Optimising Australia’s Position in international carbon markets
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1 Foreword

The Paris Agreement surprised many with the strength of its commitment to market mechanisms as a tool to combat climate change. Yet the suitability of markets has never been in question.

Time after time, studies have shown that harnessing the ability and reach of markets helps achieve outcomes at the lowest price; match demand with supply with the greatest efficiency; and gather the participation of the widest possible constituency.

But the Paris Agreement won’t set up a market by itself; it won’t magically establish a global price for carbon. That task remains for individual Parties, and it is up to them to decide how to build the markets, how to link them, and how to ensure they achieve the greatest ambition at the lowest cost.

Article 6 of the Agreement empowers nations to choose the best path for themselves, while ensuring that no potential avenue is closed. It offers broad-based support for cap-and-trade, offsetting mechanisms, results-based payments or direct regulation.

Even before Paris was ratified, there were examples of such different approaches, ranging from Europe, to California, British Columbia, Australia and Japan. Each system differs to a greater or lesser degree, but each one has the same goal.

This report identifies many of the international and domestic factors influencing the development and design of carbon markets and how they will impact Australia. We hope these insights will contribute to the upcoming 2017 Australian climate policy review to ensure Australia establishes a stable and effective emissions reduction pathway.

Creating a policy suite that is informed by the developments in international climate policy and carbon markets will be critical if Australia is to provide stability for businesses and capitalise on investment opportunities in the transition to a low emissions economy.

The Carbon Market Institute and the International Emissions Trading Association, with support from Baker & McKenzie are pleased to collaborate on this report to inform the discussion on how Australia can optimise its position as international carbon markets evolve.

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As the COP21 Paris Agreement has set the stage for action on climate change into the second half of the century, Australia has the opportunity over the next few years to optimise its position in international carbon markets as they rapidly evolve.

To date, 189 countries have submitted their Intended Nationally Determined Contribution (NDC) under the Paris Agreement, with more than 90 highlighting that the level of commitment they are putting forward is conditional upon having access to international carbon markets.

Australia has stated its support for the use of international carbon markets as a key part of reducing global emissions. At the COP21 Paris climate change conference, Australia was a signatory to the New Zealand led Ministerial Declaration on Carbon Markets that was endorsed by 17 other countries\(^1\). This Declaration sent a clear signal that countries will be cooperating on how carbon markets, included in Article 6 of the new Paris Agreement, will play a critical role after 2020 in achieving targets committed to at COP21.

Article 6 of the Paris Agreement contains key market provisions expected to be the guiding framework for international carbon market action going forward. Described within Article 6 is the use of internationally transferred mitigation outcomes (ITMOs) and the establishment of an Emissions Mitigation Mechanism (EMM) to contribute to the mitigation of greenhouse gas (GHG) emissions.

Market-based mechanisms to address climate change are increasingly being implemented by countries in many regions of the world. Australia’s key trading partners, in particular China, have implemented key carbon market and climate policies to meet their NDC commitments. This is occurring alongside a growing interest in exploring market linkages and the formation of ‘carbon clubs’. Linkage could allow for emissions reductions to be achieved quicker and at lower cost whilst also reducing competitiveness concerns.

Much of the Australian economy is exposed to this global shift towards ‘low-carbon’ development. This will have direct and indirect economic consequences in both the short and long term as Australia’s energy intensive export orientated economy is exposed to markets where there is an explicit carbon price; the fossil fuel energy mix is changing; and through competition from countries whose policies may not be aligned with Australia’s.

Australia plans to meet its target through a combination of policies including the Emissions Reduction Fund, the safeguard mechanism and the Renewable Energy Target. Australia’s domestic climate policy suite will be reviewed in 2017. This major review is likely to consider the effectiveness of current policies; how existing policies will evolve; and will appropriately be calibrated towards achieving Australia’s 2030 target. The government has signalled in its NDC it will also consider a long term emissions reduction trajectory for the Australian economy beyond 2030 leading to net zero emissions.

One key area to be examined in the 2017 policy review is the international trade in carbon. The use of international units in Australia by companies covered under the safeguard mechanism, could bring a number of benefits in meeting compliance obligations. However, it is important that

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any international emissions units used for compliance in Australia should satisfy the principles of integrity, regulatory stability, and compliance with the UNFCCC framework as it evolves.

A balance of international and domestic offset units would be the most appropriate means to protect and enhance the Australian domestic offset industry while ensuring entities covered under domestic emissions reduction policies can meet their compliance at lowest cost. Scalability, confidence, savings, demand and transparency are factors likely to affect future supply and demand of international units in a post-Paris future.

Australia is well-positioned to engage in the evolution of international markets under the Paris Agreement. With a well-designed, well-government domestic offset scheme, Australia is also well placed to potentially supply carbon units to emerging international markets, either through bi/multi-lateral arrangements with the ITMO mechanism or through Australian projects being registered under the new market mechanism developed under Article 6.

The 2017 review of Australia’s domestic emissions reduction policies represents a key opportunity to define Australia’s position in international carbon markets. Areas that could be considered include:

- How Australia engages in the ongoing development and implementation of the rules governing international markets;
- Determining the eligibility and use of international units, and the balance between domestic and international units used for compliance;
- Future supply and demand of domestic and international units needed under domestic policies as policy settings tighten; and
- The options and opportunities to explore market linkages and the potential export of Australian Carbon Credit Units.

Once it has ratified the Paris Agreement, it is in Australia’s interest to fully engage in the discussion on its implementation. A particular focus on Article 6’s market provisions will help establish market-based solutions to climate change.

It is of utmost importance that rules, principles and technical details to operationalise Article 6’s market provisions are developed in a way that maximises their potential and that this process is carried out in a timely manner to guarantee as much predictability as possible. Australia should play a pivotal role in this discussion and in the international carbon market economy that will evolve.
3 Introduction: Australia’s commitment to the Paris Agreement and as signatory to New Zealand’s ministerial statement on carbon markets

This chapter looks at the journey of ambition that Australia took in joining a significant coalition of Parties to sign a statement on the importance of international carbon markets during COP21, in the lead up to the formation of the historic Paris Agreement.

In December 2015, at Conference of Parties (COP21) in Paris, world leaders reached an agreement to limit global warming to well below 2°C: The Paris Agreement.

The Paris Agreement sets the framework for ongoing international cooperation regarding emissions reductions for the foreseeable future.

In order to enter into force, at least 55 Parties accounting for at least 55% of global GHG emissions were required, with the Agreement then entering into force 30 days later. This threshold has now been reached and the treaty will now enter into force on 4 November 2016 ahead of the COP22 in Marrakech. Australia is in the process of ratification; this will require executive power as final decisions about the ratification of treaties require the approval of the House of Representatives and the Senate.

At the COP21 Paris climate change conference, New Zealand led a Ministerial Declaration on Carbon Markets that was endorsed by 17 other countries. This Declaration sent a clear signal that carbon markets, included in Article 6 of the new Paris Agreement, will have a critical role after 2020 in achieving targets committed to at COP21. The Declaration states that interested countries will work together to develop standards and guidelines for using market mechanisms that ensure environmental integrity and avoid any double-counting or double-claiming of emissions reduction units. These elements aim to give countries and investors greater confidence that carbon markets will continue to be underpinned by consistent standards.

The Australian Foreign Minister, Hon Julie Bishop MP, supported the declaration, recognising that “international carbon markets are a key part of the global effort to reduce emissions.” Minister Bishop stated that Australia supports a long lasting climate agreement, beyond a single target period, as well as regular reviews, highlighting that the Paris Agreement instills confidence that countries will have the flexibility to use markets in a robust and credible way.

Speaking at a Carbon Market Institute event at the IETA Business Hub in Paris, Minister Bishop stated that, “carbon markets can provide flexibility for countries and companies to use genuine and verified international units to help meet their commitments” and “the government will continue to consider the role of international units in meeting Australia’s 2030 target in the longer term when we review our domestic climate policies.”

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4 General overview of the market provisions of the Paris Agreement

This chapter outlines key carbon market provisions and the definition of the new market frameworks possible under the Paris Agreement.

4.1 What is the scope of the market provisions of the Paris Agreement?

In the lead up to COP21, countries were encouraged to put forward their Nationally Determined Contributions (NDCs). An NDC can be seen as a pledge outlining the level of commitment each government intends to make towards the overall goal, and the actions it will undertake to achieve this target. To date, 189 countries have submitted their NDCs with more than 90 stating that their stated level of commitment is conditional upon having access to international carbon markets, as shown in Figure 1, below.

The UNFCCC’s NDC Synthesis Report, released in May 2016, also highlights that over half of the NDCs submitted to date plan to use, or are considering the use of market mechanisms.

The high level of interest in international carbon markets is easily explained by the fact that these instruments have the potential to provide a lower cost effective way to achieve emissions reductions. Access to an international carbon market can enable countries to put forward stronger commitments, going beyond their domestic capabilities.

Figure 1: Countries which submitted their INDC, and include or consider the use of international markets mechanisms.

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NDCs specify that in addition to domestic contributions, an additional level of reductions could be achieved by having access to market-based mechanisms or international market linkages.

Reflecting this widespread interest in international carbon markets and the call for having market mechanisms featured in the Agreement text, Article 6 of the Paris Agreement contains the key market provisions that are expected, once implemented, to be the guiding framework for international carbon market activity going forward.

### 4.2 How will Internationally Transferred Mitigation Outcomes and the Emissions Mitigation Mechanism contribute to Nationally Determined Contributions?

Article 6 outlines provisions for:

- Cooperative approaches through “internationally transferred mitigation outcomes (ITMOs)” (Paragraph 2).
- Rules for carbon market accounting, particularly avoidance of double-counting (Paragraph 2 & 5).
- Sustainable development & mitigation crediting mechanism (EMM) (Paragraph 4).

Article 6 of the Paris Agreement provides the means to expand the reach of carbon pricing to enable full implementation of NDCs.

Article 6 has two key features:

1. It describes the use of ITMOs. The concept of exchange of carbon units, either notional or real, should be an underpinning feature of any ITMO to ensure appropriate accounting.

2. It establishes a mechanism to contribute to the mitigation of GHG emissions, or an EMM; and support sustainable development. Once the Paris Agreement is fully implemented, the EMM could offer a universal carbon allowance or unit for those countries that choose to use it, facilitating trade between NDCs (i.e. ITMO), providing registry facilities and therefore offering the prospect of carbon pricing in many economies. This in turn could channel additional investment.

