IETA INSIGHTS

QUARTERLY REPORT

No.3 / SEPTEMBER / 2018

GREENHOUSE GAS MARKET REPORT

PIECING TOGETHER THE FUTURE OF CARBON MARKETS

CARBON MARKET NEWS

INTERNATIONAL

Fears are mounting that ICAO's CORSIA international aviation offsetting mechanism could collapse well before its 2021 start as China hesitates on participating from the launch, raising the prospect that the EU will again regulate extra-European flights via its ETS and leave the airline industry to navigate a complex patchwork of regional measures.

CORSIA international aviation offsetting mechanism could collapse well before its 2021 start

ICAO's 36-member Council in June signed off on CORSIA's Standards and Recommended Practices (SARPs) in a partial deal that fixed details over the MRV process but postponed thornier decisions on fuel sustainability and offset eligibility.

The EU and China stepped up cooperation on both trade and climate issues, reaffirming their commitments on climate change and to the WTO-based global trade system as the US continued to raise tariffs and provoke retaliatory action. Experts under UK-based think-tank Climate Strategies urged the rest of the world to retaliate with carbon border adjustments rather than tit-for-tat countermeasures.

EMEA

European carbon prices repeatedly extended a 10-year high over August, traditionally when prices rise due to auctions being reduced to half their normal volume to account for slower holiday demand.

EUAs climbed to just short of €22, with values quadrupling over the past 15 months thanks to post-2020 EU ETS reforms being agreed that will see nearly a quarter of the market's surplus supply withdrawn via the MSR starting in January 2019, and potentially hundreds of millions of allowances permanently cancelled by the mid-2020s.

Carbon prices have been high enough to trigger power fuel-switching from coal to cleaner gas for the first time in many years, with the rapid rise said to be attracting interest from long term investors. The gains have forced analysts to revise upwards their forecasts, with many expecting EUAs to reach €25 by year-end and above €30 shortly after the turn of the decade.

Brussels launched a 12-week consultation on revising its long-term low-carbon development strategy – a plan that might take as long as two years to finalise amid division over whether to raise the bloc's 2050 80-95% emission reduction goal to align with the Paris Agreement.

Carbon prices have been high enough to trigger power fuel-switching from coal to cleaner gas for the first time in many years

AMERICAS

Ontario in June elected right-wing Premier Doug Ford, who immediately made good on his anti-carbon pricing agenda by pulling the Canadian province out of the WCI cap-and-trade programme, restricting access to trading accounts.

Colombia will spend at least three years studying ways to impose an ETS in the country

Ford's formal repeal of cap-and-trade and other climate legislation failed to make it through a recalled July parliamentary session amid criticism among business and opposition lawmakers of its limited proposed earmarking for reimbursement C$5 million of the C$2.9 billion in permit auction revenue.

The WCI auction in August sold out and cleared over 50 cents above its reserve price at $15.05, quelling any lingering concerns that the linked California-Québec market's first sale this year without Ontario would hamper demand.

The US government proposed the Affordable Clean Energy (ACE) rule, a weaker alternative to the Obama-era Clean Power Plan it is due to replace, removing overall power sector emission reduction goals, giving states more leeway on regulating coal-fired power plants but still considering whether trading would be an eligible compliance mechanism.

Colombia will spend at least three years studying ways to impose an ETS in the country, dimming prospects of a rapid launch of emissions trading following lawmaker clearance in June to add to Colombia's carbon tax that allows large emitters to cancel domestically-generated CERs in place of paying a $5/tonne levy.

ASIA PACIFIC

The New Zealand government in August outlined a series of proposals to reform its emissions trading scheme, a move that sparked a series of record high prices in

the market, which hovered at NZ$24.80 at the time of publication. The proposals would see New Zealand set an annual cap for ETS companies in line with the nation's ambition to become carbon neutral by 2050. They would also see the introduction of auctions, and replace the current NZ$25 fixed price option with a cost containment reserve that would trigger additional auctions at a higher but as yet undecided level. New Zealand is also seeking to begin the phase-down of free allocation to industrials, and has made it clear it would limit access to international credits should those become eligible for the NZ ETS again.

South Korea adjusted down the number of foreign credits it plans to buy to meet its Paris target

In July, South Korea adjusted down the number of foreign credits it plans to buy to meet its Paris target following domestic protests against its initial plan to buy 100 million units. That number has now been revised to just 16.2 million.

A year-long effort in Australia to pass a National Energy Guarantee that would have established a traded market for carbon intensity contracts for electricity retailers ultimately failed amid great controversy that cost Prime Minister Malcolm Turnbull his job on 24 August.

PREPARED BY:

Carbon Pulse

IETA INSIGHTS

GREENHOUSE GAS MARKET REPORT

About the International Emissions Trading Association (IETA): IETA is the voice of business on carbon markets around the world. Established in 1999, IETA's members include global leaders in the oil, electricity, cement, aluminium, chemical, technology, data verification, broking, trading, legal, finance and consulting industries. **www.ieta.org**

IETA expresses its gratitude to all authors who have contributed to this report, to the editorial committee and to all others who have worked on the publication.

2018 editorial committee:
Jennifer Weiss, Climate Action Reserve
Anne-Marie Warris, Ecoreflect
Arthur Lee, Chevron
Edit Kiss, Ecosphere Capital
Jonathan McGillivray, DeMarco Allan
Bernadett Papp, Vertis
Vinod Kesava, Climate Resources Exchange
Jean-Yves Caneill, IETA Fellow

Editor: Katie Kouchakji
Design: Hitman Creative Media

1. BUILDING MOMENTUM AMONG CONTINENTS

IN THE WAKE OF THE HISTORIC PARIS AGREEMENT, NEW PARTNERSHIPS ARE EMERGING AROUND THE WORLD TO KEEP THE MOMENTUM ON CLIMATE ACTION GOING – INCLUDING THE DECLARATION ON CARBON PRICING IN THE AMERICAS. NEYDI CRUZ, ANGELA CHURIE KALLHAUGE, DIRK FORRISTER AND NATHANIEL KEOHANE LAY OUT THE BACKGROUND TO THE DECLARATION AND WHAT THE PARTNERS HAVE ACHIEVED SINCE ITS DECEMBER 2017 SIGNING

WHEN THE PARIS AGREEMENT entered into force on 4 November 2016, it sent a signal to the world that climate change is a global challenge that urgently needs to be addressed on several fronts and by multiple actors. The collective effort of all levels of government, with the participation of all stakeholders, is essential to achieving the goals laid out in the Agreement. Many jurisdictions have committed to collaborative initiatives outside of the Agreement to help increase their ambition, share best practices, and improve their capacity for climate action. The Declaration on Carbon Pricing in the Americas, which creates a platform for cooperation, is an example of collaboration among governments to enhance their commitment to fighting climate change and reaffirm their support for the Paris Agreement.

