STATE AND TRENDS IN THE AUSTRALIAN CARBON MARKET FY21

Carbon Market Update, August 2021
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## ABOUT THIS REPORT

The 2020-21 financial year saw rapid growth in the Australian carbon market, with a surge in voluntary demand driving record issuance of Australian Carbon Credit Units (ACCUs), and record spot prices, with the ACCU market continuing to break new ground on an almost weekly basis.

The State of the Australian Carbon Market 2021 provides a snapshot of activity in the Australian carbon market over the 2020-21 fiscal year, reviewing the current value of the local market based on underlying activity across the Emissions Reduction Fund, Safeguard Mechanism, and voluntary markets.

In doing so, analysis considers growth and key trends across market fundamentals including project registrations, ACCU issuance and demand, along with market prices and our forward expectations.
KEY FINDINGS

Record ACCU issuance in FY21

• 203 projects were registered under the Emissions Reduction Fund in FY21, a 227% increase from FY20 (62). Agriculture (49%) and Vegetation (40%) projects made up 89% of all FY21 registrations, while just 1 Facilities and 2 Transport projects were registered.

• As of 17 August 2021, 993 projects have been registered under the ERF framework (excluding revoked projects). 511 of these projects have been issued ACCUs, or 51% of all project registrations.

• A record 16.5 million ACCUs (16,456,794) were issued in FY21 a 6% increase on FY20 (15,471,477). As of 17 August 2021, total ACCU issuance in the Australian market has grown to 98,927,574.

Surge in corporate voluntary demand

• FY21 saw total demand of 25,041,178 (for all units) in the Australian carbon market, a 20% increase on FY20, with around two-thirds (65%) of all demand in the form of ACCUs and the balance in the form of international Certified Emissions Reductions (CERs) (35%).

• In total, the ERF made up 58% of FY21 demand (for all units), followed by voluntary actors (38%) and liquidity and speculators (3%).

• Voluntary cancellations grew to 9.56 million in FY21, a 45% increase from FY20 (6.59 m). International CERs made up 90% of total FY21 voluntary demand (8.64 m), with ACCUs making up the balance (10%).

• Compliance demand (Safeguard Mechanism) made up just 0.4% of total FY21 demand, attributed to the generous design of emissions baselines under the scheme and flexibility to manage excess emissions (such as applying for a new baseline, multi-year monitoring etc.)

Record ACCU prices (ERF and spot)

• The average price for ACCUs contracted under the ERF grew to a record high of $15.99/t in FY21, with the average price for optional delivery contracts reaching $15.97/t and fixed delivery contracts reaching $17/t.

• The ACCU spot price grew 22% over FY21, increasing from $15.85/t on 1-Jul 2020 to $19.30/t on 30-Jun 2021. The FY21 average price of $17.17/t was a 5% increase from FY20 ($16.38). The ACCU spot price is currently $22.40/t (as of 17/8/21), a record high.

• Standard transaction prices for CERs (>100t) grew from US $0.60 to $1.74, a 190% increase (average of US $1.31) over FY21.

Estimated market value of $226 million in FY21

• In line with total demand and unit prices, the total value of the Australian carbon market is estimated to be $226 million in FY21, with $210.6m attributed to ACCUs (95%), and the balance to CERs (5%, $15.4m).

• ERF deliveries made up 80% of total market value ($180m), followed by voluntary activity (14%, $31.3m) and speculative activity (6%, $13m).

• High emitting companies covered by the safeguard mechanism made up just 0.7% of all investment in carbon offsets, or $1.5m.
1. Introduction

Introduction to the Australian carbon market and key policy components
BACKGROUND

Unlike international compliance markets, the Australian carbon market is primarily a voluntary construct, underpinned by a framework to facilitate the development of Australian Carbon Credit Units (ACCUs), overseen by the Clean Energy Regulator (Regulator), which may be sold to the Commonwealth or traded via the over-the-counter market and direct offtake contracts.

