Environmental Trading Schemes

in the Australian energy sector

Overview

The table on the following pages summarizes the key characteristics of environmental product trading schemes operating in the Australian energy sector. It reflects the position in mid-June 2015.

The **Carbon Farming Initiative** (or **CFI**) is a Commonwealth scheme that allows projects that sequester or reduce greenhouse gas emissions to earn Australian carbon credit units (**ACCUs**). When established in 2011, the CFI was primarily aimed at projects in the agricultural sector. A market for eligible ACCUs was created by the carbon pricing mechanism established under the *Clean Energy Act* 2011 (Cth) (now repealed). ACCUs not eligible under the carbon pricing mechanism could be sold to the voluntary offsets market.

From 2015, government-created demand for ACCUs has moved from the carbon pricing mechanism to the Emissions Reduction Fund (or **ERF**), a Commonwealth scheme to promote greenhouse gas reductions by purchasing ACCUs. To support the ERF, the CFI has been expanded beyond the agricultural sector and has been merged into the ERF. Nonetheless, in the table, the CFI and the ERF are treated as separate schemes since the ERF may in the future accept credits from other schemes and because ACCUs can be traded outside the ERF. For example, as of June 2015 it is likely that entities subject to the "Safeguard Mechanism" to be established under the *National Greenhouse and Energy Reporting Act* 2007 (Cth) will be able to use ACCUs for compliance purposes.

The **Renewable Energy Target** (or **RET**) is a Commonwealth scheme intended to promote generation of electricity from renewable sources. The RET comprises the large scale renewable energy target (**LRET**) using large-scale generation certificates (**LGCs**) and the small-scale renewable energy scheme (**SRES**) using small-scale technology certificates (**STCs**). Participation in the RET as a generator is voluntary. Demand for certificates is created through the mandatory obligation placed on retailers and others to buy and surrender certificates each year. LGCs can also be used in the GreenPower scheme.

Two other schemes covered in the table are the **Victorian Energy Efficiency Target** scheme (or **VEET**) for trading Victorian energy efficiency certificates (**VEECs**) and the New South Wales **Energy Savings Scheme** (or **ESS**) for trading energy saving certificates (**ESCs**). Both schemes set mandatory certificate surrender obligations and primarily focus on promoting energy efficiency measures.

Standard form documentation

The Clean Energy Regulatory (**CER**) publishes a standard form contract for selling ACCUs to the CER under the ERF.

The Australian Financial Markets Association (**AFMA**), through its Environmental Products Committee, produces standard form documentation to support trading in the instruments created by these schemes, including ACCUs traded bilaterally. The terms specific to each scheme are contained in the Australian Environmental Products Addendum which is published as part of AFMA's Guide to Australian OTC Transactions. The Guide includes standard confirmations for use with the Addendum and commentary.

AFMA makes available through its website a contract for the spot trading of Environmental Products and trading conventions.

AFMA also publishes a subscription-based service providing weekly spot and forward prices for LGCs and STCs. Sample data is available on the AFMA website.

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Jurisdiction	**Commonwealth**				**Victoria**	**New South Wales**
Scheme	**Carbon Farming Initiative / Emissions Reduction Fund**		**Renewable Energy Target**		**VEET**	**ESS**
	CFI	**ERF**	**LRET**	**SRES**		
Legislation	*Carbon Credits (Carbon Farming Initiative) Act* 2011 (Cth) (**CFI Act**) *Carbon Credits (Carbon Farming Initiative) Regulations* 2011 (Cth) *Carbon Credits (Carbon Farming Initiative) Rule* 2015 (Cth) Methodology Statements made under the CFI Act.	CFI Act and associated instruments.	*Renewable Energy (Electricity) Act* 2000 (Cth) (**RET Act**) *Renewable Energy (Electricity) (Large-scale Generation Shortfall Charge) Act* 2000 (Cth) *Renewable Energy (Electricity) Regulations* 2001 (Cth) (**RET Regulations**)	RET Act *Renewable Energy (Electricity) (Small-scale Technology Shortfall Charge) Act* 2010 (Cth) RET Regulations	*Victorian Energy Efficiency Target Act* 2007 (Vic) *Victorian Energy Efficiency Target Regulations* 2008 (Vic)	*Electricity Supply Act* 1995 (NSW) *Electricity Supply (General) Regulation* 2014 (NSW) *Energy Savings Scheme Rule of 2009 (NSW)*
Title	Carbon Farming Initiative (**CFI**)	Emissions Reduction Fund (**ERF**)	Large-Scale Renewable Energy Target (**LRET**)	Small-Scale Renewable Energy Scheme (**SRES**)	Victorian Energy Efficiency Target Scheme (**VEET**) or Energy Saver Incentive	New South Wales Energy Savings Scheme (**ESS**)
Purpose and target	Remove greenhouse gases from the atmosphere and avoid emissions of greenhouse gases (**GHGs**) by undertaking eligible offsets projects. Intended to contribute to Australia's target of a 5% reduction in GHG emissions by 2020 (below 1990 levels).	Create an incentive to undertake eligible offsets projects.	Encourage new and additional generation of electricity from large scale renewable energy projects such as wind farms, commercial solar and geothermal power stations. The 2015 target is 18,850 GWh and this rises to 33,000 GWh from 2020.[1]	Encourage investment in small scale renewable technologies such as solar panels and solar water heaters to either generate renewable electricity or displace the generation of electricity from non-renewable sources. The percentage figure used to calculate liability is set based on expected supply of certificates (not annual targets).	Promote the reduction of greenhouse gas emissions through energy efficiency measures in both the gas and electricity sectors. Targets have been set in three-year phases. For 2015 the target is to achieve 5.4m tonnes of abatement per year. Targets beyond 2015 are the subject of an April 2015 consultation paper.[2]	Create a financial incentive to reduce the consumption of electricity by retail and business users.[3] The 2015 target is 5% of electricity purchased for resale. According to IPART, when exemptions are taken into account the effective target across all sales of electricity in NSW is 4% (equivalent to 6.8m tCO_2-e).[4]