The Declaration represents a landmark commitment toward the implementation of carbon pollution pricing policies in the Americas

On 12 December 2017, at the One Planet Summit in Paris, France, the governments of Canada, Chile, Colombia, Costa Rica, Mexico, as well as the US states of California and Washington and Canadian provinces including Alberta, British Columbia, Nova Scotia, and Québec, announced the creation of the Declaration on Carbon Pricing in the Americas (the Declaration). In the spring of 2018, the state of Sonora joined the Declaration, as the first subnational government from Mexico choosing to be part of this unique regional collaboration mechanism. The Declaration and platform for cooperation remain open for more jurisdictions to join.

The Declaration represents a landmark commitment toward the implementation of carbon pollution pricing policies in the Americas. It includes the participation of leading non-governmental institutions in providing resources and technical expertise to support the work programme and maximise climate action. Declaration members welcome the engagement of businesses, financial institutions, nongovernmental organisations, and civil society in developing and implementing durable, equitable, and effective carbon pollution pricing policies.

Members to the Declaration recognise that climate change is a global threat and reaffirm their support for the Paris Agreement as a necessary step toward fighting it. The national and subnational government members declared their commitment to implement carbon pollution pricing as a central economic and environmental policy instrument for ambitious climate action.

Members commend the actions by jurisdictions across the Americas to introduce a price on carbon and to develop efforts to align or link markets. Their shared vision of regional cooperation includes encouraging: comparable criteria and standards for the measurement, reporting, and verification (MRV) of GHG emissions and reductions; public and private investment decisions to deliver meaningful emission reductions; and development of common standards for environmental integrity. Members have committed to sharing lessons learned with the view of improving technical capacity to design and implement carbon pollution pricing in the public and private sector internationally and regionally.

Putting a price on carbon pollution is widely recognised as one of the most effective, transparent, and efficient policy approaches to reducing GHG emissions. Carbon pollution pricing supports the transition to a low-carbon economy by helping polluters internalise the cost of their emissions, as well as driving innovation and adoption of clean technology, enabling fiscal reform, and promoting more sustainable development. A collaborative approach will amplify these benefits throughout the region, and will help create more effective and enduring carbon pollution pricing systems. Members' collective commitment to put a price on carbon pollution helps to diminish concerns surrounding competitiveness and carbon leakage, while demonstrating to the world that the Americas are serious about reducing greenhouse gas (GHG) emissions.

To help members achieve their commitments, the Declaration established the platform for cooperation on Carbon Pricing in the Americas. The platform is a

The Declaration on Carbon Pricing in the Americas is an example of collaboration among governments to enhance their commitment to fighting climate change

working group, which includes members, partners, and endorsers of the Declaration, with the purpose of providing a knowledge-sharing forum, facilitating dialogue to help identify opportunities to increase comparability and convergence of carbon pollution pricing systems, promoting carbon markets, and building on already successfully implemented initiatives, such as the World Bank's Partnership for Market Readiness. The platform sets a framework to access and learn from the technical and political carbon pollution pricing experiences of other members, in the three official languages of the region. Mexico and Canada co-chair the platform, which has had three in-person meetings since it was established and holds regular conference calls to discuss key issue areas for future work, identify deliverables and team leads, and consider avenues to expand the Declaration to welcome new members. The platform is the cornerstone of the Declaration, embodying its collaborative spirit and facilitating open and constructive discussions.

By working through the platform, member jurisdictions identified common economic linkages, government priorities, civil society considerations, and carbon pollution pricing challenges. With these considerations in mind, members selected five priority areas for future work:

- Common Standards/Accounting/MRV
- Linkages by Degrees
- Competitiveness
- Complementary Policies
- Stakeholder/Private Sector Engagement

Members anticipate that the outcomes from this work will enable the timely and effective design of carbon pollution pricing systems in members' jurisdictions, while inspiring more jurisdictions across the Americas to join the Declaration and accelerate their efforts to fight climate change. Of the eight new or enhanced carbon pollution pricing initiatives in place since early 2016, three-quarters of them are in the Americas. Members to the Declaration hope to see that number continue to rise across the continents in 2018 and onwards.

Members anticipate that the outcomes from this work will enable the timely and effective design of carbon pollution pricing systems in members' jurisdictions, while inspiring more jurisdictions across the Americas to join the Declaration and accelerate their efforts to fight climate change. Of the eight new or enhanced carbon pollution pricing initiatives in place since early 2016, three-quarters of them are in the Americas. Members to the Declaration hope to see that number continue to rise across the continents in 2018 and onwards.

The Declaration sets a shared vision of regional cooperation on carbon pollution pricing in the Americas. In less than a year, members, partners, and endorsers of the Declaration have made significant progress towards achieving that vision – and there is no end in sight. Members welcome new partners to the platform in their efforts to implement cooperative carbon pollution pricing systems. Climate change is a global challenge that requires worldwide mitigation efforts. The Declaration on Carbon Pricing in the Americas takes climate action to the next level, by ramping up continental efforts to combat climate change and demonstrating that members are willing and ready to do their part to ensure a sustainable economy and environment for years to come. Through the Declaration, we keep the momentum alive and constant.

Members recognise that climate change is a global threat and reaffirm their support for the Paris Agreement as a necessary step towards addressing climate change

Neydi Cruz is the Deputy Director-General of International Cooperation at SEMARNAT. She is one of the co-chairs of the Declaration on Carbon Pricing in the Americas. Angela Churie Kallhauge heads the Carbon Pricing Leadership Coalition at the World Bank; Dirk Forrister is the president and CEO of IETA; and Nathaniel Keohane is senior vice-president and head of the climate programme at Environmental Defense Fund. All three are involved with and support working groups under the Declaration.

NOT ON OUR WATCH

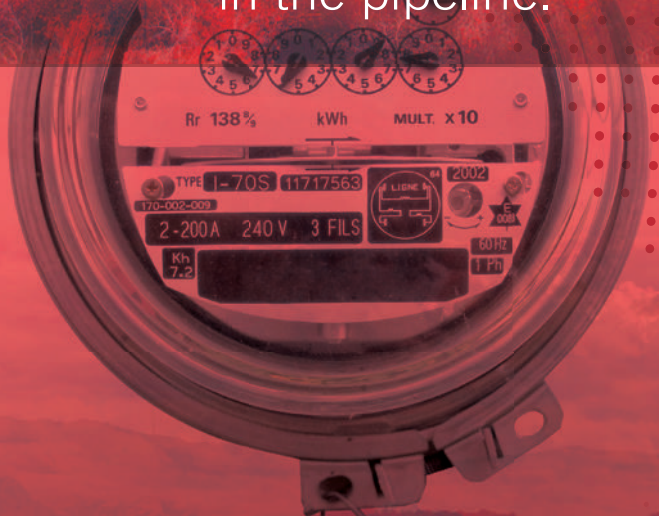
The voice of business on mobilising markets
to meet the climate challenge.

www.**ieta**.org

IETA
CLIMATE CHALLENGES
MARKET SOLUTIONS

2. CARBON PRICING ACROSS THE AMERICAS

Carbon pricing continues to pick up steam all across North and South America, with an array of mechanisms in place or in the pipeline.



