

# Regulation Impact Statement – Carbon Auction Schedule, frequency and collateral

## Background

The Australian Government will, under the Clean Energy Future Plan, introduce a carbon pricing mechanism from 1 July 2012. The carbon pricing mechanism will be implemented in two stages. From 1 July 2012 to 30 June 2015, the price for each tonne of carbon pollution will be fixed. Then, from 1 July 2015, the carbon pricing mechanism will transition to a ‘cap and trade’ emissions trading scheme. In this second ‘flexible price’ stage, the carbon price will be set by the market.

The number of carbon units issued by the Government for compliance years in the flexible price stage will be limited by a pollution cap. Some of the carbon units issued will be allocated to businesses without charge to support jobs and competitiveness, and help affected industries make the transition to a clean energy future. The remaining carbon units will be sold by the Clean Energy Regulator (the Regulator) at auction.

The *Clean Energy Act 2011* (the Act) specifies that the Regulator may issue carbon units through auctions. Section 113 sets out that the policies, procedures and rules that apply in relation to the auctioning of carbon units will be determined by the Minister in a legislative instrument.

The impacts of the carbon pricing mechanism were assessed in the Regulation Impact Statement that accompanied the Clean Energy Future Plan.<sup>1</sup> That RIS provided an assessment of (a) auctioning as an allocation method and (b) the auctioning of future year vintages through advance auctions.

There are a number of design features that have not yet been finalised that are relevant to the issues under consideration in this Regulation Impact Statement. The positions outlined in the Auctions Position Paper are the working assumptions for the assessment of the options outlined in this RIS. A full list of the positions proposed for the design features in the Position Paper are outlined at Attachment A. The design features and the working assumptions that are particularly relevant for this RIS are that:

- the auction type will be a sequential ascending clock auction;
- unsold units will be offered for sale at the next auction;
- any person who has a registry account will be able to participate in the auctions provided that they have registered as a participant and meet competency requirements; and
- the auction assumes a non-zero starting price set at a level that takes into account the expected clearing price.

## This Regulation Impact Statement

While a decision to auction carbon units has been taken, the precise nature of the auction scheme and the rules and regulations surrounding its operation have not been settled. To enable the Regulator to conduct the auctioning of carbon units effectively and efficiently, operational rules need to be established.

This Regulation Impact Statement (RIS) assesses options for auctioning carbon units from 2013-14 onward through a number of possible auction schedules. Specifically, it considers the volume and frequency of carbon units to be auctioned from each vintage in each financial year and therefore considers the proportion of carbon units to be auctioned in advance and the proportion to be auctioned

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<sup>1</sup> The Clean Energy Future Plan RIS is available at <http://ris.finance.gov.au/files/2011/07/03-Clean-Energy-Future-RIS.pdf>

during and after the relevant compliance year. The proposed auction schedule will be set out in the auction legislative instrument.

This RIS also assesses options for collateral arrangements. Specifically, it considers the amount of collateral that participants must provide to the Regulator prior to an auction, and the form in which the collateral can be provided. Details regarding the collateral arrangements will be set out in the auction legislative instrument.

The RIS also assesses options for amending the limit on the number of carbon units that can be auctioned when a pollution cap is not in place, which is restricted by section 102 of the *Clean Energy Act 2011* to 15 million units. Specifically, it considers accommodating, increasing or removing the limit.

Other design features, such as the auction type, participation requirements etc. will be considered in the context of the development of the auction legislative instrument scheduled for 2012.

### **The Objectives of the Auction Scheme**

The design of the auction scheme will be influenced by the objectives it is seeking to achieve. The key objectives are as follows:

- *Promote allocative efficiency* – a well-designed auction should allocate units in a way that will best facilitate an efficient carbon market by channelling units to their highest value in the economy with minimum risk and transaction costs.
- *Promote price discovery* – making the auction results public will provide an important price signal early in the mechanism. This signal should stimulate behavioural change, for example, by helping liable entities to manage their emissions obligations and make informed investment decisions. Later, as the secondary market matures, that market will become the main source of information about carbon unit prices.
- *Provide revenue to fund Clean Energy Future measures* – the auction revenue provides funding to assist households and businesses and support investment in clean energy and action on the land as set out in the Government's Clean Energy Future Plan. However, the auction has not been designed with the primary aim of maximising revenue.

To promote allocative efficiency and efficient price discovery a well-designed auction will include:

- a large competitive field of bidders;
- a simple system that encourages participation;
- a stable set of auction rules that are not subject to arbitrary or unpredictable changes;
- transparent processes that rapidly reveal price information; and
- minimal fees, charges and other costs of participation.

### **Auction Schedule**

The auction schedule will set out the volume of carbon units of a particular vintage to be auctioned for each financial year from 2012-13. This will guide the Regulator who will administer the auctions. The auction schedule will also provide auction participants with an understanding of the volume to be offered from 2012-13 onward.

It should be noted that the proposed auction schedules provide an indicative guidance on the number of carbon units to be auctioned as the precise number of carbon units available will depend on the relevant pollution cap and the best estimate of the number of freely allocated carbon units of that vintage at the time of the auction.

In the absence of an auction schedule, the regulator will have full discretion on the distribution of carbon units across forward auctions, vintage auctions and the post-vintage auction.

Liabe entities have indicated that the timing of the volume of carbon units to be offered at auction will have a bearing on their planning to manage their compliance requirement in relation to carbon emissions. Liabe entities will be able to meet compliance obligations by surrendering carbon units, Carbon Farming Initiative Credits, and eligible international units, and may use a range of acquisition strategy involving auctions, secondary markets, derivatives markets and direct investment.