[1] The 2020 target in the legislation will be 33,850 GWh but this includes 850 GWh referable to legacy waste coal mine gas projects which cease to be eligible from that date.
[2] State of Victoria, *Setting future Victorian Energy Efficiency Targets: Consultation pape*r, April 2015.

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Scheme administrator	Clean Energy Regulator (**CER**)	CER on behalf of the Commonwealth conducts the purchasing process and enters into contracts to buy units (**Carbon Abatement Contracts**).	CER	CER	Essential Services Commission (**ESC**)	Independent Pricing and Regulatory Tribunal (**IPART**)
Certificates	Australian carbon credit units (**ACCUs**). The CFI Act provides for two categories of ACCU: ▪ Kyoto Australian carbon credit units (**KACCUs**) ▪ non-Kyoto Australian carbon credit units (**nKACCUs**).	Eligible carbon credit units (**ECCUs**). The CFI Act provides for two categories of ECCU: ▪ KACCUs ▪ prescribed eligible carbon units (which may include international units, if prescribed).	Large-scale generation certificates (**LGCs**)	Small-scale technology certificates (**STCs**)	Victorian energy efficiency certificates (**VEECs**)	Energy saving certificates (**ESCs**)
Register, records creation, registration, transfer and surrender	Australian National Registry of Emissions Units: Link to the ANREU Emissions Reduction Fund Project Register: Link to the ERF Project Register	The Emission Reduction Fund Project Register includes information about Carbon Abatement Contracts awarded by the CER.	REC Registry: Link to the REC Registry	REC Registry: Link to the REC Registry	Register of Victorian Energy Efficiency Certificates maintained by the ESC: Link to the RVEEC	ESS Registry: Link to the Registry guide

[3] The scheme review being undertaken in 2015 includes consideration of options to expand the scheme to gas: NSW Government, *Review of the NSW Energy Savings Scheme, Overview*, April 2015, page 7.
[4] IPART Fact Sheet, *Overview of the ESS*, June 2014.

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Start date	The CFI Act commenced in December 2011 for agricultural projects and certain landfill gas projects. Expanded in 2015 to projects outside the agricultural sector.	ERF amendments to the CFI Act commenced in December 2014. The first auction was held in April 2015.	1 January 2011 for the split scheme (LRET and SRES). Targets adjusted around June 2015. Mandatory Renewable Energy Target (**MRET**) started 1 January 2001.	1 January 2011 for the split scheme (LRET and SRES). MRET started 1 January 2001.	1 January 2009	1 July 2009
Termination Date	Not specified	Not specified	31 December 2030	31 December 2030	31 December 2029	The earlier of 31 December 2020 or establishment of a national scheme.[5]
Review date	Ongoing review process through the Emissions Reduction Assurance Committee. Periodic review by the Climate Change Authority every three years (next due 2017).	As for the CFI.	Until 2015, the Climate Change Authority was required to review the operation of the RET every 2 years (the last review being completed in 2014).[6] From 2015, the requirement for 2-yearly reviews will be removed.	The STC was included in the 2014 review. As for the LRET, from 2015 the requirement for 2-yearly reviews is to be removed.	A statutory review was completed in 2011. Other reviews have been undertaken at the discretion of the Minister. A consultation on future targets commenced in April 2015.[7]	Every 5 years from 1 July 2009. A statutory review is due by the end of June 2015. Consultation commenced in April 2015 and includes broader proposals to amend the ESS.