The Federal Government has introduced several policy measures to govern the development of carbon offset projects, the issuance of ACCUs, and the procurement of ACCUs. These are summarised below.

THE EMISSIONS REDUCTION FUND

The Emissions Reduction Fund (ERF) is a voluntary framework that establishes processes for the crediting and purchasing of ACCUs by the Commonwealth. ACCUs may be created via eligible activities, with a crediting period of 7-25 years (avoidance versus sequestration projects). The forward delivery of ACCUs over a 7-10 year timeframe may be contracted to the Regulator (on behalf of the Commonwealth) via ERF auctions, generally held on a semi-annual schedule. ERF auctions follow a competitive tendering (pay-as-bid) process. For each auction, a bid stack is developed ordered from the lowest price bid to the highest price bid. Successful bids are selected up to a discretionary point determined by the Regulator (not disclosed to the market). The average price per tonne of abatement contracted is published after each auction event.

Two types of contracts are now available for proponents under the ERF Delivery. Fixed Delivery contracts require the delivery of a set number of ACCUs to the Commonwealth at a set price for the duration of the contract. Optional Delivery contracts provide the right, but not the obligation, to sell ACCUs to the Commonwealth, with no contractual barrier to the execution of (more lucrative) contracts with other buyers.

Optional Delivery contracts have therefore become an effective tool for developers to lock in a floor price for their projects and utilise a put option to access higher prices as they materialise in the private market.

THE SAFEGUARD MECHANISM

The Safeguard Mechanism commenced on 1 July 2016, applying to facilities with scope 1 emissions of more than 100,000 tonnes of CO2-e per year. Coverage extends to a range of sectors, including generation, mining, oil and gas extraction, manufacturing, transport, and waste. Each facility is required to keep its net emissions at or below an emissions baseline. Entities which exceed their baseline must purchase ACCUs to offset their excess emissions.

If a facility's emissions exceed, or are expected to exceed, its baseline the facility operator has several options available to them to manage excess emissions, including applying for a new baseline, or applying for a multi-year monitoring period (to average its net emissions over a longer period).

THE CLIMATE ACTIVE FRAMEWORK

The Federal Government’s Climate Active Carbon Neutral Standard, formerly the National Carbon Offset Standard, provides a framework for businesses (along with products, events, buildings, etc.) to voluntarily achieve carbon neutrality. The Standard sets requirements for calculating, reducing, offsetting, validating and publishing carbon neutrality claims.

For example, the scheme outlines requirements for reducing emissions or cancelling (retiring) offsets either in a forward setting or in arrears. Eligible offset units include (vintage year of later than 2012):

- Australian Carbon Credit Units;
- Certified Emissions Reductions (CERs) issued under the Kyoto Protocol;
- Removal Units (RMUs) issued by a Kyoto Protocol country
- Verified Emissions Reductions (VERs) issued by the Gold Standard.
- Verified Carbon Units (VCUs) issued by the Verified Carbon Standard.
2. Carbon offset prices

ERF and spot market prices for ACCUs in FY20-21
Two ERF auctions were held in FY21, contracting 13.8m ACCUs at a weighted average price of $15.86 (weighted average prices of $15.74/t and $15.99/t by auction). The weighted average price per tonne of abatement across all ERF auctions is currently $12.32.

In FY21, the Clean Energy Regulator committed to purchase 870,177 ACCUs via fixed delivery contracts (6%) and 12,908,003 via optional delivery contracts (94%). The average price for optional delivery contracts grew to $15.97/t (38 contracts), with fixed delivery contracts growing to $17/t in FY21 (7 contracts).

The ACCU spot price grew 22% over FY21, increasing from $15.85/t on 1-Jul 2020 to $19.30/t on 30-Jun 2021. The FY21 average price of $17.17/t was a 5% increase from FY20 ($16.38).