READ MORE

2. JUSTIN JOHNSON, ELLEN LOURIE AND CLAYTON MUNNINGS FROM THE IETA SECRETARIAT ROUND UP THE ACTION ACROSS THE AMERICAS

CANADA – FEDERAL BACKSTOP

As a part of the Pan Canadian Framework on Climate Change, the Canadian government will require every province and territory to have a carbon pricing system in place. Provinces and territories without a carbon pricing system in place by 1 January 2019 that meets federal requirements will have to take on the backstop federal system. The federal system includes a carbon levy on fossil fuels and an output-based pricing system (OBPS). The programme will start at C$20/tCO2e in 2019 and increase by C$10/t per year, reaching C$50/t in 2022. The OBPS applies to industrial facilities that emit >50,000 tCO2e/year, and will allow for tradable compliance credits, including offsets eligible under current provincial systems, surplus credits, and trading.

ONTARIO

The cap-and-trade system in Ontario came into effect in 2017 and was linked to the Québec and California systems under the Western Climate Initiative (WCI) in 2018. However, the current Ontario government is in the process of dismantling the system, and is challenging the federal backstop carbon pricing system. For more on the situation in Ontario, see page 10.

BRITISH COLUMBIA

British Columbia implemented a revenue neutral carbon tax in 2008. In September 2017, the province overturned the revenue-neutrality of the carbon tax, redirecting some of the revenue towards the funding of climate initiatives such as energy efficiency retrofits. The tax applies to GHG emissions from all sectors, with some exemptions for industry, agriculture, aviation and shipping. The tax will increase annually by C$5/tCO2e, reaching C$50/t in 2021, and increased to C$35/t this year. The province also has an performance standard trading system for new LNG facilities. Participants can comply via surrendering offsets, performance credits, or paying into province's clean technology fund.

ALBERTA

Alberta's emissions trading system, the Carbon Competitive Incentive Regulation (CCIR), came into effect in 2018, replacing the 2007 Specified Gas Emitters Regulation (SGER). The CCIR is an output-based performance programme, using sector-based product benchmarks, and applies to facilities that emit more than 100,000 tCO2e/year. Compliance flexibility is allowed under the CCIR, including the use of emissions performance credits, on-site reductions and in-province offsets. Alberta also introduced a carbon levy, under its 2017 Climate Leadership Plan. The levy covers emissions from all sectors with exemptions for some agriculture, certain industrial processes, aviation (outside Alberta) and exported fuels. The levy started at C$20/tCO2e, and increased to C$30/tCO2e this year.

MANITOBA

The Made-in-Manitoba Climate Change plan features a flat tax of C$25/tCO2e, will be applied to gas, liquid and solid combustion fuels. Manitoba has recently released a discussion paper on its proposed output-based pricing system, which would apply to emissions-intensive trade-exposed sectors and cover industrial facilities emitting in excess of 50,0000t/CO2e annually from 1 January 2019.

QUÉBEC

Québec introduced a cap-and-trade system in 2013, which linked with the California market in 2014. The system applies to emissions from industry, power, transport and buildings. In 2017, the government passed legislation to prepare the system for the post-2020 period) – including an examination of rules for free allowance allocation, and cap-setting. Allowances under the cap are distributed through auctions, with free allocation to emissions-intensive, trade-exposed sectors. Offsets are eligible for compliance, at a limit of 8% of the facility's compliance obligation.

NOVA SCOTIA

The Nova Scotia government in October 2017 proposed a cap-and-trade system, as part of its Amendments to the Environment Act. The amendments, proclaimed in February 2018, allow the government to create the provincial programme to begin in 2019. The first set of regulations are now in effect, requiring certain companies to report their GHG emissions and have them verified by a third party. Although the province officially joined WCI Inc. this year, Nova Scotia does not currently plan to link its system with other jurisdictions – but is open to linkage in the future. The government expects approximately 20 companies to be covered under the system – specifically major fossil fuel companies, big industrial companies and utilities – and will distribute the majority of allowances for free to minimise compliance costs and reduce competitiveness concerns.

OREGON

In early 2018, Oregon lawmakers failed to pass two 'cap-and-invest' bills, aimed at controlling greenhouse gas emissions by requiring large emitters to purchase allowances and offsets to meet obligations. Despite this earlier failure, legislatures did commit to providing more resources to strengthen Oregon regulatory and research efforts on carbon pricing options. The state is currently undergoing a carbon pricing competitiveness impact study on emission-intensive, trade-exposed sectors, expected to be completed at the by fall 2018. Oregon is also looking at offset opportunities –

specifically those which would provide economic development in the state.

WASHINGTON STATE

Washington State last year launched its Clean Air Rule (CAR), a hybrid carbon pricing programme (with some market and trading elements) for large power and industrial sectors. In December 2017, a court ruling prevented the government from further implementing the CAR, and the state suspended compliance requirements. In late April 2018, a court order invalidated the entire CAR regulatory programme and found that the Washington Department of Environment lacks authority to regulate emitters. The department filed an appeal with the state's Supreme Court in May 2018., Most recently, a coalition of environmental groups put forward the Protect Washington Act. This group won the right to put the carbon tax proposal on the state's November ballot. A simple majority of voter approval is required for this to become state law.

CALIFORNIA

The California Air Resources Board forges ahead with amendments to its cap-and-trade programme, following last year's legislative affirmation of the market's future to 2030. The changes under consideration include changes to cap levels, price collars, speed bumps, and carbon offsets that will be formally considered in the fall and would take effect from 2021 through 2030. It also seems that the California Air Resources Board will weather the recent withdrawal of Ontario from the Western Climate Initiative: California regulators acted to protect the environmental integrity of the allowance market immediately after Ontario's initial announcement and the most recent auction between California and Québec sold out above the price floor, quelling fears of lowered demand.