[5] The *Review of the NSW Energy Savings Scheme* includes a proposal to extend the scheme to 2025.
[6] The Commonwealth Government also commissioned a review in 2014. The results were published by the Commonwealth as *Renewable Energy Target Scheme, Report of the Expert Panel*, August 2014.
[7] State of Victoria, *Setting future Victorian Energy Efficiency Targets: Consultation paper*, April 2015.

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Activities creating certificates	Eligible offsets projects. Offsets projects are either sequestration offsets projects or emissions avoidance offsets projects. To be eligible, the project must, among other things, be covered by a Methodology Determination.	CFI projects earning KACCUs. If prescribed, projects under other schemes where the credits qualify as ECCUs.	Generation of electricity from accredited renewable energy power stations above the baseline.	Generation of electricity from eligible installations of solar water heaters, including air source heat pump water heaters and small-scale solar photovoltaic panels, wind and hydro systems.	Prescribed activities include modifying, replacing, purchasing or installing equipment which results in greater efficiency, reduced consumption of electricity and gas or a reduction of GHG emissions.	Recognised Energy Savings Activities (**RESAs**) must reduce electricity consumption compared to a baseline and includes installation of high efficiency products.
Calculation of entitlement	1 ACCU = 1 tonne of carbon dioxide equivalent (tCO_2-e) abated or sequestered. The number of ACCUs issued for sequestration projects is reduced by the applicable risk reversal buffer and permanence period discount number.	Payments from the ERF are made under Carbon Abatement Contracts. The CER offers these contracts through tender, auctions or other procurement processes.	1 MWh = 1 LGC	1 MWh = 1 STC The MWh calculation represents either electricity generated or electricity offset, depending on the technology.	1 tCO_2-e abated = 1 VEEC	1 tCO_2-e abated = 1 ESC
Certificate creators	Project proponent for the project.	N/A	The nominated person for an accredited renewable energy power station.	Registered owners of solar water heaters and small generating units. The owner may assign the right to create certificates to another person.	Accredited persons in respect of prescribed activities.	Accredited certificate providers in respect of RESAs.
Registration fee	The CFI Act allows for fees to be prescribed for project registration and applications for certificates.	N/A	If equal or less than 250 certificates — there is no registration fee. For the 251st certificate, $20.08. For 252 or more certificates — 8 cents per certificate.	If equal or less than 250 certificates — there is no registration fee. For the 251st certificate, $117.97. For 252 or more certificates —47 cents per certificate.	$1.00 per certificate.	$0.70 per certificate.

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Timing restrictions for certificates	Timing restrictions apply to the issue of ACCUs depending on the type of project. Once created, ACCUs do not expire.	N/A	LGCs must be created by the end of the year after the year of referable generation or any later date allowed by the CER.	STCs must be created by the end of the year after the year of referable generation or any later date allowed by the CER.	VEECs must be created not later than 6 months after the end of the year in which the prescribed activity was undertaken. VEECs expire after 6 years.	ESCs must be created and registered within 6 months of the end of the calendar year in which the activity occurred.
Geographical restrictions on certificate creation	The project must be in Australia. Areas can be excluded by regulation.	N/A	The generation of electricity must be in Australia.	The generation of electricity must be in Australia.	Generally Victoria, but the Act allows for activities to be prescribed that take place in another State or Territory with a similar approved energy efficiency scheme.	Generally NSW, but the Act allows for activities in another State or Territory with an approved corresponding scheme.
Entities with acquittal obligations	Acquittal obligations are not generally applicable. Project proponents may be subject to relinquishment obligations in some circumstances, with penalties applicable for failure to comply.	Participation in the ERF is voluntary. The seller under a Carbon Abatement Contract has a contractual commitment to deliver the contract quantity.	Each 'liable entity': a person (such as an electricity retailer) who makes a 'relevant acquisition', including wholesale acquisitions from AEMO or the IMO[8] and notional wholesale acquisitions where the generator sells directly to the end user and is treated as if it had bought wholesale.	As for the LRET.	Each 'relevant entity': electricity or gas retailers who supply to 5000 or more customers in Victoria or who acquire for resale 30,000 MWh of electricity or 350,000 GJ of gas.	Each 'scheme participant': NSW electricity retail suppliers and electricity generators which directly supply electricity to customers and market customers taking supply directly from the National Electricity Market.
Certificate surrender fee	N/A	Nil.	8 cents per certificate.	8 cents per certificate.	Nil	Nil

[8] AEMO is the operator of the National Electricity Market. The IMO is the operator of the South West Interconnected System (SWIS) in WA.

