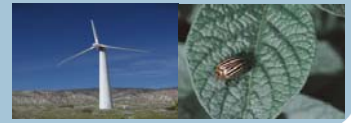


## Future of carbon trading in Australia delayed and uncertain



7 May 2009

### Inside:

Market Update .....	1
Policy Update .....	2
Product Feature: NGACs .....	3
Average Prices & Forward Curves	4
Commodity Prices & Currencies ...	5
CPRS Timetable .....	5
Glossary .....	6
ANZ Contacts .....	7

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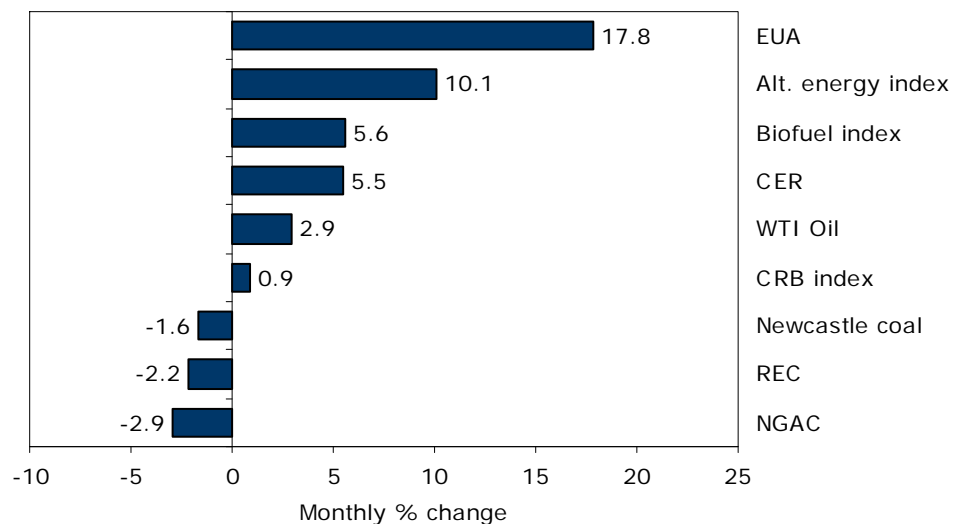
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## Market Update

- **Uncertainty for AEU**s with the announcement of a one year delay to the CPRS and a fixed price of \$10 for the first year (*see Policy Update*). These changes aren't good news for the development of the secondary market. The fixed price also raises questions about where permit prices will trade after the first year — will they return to the early AEU trades above \$20? Prior to the announcement, the market saw its first AEU options traded in March, but new bids and offers have all but disappeared from brokers screens.
- **REC prices are back above \$50** after a brief sell-off last week. Spot prices fell to \$46.20 in a flurry of selling, predominantly from solar water heater and solar panel REC sellers. It quickly rebounded following the COAG meeting last Thursday, where design of the expanded MRET was agreed and the new shortfall penalty of \$65 was finally made known.
- **NGACs remain at low \$3**, trading only a handful of times in the past few months. A delay in the start of national emissions trading means GGAS will now run for at least another year, until 1 July 2011. Interest is expected to pick up as a result of this. A number of short-dated forward trades have gone through the market this week at mid \$3 prices.
- **EUAs recovered** from their early February price fall on the back of utility compliance buying and stronger energy prices this month. The Dec '09 contract reached a high of €15.25 this week before easing back slightly as a sell-off, predominantly in the spot, ensued. It's still holding in the high €14.
- **CER prices strengthened** though underperformed compared to EUAs, causing the EUA-CER spread to widen to €3. Support came last month as compliance buyers switched from EUAs to cheaper CERs to surrender against their 2008 emissions by 30 April. Australian CER interest appeared last week, with a large generator buying 100,000 CERs for Dec. 2011 delivery. The CPRS delay will mute further interest in CERs from Australia.

