

ATSE SUBMISSION TO THE INDEPENDENT REVIEW OF AUSTRALIAN CARBON CREDIT UNITS

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The Australian Academy of Technological Sciences and Engineering (ATSE) is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together Australia's leading thinkers in applied science, technology and engineering, ATSE provides impartial, practical and evidence-based advice on how to achieve sustainable solutions and advance prosperity.

ATSE welcomes the opportunity to provide a submission to the independent review of Australian Carbon Credit Units (ACCUs). We make the following recommendations to strengthen the governance and integrity of the framework:

Recommendation 1: Separate the verification and auditing of awarded ACCUs into different agencies.

Recommendation 2: Publicly release performance data from ACCU recipients to enable independent verification.

Recommendation 3: The ERF must be aligned with international standards to ensure that it remains appropriate and fit for purpose for future advances in emissions controls.

Strengthening the governance of the ERF

The integrity of ACCUs is of critical relevance internationally as well as to stakeholders in the ERF. The ACCUs generated are vitally important to achieving the nation's 2030 and 2050 net carbon emissions targets and therefore their integrity and veracity are of vital importance to Australia's international reputation and to meeting its Paris Agreement Commitments. As a major exporter and trader of agricultural products and food, Australia's access to international markets will increasingly become dependent on credible low or net zero carbon emissions credentials of exports and therefore the integrity of ACCUs.

The original Carbon Farming Initiative (CFI) Act (2011) has rigorous requirements to ensure the integrity of methods and processes to ensure registration and compliance of projects with the rules and accounting set out in methods. No legislative change is needed for the Minister and the Clean Energy Regulator to use the current Act to ensure integrity of ACCUs.

However, since the Emissions Reduction Fund (ERF) was legislated in 2014, the governance, methodology development, compliance with method requirements and issuance of ACCUs under the scheme have not been consistently applied. Additionality is a key consideration for the awarding of carbon credits: they should represent additional reductions of greenhouse gas emissions (that would not have occurred in the absence of an incentive to create a carbon credit). Standards of additionality, measurement and permanence of emissions abatement have not always been rigorously applied to ensure ACCUs are consistent with ERF and international accounting requirements (Macintosh, Butler, Evans, Ansell & Waschka, 2022).

Many methods for generating ACCUs are based on new science and technologies. The Emission Reduction Assurance Committee should include sufficient scientific expertise and experience to adequately assess proposed new methods and undertake periodic review of methods.

The Clean Energy Regulator's responsibilities for promoting the ERF to generate ACCUs, approving the methodologies to generate ACCUs, approving projects, auditing projects, and awarding ACCUs are inherently conflicted. Separating responsibility for the verification and auditing of ACCUs awarded and making performance data from projects available for independent verification and auditing of ACCUs, would improve confidence in the integrity of ACCUs.

Recommendation 1: Separate the verification and auditing of awarded ACCUs into different agencies.

Embedding transparency in the ERF

Presently, there is a lack of transparency from the Clean Energy Regulator on the methods and allocations of ACCUs. Queries submitted by the authors to the regulator on particular allocated ACCUs have been diverted or the information has been withheld for privacy reasons. However, this transparency is essential to understanding the methods and therefore the integrity of ACCUs. It is imperative that every allocation of credits can be validated and scrutinised. This is evident in two case studies:

- Soil carbon credits: 1,904 ACCUs awarded for a soil carbon project equating to almost four times the amount of carbon sequestered as compared to estimates of sequestration in Australian conditions, with no publicly available accounting for this discrepancy (White, 2022)..
- Coles carbon neutral meat: Coles purchased ACCUs from a Human Induced Regeneration project. It was later reported in the media that the purchased ACCUs were unfounded, with reputational damage to Coles (Packham, 2022).

It should not be the responsibility of the purchaser to validate the integrity of ACCUs: this responsibility sits with the regulator. There must be more transparency on the origin of ACCUs to enable purchasers and the public to trust the veracity of their ACCUs.

Recommendation 2: Publicly release performance data from ACCU recipients to enable independent verification.