### **Auction Schedule Options**

Three options have been identified for the auction schedule. These have been developed following consultation on a public position paper, stakeholder submissions, commissioned advice, and advice from consultations through Technical Working Groups. They are:

*Option 1: Auction 18.75% in advance auctions, 75% in the compliance year*

This schedule reflects three-quarters of a carbon unit vintage being auctioned within the relevant compliance year, the advance auction of three-sixteenths of each vintage, a final post-compliance-year auction comprising one-sixteenth of the vintage, and the application of the 15 million unit limit to vintages auctioned in 2013-14.<sup>2</sup>

*Option 2: Auction 37.5% in advance auctions and 50% in the compliance year*

This schedule reflects three-eighths of a carbon unit vintage being advance auctioned and the remainder auctioned within or after the relevant compliance year, the advance auction of three future vintages each year and a final post-compliance-year auction for each vintage. In general the number of carbon units to be auctioned for each vintage will be evenly spread across each auction of that vintage. This schedule was proposed in the DCCEE position paper.<sup>3</sup>

*Option 3: Auction 50% in advance auctions and 50% in and after the compliance year*

This schedule brings forward additional carbon unit sales with half of the units offered at advance auctions and half of the units spread out during the compliance year and the final post-compliance year auction. The table below provides a representation of how the units would be distributed.

	Year 1	Year 2	Year 3	Year 4	Year 5
Option 1	1/16	1/16	1/16	3/4	1/16
Option 2	1/8	1/8	1/8	1/2	1/8
Option 3	1/6	1/6	1/6	2/5	1/10

### **Impacts**

The timeframe over which the carbon units are auctioned for the vintage year affects businesses in two ways:

1. First, the earlier the units are auctioned, the earlier businesses will need to fund the purchase of the units. This means that the clearing price at the auction will be lower at earlier auctions compared to later auctions because the market will take into account the time value of money. This is because participants forgo the interest or other value of the funds used to purchase the unit, so they are not willing to pay the same price for a unit now that they would pay in 2 years. It also means that for advanced auctions some participants will need to pay for the units before they are able to pass on the cost of the units which could impact on their cash flow.
2. Second, the early sale of units has the capacity to increase certainty around the cost and availability of the carbon units.

It is this trade off about certainty of the price and availability of the carbon units and the cost of funding that early purchase that drives different entities preferences for the quantity of advance auction of

<sup>2</sup> Section 101 of the Act prescribes that no more than 15 million carbon units from a particular vintage can be advance auctioned during a compliance year if the regulations setting pollution caps in respect of that vintage are not yet in effect.

<sup>3</sup> See Table 1, p 10 of Commonwealth of Australia (2012), *Position paper on the legislative instrument for auctioning carbon units in Australia's carbon pricing mechanism*, Commonwealth of Australia, Canberra.

carbon vintage units. This is especially so in the early years of the operation where deep and liquid derivative markets may not yet have developed.

The impact on Government from the quantity of the advance sale of carbon vintage units will primarily be on the Budget in terms of the timing of receipts. However, the price received at auction will reflect the participants' assessment of uncertainty, including regulatory uncertainty. Price uncertainty will likely decrease over time and can be expected to be lower close to the final surrender date. This means that the real price received for carbon units, and therefore receipts, could be lower at advanced auctions.

- *the auction schedule*

Stakeholder consultation has revealed a range of views on the preferred distribution of carbon units across the auction schedule. In general, these views reflect differences in: (a) the likely optimal distribution of carbon units in terms of providing an efficient price signal and (b) liable entities' preference for price certainty and managing compliance requirements. The main impact of the choice of auction schedule is one of timing.

Stakeholders uniformly preferred having more carbon units made available at advance auctions than the three-sixteenths proposed under option 1, to provide them with price certainty and help them plan for the management of their compliance requirements.

Many stakeholders supported the auction schedule as proposed under Option 2 where half of the carbon units are sold at advance auctions. These stakeholders considered that this would enable liable entities to closely match the purchase of carbon units through the auction scheme with their compliance requirements.

Other stakeholders, including the Energy Supply Association of Australia, stated a preference for more than half of a carbon unit vintage to be advance auctioned. The key advantage of the advance auction of future vintages is that advance auctions would give entities trying to manage future emissions liabilities an alternative to buying up and hoarding the current year's units, provide an additional option for planning compliance management and provide greater certainty regarding the cost of acquiring carbon units early on.

Auctioning a greater number of future year vintages as in Option 3, implies a smaller number of units available in the compliance year and post-vintage auction. This raises some concerns from some stakeholders who indicated a preference that a sufficient number of carbon units be available at the post-vintage auction. It would also reduce the potential for some liable entities to align auction purchases with their compliance requirements as fewer carbon units are available in the compliance year and post-vintage auction. Liable parties wishing to pursue this strategy would purchase units on secondary markets. These are already well developed for international units and are expected to develop for domestic units.

Auctioning more than three years in advance was not considered necessary given stakeholders' expressed needs and forward contracting arrangements, nor is it likely to be required in future as secondary and derivative markets develop. Auctioning distant future vintages many years in advance risks inhibiting allocative efficiency and preventing the discovery of a credible carbon price signal, and would become problematic for cap-setting if vintages beyond the 5 years of the pollution cap were auctioned.

- *the first auction*

The Government has decided that some carbon units would be auctioned in advance of the start of the flexible price scheme, however, they have not decided when the first auction would occur. An early first auction could help to prompt the development of an active secondary market. However, some practical considerations limit how early the first auction could occur.

It is intended that auctions will be held using an electronic auction platform, which will be developed after auction policy is finalised by the Government. The significant lead time for implementation of this system limits when the first auction can occur.

Stakeholders have generally supported the timing of the first auction to take place in early 2014.

While some stakeholders have suggested an earlier auction may have benefits, the practical considerations discussed above mean that an earlier auction is unlikely to be operationally feasible so that the first auction should take place in 2013-14, most likely in early 2014.

