



AUSTRALIAN  
ALUMINIUM  
COUNCIL LTD

Level 1,  
18 National Circuit  
Barton ACT 2600  
Ph: 02 6267 1800  
[info@aluminium.org.au](mailto:info@aluminium.org.au)

Department of Climate Change, Energy, the Environment and Water  
Via <https://app.converlens.com/climate-au/aus-guarantee-of-origin-scheme-consultations-on-design>  
24 October 2023

Dear Minister

***Re: Australia's Guarantee of Origin Scheme: consultation on scheme design, emissions accounting and renewable electricity certification***

The Australian Aluminium Council (the Council) represents Australia's bauxite mining, alumina refining, aluminium smelting and downstream processing industries. The aluminium industry has been operating in Australia since 1955, and over the decades has been a significant contributor to the nation's economy. The industry includes six large bauxite mines plus several smaller mines which collectively produce over 100 Mt per annum making Australia the world's largest producer of bauxite. Australia is the world's largest exporter of alumina with six alumina refineries producing around 21 Mt per annum of alumina. Australia is the seventh largest producer of aluminium, with four aluminium smelters and additional downstream processing industries including more than 20 extrusion presses.

The Council welcomes the opportunity to provide comment and feedback to the consultation on Australia's Guarantee of Origin Scheme: consultation on scheme design, emissions accounting and renewable electricity certification. The Council notes that this consultation is in four parts Guarantee of Origin (GO) Scheme Design paper [GO Paper]; Renewable Electricity Guarantee of Origin (REGO) approach paper [REGO Paper]; Guarantee of Origin Emissions Accounting Approach paper [Accounting Paper] and Product expansion and prioritisation survey. However, as there is some overlapping context in the Council's position, a single submission has been prepared for the GO Paper, REGO Paper and Prioritisation Survey.

The Council has responded to questions where relevant and notes that as each aluminium smelter, alumina refinery and bauxite mine has unique circumstances and contractual arrangements, the Council will present high level comments on the Papers. The Council has responded to selected consultation questions and also refers the Department to Members submissions, where these exist, for further details.

***Renewable Energy Certification***

The Council and its Members primary concerns with the GO / REGO is the treatment of electricity and how that flows through to manufactured goods such as aluminium and with future electrification, alumina, and the utility of the GO/REGO scheme in accounting for real reductions in scope 1 and 2 emissions from their operations.

Within the East Coast National Electricity Market (NEM) the Australian aluminium industry has four aluminium smelters and two alumina refineries and uses more than 10% of the electricity consumed in the NEM. The four smelters collectively use about 2600 MW of electricity, which is more than the states of South

Australia and Tasmania combined. Within the South-West Interconnected System (SWIS), there are four alumina refineries and three grid connected bauxite mines. Currently for the facilities in the SWIS most of the electricity demand is met by onsite Cogeneration. However, if there was to be an increased supply of competitively priced low or zero emissions electricity, and subject to technological advances, there is the potential to materially increase the electrification of alumina refineries in both the NEM and SWIS electricity markets. The Australian Renewable Energy Agency (ARENA) in consultation with Alcoa, Rio Tinto and South32 published a Roadmap for Decarbonising Australian Alumina<sup>i</sup> which articulates the scale of this potential

### **GO Paper and Scheme Design Survey**

At this stage, Members of the Council would be most likely to participate in a GO Scheme as a future consumer of hydrogen<sup>ii</sup> and may use GO certificates to evidence consumption claims. In this context, it will be important that the single registered participant registration process is not overly burdensome for a consumer.

The Council believes that a more comprehensive definition of ‘reasonable physical link’ is required in relation to the blending of certified and non-certified products.

The Council notes that there should be considerations for flexibility in the scheme to align with international schemes, for example the European Carbon Border Adjustment Mechanism (CBAM), which typically uses location based emission factors.

Section 3.1.3 of the Accounting Paper outlines that although the GO scheme will initially utilise a national Residual mix factor (RMF) rather than a state or territory, or source specific RMF, but notes that this may be revised as the GO scheme expands to include optional time and location matching. The Council supports the development of state based RMFs with mandatory location matching. This would provide consistency with location based factors since this will help the sites show comparable dual electricity reporting. Due to the large differences in state by state generation, a single national RMF leads to high or low electricity reporting for some states that are unrepresentative and shows a distorted view when comparing emissions side by side between location based and market based methods. It is essential that RMFs are provided on the same basis and boundary as the location based factors for the quality and accuracy of reporting.

The Council also supports the inclusion of data which would allow for temporal matching, as this incentivises other activities for grid decarbonisation such as recharging electric vehicles during the day, demand management and storage. Temporal matching will be most useful after REGOs for electricity from energy storage e.g., batteries have been established. However, the Council supports consideration of its inclusion on certificates from the offset for consistency with product GOs and to avoid future significant changes in the scheme. Consideration should be given to grandfathering any existing commercial contracts as temporal matching is introduced.

The Council believes the proposed Annual Reconciliation Check (ARC) and updating of any corrections to be well balanced and reflect consistency with other renewable electricity market approaches.