### Price performance for the month of April 2009



**Note:** Monthly price changes to 1 May 2009.

**Sources:** Bloomberg, globalCOAL, ECX, ANZ Global Markets.

## Policy Update: Australian emissions trading scheme delayed, diluted and still uncertain ...

Australia's proposed CPRS has been delayed and diluted.

The initial permit price for 2011-12 is to be capped at \$10 — less than half the current trading price of AEU's for 2011-12.

Free permits and other assistance to industry have been increased.

The national CO<sub>2</sub> reduction target remains 5% by 2020, but it could go as high as 25%, pending international agreement and action.

Although drastic, these amendments may not be enough to guarantee the CPRS a safe passage through Australia's hostile Senate.

The underlying market for RECs has been strengthened.

RECs will be an important trading mechanism until the scheme ends in 2030.

On 4 May Prime Minister Rudd announced significant revisions to Australia's proposed emissions trading scheme, the Carbon Pollution Reduction Scheme (CPRS). The key amendments to the draft legislation are:

- **1 year delay**, starting in July 2011, not 2010 (reforestation projects will still be eligible to create voluntary permits from 2010, as previously proposed).
- **Fixed price of A\$10** for the first year for an unlimited number of permits, for purchase by about 1,000 liable companies only. These fixed price permits must be used in the first year and will not be bankable for future use. A 5-yearly EITE review will include consideration of extending the price cap.
- **Increased allocation of free permits** to emissions-intensive trade-exposed industries (EITE's), from 90% to 95% of required permits for high EITE's, and from 60% to 66% for moderate EITE's in the first year, and declining by 1.3% per year thereafter. This will be reviewed every 5 years.
- **Additional funding for non-EITE businesses and community groups**, to improve their energy efficiency, including another \$100mn for strategies, audits and investments and \$80mn for capital grants. A new \$50mn 'Energy Efficiency Trust' will lend money to businesses for efficiency investments.
- **Individuals will be allowed to buy and retire CPRS permits**, through a tax deductible 'Pledge Fund'. Household purchases of accredited GreenPower after 2009 will be deducted from the annual carbon cap set for the CPRS, so that the carbon 'savings' made by households cannot be 'used' by industry.
- **A national CO<sub>2</sub> cut of up to 25% from 2000 levels by 2020**, but only if the global meeting in Copenhagen later this year agrees to stabilize atmospheric CO<sub>2</sub> levels at 450ppm by 2050. Up to 5 percentage points of this cut (1/5<sup>th</sup>) could be met by purchasing international credits. If there is no agreement, then 5% will be cut by 2020, or 15% if other countries agree to 'substantial' and 'comparable' measures at Copenhagen.

Taken together, these amendments will delay the CPRS, reduce its cost to liable businesses, increase direct assistance, and reduce the revenue to be raised by the Scheme (which had been earmarked for redistribution to households and communities). In particular, the proposed \$10 starting price is less than half the current price of Australian carbon permits for 2011-12 (AEU's, at A\$22) and well below the price of allowable international offsetting permits (CER's, at €11.50). These much-weakened price signals will reduce the Scheme's effectiveness in reducing national CO<sub>2</sub> emissions, at least in the short term. These amendments were aimed squarely at garnering enough support from the Coalition to enable the Bill's enactment, however it is already apparent these changes will not be enough to ensure the CPRS makes it safely through a hostile Senate this year.

### ... but renewable energy targets strengthened

Just days before this announcement on the CPRS, the Council of Australian Governments (COAG) agreed on the final design of the national mandatory Renewable Energy Target (MRET), which expands on the existing MRET and is backed by tradeable RECs (currently trading at around A\$50). Enabling legislation is expected to pass by mid-2009. The national MRET aims to achieve a 20% share of renewable energy by 2020 — 45,000 GWh p.a. — or four times the current legislated target (5% or 9,500 GWh p.a.). The target for 2010 will be 12,500, rising annually until it reaches 45,000 from 2020 until 2030. Eligibility criteria for creating and trading RECs has not changed, including RECs generated from domestic solar water heaters and native wood waste. COAG will consider adding new technologies such as small-scale generators and heat pumps to the list of eligible projects. The scheme will conclude in 2030, by which time renewable energy should be well established in the national energy market.