### ***Auction Frequency***

The auction frequency will provide the Regulator with guidance on the intervals at which auctions of vintage units offered in their compliance year (i.e. vintage year auctions) should be conducted for each financial year from 2012-13. Details on auction frequency will provide auction participants with an early indicative understanding of how often carbon units of a particular vintage are likely to be made available from 2012-13 onward.

In general the auction schedule is such that for each vintage there will be an auction in each of the three years preceding the compliance year and one auction after the compliance year. This section on auction frequency discusses the frequency of auctions within the compliance year.

In theory, auctions could be held a number of times each year, for example weekly, quarterly or annually. Stakeholders expressed a range of views on auction frequency in submissions on the auctions position paper in February 2012. Two options for the frequency of holding auctions of carbon units have been widely considered.

Option 1 considers monthly auctions and option 2 considers quarterly auctions.

The frequency of auctions and consequent impact on the size of the auctions will have implications for:

- *Reliability of price information* — The price signal should be as reliable and efficient as possible. The price should reflect market expectations about the demand and supply of carbon units, and the bidding field should be competitive and representative of the broader market. Smaller and more frequent auctions could lead to fewer participants and compromise the accuracy of price information from the auction.
- *Timeliness of the price signal* — More frequent auctions could improve the timeliness of price signals, which would benefit businesses making investment decisions. However, once there is a well-functioning and liquid secondary market, investors will have access to readily-observable real-time market prices as they do in other markets.
- *Absorptive capacity of the market* — The frequency and size of auctions may have implications for the absorptive capacity of the market; that is, its ability to accommodate large transactions. Smaller auction sizes associated with more frequent auctions are likely to be more readily absorbed by the market.
- *Administrative costs* — More frequent auctions involve a higher administrative cost for the Clean Energy Regulator, and potentially for bidders. However, the capacity to hold auctions via the internet will lower costs and reduce the importance of this factor in determining auction frequency.
- *Cash flow and working capital management* — A number of stakeholders cited cash flow and working capital management as reasons for either holding more frequent or less frequent auctions. In particular there were concerns about working capital related to the timing difference between the purchase of carbon units and their surrender to meet scheme obligations.

### ***Impacts***

Option 1: monthly auctions

The auction schedule from the Carbon Pollution Reduction Scheme (CPRS) provided for monthly auctions. Monthly auctions may provide liable entities with a high degree of flexibility for managing their obligations under the scheme, particularly given any working capital or debt financing constraints

they may have. For example, they might want to align their expenditure on carbon units with their accruing liability over the compliance period. This is similar to the way businesses have developed strategies for managing their accruing tax liabilities.

Some stakeholders, such as Westpac and the Australian Financial Markets Association, preferred frequent auctions (monthly or weekly) to better manage companies' liabilities and reduce their working capital or debt financing costs. Rio Tinto also argued for more frequent auctions as it reduced the opportunity for individual market players to influence the price of units between auctions. More frequent auctions will mean smaller auction sizes, including smaller advance auctions.

However, more frequent, smaller auctions have a number of disadvantages:

- More frequent auctions will reduce the number of units that can be offered at a particular auction. For instance, more frequent auctions means that fewer units could be offered at the first or last auction of a particular vintage. This is in contrast to stakeholder views that reflected strong interest in the availability of a sufficient number of carbon units either at advance or post-vintage auctions.
- On average, smaller auctions will have lower participation. With lower participation, an auction may be at greater risk of manipulation or erratic pricing outcomes.
- More frequent auctions could mean that businesses devote less time to information gathering and preparation, reducing the accuracy of some bids and the auction price signal.

Option 2: quarterly auctions

Quarterly auctions may provide liable entities with a sufficient number of to acquire carbon units through the auction scheme whilst ensuring that each auction has a sufficient number of units on offer to maximise participation. By increasing participation, the auction scheme enhances the allocative efficiency as the auction will better reflect the underlying economy wide demand for carbon units on offer through the auction process.

A number of stakeholders suggested that their participation would be focused on a limited set of auctions that closely aligned with their compliance requirements. A number of stakeholders expressed interest in the availability of larger number of carbon units on offer in the post-vintage auction in line with their compliance and surrender requirements of carbon units.

Other stakeholders expressed a desire for fewer auctions that were targeted, for instance, with their emissions liabilities. Some stakeholders, such as Origin Energy and AGL, supported quarterly auctions.

#### *Assessment*

In the presence of a functioning secondary market, the frequency of auctions should not affect liability management or the costs of working capital or debt financing. Carbon unit prices will also reflect economic conditions and the cost of capital. Lower economic growth or constraints on credit will reduce demand and cause the carbon price to be lower and units to be more affordable for business. Because of this, the timing and frequency of carbon unit purchases at auction will have a more limited effect on the current dollar cost of carbon units to businesses with similar costs of capital.

However, participants will incur some cost of participating in the auction, such as staff related costs for preparing and participating in the auction. These costs will differ between stakeholders. Individuals who wish to bid for few units will likely incur very small costs. Costs of participating for large liable entities will be higher but stakeholders in the Technical Working Groups noted that the cost of participating in the auction itself was likely to be very low. That being said, less frequent auctions would likely present lower costs to participants.

The scheme design should include frequent carbon unit auctions while maintaining the size and efficiency of each auction. More frequent, smaller auctions will be more easily absorbed by the market, present lower risks in the event of an operational failure of an auction, and potentially provide businesses with more flexibility while the secondary market is maturing.

Monthly auctioning of carbon units is feasible, but on balance, quarterly auctions provide some benefit over monthly auctions due to the expected volume of units to be auctioned under the carbon pricing mechanism. There is a concern that with monthly auctions, the volume of units offered at auction may become too low, especially over time as the pollution cap reduces. Low volumes may result in more volatile prices at auctions although this would be tempered by the existence of the secondary market. The Government believes it is important to balance the needs of different stakeholders with respect to the quantity of carbon units on offer and frequency of auctions in the auction scheme. Quarterly auctions throughout the financial year will accommodate stakeholder demands for adequate frequency while not unduly risking the efficiency of the auction process by having auctions with too few carbon units on offer.