Article 6.2 of the Paris Agreement describes the use of ITMOs. This will provide a means to balance, without double-counting, any carbon based trade between NDCs that might take place. This might be on a bilateral basis, through clustered carbon market clubs or possibly via a more centralised UNFCCC based approach.

For example, the linking of two cap-and-trade systems that sit within respective NDC envelopes and the movement of units between them could be accounted for through the ITMO provisions. At the point of true-up, one of the systems (System A) would have a net gain of units against its national allocation and the other (System B) a net reduction. This type of ITMO trading is already taking place in North America under the California-Québec carbon market.

The concept of exchange of carbon units, either notional or real, should be an underpinning feature of any ITMO. This aligns the ITMO with a cumulative emissions model and therefore ensures avoidance of
double-counting, a core provision of the Paris Agreement.

The second component of Article 6 is the creation of a mechanism to contribute to the mitigation of GHG emissions, or an Emissions Mitigation Mechanism (EMM). Its core purpose could be defined so as to deliver an emissions reduction against some reference which is contained within the NDC, but also to ensure an overall reduction in global emissions while delivering sustainable development benefits.

Because an EMM can connect with the emission mitigation objectives of another party, it can act to facilitate an ITMO. The EMM should become a broad framework mechanism within which many types of mitigation approaches can be executed with assured additionality and avoidance of double-counting, rather than a single purpose mechanism such as the Clean Development Mechanism (CDM) under the Kyoto Protocol.

The principle application of the EMM should be to encourage large scale emissions mitigation through sectoral and project based activities at a national level; and the transfer of significant finance to help fund NDCs of interested developing economies. The view of many economic experts is that markets provide the most efficient way of achieving deep emissions reductions through the implementation of carbon pricing by national governments.

This can attract investment and offer the prospect of broad-based change across the economy if used properly. Many countries may not be in a position to immediately implement a carbon price yet they have put forward ambitious NDCs that call for large scale intervention across their economies. Therefore, a broad interpretation of Article 6.4 (the EMM) may be desirable. It would be desirable to have an open framework that will help governments account for emissions reductions achieved, with robust requirements to avoid double-counting and ensure environmental integrity.

In summary, the EMM of Article 6.4 could be designed to provide flexibility for countries seeking to implement carbon pricing mechanisms by offering the following:

- Quantification and delivery emissions reductions (as an allowance type of unit) against an emissions reference level in a Party’s NDC;
- Provision of a universal emission reduction unit or emissions allowance that can be transferred from one country to another as an ITMO;
- Encouragement of large scale emissions mitigation activities as cost-effectively as possible;
- Undertaking and following of oversight rules on the EMM set by the COP;
- Promotion of sustainable development through economic transition across all sectors of the global economy.
4.3 What is the process and timing for the implementation of Article 6 and what will it involve?

The market provisions drafted in Article 6 of the Paris Agreement will help in establishing market-based solutions to climate change and will ease countries’ compliance with their NDCs by lowering the overall mitigation costs. However, Article 6 of the Paris Agreement is a simple outline, limited to a few lines, of these market provisions. Rules, principles and technical details will need to be developed to implement and operationalise those provisions. This represents the main challenge lying ahead.

The thresholds for the entry into force of the Paris Agreement have been reached on October 5 2016, so the Paris Agreement will therefore enter into force on November 4, as formalised by a recent UN note. This implies that the Paris Agreement will come into force ahead of the start of COP22 in Marrakesh, meaning that this year’s UN climate conference will coincide with the first session of the CMA (CMA1), which refers to the “Conference of the Parties serving as the meeting of the Parties to the Paris Agreement”.

The Paris Agreement mandates that the CMA adopt rules and decisions to operationalise the Agreement, including the set of rules and technical details for the implementation of Article 6, by the end of its first meeting.

The process to draft rules, principles and technical details will therefore start in November at COP22 in Marrakesh, and will be carried out by those Parties that have ratified the Paris Agreement. Officially, rules to operationalise the Paris Agreement have to be finalized by the end of CMA1. Nevertheless, it is highly likely that it will take longer to draft and agree on such a complex set of rules.

It is of the utmost importance that rules, principles and technical details to operationalise Article 6’s market provisions are developed in a way that maximizes their potential and that this process is carried out in a timely manner to guarantee as much predictability as possible.

As only Parties that have ratified the Agreement will be able to actively participate in the CMA, it is important that Australia ratifies the Paris Agreement as soon as possible in order to be able to play a role in the proceedings, and influence the implementation process of the Paris Agreement.

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5 Carbon Market developments in Australia’s key trading partners

The following section outlines key carbon market and climate policy developments in Australia’s key trading partners.

5.1 China

Domestic Climate Policies

China began to first progressively strengthen its commitment to climate change mitigation with the development of the country’s first global warming policy initiative issued by the National Development and Reform Commission (NDRC) in June, 2007. The National Climate Change Program, which highlighted policy measures that can lower GHG emissions to achieve a reduction target of 20% below 2005 levels by 2010, in energy consumption per unit of GDP. In November 2009, the State Council announced two 2020 targets during the UNFCCC’s 15th Conference of the Parties to the Convention in Copenhagen (COP15):

1. Reduce CO2 per unit of GDP by 40-45% relative to 2005; and
2. Increase the ratio of non-fossil energy to 15% of primary energy consumption.

The following year in November, the State Council announced the implementation of market-based mechanisms such as emissions trading systems (ETGs) as a tool to achieve the energy and carbon intensity goals of the Plan. In October 2011 the NDRC published a Notice that assigned the task of establishing ETS pilot programs to five cities (Beijing, Chongqing, Shanghai, Shenzhen and Tianjin) and two provinces (Guangdong and Hubei).

The main objective of the establishment of pilot ETS programs was to learn lessons through experience and to facilitate the development of a national ETS which is expected to commence in 2017. The seven pilots each started their operations between June 2013 and June 2014. In November 2014, the United States and China released a joint-statement on climate change where both heads of state announced their respective action plans on climate change beyond 2020. China’s NDC statement included the following measures which formed the foundation of China’s emissions reduction plans:

- Peak its CO2 emissions by 2030 and try to reach this peak as early as possible; and
- Raise the share of non-fossil fuels in primary energy consumption to 20% by 2030.

In December 2014, the NDRC released the state’s Provisional measures for the administration of carbon emission rights trading that are the first legal elements of the national ETS. In a joint US-China climate statement9, issued as part of President Xi Jinping’s state visit to the United States, China announced its intention to introduce a national cap-and-trade system in 2017. The national ETS is currently scheduled to begin operations in mid-2017.

NDC Commitment

China has committed to reduce its carbon intensity by 60-65% compared to 2005 levels by 2030.

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5.2 Korea

Domestic Climate Policies

As part of the 2009 Copenhagen Accord, the Republic of Korea pledged to reduce GHG emissions 30% below its Business as Usual level by 2020, a goal that equates to a 4% reduction below 2005 levels. A major step towards this goal was realized in April 2010, when the Framework Act on Low Carbon Green Growth (Framework Act) and the Presidential Decree promulgated thereunder came into effect. The three most important features of the Framework Act are that it:

1. Sets the national GHG emission target to reduce emissions 30% below Business as Usual (BAU) levels by 2020.

2. Establishes the Greenhouse Gas Target Management System (TMS), which sets emissions and energy targets for business entities in the industrial, power generation, transportation, building, agriculture, food and waste sectors.

3. Provides the legal basis for an Emissions trading system (ETS).

However, the Republic of Korea renounced the national GHG emission target described above by the June 2016 amendment to the Presidential Decree to the Framework Act. The amended Presidential Decree to the Framework Act replaced the previous target with a new target: to reduce 37% below BAU levels by 2030. As further described below, changes to the Republic of Korea’s Phase I National Allowance Allocation Plan are expected to also change its national target.

The Act on Allocation and Trading of Greenhouse Gas Emissions Allowances (ETS Act) and the Presidential Decree promulgated thereunder were enacted on November 15, 2012, introducing a national emissions trading (cap-and-trade) system that began on 1 January 2015. The Master Plan for the Emissions Trading Scheme and the Phase I National Allowances Allocation Plan were announced in 2014 in order to implement the ETS Act.

With the commencement of the Korean Emissions Trading System (K-ETS) in 2015, the Republic of Korea has become the second nation in Asia to introduce a nationwide cap-and-trade system. Approximately 530 business entities (522 entities in 2015, which has increased to 534 entities in 2016) are subject to caps under the K-ETS. For Phase I (2015-2017) 100% of the allowances have been allocated for free, and in Phase II (2018-2020), 97% of the allowances will be allocated for free.

NDC Commitment

Korea has committed to reduce its CO2 emissions by 37% below BAU levels by 2030. Korea will partly use carbon units from international market mechanisms to achieve its 2030 mitigation target, in accordance with relevant rules and standards. Unit types are not defined in the NDC.
5.3 United States

Domestic Climate Policies

Clean Power Plan

On 2 June, 2014, the US Environmental Protection Agency (EPA) proposed the Federal Clean Power Plan (CPP) for existing power plants under the legal authority of section 111(d) of the Clean Air Act – following an earlier proposal under section 111(b) for new builds. The aim of the plan is to reduce emissions in the power sector by 30% by 2030 relative to 2005 levels. Under the proposed CPP, the EPA would establish a carbon intensity target for electricity generators in each state. State reduction targets will be based on a national formula, calculated with state-wide and regionally specific information (with fixed interim goals and final reduction targets). The proposed CPP is based on flexibility, providing:

- a wide timeline of up to 15 years from when guidelines are issued to fully implement all emission reduction measures by 2030;
- a choice in the nature of the goal, to use either a rate-based or a mass-based goal;
- a choice in the nature of the plan, to use either a single or multi-state approach; and,
- an array of tools that states can use to reduce emissions, depending on their particular circumstances and policy objectives. These measures are summarized in four key “building blocks”:

1. Improving efficiency of existing fossil fuel power plants.
2. Shifting generation from high-emitting power plants to lower-emitting units.
3. Expanding use of zero-emitting generating resources, such as renewables and nuclear.
4. Increased end-use energy efficiency.

Nevertheless, on February 9 2016, the US Supreme Court put the proposed rule on hold by voting a “stay” of implementation of the Clean Power Plan until the judicial review process is complete. This is a significant procedural blow to the CPP and it leaves any further administrative action in implementing these rules to the next US President.

The first compliance date of the Clean Power Plan is 2022, and should the rule ultimately be upheld this date will not be impacted. The most significant impact of this ruling is that it will delay development and submittal of State Implementation Plans until the Supreme Court issues a final ruling.