## Product Feature: NGACs

NGACs are the tradeable instruments of the NSW Greenhouse Gas Reductions Scheme.

The participants are NSW's electricity retailers and larger energy consumers.

The NGAC scheme is the second-largest formal carbon emissions trading scheme in the world.

The NGAC scheme is scheduled to run until 2021.

It will terminate earlier if a national trading scheme (such as the CPRS) is enacted to replace it.

### What are NSW Gas Abatement Certificates?

NSW Gas Abatement Certificates (NGACs) are the tradable instruments used for compliance under the NSW state Greenhouse Gas Reduction Scheme (GGAS). One NGAC is equal to one tonne of CO<sub>2</sub>-e.

### The Scheme

The NSW government established GGAS to reduce greenhouse gas emissions arising from electricity production and consumption as well as to encourage activities that abate or offset carbon. Annual per capita benchmarks were set and the scheme aimed to achieve a target of 7.27 tonnes of CO<sub>2</sub>-e per capita from 2007 and onwards until scheme end.

GGAS started in 2003 and was one of the first carbon trading schemes in the world. It was originally mandated to run until 2012. In 2006 the scheme's legislation was amended to extend the scheme until 2021, or until a national emission trading scheme is implemented. GGAS is regulated by the Independent Pricing and Regulatory Tribunal (IPART). The ACT government also introduced a similar scheme in its state in 2005, which mirrors NSW GGAS.

### Benchmark Participants

Liability parties under GGAS known as benchmark participants are predominantly electricity retailers that retail in NSW but also include large electricity users that choose to manage their own liability. To comply with their GGAS liabilities, benchmark participants must acquire NGACs equal to the amount of emissions above their benchmark and surrender them to IPART via the web-based NGAC Registry on an annual basis.

### Abatement Certificate Providers

Abatement certificate providers are those that carry out activities that result in the abatement of greenhouse gases in NSW and eligible to create NGACs for every tonne of emissions abated. These activities include low emission electricity generation, carbon sequestration and on-site emission reductions by large users. Reducing electricity consumption from demand side is also an eligible activity and was a significant creator of NGACs over a few years of the scheme. This activity will remain eligible only until 30 June this year when they transition into the new Energy Savings Scheme and will no longer be able to create NGACs.