### **Collateral**

It is proposed that auction participants provide acceptable collateral to the Clean Energy Regulator before participating at auction. A requirement for auction participants to post collateral serves two functions: first, and most importantly, it promotes more reliable bidding activity at auctions; second, it provides a payment to the Regulator in the event of an auction bidder defaulting on settlement. The risk of payment default is taken seriously in the design of carbon auction schemes. For instance, in 2006, Ireland increased its cash deposit requirement from EUR3,000 to EUR15,000 in the second round of carbon auctions as it was viewed too low to provide security against payment defaults.<sup>4</sup> Carbon auction schemes impose a collateral requirement ranging from 10 or 100 per cent to address the potential of strategic behaviour or payment default.

Unreliable bidding activity, that is, strategic behaviour, could occur where certain participants bid up the auction price so that all successful auction participants are forced to pay more than the efficient price for their units at the auction. This is typically done by entities that have no intention of then paying for the units. The existence of a well-functioning secondary market will minimise the opportunities for strategic behaviour. However, in early auctions, when secondary markets may still be developing, there may be some risk of strategic behaviour occurring and collateral arrangements will deter this.

In relation to default, the Regulator will not transfer carbon units to successful bidders until a full settlement is made. It can also auction any unsold carbon units at a later date. However, default may affect the timing of payments to the Australian Government. Systemic payment defaults, where participants choose not to honour their bids may also affect the credibility of the auction scheme. This is especially important in the early stages of the auction scheme. Numerous instances of payment default may result in lower participation in subsequent auctions as participants may feel that the auction process is not robust or that it does not produce an efficient market clearing price, even though there may be other reasons for why participants do not honour their bids. The effect is to undermine the credibility of the auction process.

While the costs of providing collateral change with the form of collateral, the costs are generally considered to be small, particularly compared to the benefits of collateral arrangements to the auction scheme. A credible auction scheme will provide an efficient carbon market clearing price. For participants, getting the market clearing price right is more important than the costs that arise from providing collateral. That being said, the costs do rise with the amount of collateral required and a balance needs to be struck between addressing gaming and default risks with the costs of participation.

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<sup>4</sup> FEA: Federal Environment Agency (Umweltbundesamt) (2009), Methodological design and institutional arrangements for auctions in the EU Emission Trading System (EU-ETS), German Federal Environment Agency, Report no (UBA-FB) 001272E, Germany

## **Options for the collateral amount**

Five options have been identified for the amount of upfront collateral. These have been developed following consultation on the public position paper, stakeholder submissions and advice from consultations through Technical Working Groups. They are:

### Option 1: Zero collateral

This option would not require participants to provide collateral. Enforcement would occur through the common law and this would also act as a deterrent to strategic behaviour. A number of stakeholders have suggested that collateral be waived and that enforcement through the common law should be a sufficient deterrent.

Some misconduct involving the auction scheme may be regulated under the market misconduct provisions of the Corporations Act. This arises because carbon units will be financial products for the purposes of the Corporations Act and the ASIC Act. For instance, Part 7.10 of the Corporations Act addresses a range of market misconduct and other prohibited conduct relating to financial products and services. It addresses insider and manipulative trading, as well as broader provisions associated with misleading or deceptive activities.

Reliance on common law as a primary mechanism to address auction misconduct after the auction has been concluded is an ineffective and potentially administratively costly approach in ensuring that the auction process is credible.

### *Impacts*

Waiving collateral:

- has the potential to interfere with price discovery as there is a reduced deterrent against payment default or strategic behaviour;
- would provide participants with the lowest cost structure when bidding for carbon units in auctions; and
- is administratively the easiest to implement.

No other carbon unit auction schemes provide a universal waiver of collateral. The U.S.-based Regional Greenhouse Gas Initiative has a requirement that upfront collateral be lodged at a level equivalent to 100 per cent of the liable entity's maximum expected bid, the Californian ETS similarly has a proposed 100 per cent upfront requirement, while for Phase III of the EU Emissions Trading Scheme (EU ETS), a 10 per cent upfront deposit has been proposed for auctions held by the European Union.

### Option 2: 10 per cent collateral

Participants would provide a collateral amount that is relative to either the maximum bid amount or starting price bid. The maximum bid price is the price set by the participant that represents the maximum price at which they are willing to bid for units at auction. The starting bid price is a price set by the Regulator indicating the price at which the auction will open, that is, at which initial bids will be accepted.

### *Impacts*

The Australian Financial Markets Association suggested that an appropriate amount of collateral be no more than 10 per cent of the “total intended volume purchase times a nominated price”.

A 10 per cent collateral requirement:

- could provide a sufficient deterrent to minimise or prevent a payment default or strategic behaviour;
- will impose a low cost on participants;
- may adversely affect the timing of receipts to the extent that participants do not honour their auction bid. This may be offset by the forfeiture of the collateral; and
- is administratively straightforward to implement.



Collateral should be required for all participants as a deterrent against payment default and strategic behaviour. Waiving collateral is not an option as it would adversely affect the credibility of the price discovery mechanism. The 10 per cent requirement would be a low cost option for participating. A 10 per cent collateral requirement balances the need to ensure the credibility of the auction scheme whilst not imposing undue costs on participants. Forfeiture of the deposit where a participant defaults will go some way to enhancing the scheme's credibility.

#### Option 3: 25 per cent collateral

This option is similar to Option 2, except that participants would provide 25 per cent upfront collateral. This option has been proposed by the German Federal Environment Agency (Umweltbundesamt) in the context of its domestic auctions of European carbon units. There are no known auction schemes that currently prescribe 25 per cent collateral.

