The unsafe Safeguard Mechanism: How carbon credits could blow up Australia's main climate policy

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A time bomb is ticking inside the Albanese government's climate policy. When it explodes, Australia will fall short of its climate targets and leave a gaggle of investors shirtless.

The problem arises from a poorly understood aspect of the net zero transition: carbon credits or offsets.

The centerpiece of Australia's climate policy is a carbon pricing scheme known as the Safeguard Mechanism. It places caps on the emissions of around 220 of the country's largest mining, gas and industrial facilities, based on the emissions intensity of their operations. Every year through to 2030 these caps will decline by between 1% and nearly 5%.

The facilities have two ways to keep their emissions within the caps. They can reduce them, or they can buy and surrender one of two forms of credits, the most significant being Australian carbon credit units (ACCUs) issued under Australia's carbon offset scheme.

How the offset scheme works

Under the scheme, landholders, energy users and other emitters can register projects that avoid emissions or sequester carbon dioxide in trees, soils or geological formations. Those who do so in line with specified rules receive ACCUs, a tradeable financial instrument.
Each carbon credit unit is supposed to represent additional and permanent abatement of greenhouse gas emissions equivalent to one metric ton of CO₂.

Reducing the emissions of facilities covered by the Safeguard Mechanism is likely to be difficult and expensive, at least in the short term, as most are in the oil and gas, coal and other mining sectors. For some, the only viable way to significantly reduce emissions is to stop production.

Carbon credits enable these facilities to meet their obligations by effectively paying someone else who can cut emissions more cheaply. In theory, allowing facilities with high abatement costs to use offsets lowers the economy-wide cost of reducing greenhouse gases, without sacrificing climate outcomes.

But for the scheme to work, the ACCUs must have "integrity": they must represent an actual reduction in emissions that would not have otherwise occurred. And to the extent the reduction involves sequestration of CO₂ in a sink (such as a forest), it must stay in the sink permanently.

Since the offset scheme started in 2011, 137 million ACCUs have been issued. Three-quarters of these have come from three project types: avoided deforestation in western New South Wales, combustion of methane from landfills (largely to create electricity), and human-induced regeneration of native forests in arid areas of inland Australia.

Our research shows that most of these projects have low integrity. People are getting carbon credits for not clearing forests that were never going to be cleared anyway, for growing trees that already exist, for growing forests in places that will never sustain them, and for operating electricity generators at landfills that would have operated anyway.
Putting net zero in peril

These projects do serious damage to Australia's emissions reduction efforts. They enable Safeguard Mechanism facilities to increase their emissions—and governments to approve new fossil fuel projects—on the grounds that carbon credits will provide offsetting reductions elsewhere. But credits with no integrity produce no offsetting reductions.

The flood of low-integrity credits in the ACCU market also artificially lowers the carbon price faced by the Safeguard Mechanism facilities. The lower price causes the facility operators to rely more heavily on offsets and delay onsite emission reduction efforts. It also warps the offset market by making high-integrity offset projects unviable—a form of Gresham's Law, where bad projects drive out the good.

The situation with Australia's offset scheme is not unique. Research on other offset schemes has found similar integrity problems. That's because generating high-integrity credits is difficult.

Scheme regulators have a challenging job. Along with having to measure emissions and removals from dispersed and often naturally variable sources and carbon sinks, they must try to screen out phony emissions reductions offered by project proponents.

The latter have both a huge information advantage over regulators and strong incentives to claim credits for doing what they were already doing or planning to do anyway—such as retaining forests they never intended to clear.

But regulators also have an incentive to increase the supply of credits, even if it risks reducing integrity. This is because low credit supply is taken as a sign of scheme failure.
Tight integrity standards reduce credit supply and push up credit prices, which in turn increases compliance costs for polluters and destabilizes political support for carbon pricing schemes. Liquid markets built on a healthy supply of credits (regardless of quality) make regulators look good and keep emitters and politicians happy.

The failings of the Chubb Review

In 2022, the Albanese government commissioned former chief scientist Ian Chubb to lead a review of the ACCU scheme. The review's report was confused and contradictory. It dismissed concerns about the scheme's integrity, even those expressed by developers of offset projects.

Despite not analyzing the performance of a single project, the review confidently concluded that the level of abatement credited under the scheme had not been overstated. Its evidence for this was limited to one sentence: "While the Panel was provided with some evidence supporting that position (that integrity problems existed), it was also provided with evidence to the contrary." It gave no details of what that contrary evidence was.

The panel then recommended substantial changes, including an end to the untenable situation in which the Clean Energy Regulator, the statutory authority charged with implementing legislation to reduce emissions, was responsible for making and administering the scheme rules and then buying most of the credits. The panel also proposed repeal of the avoided deforestation offset.

These changes, while welcome, were carefully designed to leave existing projects untouched. For example, repeal of the avoided deforestation method will not affect 63 existing projects, which will generate credits for years to come.
Conveniently, this will ensure that the supply of ACCUs and their price remain in a politically acceptable range until at least 2030.

**What the government must do**

Truly fixing the scheme requires the government to stop crediting low-integrity projects and methods. The credit tap must be turned off for all avoided deforestation projects and most human-induced regeneration projects, and crediting arrangements for landfill projects must be radically improved.

The government's political problem is that it needs to keep the carbon price within a palatable range for Safeguard Mechanism facilities. If it stopped crediting low-integrity projects, prices would skyrocket and not enough high-integrity credits exist to meet demand.

The government could solve the problem by introducing a standard cap price into the Safeguard Mechanism. Instead of surrendering credits, facilities could pay, for instance, A$50 per ton on excess emissions. But that would open the government to claims that the scheme is just another carbon tax.

Fixing these flaws is challenging. But by refusing to face the problems head-on, the government has sabotaged its own climate policy. Its failure could also permanently stain the reputation of offsets.

Like Robodebt, the scheme is badly designed, unethical, and destined to fail, albeit for different reasons. We can only hope that when it unravels, it doesn't do Australia's decarbonization efforts permanent harm.

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