The Supreme Court’s order states that the stay will be in place until the Supreme Court rules on the merits of the Clean Power Plan (in anticipation that the rule will be appealed to them). The DC Circuit Court were to have heard the oral arguments on the substantive challenges to the rule on June 2nd of this year (2016). A decision will probably not be issued until the end of 2016 or early 2017. Following the Circuit’s decision, one can reasonably anticipate that the loser will appeal to the Supreme Court, with a final decision on the rule by early 2018.

California

At a state level, California’s climate policy frameworks lead the pack, setting an example to not only the US, but sub-national jurisdictions around the world about how to successfully decouple emissions from economic growth. In order
to reduce California’s emissions, the Global Warming Solutions Act, also known as Assembly Bill 32 (AB 32), was introduced and signed into law by Governor Arnold Schwarzenegger on 27 September, 2006. AB 32 requires the California Air Resources Board (ARB) to develop regulations which may include market mechanisms to reduce GHG emissions to 1990 levels by 2020. Included in the legislation was a requirement to develop a Climate Change Scoping Plan (to be updated every five years) towards achieving cost-effective GHG emissions reductions by 2020. The initial Scoping Plan was developed by the ARB in 2008 to outline California’s emissions reduction target and included a wide range of recommended strategies, direct regulations, market-based approaches, voluntary measures and other programs.

ARB is now undertaking its 2030 Target Scoping Plan activities including significant modifications to California’s cap-and-trade regulation. Ontario recently passed its provincial cap-and-trade regulation. This will see an Ontario-only market launch on 1 January 2017 with a likely linkage to California-Québec’s market in 2018.

AB 32 and the Climate Change Scoping Plan include the implementation of a cap-and-trade program as one of the tools to reach the 2020 emissions reductions target. The first compliance period of the California ETS started on 1 January, 2013, and covered GHG emissions from facilities such as heavy industry and first deliverers of electricity (including imports) and suppliers of CO$_2$ who emit more than 25,000 tCO$_2$e/year.

On 1 January, 2014, California officially linked its cap-and-trade program to Québec’s - a linkage supported by the regional administrative organisation, the Western Climate Initiative (WCI). All California and Québec tradeable units are fully fungible for compliance across either jurisdiction.

The second compliance period began on 1 January, 2015, when the California ETS extended its scope to include fossil transportation fuels and retail sales of natural gas. Almost 85% of Californian GHG emissions are now covered by the cap-and-trade program.

**Regional Greenhouse Gas Initiative (RGGI)**

The Regional Greenhouse Gas Initiative (RGGI) is a cooperative effort among nine North-eastern and Mid-Atlantic states to reduce carbon dioxide (CO$_2$) emissions from the electric power sector. RGGI is the first mandatory trading program that caps CO$_2$ emissions in the US through a coordinated regional cap-and-trade program.

Development of the flexible, market-based system began in late 2003, and RGGI was implemented on 20 December 2005. In 2006 RGGI published the Model Rule; a framework that allows member states to establish their own cap-and-trade program.

RGGI’s first auction was held in 2008, and the first three-year compliance period began on 1 January, 2009.

RGGI member states periodically conduct a comprehensive review process to evaluate the program’s successes, impacts, and potential areas of reform. The first review occurred in 2012, and an updated Model Rule was implemented in 2014 that included the RGGI cap being reduced by 45% and other key changes, outlined below.

**NDC Commitment**

The United States committed to reduce its emissions by 26-28% below 2005 levels by 2025.
5.4 European Union

Domestic Climate Policies

The EU Emissions Trading System (EU ETS) was the first multi-national and installation level focused cap-and-trade programme. The EU ETS covers 45% of CO2 emissions in the EU, as well as other GHG emissions. The 31 countries covered by the EU ETS – including the EU28 plus Iceland, Liechtenstein and Norway – account for 20% of global gross domestic product (GDP) and 11% of the world’s energy-related CO2 emissions.

The EU ETS was established in 2005, and after an initial trial period, Phase 2 of the EU ETS ran from 2008 until 2012. Emissions reductions in the EU ETS do not have an end date, implying that the European carbon market and the declining emissions cap is set to continue beyond 2030. The exact value of this annual decline of the cap is still an element of uncertainty as the negotiations are ongoing amongst EU policy makers, for determining the value of the cap reduction of the EU ETS beyond 2020 (the European Commission has proposed to increase it from 1.74% during the 2013-2020 period, to 2.2% after 2020).

The overall ambition of the EU by 2050 is to reduce GHG emissions by 80-95% below 1990 levels as part of an effort by developed countries as a group to reduce their emissions.

Following the adoption of targets for CO2, renewable energy and energy efficiency for the EU by 2020, discussions are currently focusing on the level of ambition for 2030, also referred to as the 2030 Climate and Energy Framework. In 2014, EU Heads of States unanimously approved the level of ambition for the EU as a whole, to reduce its GHG emission by at least 40% by 2030 compared to 1990 levels.

This ambition was reconfirmed recently; meaning the EU currently does not propose to increase its level of ambition following the adoption of the Paris Agreement. This overall EU target translates to a reduction of 43% of GHG emissions for sectors covered by the EU ETS by 2030 compared to 2005 levels, and to a 30% reduction for sectors not covered by the EU ETS.

A surplus of allowances and low permit price as a result of the economic crisis and oversupply of international credits reinforces the need for the EU ETS to undergo structural reform. As a long-term solution, changes will be introduced to reform the ETS by establishing a market stability reserve as of 2018.

The reserve will start operating in January 2019. The reserve will address current permit surplus by reducing supply and provide a mechanism to address future price shocks. The current quantity of allowances to be transferred to the reserve is set at 900 million.

NDC Commitment

The EU has committed to reduce its GHG emissions by 40% below 1990 levels by 2030.
5.5 India

Domestic Climate Policies

The basis of India’s climate policy framework is its 2008 National Action Plan on Climate Change (NAPCC), which specifies eight national objectives for 2017 that predominantly focus on improving energy efficiency, solar technology, sustainable habitats, water supply, Himalayan ecosystems, “Green India”, agriculture, and strategic knowledge.

While India has not yet established a carbon market or carbon pricing policy, it does have in place two key policies. The ‘Perform Achieve and Trade’ (PAT), which was established under the National Mission on Enhanced Energy Efficiency (NMEEE), promotes energy intensity improvement and currently accounts for roughly 60% of India’s total primary energy consumption.

PAT imposes mandatory energy targets on specific facilities rather than sector-wide coverage. A permit mechanism labelled ‘energy saving certificates’, or ‘Ecerts’, are awarded to those participants that are able to reduce emissions below their set targets. These may then be traded with underperforming participants, or saved for later use.

The Renewable Energy Credit (REC) trading system operates by establishing targets that distribution companies must meet. REC certificates are then issued to renewable energy generators in order to incentivize investment and supply.

The REC system has experienced difficulty attracting this investment however and has been trading at bottom prices since the summer of 2013 and 2012 due to insufficient supply.

The interrelationships between the two programs are currently being deliberated, and eventually units from either system may become fungible.

For the coming years, the Indian government has mandated the implementation of pilot emissions trading systems, which will aim to reduce emissions of particulates, in three states: Tamil Nadu, Gujarat, and Maharashtra.

In October 2013, the Pollution Control Board for these regions released guidelines for stationary sources to utilize Continuous Emissions Monitoring Systems (CEMS) to measure emissions.

NDC Commitment

India has committed to reduce its carbon intensity by 33-35% below 2005 levels by 2030. India is planning to use market mechanisms to mobilize finance for climate change purposes.
5.6 Japan

Domestic Climate Policies

In 1990, the Japanese government developed the Action Program to Arrest Global Warming to stabilize the level of CO₂ emissions (per capita) to 1990 levels by 2020. In 2005, the government developed its Kyoto Protocol Target Achievement Plan, which stipulated the necessary measures that would have to be undertaken to achieve Japan’s Kyoto target, under the auspices of the 1998 Law Concerning the Promotion of the Measures to Cope with Global Warming Act (Global Warming Countermeasures Act 1998, 2002). The Act has since been amended three times to include the following measures:

- An obligation for all business operators who consume at least 1.5 million litres of crude oil equivalent (COE) to annually calculate and report their GHG emissions;
- The implementation of the Japan Voluntary Emission Trading Scheme (JVETS), the first carbon emissions trading system ever implemented in Japan; and
- The adoption of Japan’s Kyoto Protocol target, requiring a 6% reduction below 1990 emissions by 2012.
- A requirement for local governments to develop action plans to reduce GHG emissions.
- Establishment of an offset crediting mechanism, the Japan Verified Emissions Reduction (J-VER), which was launched in November 2008.

The Action plan for achieving a low-carbon society, which began in October 2008 and ended in 2012, and was established by the Council on the Global Warming Issue, introduced an experimental, integrated domestic market for emissions trading. The objective of the experimental ETS was to establish effective rules that could enhance technological innovation and increase emissions reduction efforts towards achieving Japan’s Kyoto Protocol target. The experimental ETS consisted of two parts:

- The experimental domestic ETS: participating firms set their emissions reduction targets (absolute or intensity-based emissions targets) and had to surrender allowances and credits to comply;
- The two offset crediting systems which provided credits to participants from the Internal Crediting system (Domestic CDM) and the international Kyoto crediting mechanism.

Furthermore, the Joint Crediting Mechanism (JCM) and the Japan Greenhouse Gas Emission Reduction Certification Scheme were launched in 2013.

NDC Commitment

Japan has committed to a 26% reduction of its GHG emissions below 2013 levels by 2030. Japan aims at reducing 50-100 MtC02e/year through the Japanese Crediting Mechanism (JCM).
5.7 New Zealand

Domestic Climate Policies

In September 2008, the government passed the Climate Change Response (Emissions Trading) Amendment Act 2008. The cornerstone of this Act was the New Zealand Emissions Trading Scheme (NZ ETS). It was designed to expose all sectors of the economy to the international price of emissions with a phased introduction over the period 2008 to 2013. This was enabled through buy-and-sell linkages to the international Kyoto market. The forestry sector was the first to assume emissions unit (allowance) surrender obligations, based on emissions released via deforestation (in addition to the option to earn units for eligible carbon sequestration activities) retrospectively as of 1 January 2008.

A review of the NZ ETS was passed in November 2009 and resulted in the introduction of measures to reduce the economic impact of the system, such as “1 for 2” compliance (whereby emitters in the stationary energy, industrial and transport sectors could surrender one emissions unit to cover two tons of emissions), and a price ceiling of NZ$25. These measures were initially designed to expire at the end of 2012. The Act also deferred unit obligations for biological emissions from the agriculture sector from 2013 to 2015, and shifted the unit obligation start dates for stationary energy, industrial and transport participants to 1 July 2010.