Limitations of methods to meet integrity standards

The ERF is intended to reduce greenhouse gas emissions. Within this framework, the premise of ACCUs is that they should represent additional abatement or sequestration of carbon that would not have otherwise occurred in the market. Methodologies that currently have the potential to generate ACCUs of questionable veracity include:

Soil Carbon: Soil carbon sequestration draws carbon out of the air (via plants) and stores it in soil. A limitation in soil carbon methodology is that it does not factor out rainfall, despite rainfall having the strongest correlation of any variable to the annual change in soil carbon. It can be anticipated that this spring, farmers with soil carbon projects can be awarded ACCUs for soil carbon resulting from three years of the La Nina weather pattern, with minimal additional carbon stored. The resultant ACCUs therefore would not represent genuine negative carbon emissions.

Avoided deforestation: Avoided deforestation projects awards ACCUs to farmers who leave native forest on their lands, where this forest would otherwise be converted to crops or grassland. Most farmers in western New South Wales awarded ACCUs under this method did not have intentions to clear their trees. Issuing ACCUs for avoided deforestation, when no deforestation was planned, did not represent a genuine abatement or sequestration of carbon.

Human Induced Regeneration: Human Induced Regeneration activities include farmers' exclusion of livestock from native forest, reducing livestock grazing, managing feral animals, and managing non-native plants. ACCUs generated through this method may not represent any genuine change in carbon emissions if they were activities that farmers were planning regardless.

Herd management: Herd management methods credit livestock producers for delivering their livestock to market earlier, thus producing less methane over their lifetime. However, as this is the primary purpose of livestock production, the reduction is not additional.

New methods will be developed as science and technology matures. To ensure the continuing integrity of ACCUs, any new methods must be subject to transparency of data and projects to allow ongoing independent verification.

A notable limitation is that a typical offset method may generate less than 1% of a family farm turnover. For example, the average dairy farm could generate \$1000 to \$2000 per year from offsets, and an average grain farmer less than \$1000 per year. This would not change even if smaller farms were to work through an aggregator. Meanwhile, large corporate enterprises with large land holdings in arid areas can generate significant offsets valuing hundreds of thousands, or even millions, of dollars. In its present form, the ERF is only an incentive for large farming operations. This can have unintended consequences. For example, under reforestation projects, large corporations have purchased land for de-stocking or conversion to tree planting. Land use change is not an intended outcome for the ERF. Conversion to tree planting is not the best use of more valuable agricultural land with considerable food production potential. In other cases, locking up land is not problematic but can result in poor land management in regards to feral animals and weeds.

Australia's food and fibre production capacity must be considered and adequately protected – the scheme should legislate that the risks of projects are shared by the aggregators and traders with the landholders. Under current arrangements, the landholders are left with all the climate and market risks.

The independent review panel should consider these methodological issues and potential for unintended consequences.

Aligning the ACCUs to international standards

The integrity of ACCUs is central to restoring Australia's international reputation for credible action on climate change. Genuine and trusted ACCUs are required for international trade, both of agricultural products and of carbon credits. The agricultural export industries that dominate the land-based sector urgently require that ACCUs have integrity to back the net zero carbon emissions status of their produce.

To ensure the credentials of ACCUs and Australian agricultural products in international markets, ACCUs should be held to the same standards as the EU Emissions Trading System (ETS), an international carbon market. The offsets integrity standards on their own align well with international standards. However, both permanence and additionality have been compromised in the ERF and thus it is doubtful if many of the ACCUs currently issued meet international standards.

The ERF should aim to mirror actions taken for the Australian Greenhouse Gas Inventory, which provides quarterly updates on Australia's national greenhouse gas emissions. The Australian Greenhouse Gas Inventory conforms to international accounting standards and has retained its integrity because it has adhered to the international standards required under the Rio Convention and IPCC Guidelines.

Recommendation 3: The ERF must be aligned with international standards to ensure that it remains appropriate and fit for purpose for future advances in emissions controls.

Relationship of the ERF to the Climate Active certification

Climate Active is developing a voluntary insetting framework – where companies offset their own carbon emissions through projects within their value chain. This insetting framework will be far more attractive and advantageous to farmers facing supply chain emission reduction targets. The Net Zero Australia project showed clearly that the land sector will need to inset all their own offsets to achieve net zero by 2050, thus the notion of the land sector selling sequestration offsets should be seriously questioned. Given both national and international trends, it is anticipated that by 2030 when supply chain targets start requiring lower emissions production, the emphasis on carbon offsets will have switched to carbon insets. Emphasis may also shift to biodiversity credits (and/or water use efficiency credits) as the main focus, with carbon being embedded in these.

References

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