedback

Stakeholder feedback is sought on which approach to use for taking futures prices into account.

4.6. The use of an uplift factor when setting the surrender charge

Under Options 1, 2 and 4, when calculating the surrender charge, the price paid for an international unit would be uplifted to reflect the time value of money. For these options, an important consideration will be the assumed or estimated time value of money.

If the uplift factor were set too low, then entities who have a higher time value of money would have less of an incentive to buy international units at an earlier date. This is because the cost, for the entity, of buying the unit in advance and carrying it is greater than the cost assumed in setting the surrender charge. That would mean they would face a cost of surrendering the international unit that is greater than the floor price. The entity would be better off purchasing the unit closer to the date of surrender and so would choose to do this. This could result in inefficiencies because the choice of uplift factor could distort decision making about the timing of the purchase and surrender of international units.

If the uplift factor were set too high, an entity that had a lower time value of money could achieve a cost of surrender that is below the floor price. This is because the methodology used to determine the surrender charge would inflate the cost of the unit over time compared to the cost the entity would actually face. This would lead to such entities having a preference to surrender international units instead of domestic units.

Different entities are likely to have different time values of money. This means that it will not be possible for the Government to set an uplift factor that is equal to the time value of money for every market participant.

Stakeholder feedback

Stakeholder feedback is sought on the level of the uplift factor to apply for Options 1, 2, and 4.

5. Next steps

The Department of Climate Change and Energy Efficiency will continue to consult with stakeholders on the implementation options and issues raised in this paper. Stakeholders are encouraged to make submissions on their views.

Stakeholders' views will be taken into consideration when developing regulations to implement the international unit surrender charge. Stakeholders will be given the opportunity to comment on draft regulations in the first half of 2012.