A statutory review of the NZ ETS, completed in June 2011, extended price moderation measures indefinitely (and applied them to 2013 entrants), deferred unit obligations for biological emissions from agriculture indefinitely, introduced ‘forest offsetting’ for pre-1990 forests (enabling foresters to avoid deforestation liabilities by planting an equivalent forest elsewhere), and gave government the power to introduce auctioning under a cap (an option which has not been implemented to date).

In November 2012, the New Zealand government chose to take its emission reduction commitment for the period 2013-2020 under the UNFCCC broadly rather than participate in the second commitment period of the Kyoto Protocol. New Zealand severed access to the Kyoto carbon market after the end of the true-up for the first Kyoto commitment period. Starting on 1 June 2015, NZ ETS participants could no longer surrender imported Kyoto units to meet their obligations.

In December 2015, the government initiated a third review of the NZ ETS in two stages. The first focused on whether to restore a full “1 for 1” unit obligation and how to manage the associated price effects. The second focused on a broad range of issues regarding business responses to the NZ ETS, competitiveness and free allocation, unit supply, price stability and operational issues.

In May 2016, the government announced that a full unit obligation would be phased in progressively by 1 January 2019 and that the price ceiling of NZ$25 per ton and industrial free allocation would be retained. As of July 2016, the government had not announced further decisions pursuant to the review.

NDC Commitment

New Zealand has committed to reduce its GHG emissions by 30% below 2005 levels by 2030. New Zealand’s NDC will remain provisional pending confirmation of access to carbon markets. New Zealand calls for unrestricted access to global carbon markets that enable trading and use of a wide variety of units that meet reasonable standards and guidelines.
5.8 Canada

Domestic Climate Policies

On 3 October 2016 in Montreal, the Government of Canada announced its proposed pan-Canadian benchmark for carbon pricing. This announcement stems from the principles that were developed by the federal government and the provincial premiers in March 2016 under the Vancouver Declaration. Through the Declaration, the First Ministers committed to putting Canada on a credible path to meet or exceed Canada’s target of reducing emissions by 30% below 2005 levels by 2030.

The goal of the proposal is to ensure that carbon pricing applies to a broad set of emission sources throughout Canada with increasing stringency over time to reduce emissions at lowest cost to business and consumers.

Canada’s proposed carbon pricing benchmark includes the following elements:

- Timely introduction. All jurisdictions will have carbon pricing by 2018.
- Common scope. Pricing will be based on GHG emissions and applied to a common and broad set of sources to ensure effectiveness and minimize interprovincial competitiveness impacts.
- Two systems for jurisdictions to implement: (i) an explicit price-based system (a carbon tax like British Columbia’s or a carbon levy and performance-based emissions system like in Alberta), or (ii) a cap-and-trade system (e.g. Ontario and Québec).
- Legislated increases in stringency, based on modelling, to contribute to Canada’s national target and provide market certainty.
- For jurisdictions with an explicit price-based system, the carbon price should start at a minimum of $10 per tonne in 2018, and rise by $10 per year to $50 per tonne in 2022.
- Provinces with cap-and-trade need: (i) a 2030 emissions reduction target equal to or greater than Canada’s 30 percent reduction target; (ii) declining (more stringent) annual caps to at least 2022 that correspond, at a minimum, to the projected emissions reductions resulting from the carbon price that year in price-based systems.
- Revenues remain in the jurisdiction of origin. Each jurisdiction can use carbon pricing revenues according to their needs, including to address impacts on vulnerable populations and sectors and to support climate change and clean growth goals.
- A Federal backstop. The federal government will introduce an explicit price-based carbon pricing system that will apply in jurisdictions that do not meet the benchmark. The federal system will be consistent with the principles and will return revenues to the jurisdiction of origin.
- A Five-year review. The overall approach will be reviewed by early 2022 to confirm the path forward, including recognition of permits or credits imported from other countries.
- Reporting. All jurisdictions should provide regular, transparent and verifiable reports on the outcomes and impacts of carbon pricing policies.
Alberta

In 2007, Alberta passed the Specified Gas Emitters Regulation (SGER), North America’s first GHG emissions regulation for large emitters and compliance carbon pricing system. SGER requires large emitting facilities to reduce baseline emissions intensities from 1 July, 2007 by 12%, during each compliance period. In order to meet their intensity reductions, covered facilities have four compliance options:

1. Reduce on-site emissions;
2. Purchase or use emission performance credits issued on the Alberta Emission Performance Credit Registry;
3. Purchase Alberta-based offset credits; or
4. Contribute to the Climate Change and Emissions Management Fund.

Alberta’s program sets a facility-level emissions intensity goal, as opposed to an absolute cap on aggregate emissions. The program allows the increase of GHG emissions annually as production expands so long as the facility is able to reduce GHG emissions per production unit through flexible compliance. For facilities existing in 2000, the goal is to reduce annual emissions intensity by 12% below a baseline established using 2003-05 averages for emissions and production.

In June 2016, Alberta announced a new carbon “levy” on fuels. Large emitters are exempt from Alberta’s new ‘carbon levy’ and continue to fall under SGER until 2017. In 2018, these entities will transition to a product and sector-based performance standard trading system labelled the Carbon Competitiveness Regulation.

Ontario

Ontario has been part of the Western Climate Initiative (WCI) since 2008, a collaborative of sub-national jurisdictions in Canada and the United States that aims to reduce greenhouse gases (GHGs) through a regional cap-and-trade program. Ontario’s compliance cap-and-trade program is scheduled to launch on 1 January, 2017.

Mandatory and voluntary participants in Ontario’s program will be responsible for their emissions as of 1 January, 2017, with the first auction being held in March, 2017. The province will hold quarterly (likely 4) stand-alone 2017 auctions prior to linking with California and Québec in 2018.

Québec

Québec has also been part of the WCI since 2008. Québec’s emissions trading system (ETS) was announced in June 2012 as the centerpiece of its 2013-2020 Climate Change Action Plan. Québec’s cap-and-trade program officially began its first compliance period on 1 January, 2013, and four solo auctions were held prior to officially linking its ETS with California’s on 1 January, 2014. Joint auctions with California have been held since November 2014. Together, these programs create North America’s largest carbon market, and this market represents the first time cross-border sub-national jurisdictions have coordinated and linked their cap-and-trade systems.

NDC Commitment

Canada has committed to reduce its GHG emissions by 30% below 2005 levels by 2030. Canada has explicitly identified the need to use international mechanisms to achieve its 2030 target. Canada took a leadership role in shepherding through Article 6 of the Paris Agreement.
5.9 Other Countries

The map in Figure 2 (above) shows the various market based measures and carbon pricing systems with market elements implemented and those under development around the globe. It is clear that the implementation of market based climate policies is not limited to the examples outlined above, but there is much more.

An increasing number of jurisdictions are implementing domestic climate policies and, more specifically, are pricing GHG emissions. In most cases, carbon pricing policies take the form of an emissions trading system (ETS), but some jurisdictions have also implemented carbon taxes.

To date, 55 jurisdictions, including 35 national and 20 sub-national jurisdictions, have implemented an ETS as a way to put a price on carbon.

Currently around the world, two out of every five people live in a jurisdiction considering, preparing or operating with a price on carbon. The uptake of market-based mechanisms is only set to increase, with over 90 countries identifying their use in achieving emissions reduction commitments made under the Paris Agreement\(^\text{10}\).

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6 Impact and implications from international carbon market developments for Australian Trade

The following section outlines the impacts and implications of international carbon market developments on Australia’s international trade activities.

6.1 Australia’s main trading partners and key exports

Australia’s largest two-way goods and services trading partners are China (28% of trade valued at $91.3 billion in 2015), Japan ($42.4 billion) and the United States ($22.1 billion). Australia has strong trading relationships with many other countries and regions including the European Union, South Korea, India and many others in the Asia-Pacific region.

As Chapter 5 highlighted, market-based mechanisms are increasingly being implemented by other nations, including some of Australia’s key trading partners. Much of the Australian economy is exposed to the global shifts toward reducing emissions, an exposure which will increase as major trading partners implement more progressive emissions reduction policies (Table 1).

Australia’s economy relies heavily on emissions intensive exports traded in international markets. As illustrated in Table 2, Emissions Intensive Trade Exposed (EITE) industries comprise approximately 42.3% of major export activities. Many of Australia’s principal exports are resources, including iron ores and concentrates, coal, natural gas, gold, aluminium ores and concentrates and petroleum. Exports of mineral and fuels exports was valued at A$133.4 billion in 2015.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Export</th>
<th>Export + Import</th>
<th>Use of market-based mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>98,210</td>
<td>152,468</td>
<td>Scheduled for 2017</td>
</tr>
<tr>
<td>2</td>
<td>Japan</td>
<td>50,247</td>
<td>70,218</td>
<td>Sub-national, potential national</td>
</tr>
<tr>
<td>3</td>
<td>United States</td>
<td>15,510</td>
<td>60,442</td>
<td>Sub-national</td>
</tr>
<tr>
<td>4</td>
<td>Republic of Korea</td>
<td>22,017</td>
<td>34,626</td>
<td>National</td>
</tr>
<tr>
<td>5</td>
<td>Singapore</td>
<td>12,085</td>
<td>30,187</td>
<td>National</td>
</tr>
<tr>
<td>6</td>
<td>New Zealand</td>
<td>12,085</td>
<td>30,187</td>
<td>National</td>
</tr>
<tr>
<td>7</td>
<td>United Kingdom</td>
<td>8,399</td>
<td>20,788</td>
<td>Multi-national (EU ETS)</td>
</tr>
<tr>
<td>8</td>
<td>Malaysia</td>
<td>7,923</td>
<td>20,582</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Thailand</td>
<td>6,105</td>
<td>18,978</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Germany</td>
<td>2,867</td>
<td>6,725</td>
<td>Multi-national (EU ETS)</td>
</tr>
</tbody>
</table>

Table 1: Main Australian export partners with respective rank, values of export and total trade in millions of Australian dollars.