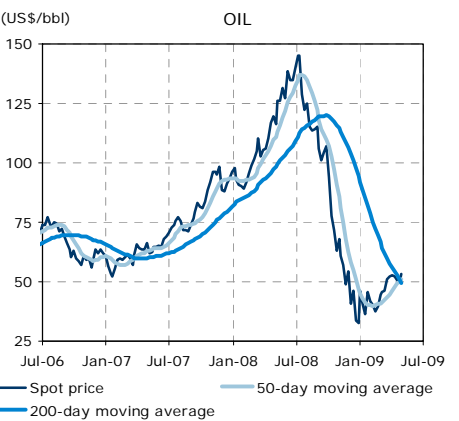
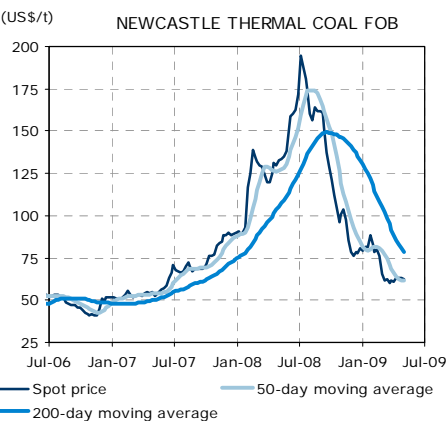
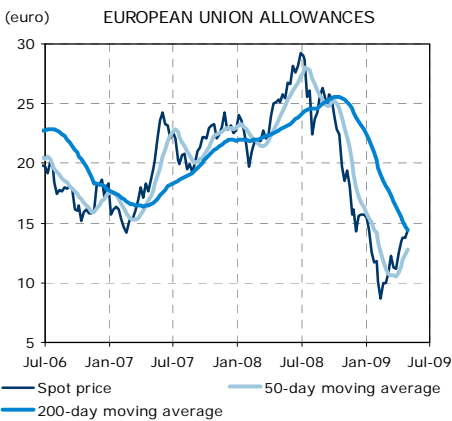
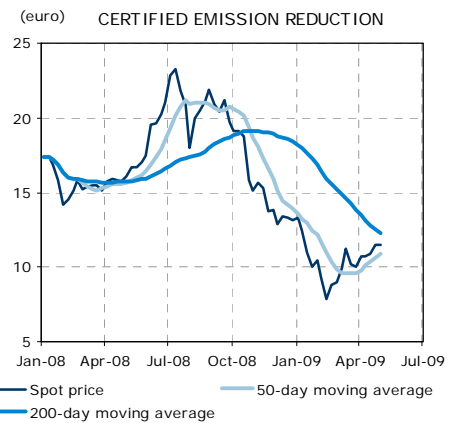
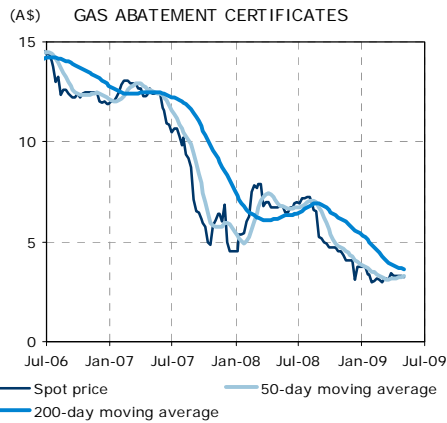
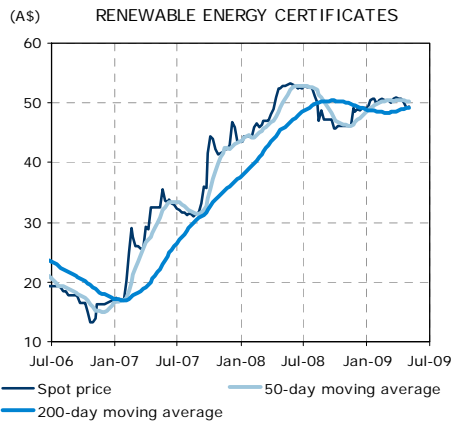
### The NGAC Market

The NGAC market isn't a very large one in terms of the number of participants. Based on the number and value of certificates traded however, it is one of the largest formal carbon markets in the world, second only to the European Union emission trading scheme. Last year over 30 million NGACs traded hands. NGACs are traded in spot and forward contracts and are physically settled through the NGAC Registry.