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Calculation of surrender obligation, including exemptions	N/A	Determine by the Carbon Abatement Contract.	Liability is calculated as a percentage of the liable entity's relevant acquisitions net of the value of exemption certificates held by it. Exemption certificates are issued by the CER for emissions-intensive, trade exposed (**EITE**) activities and can then be transferred to a liable entity.	As for the LRET, but a different percentage is applied to determine liability.	Liability is determined by multiplying the total value of the relevant entity's scheme acquisitions (electricity or gas) by the applicable greenhouse gas reduction rate factor. A new factor is published each year for each of electricity and gas. Scheme acquisitions are calculated net of supply to certain large customers who up until 2014 were subject to a separate energy efficiency scheme.	Liability is determined by multiplying the scheme target for the year by the scheme participant's liable acquisitions, then multiplying by an energy conversion factor for the year. Liable acquisitions are calculated net of quantities acquired for use in emissions intensive and trade exposed industries to the extent an exemption has been granted by the Minister.
Reporting, surrender and shortfall payment process	Reporting is required before ACCUs will be issued. The reporting period is project-specific, subject to rules in the CFI Act.	Under the Carbon Abatement Contract used for auctions in 2015, the CER may claim damages for delivery default.	Annual process: Lodge energy acquisition statement and surrender LGCs equal to the liable quantity or pay the large-scale generation shortfall charge for any shortfall by 14 February (for the previous year). LGCs not surrendered under the LRET are eligible to be used in the GreenPower scheme. A link to the GreenPower scheme is here.	Quarterly process: Calculation of the small-scale technology shortfall for each quarter, with the shortfall for each quarter giving the annual total. Annual process: Annual report and payment of the shortfall charge by 14 February (for the previous year).	Annual process: Lodge energy acquisition statement showing relevant acquisitions and VEECs surrendered, by 30 April (for the previous year). The ESC issues a statement for payment of any shortfall charge.	Annual process: Lodge an Annual Energy Savings Statement showing liability, ESCs surrendered, any shortfall and any penalty payable, generally by 30 April (for the previous year). The payment date for any penalty is 30 June.
Carry forward	N/A	The form of Carbon Abatement Contract used in February 2015 includes some flexibility to carry forward or reschedule delivery obligations.	Up to 10% of liability can be carried forward.	No carry forward of liability.	No carry forward of liability.	Up to 10% carry forward. This figure can be changed by regulation.

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Shortfall charge	A penalty is payable for failure to comply with a relinquishment obligation equal to the greater of $20 per unit or 200% of the market value (per unit). Late payment of the penalty incurs further interest charges.	The February 2015 version of the Carbon Abatement Contract provides for the buyer's market damages to be calculated by reference to the difference between the contract price and a market price as determined using the method in the contract, but subject to a cap.	$65.00 per LGC not surrendered.	$65.00 per STC not surrendered.	$44.54 per VEEC not surrendered for 2014, escalated by CPI.	$26.54 per ESC not surrendered for 2015, escalated by CPI each year.
Registry statistics and price information	The Q3 2014/2015 report issued by the CER indicates in excess of 14 million ACCUs issued since the CFI commenced on 8 December 2011. Prices for ACCUs prior to the 2015 auctions may reflect the fixed price under the carbon pricing mechanism (now repealed).	The CER conducted its first auction in April 2015 and awarded 107 Carbon Abatement Contracts for a total of 47,330,140 tonnes of abatement. The CER published the average market price from the auction, being $13.95 per ECCU.	15.5 million LGCs were created in 2013-14. The CER estimates a volume weighted average market price each year (for the following year). The estimate published for 2015 was $29.38.	19.5 million SGCs were created in 2013-14. The CER manages a clearing house for STCs that in effect sets a price cap of $40 per STC. According to the CER, to 1 January 2015, most trades have taken place outside the clearing house at market prices below that cap.[9]	6.2 million VEECs were created in 2013. The 2015 consultation paper indicates that an analysis of the 2014 spot market produced a long run average certificate price of around $18. Average marginal certificate prices modelled for the consultation range from $26 to $39, depending on the option chosen.[10]	4.1 million ESCs created in 2013. The 2015 review consultation paper indicates the weighted average price for ESCs from 2009 to 2013 was $24.02.[11]

For further information, please contact:
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[9] Clean Energy Regulator, *Renewable Energy Target 2014 Administrative Report*, April 2015, page 29.
[10] *Setting future Victorian Energy Efficiency Targets: Consultation Paper*, page 8.
[11] *Review of the NSW Energy Savings Scheme, Overview,* page 5.