11 Commonwealth of Australia, Department of Foreign Affairs and Trade, Composition of Trade Australia 2015 p.6

12 Commonwealth of Australia, Department of Foreign Affairs and Trade, Composition of Trade Australia 2015 p.3
### Table 2: Main export commodities for Australia based on value and percentage of trade market (2015)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Commodity</th>
<th>Value (A$ million)</th>
<th>Exporting market share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Iron ores &amp; concentrates</td>
<td>49,060</td>
<td>15.5</td>
</tr>
<tr>
<td>2</td>
<td>Coal</td>
<td>37,031</td>
<td>11.7</td>
</tr>
<tr>
<td>3</td>
<td>Education-related travel services</td>
<td>18,801</td>
<td>5.9</td>
</tr>
<tr>
<td>4</td>
<td>Natural gas</td>
<td>16,456</td>
<td>5.2</td>
</tr>
<tr>
<td>5</td>
<td>Personal travel (excl education) services</td>
<td>15,943</td>
<td>5.0</td>
</tr>
<tr>
<td>6</td>
<td>Gold</td>
<td>14,500</td>
<td>4.6</td>
</tr>
<tr>
<td>7</td>
<td>Beef</td>
<td>9,296</td>
<td>2.9</td>
</tr>
<tr>
<td>8</td>
<td>Aluminium ores &amp; conc (incl alumina)</td>
<td>7,493</td>
<td>2.4</td>
</tr>
<tr>
<td>9</td>
<td>petroleum</td>
<td>6,036</td>
<td>1.9</td>
</tr>
<tr>
<td>10</td>
<td>Wheat</td>
<td>5,814</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Total (b) 326,862

6.2 Implications for Australian trade

The introduction of carbon pricing mechanisms by the governments of Australia’s key trading partners, in particular China, will create a number of direct and indirect consequences for Australian companies, such as those with emissions intensive exports. Climate policy developments in trade competitors are also critically important to consider for EITE companies who risk potential loss of market share if policies are not aligned. Taken together, the development of climate policy and carbon markets among key trading partner countries and trade competitors are likely to have significant economic implications for Australia.

With the proliferation of market-based mechanisms and forms of carbon pricing globally, it is important that both Governments and businesses in Australia seriously consider how to manage the implications, risks and opportunities in international markets and evolving policy settings.

As noted in Chapter 5, each of Australia’s key trading partners has adopted an NDC under the Paris Agreement. Those NDCs outline how each country will make material reductions in emissions in the post-2020 period, and almost all main partners have adopted some form of carbon pricing at the national or sub-national level, either through emissions trading systems or carbon taxes. The implications of Australia’s key trading partners taking steps to limit emissions and to engage with carbon markets presents both risks and opportunities for Australia. These are outlined below.
If companies operate in a number of countries (for example, a number of mining and oil and gas companies) they may be covered by one or more emissions trading systems, and subject to regulatory costs associated with compliance with those systems. These include costs associated with the purchase of permits (if those permits are not freely allocated), potential penalties for non-compliance with surrender obligations and the increased costs of inputs for production, such as electricity, which, if subject to the same pricing mechanism are likely to be passed on.

Arguably the introduction of a carbon price may have an impact upon the competitiveness of different fuel types which are exported from Australia. By way of example, carbon pricing in countries such as South Korea may make gas more cost competitive with coal as it has a lower emissions profile when used as a fuel source in electricity generation. This price differential may promote fuel switching for energy production in those jurisdictions where carbon pricing has been implemented.

However, we note that this transition may take a number of years due to new development lead times. It is also important to acknowledge that policy settings in other countries have the potential to advantage or disadvantage Australian exports, depending on their design.

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**Box 1: Case Study - Australia’s LNG Industry**

The complexities faced by Australia’s trade exposed industry can be illustrated by Australia’s LNG industry. Australia is forecast to become the world’s largest LNG supplier by 2018. Demand for LNG is dominated by Japan, China and South Korea, representing slightly over 55 per cent of global demand in 2015. It is into this market that Australian LNG must primarily compete for market share alongside producers in countries including those from the Middle East, Malaysia and Nigeria, few of whom appear to be considering imposing an emissions cost on their industry.

When considering trade exposed industry impacts often only direct competitors are considered. In the case of LNG this assumption is erroneous given the ease of substitution of other energy commodities. Australian LNG producers must therefore compete in international markets not just with other exporters of LNG but also with domestically sourced and internationally traded coal. Consideration of trade exposed impacts associated with the introduction of any constraints or cost on GHG emissions in Australia must be framed around this reality.

The relative life cycle emission benefits of LNG compared to coal must also be considered. While growth in Australian LNG exports will add around 30 million tonnes to Australia’s emissions between 2015 and 2020 it needs to be considered in the context of global energy supply and demand. If gas is used to displace coal fired generation, the global life cycle emissions benefit is around 200 million tonnes per year.

In formulating Australia’s climate regulation and provisions for trade exposed industry, policy makers need to be mindful of:

- Impacts Australian policy may have on overall global emission reduction efforts. Efforts to promote more gas into the Asia Pacific market with the objective of displacing the use of coal can have a significant effect on global emissions, far exceeding the opportunities from domestic mitigation efforts.

- Impacts on national industries. Considerations should be made not just for direct competitors but also for the suppliers of possible substitutes. For Australian LNG, the competitors are LNG from the Middle East, Australian export coal and domestic coal in China.

It is not the carbon policy of any one jurisdiction or trading partner that is important when considering trade exposed issues but the comparable costs being imposed on the industries’ competitors.

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6.3 Carbon Pricing Systems

If companies operate in a number of countries (for example, a number of mining and oil and gas companies) they may be covered by one or more emissions trading systems, and subject to regulatory costs associated with compliance with those systems. These include costs associated with the purchase of permits (if those permits are not freely allocated), potential penalties for non-compliance with surrender obligations and the increased costs of inputs for production, such as electricity, which, if subject to the same pricing mechanism are likely to be passed on.

Arguably the introduction of a carbon price may have an impact upon the competitiveness of different fuel types which are exported from Australia. By way of example, carbon pricing in countries such as South Korea may make gas more cost competitive with coal as it has a lower emissions profile when used as a fuel source in electricity generation. This price differential may promote fuel switching for energy production in those jurisdictions where carbon pricing has been implemented.

However, we note that this transition may take a number of years due to new development lead times. It is also important to acknowledge that policy settings in other countries have the potential to advantage or disadvantage Australian exports, depending on their design.
6.4 Border Tax Adjustments

The potential for adverse effects on the international competitiveness of certain industries has seen importing countries that are imposing a carbon price in their economies contemplate border tax adjustments. These approaches are designed to level the playing field for domestic producers (where they are trade-exposed and could contemplate relocating offshore) and usually involve an equivalent carbon price being levied on imports of goods from outside the jurisdiction that are from non-carbon constrained region. These proposals are often complex and subject to legal and diplomatic challenges (e.g. when the EU proposed to include aviation in the EU ETS). As a result, they have historically been discouraged/avoided. The threat of imposing border tax adjustments can be used as a means of encouraging other countries to adopt carbon pricing approaches. Anecdotally the suggestion by President Obama that the US may introduce border taxes has been linked to China’s move to develop domestic emissions trading systems.

6.5 Competitiveness concerns

At the domestic level, a number of the ETSs that cover activities that are emission intensive and trade-exposed (EITE) have addressed competitiveness concerns through the allocation of units - providing free allowances to EITE sectors based on an agreed percentage of the companies’ regulatory compliance obligation (e.g. EU, Korea, California, Québec). This approach was also adopted by the former Australian Carbon Price Mechanism which characterised certain activities as either highly or moderately emissions-intensive trade-exposed and allocated free carbon units accordingly.

The current Australian Safeguard Mechanism does not provide any special treatment for EITE sectors, largely on the basis that baselines are set based on historical emissions and are capable of being adjusted to reflect significant changes in production and therefore covered entities are unlikely to be subject to carbon costs. However, if there is a tightening of baselines through the 2017 Review process, this may result in compliance costs for companies engaged in EITE activities and calls by industry to level the playing field with competitive markets. The strength of these arguments will ultimately depend upon whether carbon prices are being imposed on equivalent goods in those competitor markets.

6.6 The impact of the Chinese Emissions Trading Scheme (ETS)

As noted above, China has indicated that its national ETS will commence in 2017. This will represent the world’s largest carbon market, with an expected cap size of at least 4 billion tonnes of CO2-e. As Swartz notes, the presence of a national carbon market in the country which is the world’s largest emitter and a key player in world trade has the potential to scale up climate action through carbon markets.
and incentivise other countries to implement carbon pricing policies.\textsuperscript{12}

In the context of Australia’s exports of natural resources to China to support its energy and industrial sectors, increased costs to those industries as a result of the ETS and also the transition, over time, to low emission sources such as renewable energy, could have flow on effects in relation to volumes of products imported.

In some cases, this may provide opportunities for Australian businesses that are operating in the low-emissions technology space or that can take advantage of those technology changes (e.g. high quality coal for super-critical power plants).

There is also the possibility, over time, for China to explore linking with other emissions trading systems and/or participation in carbon market clubs (see Section 7.7), thereby expanding the scale and integration of global carbon markets.

Given Australia’s key trading relationships with China, it will be important to keep an open dialogue going on the potential opportunities for future linkages between the Chinese ETS and Australian domestic carbon markets as they develop post-2020.

### 6.7 NDCs and the shift to low carbon development

The NDCs submitted by Australia’s key trading partners in the lead up to the Paris COP demonstrated that there is increasingly a shift towards ‘low-carbon’ development, which in the long-term is likely to result in a greater share of energy being generated by renewables; energy efficiency opportunities to be pursued in the transport, building and industrial sectors; and in the short to medium term may result in some fuel switching from coal to gas.

For the Australian energy and resources sector, these policy and development changes may see a slight decrease in the use of fossil fuels compared to business as usual scenarios; however, in absolute terms the policies outlined in NDCs to date would not appear to have a dramatic impact upon demand in the short to medium term. In the longer term, a number of analysts have highlighted the risk of stranded assets as a result of increased regulation to address climate change. Those risks include:

- Closure of certain operating assets that are energy intensive and uncompetitive in a carbon constrained world;
- Increased operating costs for existing and new facilities with the imposition of carbon pricing in domestic markets - in some instances carbon pricing may make existing or new projects unviable;
- Constraints on the development and construction of new assets, for example requiring plants to meet emissions standards or be fitted with Carbon Capture and Storage - which again could make the costs of new investments prohibitive.\textsuperscript{13}
- As key trading partner countries implement emissions reduction policies, covered entities will likely examine the emissions intensity through their supply chain. This in turn could see reduced demand for some emissions intensive commodities leading to reduced export market share. China, Australia’s

\textsuperscript{12} Swartz, J “China’s National ETS - Implications for Carbon Markets and Trade” ICTSD, (March 2016)

\textsuperscript{13} Citigroup “Energy Darwinism II - Why a Low Carbon Future Doesn’t Have to Cost the Earth” Citi GPS: global Perspectives and Solutions (August 2015) p.94
key market for seaborne coal, is experiencing a significant decline in coal consumption as China’s Government implements measures to reduce emissions, improve air quality and make accelerated reductions in energy intensity.\textsuperscript{14,15}

- A number of Australian companies have been developing climate change strategies and, in some cases, adopting internal carbon budgets and applying carbon prices to quantify and manage risks. This is in response to changing policy environments in key markets, and also public and investor pressure to provide greater disclosure in relation to climate change risks. This trend is likely to increase with more companies actively looking to price carbon into their operating budgets.