The ACCU spot price increased 10% in February 2021, growing from $16.70/t to $18.50/t following the Prime Minister’s statement of support for a net-zero target “preferably” by 2050.

The ACCU spot price is currently $22.40/t (as of 17/8/21), an increase of 16% since the conclusion of FY21, or 35% calendar year-to-date.
INTERNATIONAL PRICE: CERs

Figure 3: Monthly average CER prices FY21 (US$)

*CER prices under the Clean Development Mechanism (CDM) also increased over FY21. Standard transaction prices (>100t) grew from US$0.60 to $1.74, a 190% increase (average of $1.31), while small CER transaction prices (<100t) grew from US$2 to $2.66 over the period, an increase of 33% (average of $2.44).

*The future use of credits issued under the CDM, including CERs, remains uncertain, specifically whether these units will be recognised by the Paris Agreement, with potential for the CDM to be enhanced, or replaced, due to concerns over the additionality of some project methodologies, particularly older vintages.

OTHER VOLUNTARY PRICES

Figure 4: International voluntary offset prices (US$) - as of 12/8/21

*International voluntary markets have experienced considerable growth in both demand and prices over FY21, supported by the development of new category specific carbon offset assessments.

*International removal and sequestration projects (average US$6.56) continue to trade at a premium to avoidance, household and industrial projects (average US$2.91-$3.91) as buyers increasingly seek to support projects that permanently capture and sequester carbon. Within categories, more recent emissions reduction vintages also trade at a higher value, while offsets originating from North America and Least Developed Countries are also trading at a premium (ClearBlueMarkets).
3. Supply and demand for ACCUs

Project registrations, issuance and demand for ACCUs in FY20-21
203 projects were registered in FY21, a 227% increase from FY20 (62). As of 17/8/21, 993 projects have been registered under the ERF framework (excluding 203 revoked projects).

Agriculture projects (101) made up 49% of FY21 registrations, increasing from 11 in FY20 behind growth in soil carbon activity. Vegetation projects (83) made up 40% of FY21 registrations, while just 1 Facilities (Orica) and 2 Transport projects were registered.

Vegetation projects make up 54% of total registered projects, followed by Agriculture (17%), Waste (14%), Savannah Burning (8%) and Energy Efficiency (5%). Facilities, Industrial Fugitives and Transport methods make up less than 2% of all project registrations.

As of 17/8/21, 511 projects have been issued ACCUs, or 51% of all project registrations (excluding revoked projects).

2 projects registered in FY21 have begun to be issued ACCUs. Comparably, 145 projects registered in FY15-16 have been issued ACCUs (28% of all projects), with 94% of all ACCU issuance attributed to projects registered in FY17-18 or earlier. This reflects the lead time between project registration and commencement of ACCU issuance.
• A record 16.45 million ACCUs (16,456,794) were issued in FY21, a 6% increase on FY20 levels (15,471,477).

• As of 17/8/21, total ACCU issuance has grown to 98,927,574, with the majority of this issuance contracted to Fixed Delivery Contracts under the Emissions Reduction Fund, and therefore unavailable to the market (refer to the following section).

• Vegetation projects were issued the majority of ACCUs over FY21, making up 54% of issuance, or just over 8.8 million. Waste projects made up 31% of FY21 issuance, or over 5 million ACCUs, followed by Savanna Burning (7%), Industrial Fugitives (3%), Energy Efficiency (3%) and Agriculture projects (2%).

• No issuance was recorded to Facilities projects in FY21, while less than 0.5% of total issuance was to Transport related projects.

• Vegetation projects make up 55% of total issuance, at over 52 million ACCUs, followed by Waste (30%), Savannah Burning (10%), Industrial Fugitives (1.6%), Energy Efficiency (1.6%) and Transport (0.1%).
SOURCES OF ACCU DEMAND

Figure 9: Demand for ACCUs by source

- The ERF made up 89% of FY21 demand for ACCUs, receiving 14.6 million deliveries over the period, a 9% increase on FY20.

