



14 November 2023

Department of Climate Change, Energy, the Environment and Water

**Submitted via DCCEEW's consultation hub: <https://consult.dcceew.gov.au/au-guarantee-of-origin-scheme-consultations-on-design/new-emissions-accounting-survey>**

Dear Sir/Madam

**Australia's Guarantee of Origin Scheme,  
Emissions Accounting Approach – Attachment to the Scheme Design Paper**

Stanwell Corporation Limited (Stanwell) welcomes the opportunity to respond to the Department of Climate Change, Energy, the Environment and Water's (DCCEEW's) 20 September 2023, Emissions Accounting Approach – Attachment to the Scheme Design Paper and the Guarantee of Origin Hydrogen Calculator.

We acknowledge the work of DCCEEW in preparing this consultation paper and we thank DCCEEW for the opportunity to provide a response.

This submission contains the view of Stanwell and should not be construed as being indicative or representative of Queensland Government policy.

As a major provider of electricity to Queensland, the National Electricity Market (NEM) and large energy users throughout Australia, Stanwell is invested in providing reliable and affordable energy for today and into the future. We are also developing renewable energy, storage and hydrogen projects and technologies to help reduce emissions and ensure Queensland's electricity supply remains secure and reliable now and into the future.

Stanwell has already lodged one submission on 24 October 2023 in response to the Guarantee of Origin Scheme Design. Now that we have had time to trial the Guarantee of Origin Hydrogen Calculator (the Emissions Calculator) and consider the Emissions Accounting Approach – Attachment to the Scheme Design Paper (the Attachment) in the context of the other consultation papers which form the Guarantee of Origin Scheme, we have the following comments:

## 1) Application of the materiality threshold

While Stanwell is, in principle, supportive of having a materiality threshold, we ask that DCCEEW provides some detailed worked examples to demonstrate how the proposed materiality threshold would be applied in practice.

There are comments and examples within the Attachment which raise questions about exactly which emission sources would have to be included in the ProductGO emission intensity calculation as opposed to having to only be recorded.

It is imperative for participants to have a clear understanding of what emissions sources are important and the relevant measurement methodology applicable now, so that the optimal location for metering and measuring instruments can be incorporated into plant design early on. Otherwise, the requirement to retrofit instruments later will be costly.

Tables 1.1 and 1.2 of the Attachment set out the minimum emission sources for each module which must be reported. It then provides an example whereby lighting for 'crew quarters' and its associated emissions is a non-attributable process which could be removed from the emissions calculation. The information in the tables and example of crew quarter lighting gives the impression that unless the emission is directly applicable to the production process, it should be considered a non-attributable process and excluded from the emissions calculation.

But then, Section 1.4 of the Attachment on Materiality Threshold, states that *“the Materiality Threshold will be set at 2.5% of the total emissions, from each source within the **production boundary**. Where an emissions source is not listed in Table 1.1 or Table 1.2 and exceeds this threshold, they will need to be reported. Where an emission source is below this threshold, they will need to be **recorded** but will not require **detailed** measurement or reporting”*

The end of the materiality threshold section concludes by saying:

*“if another emissions source is required to be estimated under the **NGER** scheme and it is within the GO scheme’s scope, it must be reported, even if it is below the materiality threshold”.*

The comments above raise a number of questions that Stanwell seeks clarification on from DCCEEW:

- What is the production boundary being referred to in Section 1.4? Is it:
  - the emission sources for each module listed in the production **profile**, meaning that the 2.5 percent materiality threshold is not applicable to the transportation or storage profiles and all emissions for transport and storage are considered material; or
  - is the production boundary referring to the GO Scheme system boundary which is the well-to-delivery gate?
- What does DCCEEW mean when an immaterial emission source has to be recorded but not require detailed measurement – does it mean that some sort of measurement is still required to record the emission but the measurement method is at the discretion of the participant?

- The most confusing aspect is how the National Greenhouse and Energy Reporting Scheme (NGER) test will be applied as there are some fundamental differences between the reporting boundaries of NGER versus the GO Scheme. NGER is reported at a facility boundary level or as a vertically integrated production process – both of which are underpinned by the concept of operational control. The GO Scheme on the other hand seeks to capture all relevant emissions from a much broader well-to-delivery gate reporting boundary. Lighting for crew quarters would be captured under NGER. So, if the GO Scheme intends to carve this out of GO, will there be another list of “non attributable processes” provided within the legislation to give participants clarity and certainty about what to include or exclude from the emissions intensity calculation?
- Without clarity on what the **total scope of emissions** entails, it is difficult to identify what 2.5 percent of an unknown number equates to, and therefore whether a particular emission source is material or not.

## 2) Water emission factors

Emissions associated with water supply is nominated as an emission source required for hydrogen production via electrolysis. The Calculator offers several calculations depending on the water type being sourced. For all water types, a ‘Bespoke Upstream EF (Emission Factor)’ may be entered, or a default is applied. However, only the ‘Pumped Raw Water Feedstock’, ‘Raw Wastewater’ and ‘Treated Wastewater’ water types have the requirement to enter a ‘distance to site’ value.