#### *Impacts*

A 25 per cent collateral requirement:

- will provide a larger deterrent to minimise or prevent a payment default or strategic behaviour;
- will impose a medium cost on participants;
- may adversely affect the timing of receipts to the extent that participants do not honour their auction bid. This may be offset by the forfeiture of the collateral; and
- is administratively straightforward to implement.

#### Option 4: 100 per cent collateral

Participants would provide collateral that fully covers the starting bid or maximum bid. In the event of default, the auction revenue shortfall amounts to the difference between the auction clearing price and market price of the carbon units multiplied by the volume purchased at auction.

#### *Impacts*

In general, stakeholders rejected the need for a 100 per cent collateral requirement. Reasons given included that this requirement: would be financially restrictive, would provide a barrier to entry to participate in the auction and was a disproportionate measure to deal with fake bids. This option also results in an opportunity costs for the bidder, as it is not envisaged that the Regulator will pay interest on a cash deposit or any other form of collateral. However, these carrying costs have not prevented participants from bidding in other carbon auction schemes. For instance, the Regional Greenhouse Gas Initiative (RGGI) has an upfront 100 per cent collateral requirement for its carbon auctions. Since 2008, RGGI has held 15 auctions with participation ranging from approximately 20 to 90 bidders at each auction.

Given the likelihood that collateral will only need to be held by the Regulator for a limited period of time (as settlement could take place three days after the auction), genuine bidders at auction can reasonably be expected to have either the collateral amount or a significant portion of the total bid amount ready at hand.

#### Option 5: Flat rate collateral amount

This option provides an alternative to a proportional collateral arrangement. It requires a flat-rate amount of collateral, that is, a set amount irrespective of how many units participants will bid for at auction.

#### *Impacts*

A flat-rate collateral amount is easier to administer as no calculations or comparisons are required for the collateral and the bid. However, flat-rate amounts have a discriminatory impact on smaller bidders since they only require small quantities of allowances, for which they have to meet relatively high capital commitment costs. If the flat-amount is set too low (as was initially the case in Ireland<sup>5</sup>) large

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<sup>5</sup> FEA: Federal Environment Agency (Umweltbundesamt) (2009), Methodological design and institutional arrangements for auctions in the EU Emission Trading System (EU-ETS), German Federal Environment Agency, Report no (UBA-FB) 001272E, Germany

bidders could engage in strategic behaviour and write off the fee as an option, making collateral an ineffective deterrent. Furthermore, there is no established way or industry best practice on how to determine an optimal flat rate collateral amount for an auction.

### **Options for the type of collateral**

Six possibilities have been identified for the form of the collateral. These are not mutually exclusive, and have been developed following consultation on a public position paper, stakeholder submissions and advice from consultations through technical working groups. Stakeholders did not provide information on the relative costs of each form of collateral. The list of options below is not exclusive, as other forms of collateral may be considered in the future, such as units held in ANREU accounts and treasury bonds. These will be considered as part of the determination of the legislative instrument.

#### *Option 1: Cash deposit*

A cash deposit is the most straightforward form of collateral and requires participants to deposit Australian currency with the Regulator in a nominated account.

#### *Impacts*

There is an opportunity cost arising from cash deposits in the form of foregone interest for the duration of the lodgement and settlement period (see box below). The cash deposit performs a security and deterrent function. A short settlement period will reduce costs associated with providing up-front collateral. For the smooth operation of the auction, it may be advisable that the collateral is submitted and lodged a few days before the auction. Based on stakeholder feedback and literature, the duration of collateral to be lodged with the Regulator could range from 5 – 10 days.

#### *Option 2: Provision of a guarantee by a bank*

A bank guarantee will guarantee a sum of money to the Regulator. The sum is only paid if the bidder does not pay for a successful bid. A bank guarantee can be used to insure the Regulator from payment default.

#### *Impacts*

The transaction costs associated with bank guarantees will depend on the conditions imposed by the issuing bank and the creditworthiness of the borrower, with interest rates varying from 0.25 per cent to 3 per cent of the guaranteed amount. Smaller bidders are likely to have somewhat higher transaction costs in relation to the collateral. Compared to cash deposits, a bank guarantee will also impose a small inconvenience in arranging this form of collateral.

A participant could provide a bank guarantee that covers either the collateral deposit (say 10 per cent) or one that is based on the maximum bid, in which case the Regulator could draw upon the guarantee as part of the settlement process.

#### *Option 3: Letter of Credit*

A letter of credit (LoC) is an obligation taken on by a bank or financial institution to make a payment once certain criteria are met. Once these terms are completed and confirmed, the bank will transfer the funds. This ensures the payment will be made as long as the services are performed. For the auction scheme this means that once a bidder has been successful, the bank will be able to transfer the funds to the Regulator.

#### *Impacts*

What distinguishes a LoC from a cash deposit is that there is no transfer of funds where bids are not successful, thus potentially minimising the cost associated with providing collateral. Some cost will be incurred as LoCs typically incur a small charge. Participants will also face a small inconvenience in organising a LoC.

A key problem with this option is how to enforce forfeiture given that release of funds under a LoC would only apply when a bidder is successful and purchases units. In the absence of enforcement,

letters of credit would in effect amount to waiving collateral requirements. However, an irrevocable letter of credit would allow the Regulator to access the collateral in circumstances where the successful bidder does not honour payment.

It is proposed that an irrevocable Letter of Credit issued by an Authorised Deposit-taking Institution with a specified minimum credit rating (e.g. a rating of 'A') is an acceptable form of collateral as the Regulator would be able to enforce forfeiture in the event of a default.

*Option 4: Government loans: Loans for Future Vintage Units program*

The Government will provide short-term loans to electricity generators to help finance purchases of future vintage carbon units for the first three years of carbon unit auctions. The loans program, to be administered by Treasury, could provide an alternative form of collateral. That is, an approved loan could be an acceptable form of collateral.