### The Future for NGACs

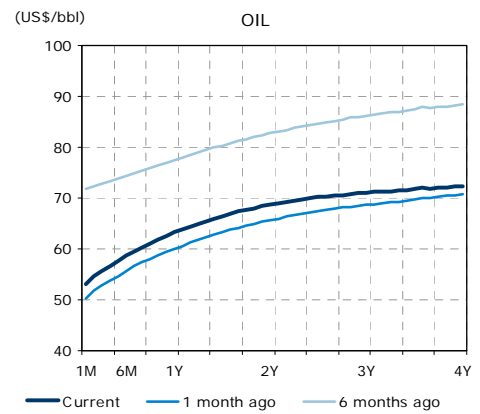
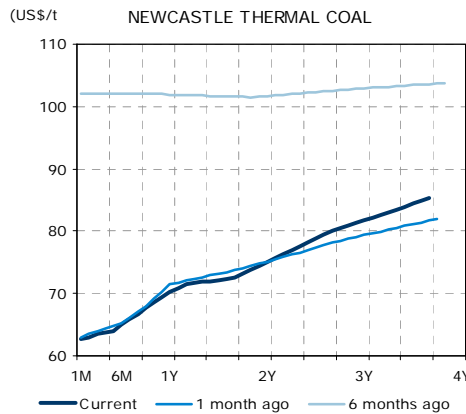
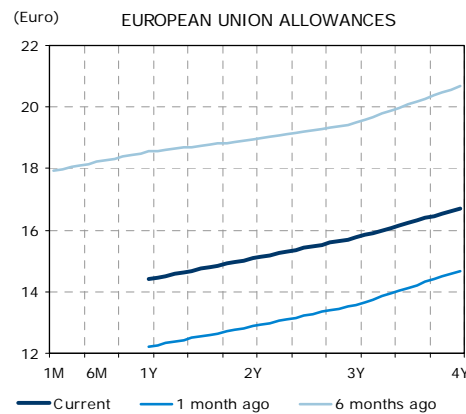
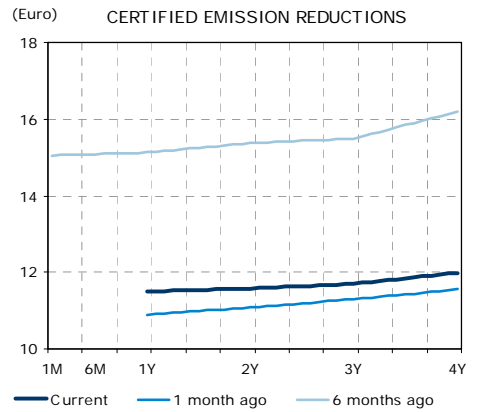
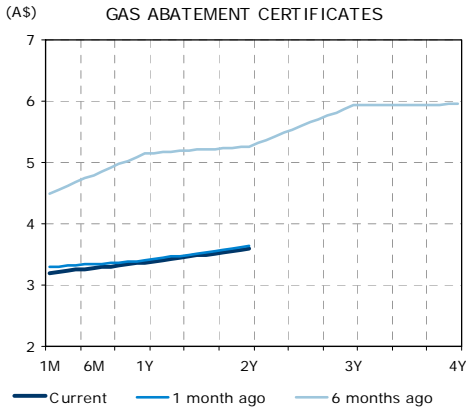
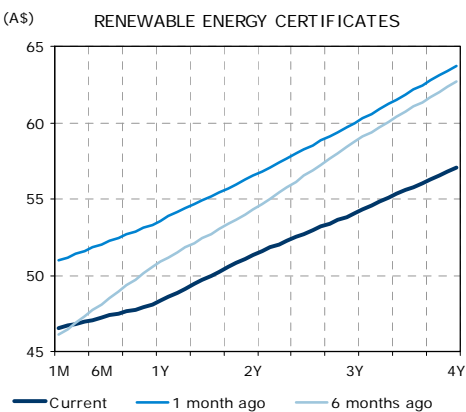
GGAS is legislated to terminate once a national emission trading scheme commences, which covers NSW. This means that if the CPRS is enacted this year and commences in 2011 as currently proposed by the Australian Government, GGAS could end earlier than the extended period of 2021 and possibly even before the original end date of 2012. The NGAC market has been significantly oversupplied and, since expectations of a national emissions scheme in Australia emerged in 2007, prices have fallen and trading interest diminished. Market participants anticipate an NGAC oversupply will exist at the end of GGAS in mid-2010, which will not be transferable into a new national scheme. But now, with the one year delay in CPRS, GGAS will live to see at least another year.

