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CREDIT WHERE CREDIT IS DUE: OUTER SPACE SOLUTIONS FOR CARBON MARKET CHALLENGES

Abstract

Under the existing Australian carbon credit scheme, organisations are allocated carbon credits for preventing future emissions or removing greenhouse gases from the atmosphere. These carbon credits are then able to be traded as financial products or used to offset further emissions. By complementing the scheme with a Safeguard Mechanism requiring the country's biggest polluters to cut emissions by nearly five percent a year, Australia aims to fulfil its net-zero emissions target by 2050 as called for in the Paris Agreement. However, over the past year, the effectiveness of the Australian carbon credit scheme has been called into question with allegations of carbon abatement levels being overstated. The success of market-based solutions to climate change largely depends on the integrity and transparency of the administered scheme.

This article proposes that several key challenges faced by the Australian carbon market are able to be overcome through the use of space technologies. Daily Earth observation imagery may be applied to assure the quality of carbon units issued by ensuring real and permanent sequestration is occurring. This, in turn, will increase investor confidence in the Australian carbon market and bring Australia closer to achieving its emissions targets. Furthermore, because high-quality Earth observation imagery delivers unique data, its use will likely broaden the range of sequestration projects under which carbon credits can be claimed and could be useful in other emerging Australian environmental markets. Finally, space sector engagement in the carbon market will improve public perception of the growing Australian space industry and justify government investment, while potentially also aiding space start-ups in breaking barriers to market entry. Although delivered in an Australia-specific context, the principles addressed will be applicable internationally as the global carbon market size continues to grow.