6.8 An export market for Australian Carbon Credit Units

As the use of carbon markets increases, so too does the demand for offset units from covered companies. Many jurisdictions are in the design phase of their market-based mechanisms and determining which units will be eligible to meet compliance obligations. Within this phase there is an opportunity for Australia to set in train the process for ensuring Australian Carbon Credit Units (ACCUs) are fungible in foreign markets. This in turn could create a significant export market for domestic abatement as supply and demand dynamics for offsets change, particularly in a post-2020 environment.


7 Factors that may affect Australia optimising its position in international carbon markets

As the international carbon market develops under the implementation of Article 6 of the Paris Agreement, there are a number of factors that Australian policy makers and businesses need to be aware of and consider if Australia is to optimise its economic position in a post-Paris world.

7.1 Australia’s UNFCCC target and engagement in international markets under the Paris Agreement

The Australian Government committed to an emissions reduction target of 26 to 28% below 2005 levels by 2030, as outlined in the NDC submitted under the Paris Agreement\(^\text{16}\). As outlined in the NDC, Australia plans to meet this target through a combination of policies including:

- The Emissions Reduction Fund;
- The safeguard mechanism;
- Renewable Energy Target (23% of Australia’s electricity by 2020);
- National Climate Resilience and Adaptation Strategy;
- National Energy Productivity Plan (40% improvement between 2015 and 2030);
- Improvements in the efficiency of light and heavy vehicles; and

The contribution of each of the above policies to reducing Australia’s emissions according to the Australian Government is illustrated in Figure 3 (right).

\[\text{Figure 3: Emissions reduction contributions that the Australian Government considers its Direct Action policies could make towards the 2030 target}^{17}.\]

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\(^{16}\) Commonwealth of Australia, Department of Foreign Affairs and Trade. (2015). Australia’s Intended Nationally Determined Contribution to a new Climate Change Agreement. Canberra, ACT.

\(^{17}\) Commonwealth of Australia, Department of the Prime Minister and Cabinet. Setting Australia’s post-2020 target for reducing greenhouse gas emissions. Final report of the UNFCCC Taskforce.
Australia’s domestic emissions reduction policy suite will be reviewed in 2017. The review is likely to consider the effectiveness of current policies, how policies will evolve; and any additional policies for the post-2020 period. It will be important, in assessing the effectiveness of the policy suite, to consider how policies can deliver an emissions reduction trajectory in alignment with achieving Australia’s 2030 target. The government will also consider a potential long term emissions reduction goal for Australia, beyond 2030\(^\text{18}\).

In line with the Paris Agreement’s pledge and review mechanism, targets will be reviewed every five years, commencing in 2023. With each revision, countries (parties) will have the option to maintain their existing target or increase the level of ambition. The pledge and review mechanism will mean Australia’s emission reduction targets are examined by the international community which may lead to pressure to commit to greater emissions reductions.

With likely increased emissions reduction commitments over time, greater reductions will subsequently be required from all sectors of the Australian economy. At the same time, increased demand for abatement, in the form of offset units, is likely to happen. To meet this increased focus on emissions reduction, Australia could participate in international carbon markets or increase availability and production of domestic abatement (ACCUs), or a combination of these.

As highlighted previously, the design of many carbon markets around the world is still underway, meaning early engagement to optimise Australia’s position is crucial. Australia’s engagement, at least in the preliminary stages, would likely be best applied in the design of the international market-mechanism framework under Article 6 of the Paris Agreement.

The design of the Article 6 framework also includes some measures to ensure environmental integrity, transparency and the avoidance of double-counting. As a signatory to the New Zealand Ministerial Declaration on Carbon Markets, Australia is committed to work to ensure the integrity of market-based mechanisms under the Paris Agreement.

Through active involvement in the Article 6 negotiations and the New Zealand Declaration, Australia can position itself to provide more flexibility to engage across markets and link our domestic carbon market with other international markets.

### 7.2 How Australian domestic policy is set to enable trade in domestic and/or international units

Engagement in the evolution of international markets under the Paris Agreement will optimise Australia’s position to support the effective implementation of domestic policy. Under the safeguard mechanism, facilities emitting over 100,000 tCO\(_2\)-e are allocated a baseline representing the historic highpoint in absolute emissions over the period 2009-14\(^\text{19}\). These facilities are required to maintain emissions at or below this baselines by limiting emissions or

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\(^{18}\) Commonwealth of Australia, Department of Foreign Affairs and Trade. (2015). Australia’s Intended Nationally Determined Contribution to a new Climate Change Agreement. Canberra, ACT.

purchasing offset units, or some combination of these.

At present, only ACCUs are eligible for use under the safeguard mechanism, meaning the cost of compliance is linked to the price curve for domestic abatement. Enabling access to international units under the safeguard mechanism can allow covered entities to determine the optimum weighted average cost of compliance. While allowing covered entities to optimise their position through the use of international units is important, it is important to recognise that limits need to be placed on the use of international units if Australia is to ensure the viability of its domestic abatement industry.

7.3 Rationale for use and types of units to consider and eligibility requirements

As outlined above, Australia’s long-term emissions reduction target requires a significant, economy-wide abatement effort. Addressing climate change and reducing emissions to the degree necessary will have a cost, and such cost poses a challenge as it could potentially impact on wealth, prosperity and quality of life. It is an absolute imperative therefore that ways are found to reduce emissions at the lowest possible cost, as to do otherwise will come at a penalty to economic and personal prosperity.

For many industrialised economies such as Australia, that already have a relatively efficient industrial and energy sectors, implementing an ambitious emissions reductions commitment required to meet the Paris Agreement’s long-term goal could result in significant costs for society, as domestic abatement options are likely to be costly. This is especially true for countries that are fully industrialised and have high carbon abatement costs and for countries whose emissions originate in sectors with limited abatement opportunities.

At the same time, GHG emissions impact the climate at a global level and the climate is apathetic to the geographic source or sink of GHG emissions. Therefore, the use of international units is an option available to policymakers to maintain an ambitious long-term emissions reduction target while lowering abatement costs at the same time. Assuming there is sufficient supply at attractive prices, accessing international emission units could allow Australia to meet its target in a cost-effective way.

The ability to surrender emissions units generated in another jurisdiction, by allowing emissions reduction to take place where it is cheapest can lower compliance costs to business, and hence the overall cost on the Australian economy, as well as allow achieving Australia’s overall reduction goals in a cost-efficient way. Moreover, as a transfer of emissions reduction units corresponds to a transfer of finance and investments, the use of international units has the potential of opening up new markets and new business lines for Australian businesses.

For example, Australian farmers could sell ACCUs to liable entities in other systems. Taking a long-term perspective, the trade and surrender of international units can be seen as a first form of linking climate efforts between two or more countries, as it can broaden the scope of domestic climate action by allowing the flow of units between different systems. The use of international units brings a number of benefits, further elaborated below.
Cost-effectiveness

- The ability to surrender an emissions unit from another jurisdiction can help lower compliance costs. Widening the pool of abatement options beyond Australia’s borders can lower the overall costs of abatement and help meet the environmental objective at lowest cost. By allowing flows of emissions units in and out of the system, according to where mitigation is cheapest, the long-term emission reduction targets for both Australia and international partners will be able to be met by all sectors cost-effectively.

- As emissions reduction targets grow more stringent over time, Australian businesses will need access to international markets to reduce emissions cost-effectively and maintain reasonable international competitiveness. Allowing access to international market mechanisms outside Australia can reduce overall costs to industry and governments alike. This would also help to create a level-playing field by aligning the costs for Australian business with those of international competitors.

- Flexibility in the system allows participants to make strategic choices about their route to compliance as well as ensuring their abatement options for GHG emissions are more efficient and cost-effective using modern techniques and technologies.

International Cooperation and Global Partnerships

- International efforts and cooperation in climate change mitigation are needed to meet the Paris Agreement’s long-term below 2°C goal. Focusing emissions reductions only domestically will not be sufficient to achieve the necessary emissions reductions needed globally.

- Australia would set a precedent and good example for other countries and regions to work towards viable international markets that would create demand for international units from other jurisdictions. Providing access to international units will incentivise advanced, emerging, and developing economies alike to meet climate mitigation goals using market mechanisms, improving the cost-effectiveness and quality of their systems. Governments hosting projects for which units will be issued will see the benefits of market-based measures to reduce emissions.

- Use of the CDM Mechanism expanded international cooperation with many developing countries and prompted the growth of expertise within their business communities. It also created export opportunities for technology transfer. These lessons learnt should be looked at when considering the use of international units post-2020.

- Emissions units are important not only in environmental terms, but also in providing improved prospects for linking of policy mechanisms in the future. They provide a safety valve for each system, and each system can implement the filters it feels are necessary for its domestic ETS, according to predefined criteria.

Types of units to consider and eligibility requirements

International emissions units eligible for compliance in Australia could include internationally recognised emissions reduction units as well as emissions allowances issued under other ETSSs. International units typically include
Certified Emission Reduction (CER) units generated by the CDM, Reducing Emissions from Deforestation and Degradation (REDD+) units and others. Moreover, Australia’s climate policy framework should also contain provisions for the inclusion, in the post-2020 period, of international units categories established under the framework of the Paris Agreement. Articles 5 and 6 of the Paris Agreement pave the way for the expansion of a REDD+ framework and for the development of a new market-based mechanism.

Particular attention should also be focused on REDD+ units, as addressing deforestation is essential to avoid climate change. We view REDD+ as a key new mechanism as it has the potential to provide crucial financing to emissions reductions activities at an impactful scale. REDD+ units can help combating deforestation, and Article 5 of the Paris Agreement paves the way for the establishment of a REDD+ framework at the UN level.

Therefore, when exploring the use of international units in Australia, several unit types should be considered, both existing and under development, as they allow having diversified sources of abatement opportunities and because frameworks that are currently being developed are likely to represent an important sources of international units in the near future. Furthermore, we recommend the use of units that meet the criteria and principles outlined below.