COLOMBIA

Colombia introduced a tax on the carbon content of fossil fuels in 2017, charging US $5/tCO2e on sales and imports of fuel, and increases annually. The use of offsets is allowed for compliance under the tax. Colombia intends to use revenues from the carbon tax to fund environmental and rural development projects. The Colombian Senate recently approved a bill that approves the creation of a broader emissions trading system (ETS) and is in the process of examining the various economic impacts of different ETS designs. The impact studies are expected to take at least three years, and timing for the launch of the system remains uncertain. A voluntary carbon market is currently under design, as per the Pacific Alliance's Cali Declaration last year. Colombia is also a signatory to the 2017 Carbon Pricing in the Americas Declaration.

CHILE

Chile's carbon tax, introduced last year, aims to reduce the negative impacts of fossil fuel use on public health and the environment. The tax covers all fossil fuels, and emissions from the power and industry sectors – specifically covering all facilities with stationary sources of a thermal input capacity greater than 50MW. The levy was implemented as part of a wider reform to reduce taxes for individuals and increase tax for large industry. The carbon tax, and its monitoring, reporting and verification system, has been designed to be compatible with an emissions trading system, which is currently under consideration. Chile is a member of the Pacific Alliance and a signatory of the 2017 Carbon Pricing in the Americas Declaration.

ARGENTINA

Argentina approved an economy-wide carbon tax in 2017, partially replacing a former tax on fuels, which come into effect in 2019. Sectors exempt from the tax, for competitiveness reasons, include international aviation and shipping, fuel exports, biofuels in mineral oil, and the raw materials in chemical production/processes. Almost all liquid fuels are covered by the tax, set at US$10/tCO2e. Coal, petroleum and fuel oil will be taxed at 10% of the full tax rate, increasing by 10% annually until it reaches the full rate in 2028.

MEXICO

Mexico has had a carbon tax in place since 2014, covering all sectors and fossil fuels, except natural gas. The tax does not cover the full carbon content of fossil fuels, but rather the additional emissions compared to natural gas. In 2017, new rules for the use of offsets in lieu of paying the tax came into effect. Mexico's amended climate change law, signed in 2018, gives a clearer mandate to the country's planned cap-and-trade programme to align with its Paris contribution. The ETS will begin with a three-year pilot phase, formally launching after 2020. The new government, elected on 1 July 2018, remains committed to climate action and progressing the country's carbon market. Mexico is a member of the Pacific Alliance and is Co-Chair of the 2017 Carbon Pricing in the Americas Declaration.

RGGI

The Regional Greenhouse Gas Initiative (RGGI), made up of a partnership of nine northeast US states, has now reached its 10th anniversary. In that decade, RGGI has moved from being a pilot project to a mature stand-alone programme looking at expansion in the face of federal inaction. Changes have been made over the years – and they continue today. In 2009, the RGGI cap was 188 million allowances; by 2017, it had been reduced to 84.3 million, and was further adjusted down to 62.4 million. One of the great strengths of RGGI has been its programme review process, with the nine jurisdictions adjusting the programme by consensus.

Apart from the updates to RGGI state regulations, the imminent return of New Jersey to the RGGI fold as well as the admission of the first southern state, Virginia, should make 2019 another exciting year for the programme.

3. THE COST OF CLOSING A CARBON MARKET

A CHANGE IN GOVERNMENT HAS BROUGHT A CHANGE OF DIRECTION FOR ONTARIO'S CLIMATE CHANGE RESPONSE. FOLLOWING ITS JUNE ELECTION, THE NEW PROGRESSIVE CONSERVATIVE GOVERNMENT HAS ACTED ON ITS CAMPAIGN PLEDGE TO RESCIND THE PROVINCE'S CARBON MARKET. MICHAEL BERENDS, MICHIEL TEN HOOPEN AND NICOLAS GIROD LAY OUT THE CHAOS AND COST OF THIS MOVE.

ON 3 JULY, Ontario's new government revoked the cap-and-trade regulations, 'effective immediately', one and a half years into the programme, replacing it with a new regulation preventing the purchase or sale of compliance instruments[1]. The cancellation of the Ontario cap-and-trade programme, along with 758 renewable energy contracts, has been the first major action by the province's Progressive Conservative (PC) government under Doug Ford. The province's cap-and-trade system began in 2017 and linked with Québec and California's carbon markets to form the Western Climate Initiative (WCI) in 2018. In total, the market covered 247 participants, representing 85% of provincial emissions, in the first compliance period (2017-20).

The carbon pricing landscape in Ontario is becoming increasingly murky

With the imminent revocation of cap-and-trade legislation and the recent constitutional challenge by Ontario's Attorney-General Caroline Mulroney to the federal government's carbon pricing backstop legislation, the carbon pricing landscape in Ontario is becoming increasingly murky. On 25 July, Minister of the Environment, Conservation and Parks Rod Phillips introduced new legislation to rescind the cap-and-trade market in Ontario, which sets out the legal framework for the wind-down of the programme and includes a compensation framework for entities which had already bought allowances[2]. While the value of the allowances sold in the auction alone had a value of approximately C$2.9 billion (US$2.23 billion), the estimated final compensation amount, according to the PC government, is expected to be up to $5 million (see Figure 1).

As the basis for the compensation breakdown, the government used the roughly 220 million emission allowances that were either given for free or sold in the auction in the cap-and-trade system (which at the time of writing had a value of approximately C$3.88 billion). From this, C$1.25 billion worth of allowances were allocated freely (for which the government does not believe compensation is required). Of the remaining C$2.63 billion, C$2.4 billion worth of allowances will be 'matched to emissions', which entails some degree of compliance. As part of the compensation framework, this compliance obligation would be for emissions between 1 January 2017 up to 3 July 2018.

FIGURE 1

MECP Proposed Compensation Approach

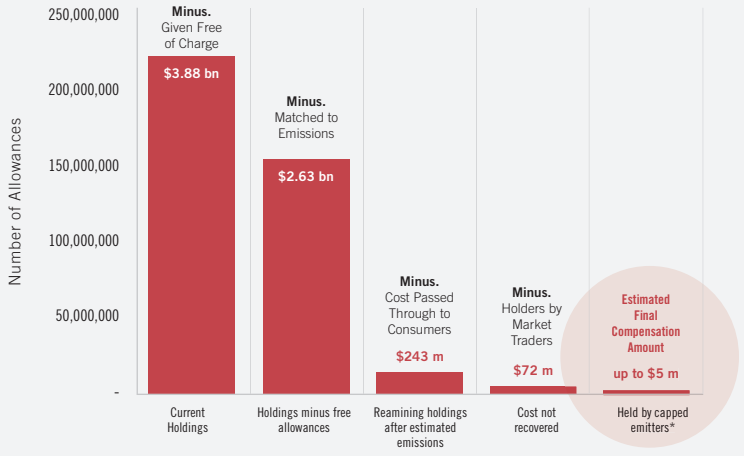


Figure 1: Proposed compensation framework (Source: Ministry of the Environment, Conservation and Parks - MECP)

(1) O.Reg 386/18: Prohibition Against the Purchase, Sale and Other Dealings with Emission Allowances and Credits. (2) However, this legislation, The Cap & Trade Cancellation Act, 2018, is yet to pass, at the time of writing (late August 2018) and will be delayed until the fall legislature.