- Voluntary actors made up 6% of ACCU demand in FY21, or 923,726 ACCUs, a 43% increase from FY20 (647,675), while speculators and liquidity providers made up 5% of all ACCU demand (757,452 ACCUs), a 15% increase from FY20.

- Compliance demand (Safeguard Mechanism) made up 0.5% of ACCU demand in FY21, with 88,325 ACCUs surrendered by high emitting facilities. This is attributed to the generous design of emissions baselines and flexibility to manage excess emissions (such as applying for a new baseline, multi-year monitoring etc.)

VOLUNTARY CANCELLATIONS (ALL UNITS)

Figure 10: Voluntary cancellations by unit type

- Total voluntary cancellations (over all offset units) grew to 9.56 million in FY21, a 45% increase from FY20 (6,584,063).

- Certified Emissions Reductions (CERs) made up 90% of total FY21 voluntary demand (8,641,574), a 45% increase from FY20 (312% increase from FY19), with voluntary actors favouring low-cost CERs to meet their immediate carbon neutral goals.

- ACCU cancellations made up 10% of total FY21 voluntary cancellations, reflecting the higher cost of domestic offsets and the higher value of ACCUs to manage future compliance risks (rather than being used for immediate voluntary surrender).
4. Carbon market value

The value of the Australian carbon market in FY20-21
FY21 saw total demand of 25,041,178 (across all units) in the Australian market, a 20% increase on FY20, with two-thirds (65%) of all demand attributed to ACCUs and the balance to CERs (35%).

The ERF made up 58% of total FY21 demand (all units), while voluntary actors made up 38% of total demand, a 6.5% increase on FY20. Liquidity and speculators made up 3% of total demand, while compliance entities made up just 0.4% of total demand.

In line with unit prices\(^1\), the total value of the Australian carbon market is estimated to be $226 million in FY21, with $210.6m attributed to ACCUs (95%), and the balance to CERs (5%, $15.4m).

ERF deliveries made up 80% of total market value ($180m), followed by voluntary (14%, $31.3) and speculative demand (6%, $13m).

High emitting companies covered by the Safeguard Mechanism made up just 0.7% of all investment in carbon offsets, or $1.5m.

\(^1\) Analysis applies the FY21 annual average spot price for ACCUs ($17.17) for safeguard, liquidity & speculative and voluntary transactions. Standard transaction prices for CERs are applied (average US$1.31) converted into AUD at 1 USD = 1.368 AUD as of 16/8/21 ($1.79). ERF deliveries are assumed to be made at the weighted average price per tonne of abatement across all ERF auctions ($12.32).
5. Forward expectations

Market trends and policy developments for FY21-22
FORWARD EXPECTATIONS

Below we outline the key considerations that are likely to impact both market and regulatory development over the next financial year.

COP26: A net zero target for Australia?

While the Prime Minister has stated his desire to reach net-zero emissions “preferably” by the 2050, the Federal Government is yet to announce any change to its interim or long-term emissions target under the Paris Agreement, with COP26 in November looming as a key decision point for the Coalition. Notably, National Party MPs have reportedly sought the exclusion of agriculture from any new target, along with compensation for farmers for stronger action on climate change, setting up a potential negotiation in federal cabinet on a more ambitious emissions target. Despite this, market expectations for more ambitious policy settings to reach net-zero emissions remain low.

How far will voluntary demand carry prices?

Even in the absence of more ambitious federal policy, the Australian market has begun to price in increased emissions reduction activity, with spot and forward prices beginning to trend toward our higher net-zero price pathways. We forecast demand for ACCUs will continue to grow on the back of new corporate voluntary commitments, with high emitting companies increasingly responding to pressure from local and international investors, and downstream customers (locally and in net-zero export markets), rather than government policy.