We recognise that the use of international units must operate within well-defined parameters. Allowing a flow of uncontrolled units is not a sustainable solution and it is important that clear and strict criteria are used to define the credibility of international units and rules for their use. The role of international units should satisfy the following principles:

- **Integrity:** International units should represent real, permanent and additional reductions, and be subject to robust monitoring, reporting and verification (MRV). It is therefore essential to ensure common and consistent MRV processes. One tonne of reductions located outside Australia should equal at least one tonne of reductions within Australia. Clear quality criteria need to be agreed at the UN level from the outset, to allow individual and sectoral projects to develop once they meet minimum criteria set by the UNFCCC.

- **Regulatory stability:** The extent to which international units should be allowed (volume and type) should be defined as clearly as possible. This offers market participants visibility on what to expect in terms of market dynamics, and it helps to avoid a sudden inflow or outflow of units when rules get modified. Moreover, property rights on the emissions units must be ensured to market participants, to prevent regulatory uncertainty and economic losses.

- **Compliance with the UNFCCC framework:** International units should comply with the evolving framework established by Article 6 of the Paris Agreement.

Moreover, criteria for the type of international units could include the following:

- **Net mitigation contribution:** The extent to which a project counts towards a host country’s efforts to reducing their domestic emissions should be clearly established, to assure that there is no double-counting. Net mitigation could
be set by project type and/or by country type.

- Clear additionality: Units should meet a clear additionality standard set by determining an appropriate sectoral benchmark for the country or region. Projects with clean technologies that abate significant levels of GHG emissions should flourish as a result.

- Sustainable development: Units should, in addition to contributing to a net mitigation of GHG emissions, support sustainable development, as outlined by the Paris Agreement’s Article 6.

- Project neutrality: Project size should not be a criterion for the eligibility of units, in order not to favor small projects over large projects and vice versa.

- Credibility: UN-issued units could be recognised, to ensure that qualitative criteria are guaranteed.

7.4 Setting the right balance between international and domestic units in Australia

A balance of international and domestic offset units is the most appropriate means for Australia to protect and enhance the domestic offset industry while ensuring entities covered under domestic emissions reduction policies can meet their compliance at lowest cost. It is important a balance is achieved to ensure continuity of demand and protection for the domestic abatement sector while ensuring compliance costs can be managed most effectively for business, such as entities covered by the safeguard mechanism.

Mapping the forward price curves of selected international units together with the ACCU price can help determine the weighted average cost of compliance for covered entities, assisting with identifying the optimal unit balance.

Box 2: The Waste Industry Protocol

There has been some precedent in Australia for use of international units counting towards our UNFCCC targets. In Australia, the waste sector accounts for two per cent of national GHG emissions. Under the Carbon Pricing Mechanism (CPM), landfill operators were required to collect payment for future emissions released over time from decaying waste.

Following the repeal of the CPM in 2014, this future emissions liability was extinguished. To manage funds collected for future emissions prior to the repeal of the CPM, the Australian Government developed the Waste Industry Protocol which ensured the use of these funds for consumer benefit.

The Waste Industry Protocol totalled $200 million from funds collected by landfill operators prior to the repeal of the CPM. These funds were then used to purchase international offset units. Units accounting for over 22 million tonnes were purchased. The units were voluntarily transferred to the Government greenhouse gas accounts to be used toward Australia’s 2020 Kyoto Protocol target.

The final version of the protocol has made provisions for use of international carbon units through donations. A total of 25.46 million international CERs units were donated by two companies during 2015. This was more than twice that delivered to the Regulator under ERF contracts through to October 10 2015 (11.35 million carbon credits).

At around $1 each, these units provided major cost effective abatement in comparison to the average ERF auction price ($12.10). This illustrates how despite uncertainty communicated on the future use of international units, Australia has already heavily relied on them for abatement.

7.5 Factors affecting future supply and demand of international emissions reductions

As previously mentioned, of the 189 countries that submitted an NDC to the UNFCCC ahead of the Paris Agreement in 2015, over 90 included an intention to participate in an international market-based mechanism to meet their emissions reduction contribution. Many of those countries will be likely ‘sellers’ of emissions reductions in a world of bottom-up contributions, such as countries that have cheap emissions reductions opportunities available and are interested in financing such activities.

These countries in Africa, Latin America, and Asia participated in the Kyoto Protocol’s CDM, and are familiar with the UN-led system of a project-by-project based approach to carbon abatement generation and issuance. Other countries, on the other hand, will be ‘buyers’ of emissions reductions, for example countries that are fully industrialized and have high carbon abatement costs and for countries whose emissions originate in sectors with limited abatement opportunities because of technology constraints.

IETA and CMI note the long-term durability of the Paris Agreement, making it especially crucial that its implementation incentivises the maximum level of emissions reductions – including via harmonised carbon pricing systems. This can be achieved through cooperative action, which in turn enables the transfer of emissions units between various national carbon pricing systems.

Such transfers are described in Article 6 of the Paris Agreement, with paragraph 2 establishing internationally transferable mitigation outcomes (ITMOs) as means of accounting for such linkages and paragraph 4 which creates an emissions mitigation mechanism (EMM).

A number of factors are likely to play a role in affecting future supply and demand of international units in a post-Paris future. These factors include:

- Scalability: The system of transfers of international emissions reductions must be sufficiently robust to support large scale mitigation investments in a wide range of jurisdictions. The EMM and ITMO processes have great potential to involve all countries and to target whole sectors, rather than the project-by-project approach with the CDM and JI under the Kyoto Protocol. This can help governments meet the ultimate objective of the Paris Agreement of limiting the temperature increase to well below 2 degrees. The EMM can also be a catalyst for more carbon pricing systems, if flexibility remains at its core.

- Confidence: The system must promote confidence not only for the Parties involved and their constituents, but also for the international community. To deliver that confidence, Article 6 accounting guidelines should focus on the solid fundamentals of clarity, consistency and accuracy.

- Savings: Early analysis by the World Bank Group shows that current NDCs could be delivered at a potential 30% lower cost if there were full access to the international market through emissions transfers and trading – which in turn implies much greater ambition at the same cost. This is both significant in terms of money saved which enables governments to take on higher targets and conduct an overall greater emissions reduction.

- Demand: 90 governments state in their NDCs that access to markets is essential
to fulfil their plan, if not go further, according to IETA’s recent analysis\(^{20}\) with the Environmental Defense Fund. The ITMO provision in the agreement could see carbon market coalitions or clubs form, as governments seek to raise their ambitions.

- Transparency: We believe that ITMOs should be expressed in clear units of measure using defined standards. Transferred units should be verifiable, ideally with verification undertaken by independent experts. Finally, transfers between Parties should be reported by sender and receiver in a clear manner so that independent reviewers can be assured that the accounts match, with no double-claims for use.

### 7.6 Establishment of a strategic reserve

In conjunction with Australia’s current domestic emissions reduction policies, the establishment of a strategic reserve of eligible international offset units is an option to explore that could serve as a back-stop to ensure emissions reduction targets are met. The primary purpose of a strategic reserve is to procure a sufficient quantity of eligible international units to meet an emissions reduction target.

A strategic reserve for Australia could increase offset (ACCU) providers participation in the ERF by providing a reserve pool of units for project developers to access. For the safeguard mechanism, companies which exceed allocated baselines could purchase units to offset excess emissions from the strategic reserve, or reserve units could be used in the case of an absence of domestic units, or directly as a source of voluntary or mandatory compliance.

A strategic reserve could also serve to hedge against any increase in Australia’s 2030 target which may occur as a result of the pledge and review mechanism of the Paris Agreement (Chapter 4). Further to the target-associated benefits, a strategic reserve could also present additional benefits including alignment with foreign development and policy objectives.

When considering the establishment of a strategic reserve, it is important to consider the terms of a strategic reserve: its period, procurement programs, mandate, and governance frameworks. The experiences and models used by countries and institutions such as Austria, Belgium, France, Norway, Sweden, Japan and the Asian Development Bank could be utilised by Australia in establishing a strategic reserve.

### 7.7 Factors to consider in linkage of markets, development of “Carbon Clubs” and other bilateral arrangements

Article 6 allows for carbon markets to grow through the ITMO and EMM provisions. The purpose of these simple provisions is to facilitate powerful linkages between different carbon markets and crediting systems over time, which can support action at a scale equal to the 2°C challenge. Linked systems allow greater emissions reductions to be achieved quicker and at lower cost than if every

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country acts on its own, while also reducing competitiveness concerns.

Emissions reduction opportunities do not exist equally across jurisdictions. This fact drives many in business to encourage linkages of pricing systems. Economists frequently point out the economic and environmental benefits of such links: the broader the geographic reach, the more emissions reduction opportunities become available.

Conversely, the more limited a carbon pricing system is geographically, the higher the cost is likely to be for a given abatement target. Linkages can encourage the harmonization of systems, which can promote a more level playing field by reducing competitive distortions and lowering costs.

Linkages offer environmental advantages as well. Allowing efficient capital allocation across the linked systems offers the potential for enabling greater emissions reductions for a given amount of investment. In light of the challenge of lowering emissions to the levels commensurate with a 2°C level, linked systems enable the business community to deliver the most cost effective results across the system as a whole. This stronger economic performance improves the likelihood of achieving higher levels of climate protection.

That is why many businesses, environmental activists and economists support a globally networked carbon market for the future. After Paris, there are two broad paths that future of carbon pricing programs could follow (and of course, there are many variations):

- Establishing a “hub” for carbon markets at UN level, drawing together a reformed project offsetting system with an international registry.
- Enabling decentralised “clubs” of markets to form, taking lessons from the CDM and JI markets of the past. On this path, markets could expand gradually through a broadening of the EU ETS, the Japanese JCM, California-Québec and RGGI markets in North America, and others as they emerge over time. Eventually, these decentralised clubs could find linkages through common recognition of offsets or direct connections of registries.

Either approach would need standards and rules to provide transparency and guard against double-counting. But under the decentralized model, these might be applied as ‘club rules’ rather than through UNFCCC requirements.

Market linkage may occur through indirect, incremental, restricted, reciprocal or direct linking methods21. There is a growing trend towards countries establishing ‘carbon clubs’ which may form their own rules and trading mechanism irrespective of what happens with the implementation of Article 6. These ideas are being discussed amongst governments and amongst thought leaders in the carbon market policy space.

“Attention is turning to China, Japan, and Korea as potential global leaders in carbon market cooperation and connectivity. Given the scale of their economies and emissions profiles, successfully linking these markets would substantially impact international climate change mitigation efforts”22.