Water pumping emissions will be inherent in all water types. Therefore, it is suggested that either:

- all water types combine a default value for pumping into the Bespoke Upstream EF; or
- a default Pumping/Distance EF be applied for all water types, with the ‘Bespoke Upstream EF’ for each water type to only capture the embodied emissions associated with treatment of water to that water type quality.

It should also be noted that determining an emission factor for ‘Distance to Site’ is not straightforward without the support of the water supply system operators in supply schemes with multiple sources and multiple off-takers, especially when the water supply system operators are not bound by the requirements of the GO scheme.

## 3) Define the purpose of the storage profile in the Emissions Accounting Approach

The current proposal to enable profiles to be created for production, transport and storage makes sense from a commercial perspective particularly since there is the ability to delegate responsibility for others to “fill in” the required information along the supply chain beyond the production facility. However, after trialling DCCEEWs emissions calculator for transport and storage, we found ourselves asking the question – what is the main purpose of the storage profile? In addition, must a participant calculate emissions data under the storage profile, regardless of whether the same emission sources could readily be captured within the production facility under the production profile?

Transport is an activity which is more commonly segregated from production, as it is something which takes place beyond the physical production site boundary and could typically be undertaken by a separate entity under various commercial arrangements. Storage on the other hand, is an activity which will be required at a production facility as part of a stock standard plant process. A product could also be put into storage (short or long term) at a facility forming part of, or separate to the production facility itself. The point being, if the production and storage activity was undertaken by the same participant, will there be

provision with the ProductGO scheme to enable emission from storage to be captured within the production profile rather than having to create the “production profile” part of the certificate first and then to capture storage “emissions intensity” separately.

#### 4) **REGO to be surrendered at the same time as ProductGO creation**

One piece of feedback sought in the 20 September 2023, Australia’s Guarantee of Origin Scheme Design Paper, was whether Renewable Energy Certificates (RECs) should be required to be surrendered prior to any GO certificates being created. After trialling the Calculator and considering the potential work in gathering the data needed to create GO certificates, Stanwell’s preference would be for the REGO’s to be surrendered contemporaneously with GO certificate creation. Having a standalone calculator where the number of REGOs to be surrendered to meet a specific emission intensity for the particular ProductGO batch would also be incredibly helpful for participants to ensure their ProductGO meets contractual requirements.

#### 5) **Site-specific emission factors for non-routine associated processes**

Stanwell’s trial of the calculator shows that where use of the residual mix factor for electricity is removed – through the use of 100 percent renewable electricity, the emission intensity of the ProductGO becomes highly sensitive to the remaining emissions from associated processes. For this reason, Stanwell would strongly encourage DCCEEW to include the provision for production facilities to develop a site-specific emission factor for non-routine associated processes in conjunction with the Clean Energy Regulator when the production profile is set up. This site-specific emission factor could then be reviewed every few years to start with, depending on the frequency of the non-routine processes it is capturing. The review period could then be extended once there has been the opportunity to clock up real operational data. The review of this site-specific emission factor could also be used as a true-up process (if required) by taking into consideration the production quantity which has had this emission factor applied, the actual emissions from the activities and the forecast volume of production that the revised emission factor would be applied to before the next review date. Stanwell believes this approach would provide the following benefits:

- **Reduce administrative burden of certificate creation** - The creation of a site-specific emission factor for non-routine activities e.g. chemical clean or large venting events for plant inspections etc, would enable a single number to be set in the profile and used when creating batches of Product GO certificates. This would significantly reduce the administrative burden for participants as there would be no need to chase up operational staff at the time of certificate creation to work out what non-routine activities may have taken place over the certificate batch period.
- **Reduce administrative burden of approval and audit process for CER and participants** – By taking a whole of plant approach right at the start of the production profile set up process, participants could have a conversation with the Clean Energy Regulator about what is captured in this site-specific emission factor, including how it is to be measured and what would be audited.
- **Reduce impact of certificate batch periods on emission intensity of product** - Given the potential sensitivity of the ProductGO emission intensity to emissions from non-routine processes, the establishment of a site-specific emission intensity, together with an agreed timeframe for review and adjustment of this emission factor would give participants greater commercial confidence in the emission intensity of the product being created. This would minimise the need for adjusting “batching” periods to avoid “contamination of batches” during any large scale non-routine events that may have a significant impact on the ProductGO emission intensity.

Stanwell appreciates the opportunity to contribute to DCCEE's development of Australia's Guarantee of Origin Scheme and we look forward to working with DCCEE as development of the Guarantee of Origin Scheme progresses.

Should DCCEE wish to discuss our submission in more detail, please contact Zi Ying Koh on (07) 3228 4137 or email [ZiYing.Koh@Stanwell.com](mailto:ZiYing.Koh@Stanwell.com).

Yours sincerely



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