FIGURE 2

Carbon Price Forecast - Backstop Versus Cap & Trade

(CAD/tCO_2)

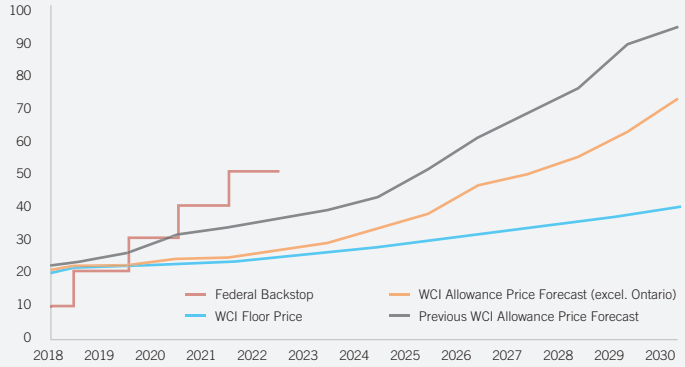


Figure 2: WCI vs. Federal Backstop Price Forecast (Source: ClearBlue Markets)

From the remaining C$243 million, C$171 million worth of allowances were purchased by oil companies and natural gas distributors, which were able to pass along their costs to customers - therefore the government does not believe these entities need to be compensated. Thus, based on the breakdown above, the government estimates they will likely need to compensate 'up to C$5 million' worth of allowances held by capped entities that will not be required for compliance. This is interesting to note as it appears as though there will be no consequences for an entity that, as of 3 July 2018, did not hold enough allowances to cover their emissions since 1 Jan 2017 (the period between the start of the programme and the cancellation date).

IMPACT ON WCI

Ontario's exit from the WCI market was abrupt and unexpected. Per the WCI agreement, there was meant to be a year's worth of written notice, and any departure was intended to be at the end of a compliance period. This obviously was not the case, and California and Québec regulators acted swiftly to ensure Ontario entities were unable to flood the market with allowances (which would have driven the price down significantly). Despite this, around 13.2 million allowances ended up in California and Québec accounts, which will add supply in the short term – with more aggressive buyers in the first two joint auctions (purchasing 2021 vintage instruments for example) primarily located in Québec and California.

Based on modelling forecasts up to 2030, the new cumulative balance of emission units (without Ontario entities) would see the WCI market short by 2027, compared to previous estimates of 2025 with Ontario included in the forecast. This shows how important Ontario was for the market, and its absence could have a bearish impact on prices in the long run. Based on ClearBlue's price forecasts, prices were estimated to increase above the price floor in 2020; however, now they are expected to rise above the floor in 2023/24 (see Figure 2). This delayed allowance shortfall not only impacts prices, but it could also impact hedging demand and speculative interest in the market.

FEDERAL BACKSTOP CARBON PRICE

The Canadian government's national carbon pricing plan is intended to be implemented in whole or in part in provinces without their own carbon pricing programme. Previously, Ontario was not considered a backstop jurisdiction due to its cap-and-trade system; however without a form of carbon pricing in place, the province will find itself within the federal program.

The backstop is a hybrid system, consisting of a fuel levy (which is proposed to start at C$20/tonne of CO¬2e in 2019 and increase by C$10/year, reaching $50/tonne of CO2e by 2022) and an output-based pricing system. The carbon levy is a charge on fossil fuels (eg, gasoline, diesel, propane, natural gas) which would be paid by fuel producers and distributors. For consumers in backstop jurisdictions, the levy will be embedded in the cost of fuel.

An output-based pricing system (OBPS) would apply for industrial facilities with annual emissions of 50,000t CO2e or above. Industrial facilities in the OBPS would not have to pay the carbon levy, but instead they would face a price on carbon based on the amount they emit above a specified limit (a benchmark based on output). The benchmark will begin at 80% as the starting point for all sectors, with room for additional increases depending on the sector. These further adjustments will be developed for risk exposed sectors, focusing on Emissions Intensity (EI) and Trade Exposure (TE). Those sectors that are considered high risk will have their emissions benchmarks increased to 90% of the national average.

Ontario entities are in for quite a ride in the following months

Ontario entities would have options when it comes to compliance for emissions above the benchmark under the OBPS framework. Surplus credits (similar to emission allowances) would be granted to any entity that emits below the benchmark for their specific sector - and the entity would then be able to either bank these credits for future compliance (for up to five years), or trade them to other entities in a backstop jurisdiction. If an entity emits above the benchmark for their industry, they could either pay an excess charge for any emissions over the benchmark, surrender credits either banked from the preceding five years or purchased in the OBPS market from other entities, or purchase offsets in the primary (ie, backstop registry) or secondary markets for compliance. In the OBPS, Ontario entities could use any combination of these compliance options with no limits, as the federal government is hoping to ensure flexibility and the lowest cost to emitters moving forward.

As Ontario is currently challenging the federal government's constitutional jurisdiction when it comes to imposing the backstop (in addition to Saskatchewan), it is still unclear if the Ford administration will propose an alternative climate change plan in line with the backstop. If the federal backstop indeed begins in Ontario in January 2019, it will remain in place for four years, which will lead into 2023.

It is important to note a similar challenge was proposed by Manitoba's provincial government earlier this year, but it was quietly abandoned after it sought independent legal advice. Whatever does happen, one thing is clear: Ontario entities are in for quite a ride in the following months, as 1 September 2018 is the deadline for provinces to have a carbon pricing plan in place (to avoid the federal backstop). Your move, Ontario.

_____

Michael Berends is Managing Director, Origination at ClearBlue Markets and has over 15 years of experience in Carbon Markets, in particular with carbon pricing strategy, offset development and trading. Prior to ClearBlue, Michael worked at EcoSecurities, Barclays Capital, Vattenfall Energy Trading and ICL Ltd. Michael has executed thousands of carbon product deals, structuring transactions for offsets, allowances, and allowance related products in the primary and secondary carbon markets in over 50 countries.

Michiel ten Hoopen is a Managing Director and Head of Advisory at ClearBlue. He has over 17 years of in-depth policy and practical trading experience that provides clients with a unique perspective that is unparalleled in the market. Michiel led the ClearBlue team that developed one of Ontario's largest gas distributor's Compliance Instrument Purchasing Strategies for 2017 & 2018 and are currently developing the 2019 & 2020 Strategies. Michiel has worked globally on emission reduction projects with a wide variety of technologies such as industrial energy efficiency.