As investors continue to build their exposure to the low-carbon transition, and hedge climate risks in other asset classes, we forecast corporate and investor-led demand will carry ACCU prices higher. This may see a positive feedback cycle take hold in the Australian market, with increased corporate demand driving higher prices, encouraging increased investor and speculative activity, and in-turn incentivising more high emitting buyers to enter the market to protect themselves from rapidly escalating spot prices.

The 2021-22 federal election: Industry emissions

With the next federal election to take place prior to 21 May 2022, climate policy again looms as a key political issue in Australia. Most notable is the potential for more robust emissions limits to be implemented for high emitting facilities, with the ALP’s 2019 Climate Change Action Plan proposing to tighten baselines under the Safeguard Mechanism in order to curb emissions growth and create an economic incentive for investment in emissions reductions.

This again remains a key watch for market participants, with the potential alignment of the safeguard scheme with a net-zero emissions target forecast to establish more robust compliance demand in the Australian market and create a more supportive environment for ACCU investment and prices.

Article 6, CERs, and a ‘flight to quality’

As noted, the future use of carbon offsets issued under the CDM, including CERs, remains uncertain, with negotiations around Article 6 of the Paris Agreement set to continue at COP26. How or if CDM credits will be recognised under the Paris Agreement will be a key watch for market participants, with concerns over the additionality of some project methodologies (particularly older vintages) likely to see the current crediting mechanism enhanced or replaced.

In the international voluntary market, the low-quality reputation of CERs has already led to a flight to higher quality offsets, with removal and sequestration projects trading at a premium to avoidance, household and industrial projects as buyers increasingly seek to support projects that permanently capture and sequester carbon. In addition, many international compliance markets have now eliminated the use of CERs, instead favouring actions to incentivise domestic emissions reductions and investment in low-carbon technologies.

Australian companies are likely to increasingly adopt this trend, with initiatives such as the Commonwealth’s Corporate Emissions Reduction Transparency (CERT) report to create more pressure for voluntary market participants to demonstrate meaningful investment in local emissions reductions.
Our EnergyIQ portal

A closer look at the RepuTex EnergyIQ client platform
Our **EnergyIQ** portal

EnergyIQ combines our expertise for the Australian carbon & electricity markets into one integrated platform, providing visibility of key prices, and forward intelligence, to drive business and trading decisions.
Carbon market features

CARBON SPOT PRICES
Access daily carbon spot prices for ACCUs, LGCs, CERs, VCS and VERs.

PRICE FORECASTS
Forecast ACCU prices to 2030-50 and net-zero emissions scenarios under the Paris Agreement.

FUNDAMENTALS
View underlying supply-demand dynamics, market balance, and our marginal abatement cost (MAC) curve for the Australian economy.

VOLUNTARY MARKET
Comprehensive voluntary market coverage including international offset dynamics and cancellations.

LATEST ANALYSIS
Access our regular commentary and analyst updates, offset market report, outlooks, and webinars.

ASK AN ANALYST
Open access to our research team via our Ask an Analyst function.

DATA DOWNLOAD
Download data into CSV and access source code (data scrape).
Electricity market features

QUARTERLY OUTLOOK
Access our quarterly Australian Electricity Outlook (AEO) report and underlying datasets.

LGC PRICE FORECAST
Forecast large-scale generation certificate (LGC) prices to 2030, including scenarios for LGC fungibility with ACCU offset prices.

WHOLESALE FORECAST
Outlook for wholesale electricity prices in each region of the NEM over medium-term (4 years) and long-term horizons (20 years), and scenarios for price development.

GENERATION MIX
Forecast market outcomes such as change in capacity, generation mix, emissions and emissions intensity, including scenario analysis.

“STEP CHANGE” SCENARIO
Modelling of AEMO’s Step Change scenario, accounting for more aggressive action on climate change under the Paris Agreement.

DATA DOWNLOAD
Download all chart data into CSV format and access underlying forecasts and model outcomes in Excel format.
Contact us

To schedule a demonstration of our EnergyIQ platform, please contact:

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