## Average Prices



**Note:** Spot prices and moving averages to 1 May 2009. **Sources:** Bloomberg, TFS Energy, ECX, ANZ Global Markets.

## Forward Curves



**Note:** Forward curves to 1 May 2009. **Sources:** Bloomberg, globalCOAL, AFMA, ECX.

## Commodity Prices and Currencies

Product	Current Price (1 May '09)	1mth ago		3 mths ago		6 mths ago		12 mths ago	
		price	% Δ	price	% Δ	price	% Δ	price	% Δ
<b>Emissions</b>									
REC (A\$ spot)	49.70	50.80	-2.2	50.70	-2.0	46.10	7.8	52.75	-5.8
NGAC (A\$ spot)	3.30	3.40	-2.9	3.00	10.0	4.40	-25.0	6.75	-51.1
AEU (A\$ contract 2011-12)	22.65	22.25	1.8	22.25	1.8	21.75	4.1	na	na
EUA (€ Dec '09)	14.40	12.22	17.8	11.29	27.5	18.88	-23.7	24.22	-40.5
CER (€ Dec '09)	11.50	10.90	5.5	10.06	14.3	15.19	-24.3	15.63	-26.4
<b>Other energy</b>									
WTI Cushing Oil (US\$)	51.12	49.66	2.9	41.68	22.6	67.81	-24.6	113.46	-54.9
Tapis Oil (US\$)	52.86	51.75	2.1	46.17	14.5	60.16	-12.1	121.62	-56.5
Newcastle Coal (US\$)	62.26	60.79	2.4	78.17	-20.4	100.83	-38.3	133.00	-53.2
Richards Bay Coal (US\$)	58.40	63.30	-7.7	74.23	-21.3	100.90	-42.1	110.82	-47.3
<b>Key Indices</b>									
ASX 200 Index	3780.5	3582.1	5.5	3540.7	6.8	4018	-5.9	5595.4	-32.4
CRB Index	222.39	220.4	0.9	220.37	0.9	268.39	-17.1	409.27	-45.7
S&P Alternative Energy Index	1744.2	1583.8	10.1	1569.2	11.2	1478.2	18.0	2557.3	-31.8
Bunge Biofuel Index	394.97	373.93	5.6	372.38	6.1	434.75	-9.2	746.16	-47.1
<b>Currencies</b>									
AUD/USD – Aussie	0.73	0.70	4.5	0.63	15.7	0.68	8.0	0.93	-21.7
USD/JPY – Yen	99.11	98.53	0.6	89.45	10.8	99.12	0.0	104.43	-5.1
EUR/USD – Euro	1.33	1.32	0.2	1.28	3.3	1.26	5.0	1.55	-14.2
USD trade weighted	84.55	85.50	-1.1	86.07	-1.8	86.35	-2.1	73.28	15.4
AUD trade weighted	59.90	57.60	4.0	52.40	14.3	55.90	7.2	70.90	-15.5

**Note:** prices on first trading day of May 2009, April 2009, February 2009, November 2008 and May 2008.

**Sources:** Bloomberg, Point Carbon, ECX, globalCOAL, ANZ Global Markets.

## Australian CPRS Development Timetable

Date	Development
15 Dec 2008	Government White Paper released
Early 2009	Draft legislation (the CPRS Bill) released for debate
June 2009	CPRS Bill presented to the Senate for debate and enactment (the CPRS Act)
1 Jul 2009	Second stage of GHG mandatory reporting commences
Late 2009	Consultation and drafting of CPRS technical regulations
<b>Subject to the CPRS Bill being enacted by Parliament in 2009:</b>	
Late 2009	CPRS Act, regulations and statutory regulatory agency commences
1 Jul 2010	Third stage of GHG mandatory reporting commences
Mid 2011	First auction of CPRS emissions permits. Market commences trading