*Impacts*

This option provides a low cost collateral alternative to electricity generators who wish to participate in the auction. However, this form of collateral would only be available to a limited number of participants raising equity concerns.

*Option 5: Electricity Generator's receivables with AEMO*

At any one time, the Australian Energy Market Operator (AEMO) holds around 4 weeks of receivables (referred to as standing credit) whereby electricity generators provide in effect a form of credit to energy retailers. It has been suggested that, subject to a legally robust framework and creditor (bank) agreements, electricity generators could be allowed to use their receivables with AEMO as an acceptable form of collateral for participating in auctions.

*Impacts*

Whilst this option would present a low cost alternative to electricity generators, it would impose significant administrative complexity as the Regulator would have to work with AEMO to set up the legal and financial framework to implement this option. Furthermore, this form of collateral would only be available for a limited number of participants.

*Option 6: Cash deposits with the Reserve Bank of Australia (RBA)*

Financial institutions such as brokerage firms may have an exchange settlement account with the Reserve Bank of Australia. This option would permit cash deposits with the RBA be acceptable collateral for the purposes of the auction.

*Impacts*

Some stakeholders suggested this option. However, using funds in RBA exchange settlement accounts as a form of collateral is not feasible as the funds in those accounts (a) cannot be ring-fenced for auction purposes and (b) institutions cannot be prevented from withdrawing their own funds at any time. Furthermore, there are a limited number of institutions that have exchange settlement accounts, and so the provision of this form of collateral would be highly discriminatory.

**Carbon unit auction limit**

The *Clean Energy Act 2011* (the Act) states that no more than 15 million carbon units from a particular vintage can be advance auctioned during a financial year if there is no pollution cap in place. The limit is intended to provide flexibility to auction carbon units in the initial years of the carbon pricing mechanism before caps have been set

The main need for the limit is to ensure the viability of later (capped) auctions of vintages where a proportion of the vintage has been auctioned before the pollution cap has been set. That is, a limit will help ensure there is sufficient volume of units at later auctions. The 15 million unit limit was set conservatively and was determined prior to knowing the auction schedule.

The advance auction of carbon units will assist the development and functioning of secondary markets and assist liable entities manage their compliance costs. This is of particular significance to electricity generators, who typically contract some proportion of their output several years in advance and wish to hedge financial risks associated with those contracts.

In consultation on the exposure draft of the Clean Energy Bill in 2011, relatively few stakeholders commented on the 15 million unit limit. Those who commented (for example, the Australian Financial Markets Association, AGL, the National Generators Forum, and the Energy Supply Association of Australia) opposed the limit.

- Electricity generators in particular preferred the greater availability of permits early in the scheme, to facilitate the development of the domestic carbon unit market, help provide them with price certainty, and help them to manage their compliance requirements.
- The Australian Financial Markets Association considered the limit at 15 million tonnes to be too restrictive, and noted that a higher quantity of auctioned permits at an early date would also assist with forward project planning and would increase industry commitment to the scheme, which in turn would contribute to confidence in the scheme's ongoing nature.

### **Carbon unit auction limit options**

Three options have been identified in respect of the 15 million unit limit. They are:

#### The auction schedule accommodates the 15 million limit

The first option is to leave the 15 million limit as legislated without amendment.

#### *Impacts*

The primary benefits of this option are that no amendment is required, and that the first auction will not be the largest auction the Regulator runs. From an implementation perspective there are arguments for having a modest first auction size while the Regulator and participants are relatively inexperienced. At this level, there is little risk of an overallocation of units of any particular vintage in the context of Australia's national emissions reduction target range.

As noted, given that pollution caps will not be set before May 2014, industry stakeholders consider this limit to be overly restrictive and cited concerns with the development of secondary markets and adverse impacts on liable entities' investment and compliance strategies.

#### Amend the legislation to remove the 15 million limit

This option amends the Act to remove the 15 million limit. The impact of this option will be to bring forward the sale of carbon units from 2014-15 to 2013-14, as per the auction schedules referred to earlier in this RIS. This option enables an unlimited number of units to be advance auctioned.

#### *Impacts*

A risk with removing the limit is that future governments would have the opportunity to auction an unlimited number of carbon units from distant vintages, which has the potential to compromise future Governments' decisions on setting future pollution caps. This option removes a precautionary mechanism that may impede the effectiveness of the auction instrument in distributing auction volumes evenly.

#### Amend the legislation to increase the 15 million limit

The final option is to amend the Act to increase the advance auction limit to greater than 15 million units. The key question is then what should the limit be increased to?

On the basis that electricity generators are the most likely to forward contract and hedge their carbon costs, a limit reflecting forward contracting relating to 20 per cent of generators' projected liabilities

three years in advance would be an appropriate level. This indicates a possible need of up to 40 million units of the 2015-16 vintage in 2013-14. It should be noted in this regard that:

- Liable entities will also have access to eligible international emissions units for up to 50 per cent of their liability, and may have access to forward markets in domestic units, meaning that 40 million units may not be required for delivery by compliance buyers in 2013-14;
- Other entities, such as financial intermediaries, may, however, wish to acquire units ahead of the relevant compliance year in order to support their carbon derivatives offerings.

While stakeholders would prefer more units to be available earlier, the possible limit also needs to be considered in the context of possible future pollution cap levels. Based on current projections for emissions from sources not covered by the carbon pricing mechanism and Australia's 2020 target range, an 'eighths' auction schedule indicates auction sizes of 13 to 20 million units for the 2015-16 vintage (noting that in 2013-14 this equals 26 to 40 million units due to the 'double-up' that occurs as a result of having no auction in 2012-13). Auction sizes would generally decline for each vintage thereafter, depending on the levels of allocation under the Jobs and Competitiveness Program, and allocations to eligible electricity generators.