Nicolas Girod is a Managing Director and Head of Markets at ClearBlue Markets and has over 10 years of experience in carbon markets. He has a deep understanding of the integration of the energy and carbon markets, having worked for banks and utilities as a risk manager, market analyst and trader. Nicolas developed ClearBlue's in-house analytical models and leads the team that provides weekly updates for the WCI market and USD/CAD trends.

4. ENCOURAGING PRIVATE INVESTMENTS IN REDD+ IN THE POST-2020 PARIS AGREEMENT WORLD

While the world works out rules for international carbon markets under the Paris Agreement, many tropical forest countries are ploughing ahead with projects to preserve their forests and valuable ecosystems, with a view to counting these avoided emissions towards their nationally determined contributions.

READ MORE

4. ENCOURAGING PRIVATE INVESTMENTS IN REDD+

MARISA MARTIN, ALEXANDRA CARRANZA BENDEZU, EDIT KISS AND JUAN CARLOS GONZALEZ AYBAR DETAILS HOW PERU IS APPROACHING NESTED PROJECTS, THE CHALLENGES AHEAD AND HOW THE COUNTRY CAN OPEN THE DOOR FOR INCREASED PRIVATE SECTOR CAPITAL.

WHILE IMPLEMENTATION guidelines for Article 6 of the Paris Agreement are being developed at the international level, tropical forest countries are preparing for participation in carbon markets at a national level. This includes paying particular attention to how REDD+ will fit within their national goals and their nationally determined contributions (NDCs). REDD+ is recognised by Article 5 of the Paris Agreement and is defined as reducing emissions from deforestation and forest degradation, plus the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries. It has the potential to play a significant role in the global climate change solution (as illustrated by the figure below) by crucially driving higher ambition through cost-effective emission reductions with significant co-benefits for biodiversity and people's livelihoods.

The model is highly replicable and can provide an example for other countries

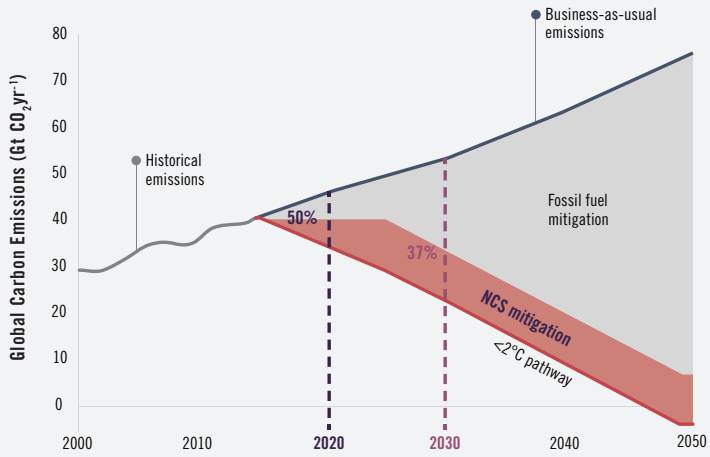
Many tropical forest countries already host REDD+ projects developed by a diverse group of project developers, among them several non-governmental entities. These have been at the forefront in the implementation of necessary sustainable land use activities in the rainforest with local communities, bringing private investment, as well as developing monitoring, reporting and verification procedures, and encouraged the sharing of best practices for REDD+ activities. These countries are currently working to harmonise these early action best-in-class REDD+ project activities within their national REDD+ systems, aligning with national forest emission reference levels as the framework under the Paris Agreement moves towards national-level accounting, so that they additionally contribute to their NDC commitments.

CASE STUDY:
PERU'S NESTING APPROACH

Peru illustrates the way on REDD+ nesting pathway for projects, opening the door for sustained and scalable financing for NDCs.

The country has significant REDD+ experience and has taken global leadership since the concept's early days. It has 76 Natural Protected Areas (NPA) such as National Parks, National Reserves, and Communal Reserves, in the Peruvian Amazon, spanning over 16 million hectares of rainforest. These areas are of

Natural Capital Solutions (NCS) are Essential to Stabilishing Warming to Below 2°C



The land-use sector holds huge potential – it could fill 50% of short-term to 2020 mitigation and 40% of the 2030 emissions gap needed to achieve a below 2°C linear reduction according to the UNFCCC (2015). Global climate goals will not be met without urgent action to halt the loss of and improve global carbon sinks, including forests.

Source: http://www.pnas.org/content/114/44/11645.figures-only

Peru illustrates the way on REDD+ nesting pathway for projects, opening the door for sustained and scalable financing for NDCs

key importance for the planet in terms of natural and cultural diversity, as well as for the climate in terms of carbon storage and sequestration.

However, the Andean-Amazon country still has a large untapped REDD+ potential, especially in terms of attracting financing. In order to bridge that gap, Peru is beginning to take affirmative actions such as aligning the REDD+ projects inside NPA, initially implemented under a voluntary standard (the Verra Verified Carbon Standard (VCS) with the national forest reference emissions level communicated to the United Nations Framework Convention on Climate Change (UNFCCC) in 2016. Using a nested approach, Peru has authorised REDD+ project operators to use their existing baselines under the VCS for 2015-18, and the government will then remove any emission reductions achieved from the national inventory if they are sold outside of the country. This recognition effectively safeguards REDD+ projects against any potential double counting with Peru's NDC, which is a key requirement for the Article 6 market mechanism and, more broadly, for the tradability of mitigation units in other programmes like the Carbon Offsetting and Reduction Scheme for International Aviation(CORSIA).

In April 2018, the Peruvian Government enacted Law N. 30754, Climate Change Framework Law, which declares promoting public and private investment in climate change mitigation management of national interest. Taking into consideration Peru's potential for REDD+, and that the emissions reductions derived from the implementation of such projects will be counted towards Peru's NDCs, the country has sufficient incentives to promote public and private investment in these areas. For such a purpose, the Peruvian government must approve a national accounting methodology to avoid double accounting issues from 2019, as well as develop the rules to account for current baselines used by REDD+ project developers as they will have to work with the national accounting system instead of their own.

The level of regulatory development has not been the same for the REDD+ projects outside the NPA in Peru (eg, REDD+ in logging concessions). As NPA are considered "Patrimony of the Nation" and their maintenance is a government priority, it is no surprise that NPA REDD+ projects have been leading the way for such integration. Non-governmental organisations such as AIDER, CIMA and Conservation International have demonstrated that the REDD+ mechanism can be a sustainable source of financing for the NPA's conservation goals and can play a catalytic role in the transformation of the broader landscape, in particular transforming the buffer zones of the protected areas into sustainable land use (for example through cocoa or coffee agroforestry). This is critical for long-term sustainability and permanence of the achieved emission reductions.