The Council believes the sharing of information on the GO Registry is appropriate as long as it remains fit for purpose and do not compromise commercially sensitive information and breach privacy laws.

### **REGO Paper and Certification Survey**

The Council and its Members, like many electricity consumers are entering into future arrangements with regard to their electricity, including in the period beyond 2030. As such, the Council recognises the need to provide policy certainty around the structure for the certification of renewable energy beyond the timeline of the Renewable Energy Target (RET). In this context also, the Council recognises the design of REGO needs to consider until 2050 in mind but also that there will need to be sufficient certainty balanced with flexibility to respond to market and policy developments. The current unknowns, including data matching, ongoing restrictions on the use of below baseline certificates and treatment of distributed energy resources and

virtual power plants does not deliver that certainty, which limits the value of the development of this scheme now.

While the REGO Paper somewhat defines that the generation boundary is “all renewable electricity generation in Australia” including “Australia’s Exclusive Economic Zone”, the Council believes the market boundary for both generation and surrender should be clearly articulated and limited to Australia.

*Power stations that have Renewable Energy Target baselines are proposed to be eligible to create REGO certificates for ‘below baseline’ generation.*

The Council notes the recognition of ‘below-baseline’ generation (generation from capacity which existed prior to 1997), small scale and offshore renewable generation accounts for the full range of generations within Australia. The RET is a specific scheme which was aimed at providing additional funding for additional renewable generation, over and above that which existed prior to 2001. The exclusion of below-baseline generation, predominantly hydropower generation from the Snowy Scheme and Tasmania, is inconsistent with international experience where there is no distinction based on the age of hydropower generation assets.

What is considered below baseline for the REGO scheme needs consideration in light of the objectives of the REGO scheme. If the objective is to account for all renewable electricity, then all renewable energy regardless of when the facility was commissioned should be included. For this not to just create a new revenue stream for electricity generators, temporal and spatial matching should be available on certificates and the costs for the REGOs should only be administrative. Without a requirement for data matching, this approach may hamper appetite for contracting for new generation/storage. If the objective is to incentivise new renewable electricity generation capacity, the definition of “below baseline” should be reconsidered. In this case, facilities would only be able to generate REGOs for a set period e.g., 10 years.

The Paper mentions that in the absence of below baseline REGOs, I-RECs are likely to be created and result in double counting. Addressing this issue needs to be balanced with not creating additional issues. The revenue from certificate creation could encourage a generator to continue to feed into the grid when power prices are negative, adding to network instability.

*Power stations, including small-scale system owners, are proposed to be able to assign the right to create REGO certificates to another person or entity by written notice and in accordance with regulations. The regulations are proposed to include requirements for REGO scheme participants who have been assigned the right to create REGO certificates on behalf of another person, such as information that must be collected and maintained, metering arrangements, and certificate creation processes.*

If the objective of the scheme is to account for all renewable generation, then small scale systems should be included. For practicality, it may make sense to be able to delegate another person or entity, such as their electricity retailer, the right to create the certificates. As previously articulated, therefore the costs for the REGOs should only be administrative.

*Electricity storage is proposed to be eligible to create REGO certificates where it can be demonstrated that renewable electricity has been stored, with detailed arrangements to be outlined in regulations. The approach paper provides details of a proposed method for electricity storage facilities to prove they have stored renewable electricity in Section 1.3.*

For this not to just add to the cost of storage, location and time matching needs to be mandatory rather than optional. This will create the price differential to support storage.

Arguments have been made that allowing the use of certificates created in an unconnected grid supports investment in the lowest cost of generation however, without creating the demand for this generation it could lead to network issues. For example, it may be cheaper to install a solar farm in Western Australia than Tasmania, but it is broadly recognised that the storage options in Western Australia are constrained due to the limited viability for pumped hydro. Incentivising supply over demand is problematic.

While it is broadly acknowledged that changing consumers behaviour is difficult, many early adopters of roof-top solar varied their usage to take advantage of the high feed-in prices compared to the off-peak consumption rates.

*The REGO scheme legislation is proposed to include a provision allowing regulations to be made that could limit the surrender of REGO certificates for 'below baseline' generation prior to 2030.*

See discussion on below baseline generation.

*Below-baseline REGO certificates are proposed to be clearly differentiated from other certificates. Stakeholder views are invited on how this should be implemented.*

The Council recognises that other stakeholders are concerned about the potential impact of the recognition of below baseline generation investment signals.

The Department is considering restricting use of below-baseline REGO certificates to EITE activities and Product GO creation. Data matching would be another way to reduce the impact of below-baseline certificates. Since REGO certificates will not be introduced until 2025, any further measures announced by the Government or implemented before then could be factored into decision-making around restrictions on surrender and the precise parameters imposed. However, in the context that Members and other energy users are currently entering into post 2030 contracts there is value in increased certainty now.

As the definition of below baseline may be different depending on the purpose, the Council believes that inclusion of the year the that the relevant power station was commissioned on the certificate is sufficient to identify certificates from below baseline generation.