This implicitly assumes, however, that all auctions of a vintage need to be the same size. In practice, should pollution caps subsequently be set at a level that indicates more units have been advanced auctioned than is implied by the relevant auction schedule, the Clean Energy Regulator will be able to adjust the remaining auction sizes for that vintage to maintain the overall allocation within the pollution cap, without significant adverse impacts on auction performance.

It is proposed that the limit is increased to accommodate the one-eighths auction schedule so that the limit is 40 million units for 2015-16 vintage auctioned in 2013-14 and 20 million units for all other advance auctions prior to a cap being in place. This would address the needs of stakeholders for early availability of units while still maintaining a limit that safeguards against early over-allocation of units.

#### *Impacts*

The most obvious impact of this option would be to bring forward the sale of carbon units from 2014-15 into 2013-14, as per the auction schedules referred to earlier in this RIS. Increasing the limit would require legislative amendment. However, this option would address concerns raised by stakeholders concerning the availability of permits early in the scheme and brings forward revenue into 2013-14 and 2014-15.

The increase in the limit will make more units available in 2013-14 by bringing units forward from 2014-15 without unduly disadvantaging stakeholders who wish to have sufficient units available in later auctions.

### **Consultation**

Consultation on the design of the auction scheme is an integral part of the development of legislation, regulations and administrative decisions underpinning the scheme.

In early 2012, DCCEE undertook public consultation on outstanding policy options for auction design arrangements with the release of the Departmental Paper *Position paper on the legislative instrument for auctioning carbon units in Australia's carbon pricing mechanism*. Submissions were received in response to the Position Paper from individual businesses and business groups on a range of design features.

In relation to the auction schedule, submissions represented a mix of views and preferences.

- In general, a majority of submissions supported the auction schedule as outlined in the Position Paper whilst the National Generators Forum suggested that the auction schedule remain flexible to enable the Regulator to review or amend the schedule following further consultation. Rio Tinto advocated that more than half of all units be auctioned during the compliance year.

- The Energy Supply Association of Australia (ESAA), Origin and Alinta prefer that more than half of carbon units for a particular vintage year be offered at advance auctions.
- Most submissions support three year advance auctions, with Australian Power and Gas (APG) only wanting two years of advance auctions, while LYMMCo advocated for more than three years of advance auctions.

In relation to auction frequency, most stakeholders did not take a position.

- For those stakeholders that did have a position the majority supported more frequent auctions. These included AFMA, Alinta Energy, the Energy Supply Association of Australia, Rio Tinto and Westpac, who all supported monthly or bi-monthly auctions. Rio Tinto argued monthly auctions would minimise market fluctuations and the potential for market manipulation.
- The National Generators Forum supported quarterly auctions, but preferred the auction frequency be reviewed.

In relation to the collateral amount and the type of collateral, submissions represented a mix of views and preferences.

- The vast majority of stakeholders do not support 100 per cent upfront collateral and some argued that liable entities should not have to provide collateral at all. The Australian Financial Markets Association (AFMA), AGL and the Australian Industry Greenhouse Network viewed 100 per cent collateral as “unreasonable” or “excessive” on the basis of cost, and suggested the Corporations Act should sufficiently cover market manipulation.
- Some stakeholders, such as Westpac, suggested that collateral requirements should be a percentage of volume on which participants want to bid using the market price. AFMA proposed a maximum 10 per cent requirement. SAE&C Consulting supported a non-refundable deposit of five per cent.
- Most stakeholders did not make specific proposals on the form of collateral. However, Shell supported the form of collateral being as broad as possible. AFMA supported Australian Energy Market Operator credit or carbon units held by the Regulator.

Following the release of the position paper, the Department of Climate Change and Energy Efficiency convened two technical working group meetings in Sydney and Melbourne, comprising key industry participants and subject matter experts, to provide additional advice on the detail of the proposed auction arrangements.

## **Assessment and conclusions**

### *Auction Schedule Options*

Option 1 is not preferred. This is because it has only a small proportion of carbon units advanced auctioned, which is unlikely to meet the needs of a broad set of stakeholders. Also each of the advanced auctions would be small in size. Small auctions may increase the risk of auctions not delivering an effective price signal, as they would on average have lower participation. If the auction is too small, then only a very small number of bidders might participate. The auction would then be more prone to manipulation and erratic pricing outcomes.

Options 2 and 3 are similar and both meet the auction objectives. Both would provide for deeper and more competitive auctions at advance auctions compared to Option 1. The key difference between Option 2 and 3 is that Option 3 has half of the carbon units advanced auctioned, which is more than under Option 2 and means that less carbon units are available during the compliance year and in the post-vintage year auction.

Option 2 would likely be preferred by those stakeholders who would prefer to align their purchase of carbon units with the incidence of liability, that is, during the compliance year. Option 3 would likely be preferred by those stakeholders who place a priority on price certainty in advance of the compliance

period, for example, if they forward contract with their customers. It would also provide additional auction receipts early on in the auction scheme, but is unlikely to impact on revenue in accrual terms.

On balance Option 2 is preferred because it better balances the interests of stakeholders by providing a significant proportion of carbon units for advanced auction, while still maintaining half of the units for sale in the compliance period and a reasonable sized post-vintage auction.

#### *Level of collateral*

Practices for setting the level of collateral vary among other jurisdictions in respect of carbon unit auctions, and also across other types of auction (for example, auctions for broadcasting licences or spectrum in Australia).

At one level, there is relatively strong precedent for setting collateral at 100 per cent of the starting price or maximum bid, both in terms of other jurisdictions' practices and in recent moves in Australia in respect of spectrum, supported by an argument that entities should be able to post this level of collateral given they are anticipating settlement at that level within a very short period of time. However, stakeholders were uniformly opposed to such an approach.

The principal alternative, also supported by precedent, is to set collateral at 10 per cent of a starting bid or maximum bid. This may be sufficient to deter strategic behaviour, is well-established as a level of deposit that could be forfeited in the event of default, and is less costly for participants.