The G7 Carbon Market Platform, the countries who signed up to the New Zealand Declaration on carbon markets,
and North America may be the first areas where clubs emerge.

7.8 Opportunities for scaling Australian domestic abatement

Australia is well placed to supply offsets to emerging international markets, either through bi/multi-lateral arrangements with other parties to the Paris Agreement through the ITMO mechanisms or through Australian projects being registered under the EMM.

The adoption of an ambitious global emission reduction goal in the Paris Agreement, national emission reduction targets and commitments in developed and developing country NDCs (in some cases linked to national emissions trading systems) and the inclusion of ITMOs and the EMM in Article 6 set the scene for increased demand for high quality international offsets.

Projects that have been developed to date through the Carbon Farming Initiative and the Emissions Reduction Fund (ERF) have been subject to rigorous evaluation against robust and scientifically based methodologies. In addition, the rules to manage issues such as permanence for sequestration projects have been developed to manage risk of reversal in a pragmatic way, consistent with other international standards and approaches.

The ACCUs generated through ERF projects are widely recognised as representing real, permanent and additional emissions reductions. Finally, the accounting systems developed through the Australian National Registry of Emissions Units provides a robust system to account for the issuance and trade in ACCUs and has also been designed to allow for the international trade in emission reduction units. These features make ACCUs potentially desirable units for use in other systems, provided they are cost competitive.

It will be a matter for the Australian Government to determine the extent to which it will allow the export of ACCUs or whether it will seek to retain domestic abatement to assist in meeting its own targets under the Paris Agreement. As part of the 2017 Review, an important issue will be how Australia engages with international markets on both the supply and demand side. However, allowing Australian projects to export ACCUs would clearly assist in supporting the continuation of a robust domestic offsets market.

As outlined in Chapter 7.1, Australia’s domestic emissions reduction policy suite includes both the ERF and safeguard mechanism, jointly administered by the Clean Energy Regulator. While the safeguard mechanism allocates emissions baselines to high emitting facilities, the ERF purchases abatement from domestic emissions reduction projects.

The ERF operates through crediting emissions reductions achieved by projects registered under Government approved methods in the form of ACCUs. Project developers can bid through a reverse-auction to receive payment for ACCUs generated, funding for which is provided by the $AUD2.55 billion allocated to the ERF.

To date, the ERF has featured three auctions, with a fourth scheduled for November 2016. Across the first three auctions, $AUD1.733 billion was contracted at an average price of $AUD12.14 per tonne of abatement, to deliver 143.2 MtCO2e from 236 registered projects.

Land-sector sequestration projects have been contracted to provide the largest volume of abatement under the ERF, with the volume weighted average price...
(VWAP) declining from $AUD13.95 in the first auction to $AUD10.23 in the most recent auction (Figure 4). The dominance of land-sector sequestration abatement is largely the result of a suite projects under the former Carbon Farming Initiative (part of the repealed CPM) transitioning to become ERF projects.

Despite a large number of pre-existing (Carbon Farming Initiative) and new land-sector sequestration projects being funded through the ERF, there exists significant potential for Australia to scale-up abatement from the land-sector. Australia has built up deep capability across the broad spectrum of project development, financing, legal, commercial and monitoring, reporting and verification of carbon projects.

Australia has an enormous land mass that could accommodate carbon abatement projects. Scaling up of land-sector abatement represents an opportunity for land holders to diversify their revenue streams and earn income from marginal or less-productive land. In addition, by engaging in negotiations surrounding international markets under Article 6 of the Paris Agreement, Australia can optimise its position to serve as a source of high quality, robust units for foreign markets, creating an export market for domestic abatement.

![Figure 4: Auction price and abatement source results across the first three ERF auctions](image-url)
Creating opportunities for export of units and capability

International and domestic market-based mechanisms represent opportunities for Australia to meet targets effectively and efficiently. At a domestic level, such a mechanism can represent the most cost-effective policy option to meet Australia's ongoing emissions reduction task. A carbon price combined with market-based mechanisms also have the strong support of international and domestic business communities. Moving sooner to a market-based system will enable Australian businesses to meet their own emissions reduction goals and support the transition from predominantly public to private sector funding of abatement.

At an international level engagement in, and commitment to international markets under the Paris Agreement present an opportunity for Australia to optimise its position and manage the risks and opportunities for Australian business. Access to international markets enable cost-effective compliance for Australian companies and open up export market opportunities for domestic abatement. Proactive engagement by the Australian Government could provide first-mover advantage and optimise Australia's international position.

A further factor to consider in optimising Australia's international position is the alignment between emissions reduction and aid, trade and diplomatic objectives. Australia is the source of 60% of aid to Pacific Island countries and the aid program has strong potential to promote climate resilience and adaptation among these countries. Australia has pledged $AUD200 million over four years to the Green Climate Fund to support developing countries to grow their economies in a sustainable way and help them adapt to climate change. The Australian aid program also has commitments to actively manage adverse environmental and social impacts in countries which it assists. This combination of aid programs, both specific to climate change and targeted at broader issues, has the potential to be strengthened through engagement in international market-based mechanisms and further support target countries to reduce emission and adapt to the impacts of climate change.

In terms of trade, there is also potential to further Australia's trade relationship with China as we move to increased cross-border trade in products and services in the low carbon economy transition. Australian products already enjoy a significant advantage in the Chinese market through the China-Australia Free Trade Agreement (ChAFTA).

As part of the ChAFTA, innovative new Investment Facilitation Arrangements aim to significantly improve market access for a wide range of services, such as banks, insurers, securities and futures companies, law firms and professional services suppliers. These arrangements also open up potential opportunities for deployment of Australian expertise, carbon market-related services and low emissions technology in a significant market where demand will rise considerably with the implementation of the Chinese ETS.

Australia has a prominent position in the Asia-Pacific region through aid, trade and diplomatic relations. This is further boosted by Australia's co-chairing of the Green Climate Fund and the expertise and competence of Australian firms in emissions reduction-related financial, consulting, auditing and technology services. Australia is very well positioned to be proactive, lead cooperation and capture the benefits that will stem from engagement in the north-east Asian carbon markets.
8 Key recommendations to consider

The 2017 review of Australia’s domestic emissions reduction policies represents a key opportunity to align the policy suite with the emissions reductions required. This would also provide the certainty and stability required by business for investment decision making. In setting the review’s Terms of Reference, it is recommended that several areas be considered.

8.1 In setting the 2017 Policy Review Terms of Reference

- The review could consider the use and eligibility of international units and the ratio of domestic units for use to meet safeguard mechanism compliance obligations. The use of international units under domestic compliance policies, such as the safeguard mechanism, will become increasingly important, particularly if the mechanism becomes the primary driver of emissions reduction.

  Access to international units will enable companies covered under the safeguard mechanism to meet their compliance obligations at lowest cost. At the same time, the domestic abatement industry must be supported and additional sources of demand, such as safeguard mechanism covered companies, need to be fostered. To achieve these simultaneous goals, a balance of international and domestic units needs to be considered.

- The review could consider the factors affecting availability and future supply and demand for domestic and international units as countries implement their commitments made under the Paris Agreement. The design features of Australia’s domestic policy suite should maintain a line of sight to our post-2020 targets and the potential for international fungibility of ACCUs so as to enable the development of linkages with other markets over time. The review could examine the best way to engage with international markets in order to provide an opportunity to both allow entities covered under the safeguard mechanism to meet compliance at lowest cost through import of international units and support the development of export markets for ACCUs.

- The review should examine how Australia could be part of internationally linked carbon markets as they evolve under the Paris Agreement and examine the pathway to open up opportunities for the export of Australian Carbon Credit Units into other markets. The policy approach adopted in Australia should evolve in parallel with developments in other international markets.
8.2 In Australia’s role in supporting the market provisions and implementation of Article 6 under Paris Agreement

- Swift ratification of the Paris Agreement: As previously mentioned in Chapter 4, the Paris Agreement will come into force ahead of the start of COP22 in Marrakesh, meaning that this year’s UN climate conference will coincide with the first session of the “Conference of the Parties serving as the meeting of the Parties to the Paris Agreement” - CMA1.

Only Parties that have ratified the Agreement will be able to actively participate in the CMA. Therefore, it is important that Australia ratifies the Paris Agreement as soon as possible in order to be able to sit at the table and influence the implementation process of the Paris Agreement.

- Full engagement in negotiations on the implementation of the Paris Agreement: Once it has ratified the Paris Agreement, Australia should fully engage in the discussion on the implementation of the Agreement, with a particular focus on Article 6’s market provisions. As previously mentioned, the market provisions included in Article 6 of the Paris Agreement will help in establishing market-based solutions to climate change and will ease countries’ compliance with their NDCs by lowering the overall mitigation costs.

But Article 6 of the Paris Agreement is a simple outline, limited to a few lines, of these market provisions. Rules and principles and technical details will need to be developed to implement and operationalise those provisions.

This represents the main challenge lying ahead. It is of the utmost importance that rules, principles and technical details to operationalise Article 6’s market provisions are developed in a way that maximizes their potential and that this process is carried out in a timely manner to guarantee as much predictability as possible. Australia should play a pivotal role in this discussion.
The Carbon Market Institute is at the centre of climate policy and business in Australia. We are passionate about business understanding the challenges of climate change and seizing the opportunities in the transition to a low carbon economy.

As the peak body for climate change and business, the Institute remains independent and non-partisan. We share knowledge and facilitate commercial interaction between business, policy makers and thought leaders to drive collective impact and create pragmatic solutions. Engaging leaders, shaping policy and driving action, we’re connecting insights and catalysing opportunities at home and abroad.

The International Emissions Trading Association (IETA) is a non-profit business organisation created in June 1999 to serve businesses engaged in the new field of carbon markets. Our objective is to build international policy and market frameworks for reducing greenhouse gases at low cost.

Our vision is a single global carbon price produced by markets of high environmental integrity. We pursue this vision with an eye to pragmatism, political reality and sound economics. With deep relationships in key policy centres and commercial arenas, IETA is the collective voice for the full range of businesses involved in carbon markets all around the world.

Baker & McKenzie has been at the forefront of global climate change law for more than fifteen years. Our team of more than 60 lawyers across the globe have worked on numerous pioneering deals, including writing the first carbon contracts, setting up the first carbon funds and advising on the first structured carbon derivative transactions. In Australia we have advised the Federal Government, various state governments, potential compliance entities and market players on climate law and policy. We have advised on transactions in the Australian carbon markets as far back as 1998, including on the first carbon sink transaction.

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