*REGO certificates are proposed to include a time stamp only where 1 MWh is generated within an hour. A procedure for time stamping certificates will be outlined in regulations.*

This approach is supported for data accuracy. However, where participant has been given the authority to create certificates from multiple smaller generators the supply should be able to be aggregated to create a certificate.

*REGO certificates are not proposed to include any data on emissions intensity when the scheme commences. However, this data could be added to REGO certificates in the future subject to rigorous and accurate data being available for all generation nation-wide.*

As REGOs are not offsets, emissions intensity of offset generation should not be reported. As discussed in the Paper, this would require many assumptions. However, the total emission intensity of the renewable electricity should be included on the certificate. How this should be calculated would need consideration, as scope 2 emissions associated with renewable generation normally occur when generation is not occurring. The intensity could perhaps be averaged over the certificate creation period (quarterly or annual).

#### **Product expansion and prioritisation survey**

The Council recognises that while the GO scheme will focus on hydrogen, hydrogen energy carriers (e.g. ammonia) and renewable electricity over time it may be expanded over time to include metals such as aluminium (i.e., 'green' aluminium). A well-designed product GO scheme will provide consumers with transparent and robust information regarding 'green' claims and other credentials of that product. The Council supports the development of a single GO scheme with a single set of rules. For this reason, Renewable Gas Guarantees of Origin (RGGOs) should be brought under the GO scheme as soon as possible to reduce the risk of duplication/overlap.

Aluminium<sup>iii</sup> is one of the commodities most widely used in the global transition to a clean energy future. It is also recognised for its importance to both economic development and low emissions transition. It is also Australia's top manufacturing export. The industry directly employs more than 19,000 people, including 6,600 full time equivalent contractors. It also indirectly supports around 60,000 families predominantly in

regional Australia. The aluminium industry has been operating in Australia since 1955, and over the decades has been a significant contributor to the nation's economy

It is important that hydrogen GO schemes are internationally consistent to facilitate efficient international trade and enables informed choice for customers of both hydrogen and other Australian exports, including alumina and aluminium. Within the industry, the Aluminium Stewardship Initiative (ASI) provides a global certification scheme which includes not just carbon content, but the full range of Environmental, Social, and Governance (ESG) issues for all parts of the value chain<sup>1</sup>. Many of Australia's mines, refineries, smelters and chains of custody supply chains are certified. The global aluminium industry is also differentiating products on the basis of the carbon credentials<sup>2</sup> and uses blockchain technology to provide provenance traceability and transparency<sup>3</sup>.

In this context, the Council would support the prioritisation of specific methodologies for both alumina and aluminium. However, noting that Tier 1 methodologies are intended to commence development in the next 12 months, the Council and its Members would like to resolve some outstanding issues related to the development of the REGO and NGERs Scope 2<sup>4</sup> methodologies before undertaking this work. Therefore, it is unlikely to be appropriate to commence in the next 12 months.

The Council supports broadly aligning the calculation methodology boundary with an internationally recognised standard. The well-to-user system boundary is suitable for informing energy users as to the value chain emissions of the product GO. However, while this may be appropriate for hydrogen and its carriers, it is not appropriate for renewable energy or other materials such as aluminium. For example, the ASI outlines a Mine to Metal boundary.

### **Conclusion**

It is important that GO schemes are internationally consistent to facilitate efficient international trade and enables informed choice for customers of Australian exports, including ultimately alumina and aluminium. The Council seeks a national climate and energy policy framework which is transparent, stable and predictable, while maintaining the economic health of the nation including vital import and export competing industries. The Council is happy to provide further information on any of the issues raised in this submission and looks forward to continuing to work with the Government on the development of climate policy.

Kind regards,



Marghanita Johnson  
Chief Executive Officer  
Australian Aluminium Council  
M +61 (0)466 224 636  
[marghanita.johnson@aluminium.org.au](mailto:marghanita.johnson@aluminium.org.au)

---

<sup>i</sup> <https://arena.gov.au/assets/2022/11/roadmap-for-decarbonising-australian-alumina-refining-report.pdf>

<sup>ii</sup> <https://arena.gov.au/projects/yarwun-hydrogen-calcination-pilot-demonstration-program/>

<sup>iii</sup> <https://www.worldbank.org/en/topic/extractiveindustries/brief/climate-smart-mining-minerals-for-climate-action>

---

<sup>1</sup> <https://aluminium-stewardship.org/asi-standards/performance-standard>

<sup>2</sup> For example: <https://www.riotinto.com/-/media/Content/Documents/Products/Aluminium/RT-Aluminium-RenewAl-fact-sheet.pdf?rev=f89b8d105e15400fa053d58a364c3be8>,  
<https://www.alcoa.com/sustainability/en/pdf/EcoSource.pdf>

<sup>3</sup> <https://www.startresponsible.com/>

<sup>4</sup> <https://aluminium.org.au/wp-content/uploads/2023/05/230428-Aluminium-NGER-Measurement-Update-2023.pdf>