Other options put forward (zero, 25 per cent, flat level) are considered less satisfactory than these two options. While minimising costs to participants, zero collateral or a flat rate do not provide a sufficient deterrent to address the risk of payment default or prevent strategic gaming. While a 25 per cent collateral level is likely to address gaming and default risks, the added benefit in addressing these risks over a 10 per cent collateral level does not warrant the additional cost burden on auction participants. There is also no examples of other auction schemes using a 25 per cent collateral level.

On balance, given the need to prevent strategic behaviour but also recognising the arguments put forward by stakeholders, it is proposed that collateral requirements initially be set at 10 per cent of the starting bid price (as determined by the Regulator prior to an auction) for simplicity. This approach assumes that the starting price set for auctions will be a substantial proportion of the expected clearing price.

#### *Form of collateral*

For the type of collateral, cash, a bank guarantee or an irrevocable letter of credit are preferred. A cash deposit is an acceptable form of collateral as the Regulator can readily secure collateral through deposits. A bank guarantee from an authorised deposit taking institution with a minimum credit rating, is an acceptable form of collateral as the Regulator can readily secure collateral. An irrevocable letter of credit is also a preferred form of collateral because the Regulator would be able to enforce forfeiture.

Other options for collateral, such as carbon units in ANREU accounts and Treasury bonds may be considered and potentially added to the list of acceptable forms of collateral at a later time. This will allow the decision process to incorporate further information on the technical details regarding the feasibility of implementing these options. There is currently not enough information to come to a definitive conclusion regarding their feasibility as acceptable collateral.

The options of generator loans, AEMO receivables and cash deposits in RBA accounts are not preferred because they cannot be guaranteed to be available to the Regulator in the event of default, would impose significant administrative complexity, or are not forms of collateral that are broadly or equally available to potential auction participants so create inequities.

### *Auction limit*

Increasing the carbon unit limit is the preferred option. This option addresses the concerns raised by stakeholders concerning the availability of permits early in the scheme and while still maintaining a limit that safeguards against early over-allocation of units. This option would also require an amendment to the Act.

Maintaining or removing the limit are not recommended. Although maintaining the limit still provides a carbon unit limit, it does not address the concerns of stakeholders about the early availability of permits in the scheme. Removing the limit is not preferred because it has the potential to compromise future Governments' decisions on setting pollution caps.

### **Implementation and Review**

Consultation with interested stakeholders on the design of regulations and the implementation of the auctions scheme will be ongoing. Specifically, a further round of consultation will be undertaken on the details of the auction rules via the release of a draft legislative instrument in mid-2012. The Government has previously indicated that, following consultation, it intends to make a disallowable legislative instrument determining the auction process and operational rules during calendar year 2012.

Once established, the Regulator will be best placed to manage ongoing auction policy design and operational matters, with discretion prescribed in the legislative instrument. This will result in an administratively more efficient outcome than requiring the responsible Minister to approve small changes to auction design.

The Climate Change Authority, a new statutory authority that will provide expert advice on key aspects of the carbon pricing mechanism, will undertake the first review of the carbon pricing mechanism, including policies and procedures that should apply to the auctioning of carbon units, and report to the Government by 31 December 2016.



# Regulation Impact Statement – Attachment A

## **Background**

The following proposals form the working basis of the Regulation Impact Statement. The Government has yet to finalise a decision on these proposals.

### Auction frequency and size

Proposal: Four auctions will be held during the compliance year, one in each quarter (approximately 3 months apart).

### Advance auction of future vintages

Proposal: Four years of vintages will be auctioned (current vintage plus advance auctions of three future vintages).

### Post-vintage year auction

Proposal: One auction of each vintage will be held after 1 December following the vintage year and at least four weeks prior to the final surrender date of 1 February the following vintage year.

### Timing of first auction

Proposal: The first auction will take place in 2013-14 financial year, most likely in early 2014.

### Auction schedule

Proposal: The Regulator will adopt the indicative auction schedule as outlined in Table 1.

### Unsold units

Proposal: Unsold units will be offered for sale at the next auction.

### Auction of relinquished units

Proposal: Relinquished units will be auctioned with the regular pool of carbon units at the next auction.

### Auction type

Proposal: The auction type will be a sequential ascending clock auction.

### Participation

Proposal: Any person who has a registry account will be able to participate in the auctions provided that they have registered as a participant and meet competency requirements.

### Collateral

Proposal: Acceptable collateral is required from all participants.

### Misconduct and sanctions

Proposal: A decision has not been finalised.

### Reserve price

Proposal: The Regulator will determine the reserve price for each auction having regard to elements raised above. The reserve price will be determined and published at least 14 days before the relevant auction.

### Minimum number of units in a bid

Proposal: The minimum bid size will be one carbon unit.

### Maximum parcel size

Proposal: The maximum parcel bid size will be no more than 25 per cent of the total number of carbon units sold at each auction for a particular vintage.

#### Variation of bids

Proposal: Bidders will not be permitted to increase the bid quantity as the auction progresses.

#### Proxy bidding

Proposal: Proxy bidding will be permitted at auctions.

#### Bidding window

Proposal: Bids will be accepted during a defined bidding window, as determined by the Regulator in advance of the auction.

#### Bid increments

Proposal: The Regulator will determine the size of bid increments.

#### Intra-round bidding

Proposal: The Regulator will determine if intra-round bidding is used.

#### Electronic auction platform

Proposal: The auction will be conducted using an electronic platform and an electronic settlement system.

#### Suspension or cancellation of auctions

Proposal: The Regulator will have the authority to suspend or cancel auctions.

#### Payment timing and method

Proposal: The settlement day will be three business days (T+3) after the end of the auction.

#### Public information for auctions

Proposal: The Regulator will publish information on auctions.