However, Peru's efforts to harmonise REDD+ projects with national accounting in preparation for the Paris Agreement remains a work in process. To date, for NPAs or those areas outside of the protected areas, there is no provision that covers REDD+ project accounting post-2020. The NPA Agency (SERNANP) is working to approve harmonisation policies that will provide more guidance on this issue. Peru is attempting to harmonise the REDD+ projects in NPAs in a way that does not unduly affect investors or potential buyers of the credits, so as not to endanger the financial sustainability of NPAs. This will likely have to involve a risk-based approach to allocating regional reference levels to specific project areas and developing a partnership to monitor achievements on the ground. There is a lot at stake; SERNANP's model is highly replicable in Peru but can also provide an example for other countries in the region and, eventually, globally.

Indeed, we consider Peru is clearly ahead of other countries that will need to address with certainty the status of REDD+ projects and credits post-2020. To the extent that countries want to facilitate private investment in REDD+ projects, developing policies that provide clear guidance on

the legality of REDD+ credits pre- and post-2020 is crucial. This should include recognising the performance achieved by the projects and their contribution to the national targets. REDD+ countries like Peru will need to focus on how to address the double accounting issues in the short run, but additionally ensure they create a solid and sustainable mechanism to promote the implementation of these type of projects in the future, as well as making them viable when viewed at a national level, as established by the Climate Change Law.

Leading countries like Peru will be closely watched by other REDD+ countries that are beginning to address similar issues.

How REDD+ projects are accounted for internationally will also be important for other international systems that may allow for REDD+ credits, such as CORSIA. Countries that do not work out how REDD+ projects can continue under national level accounting risk issues with potential double counting in their NDCs. Consequently, they may endanger private sector investment in REDD+ projects in the event the projects are not appropriately accounted for on the national level. Private sector involvement and investments are going to be critical in many forest-rich countries to achieve their domestic targets and eventually to help raise global ambition to meet the Paris Agreement goals. Because private sector investment is key, developing clear guidance and rules that define how projects will operate within national level programmes we be an essential element of ensuring the long term success of REDD+.

———

Alexandra Carranza is an Associate in the Global Climate Change Practice group of Estudio Echecopar member firm of Baker McKenzie International. Alexandra specialises in environmental and climate change law. She advises multinational companies, project sponsors and investors in connection with environment issues and claims, water management, climate change regulations and REDD+ and carbon market transactions.

Marisa Martin is a Senior Associate in Baker McKenzie's Global Climate Change Practice Group. Marisa, a Chambers-ranked lawyer in the field of climate change law, advises companies, investors, governments and NGOs on legal issues related to the transition to the low carbon economy with a special focus on REDD+, carbon market transactions and the California cap-and-trade system. Marisa also serves as co-chair of the American Bar Association's Climate Change, Sustainable Development and Ecosystems Committee.

Edit Kiss is Director of Portfolio Management and Development at Althelia funds, managing the portfolio of investments and investor relations in Althelia Climate Fund as well responsible for developing partnerships and providing thought leadership in the field of sustainable land use for the Althelia funds platform. Edit has over 12 years of experience in climate finance, carbon markets and conservation finance. She is an environmental economist and has been a regular guest lecturer at various universities in the Netherlands.

Juan Carlos Gonzalez Aybar leads Althelia funds' investment deployment in Latin America. He is in charge of project origination and investment structuring in high priority conservation areas, that mix conservation and sustainable production through innovative inclusive business models. Previously JC worked at AIDER NGO, the Livelihoods Ventures Fund, Danone and Carrefour, in Paris, France. JC is a board member of Pecsa S.A, as well as senior advisor for protected area's financial sustainability before IUCN Protected Areas Financing Expert Group.

5. HOW MARKETS CAN MOVE THE NEEDLE ON CLIMATE CHANGE

As emission trading systems (ETSs) continue to develop around the world, it is important for policymakers to recognise the growth of corporate renewable energy procurement and voluntary renewable energy markets.

READ MORE

5. HOW MARKETS CAN MOVE THE NEEDLE ON CLIMATE CHANGE

TODD JONES LOOKS AT THE INTERSECTION OF CARBON MARKETS AND VOLUNTARY RENEWABLE ENERGY PURCHASING, AND WHAT IT MEANS FOR THE CLIMATE FIGHT

GOVERNMENTS, together with leading global companies, are creating instruments and policy options that facilitate the voluntary procurement and purchasing of renewable energy by residential and large commercial customers. This private-sector support for renewable energy can produce environmental and economic benefits beyond what can be achieved through regulation.

In recent years, a number of countries have seen growth in their voluntary renewable energy markets and infrastructure, including Chile, China, India, Japan, Mexico, Singapore, Taiwan and the United Arab Emirates, among others. Carbon markets are often being considered or actively developed in these same places, but when an ETS includes the power sector, it can change the benefits and impact of voluntary and corporate renewable energy procurement. ETSs may also impede voluntary demand, which can be an important driver of renewable energy development and emissions reductions.

Policymakers and corporate purchasers should understand how ETSs (and other carbon regulations in the power sector) affect the benefits of voluntary renewable energy use, and the proven solutions that exist to ensure that voluntary and corporate purchasers of renewable energy can make a difference under an ETS.

THE POTENTIAL OF VOLUNTARY RENEWABLE ENERGY MARKETS

Among many large companies, there is growing demand for renewable electricity from sources like wind, solar, hydropower, geothermal, and biomass. These companies are looking to demonstrate environmental leadership, reduce their carbon footprints, and get recognition from green certification programmes. Increasingly, these companies are also looking to save money, as renewable electricity has become cost competitive. Hundreds of companies have made renewable energy commitments through initiatives like RE100 over the past five years alone.[1]

In the US, the voluntary market for renewable energy is nearly 20 years old and has experienced tremendous growth. In 2016, over six million electricity customers across the country procured about 95 million megawatt-hours of green power,[2] which is about the amount of total electricity consumption in the state of Louisiana, or 2% of total US electricity sales. The market is also growing at more than 10% per year,[3] representing a significant driver for new renewable generation capacity across the US. In 2015 and 2016, the majority of renewable capacity additions in the US — 60% and 55% respectively — were made outside of state-mandated renewable energy requirements.[4]

Companies and governments alike have realised that the success of the national voluntary market in the US is replicable in other countries, provided that voluntary buyers can make credible, exclusive usage claims and have an impact on renewable energy development and emissions reductions beyond what is required by law.