**Sources:** Department of Climate Change; Garnaut Review; Officer of Senator Penny Wong.

## Glossary

Instrument	Definition
AAU	<b>Assigned Amount Units</b> are tradeable emission units allocated to Annex I Parties under the Kyoto Protocol each commitment period. Countries are allowed to emit GHGs equivalent to their assigned amount. (one AAU unit equals one tCO <sub>2</sub> -e)
Additionality	The positive difference between the emissions that occur in a baseline scenario and the reduction of emissions that occur in the proposed project. Under the Kyoto Protocol gas emission reductions generated by CDM and JI project activities must be additional to those that otherwise would occur.
AEU	<b>Australian Emissions Unit</b> is the basic unit of compliance and trade in the forthcoming CPRS (from 2010).
Annex B Countries	<b>Annex B (also known as Annex I) Countries</b> are the developed signatory countries within the Kyoto Protocol that have committed to emission reduction targets.
CCS	<b>Carbon Capture and Storage</b> of CO <sub>2</sub> within a carbon sink, which includes the absorption of atmospheric CO <sub>2</sub> by biomass and/or the geological capture and storage of CO <sub>2</sub> in oil/gas wells.
CDM	<b>Clean Development Mechanism</b> in Article 12 of the Kyoto Protocol allows Annex I Parties to invest in carbon projects aimed at reducing GHGs in developing countries to assist them with sustainable development. The investor receives tradeable carbon credits (CERs) in return.
CER	<b>Certified Emission Reduction</b> is a tradable credit generated by projects in developing countries that are registered as a CDM under Kyoto Protocol. (One CER represents a reduction in GHGs of one tCO <sub>2</sub> -e)
CO <sub>2</sub> -e	<b>Carbon Dioxide Equivalent</b> is the universal measure that indicates the global warming potential of each of the six GHGs targeted by the Kyoto Protocol, in terms of the corresponding impact on atmospheric CO <sub>2</sub> . CO <sub>2</sub> -e's is calculated by multiplying the Global Warming Potential (GWP) of a gas by its emitted weight.
CPRS	<b>Carbon Pollution Reduction Scheme</b> due to commence in Australia in 2010.
ERU	<b>Emission Reduction Units</b> is a unit of emission reduction issued pursuant to JI. When ERUs are issued, an equivalent number of AAUs are cancelled. (One ERU equals one metric ton of CO <sub>2</sub> equivalent)
EUA	<b>European Union Allowances</b> is an exchange traded credit arising from the EU-ETS. EUA phase 2 commenced from 1 January 2008 and is valid to 31 December 2012. (One EUA equals one tonne unit of CO <sub>2</sub> -e)
EU-ETS	The <b>European Union Greenhouse Gas Emissions Trading Scheme</b> commenced operation as the largest multi-country, multi-sector scheme globally in January 2005.
GHG	<b>Greenhouse Gases</b> are the gases emitted by human activities that are responsible for climate change. Annex I of the Kyoto Protocol targets 6 GHGs include - carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O) as well as hydrofluorocarbons (HFC-23), perfluorocarbons (PFCs) and sulfur hexafluoride (SF <sub>6</sub> ).
ITL	<b>The International Transaction Log</b> provides the link between national registries and the CDM registry and is in charge of verifying the validity of transactions (including issuance, transfers, cancellations, etc).
JI	<b>Joint Implementation</b> allows an Annex I Party to implement an emission-reducing project in the territory of another Annex I Party and count the resulting ERUs towards its own Kyoto target.
Kyoto Protocol	Adopted at the Third Conference of the parties to the UN Framework Convention on Climate Change held in Kyoto, Japan in December 1997. It commits industrialised country signatories to reduce GHGs by an average of 5.2% compared with 1990 emissions by 2008-2012.
MRET	<b>Mandatory Renewable Energy Target</b> , which is the Australian government scheme to increase renewable energy generation and consumption.
NGAC	<b>NSW Gas Abatement Certificates</b> are created under the GHG Abatement scheme in NSW and ACT. (One GAC equals one tonne of CO <sub>2</sub> -e)
REC	<b>Renewable Energy Certificates</b> were created under the Australian Government's national Mandatory Renewable Energy Target (MRET) scheme enforceable nationwide. (One REC equals one MWh of electricity generated from an eligible renewable source).
REDD	<b>Reducing Emissions from Deforestation and Degradation</b> is a set of UN programs to assist developing countries with technical assistance, training, demonstrations, research and financial incentives.
UNFCCC	<b>United Nations Framework Convention on Climate Change</b>
VER	<b>Verified Emission Reductions</b> are emission abatement units that are not part of mandatory schemes. Instead, they are verified by an independent auditor. VERs are used to voluntarily offset carbon emissions.
VREC	<b>Victoria Renewable Energy Certificates</b> are created under the Victoria State scheme in Australia and are similar to that of MRET.

Sources: ANZ, World Bank, UNFCCC.



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