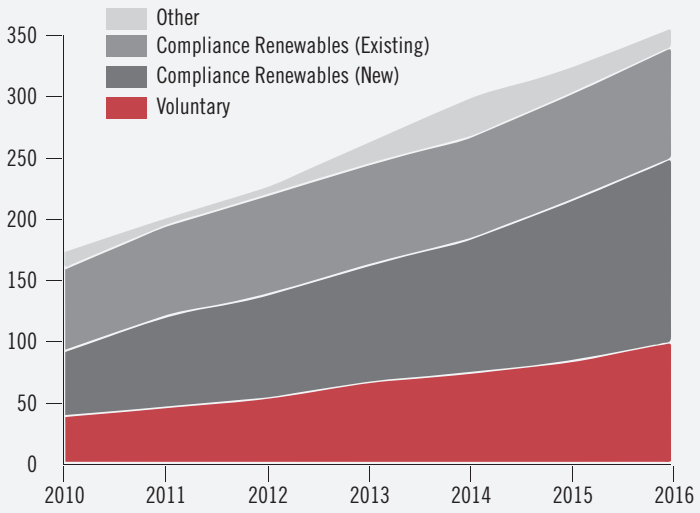
> Corporate support for renewable energy can produce environmental and economic benefits beyond what can be achieved through regulation

WHERE VOLUNTARY RENEWABLE ENERGY AND EMISSIONS TRADING INTERSECT

Cap-and-trade systems often cover the power sector, since power generation is a significant source of CO2 emissions. In this case, carbon and renewable electricity markets can coexist and both contribute to climate goals.

Broadly speaking, "source-based" carbon systems, including ETSs, do not affect voluntary buyers' claims of renewable energy generation that has lower or zero carbon emissions.[5]

(1) See http://there100.org/companies. (2) O'Shaughnessy, E. et al. (October 2016). Status and Trends in the US Voluntary Green Power Market (2015 Data). National Renewable Energy Laboratory (NREL). Technical Report NREL/TP-6A20-67147. Available at: https://www.nrel.gov/docs/fy18osti/70174.pdf. (3) Ibid. (4) Barbose, G. (2017). US Renewable Portfolio Standards: 2017 Annual Status Report. Lawrence Berkeley National Laboratory. p. 14. Available at: http://eta-publications.lbl.gov/sites/default/files/2017-annual-rps-summary-report.pdf. (5) There are some exceptions, for example, for voluntary buyers of generation that is imported into a capped region where emissions from imported electricity are included in the ETS.



But these systems do affect whether voluntary purchasing activity is driving carbon emissions reductions beyond what is already required — that is, whether voluntary generation and purchasing is making a difference on climate change.

Under an ETS, while renewable electricity generation reduces emissions from the sector, it does not affect the overall level of emissions that is allowed by regulation (ie, the cap). Emissions cannot exceed this overall level and emissions reduced below it can be reversed, or emitted, elsewhere. Renewable energy simply frees up room under the cap. In addition, emissions reductions due to renewable energy are automatically counted toward compliance by the regulated entities, and renewable energy generation effectively makes it easier for regulated entities to comply.

A RISK TO VOLUNTARY DEMAND AND PRIVATE INVESTMENT

Historically in the US, it has been important to voluntary buyers and investors that their renewable energy not only generates lower or zero emissions (which they can report in Scope 2 of their corporate carbon footprint, for example), but also that their renewable energy has some impact—that it is reducing emissions beyond what is already required and not subsidising compliance for fossil fuel generators. In order receive these benefits from renewable generation in a region with an ETS, voluntary buyers would also need to purchase and retire emissions allowances, which is the only way to affect the level of emissions. This additional requirement could incur a significant increase in the price of voluntary renewable energy. As a result, voluntary demand for renewable energy may suffer under an ETS, either due to a lack of benefits or the price increase.

Whether voluntary demand declines or the emissions reductions from voluntary renewable energy are captured under the cap, a significant amount of additional emissions reductions are being left on the table.

SETTING ASIDE ALLOWANCES FOR VOLUNTARY RENEWABLE ENERGY

To encourage voluntary demand and remove a significant barrier to private investment and the development of renewable energy, emissions trading programmes can actually lower the cap on behalf of voluntary renewable energy generation. They can include allowance "set-asides" (sometimes called reserves), in which allowances are quite literally set aside and periodically retired on behalf of the voluntary market, which effectively lowers the cap. Set-asides counteract the automatic counting of emissions reductions associated with voluntary renewable energy and explicitly recognise emissions reductions from voluntary renewable energy as incremental to what would otherwise be achieved through the ETS.

Historically, the cost of these set-asides has been minimal for regulated entities, since the decrease in supply of allowances (and corresponding increase in price) is offset by the decrease in demand for allowances due to reductions from voluntary renewable energy (and corresponding decrease in price).

Voluntary renewable energy markets and ETSs are expanding around the world as complementary initiatives that can reduce carbon emissions. They can coexist, but voluntary renewable energy should be a separate driver of emissions reductions, so that voluntary buyers can move the needle with their investments. Otherwise, emissions reductions and private investment dollars may be squandered. There are proven examples of successful policy mechanisms that set aside and retire emissions allowances on behalf of voluntary and corporate renewable energy in both California and states participating in the Regional Greenhouse Gas Initiative in the US. Policymakers can use these as models for their own programmes, and corporate buyers can advocate for this type of mechanism to sustain and increase their impact in regions with an ETS.

———

Todd Jones is Director of Policy and Climate Change Programs at Center f or Resource Solutions (CRS), where he provides guidance and technical expertise to policymakers, regulators and functional support entities at all levels to support the design and development of policies and programs that increase renewable energy development and reduce greenhouse gas emissions. He focuses on credible accounting systems, protecting voluntary demand for renewable energy and emissions reductions, and maximizing positive interactions between markets. He holds a Master's in Environmental Science from Yale University and a Bachelor of Science in Environmental Science from the University of California, Berkeley.

HEADQUARTERS
24, rue Merle d'Aubigné
CH-1207, Geneve
Switzerland
+41 22 737 05 00

BRUSSELS
Rue du Commerce
Handelsstraat 123
1000 Brussels
Belgium
+32 289 55 747

WASHINGTON
1001 Pennsylvania Ave. NW
Suite 7117
Washington, DC 20004
+1 470 222 IETA (4382)

TORONTO
481 University Ave
Suite 703,
Toronto, ON
M5G 2E9
+1 647 792 7775

LONDON
167 Fleet Street
London, EC4A 2EA
United Kingdom
+44 7967 428 247

IETA also has
representation in:
Beijing, Paris, Seoul, Tokyo
and San Francisco.

No.3 / SEPTEMBER / 2018
GREENHOUSE GAS MARKET REPORT

www.**ieta**.org

IETA
CLIMATE CHALLENGES
MARKET SOLUTIONS