



23 March 2026

House of Representatives Standing Committee  
Climate Change, Energy, Environment and Water  
Parliament House  
Canberra ACT 2600

Dear Committee Members

**Subject: NQROC Submission - Solar Panel Reuse and Recycling**

The North Queensland Regional Organisation of Councils (NQROC) is a collaborative organisation representing five member-councils: Burdekin Shire Council, Charters Towers Regional Council, Hinchinbrook Shire Council, Palm Island Aboriginal Shire Council, and Townsville City Council.

We appreciate the opportunity to provide feedback into solar panel reuse and recycling in Australia with respect to current and projected volumes, disposal practices and trends, the costs associated with management techniques, and policy options for governments to help overcome the industry challenges. Based on the experience of our NQROC members, we offer the following insights aligned with the Terms of Reference:

**1. Current and projected waste volumes from end-of-life solar panels in NQROC**

Solar panels, like most waste materials, flow to the cheapest point of disposal. As such, over the last 12 to 18 months, most NQROC members have raised the price for acceptance of solar panels at their waste facilities to equal that of the local industry recycler / aggregator. This was undertaken to encourage contractors to drop their panels directly to the recycler and not have Councils acting as an intermediary.

Panels are now generally only received directly from households or smaller roof top contractors, in dedicated loads, however some contractors also deliver panels within mixed commercial and industrial waste loads. The panels delivered in the mixed loads are not identified and counted separately. The approximate number of panels currently received across the region's waste facilities has dropped to around 1,000 – 1,500 per annum since Councils imposed higher fees and charges.

*a stronger north together*

Outside of our Council facilities, we understand from our industry partner that around 1,000 per week are collected and aggregated for transport to the south-east Queensland recycling market. These numbers arise from the domestic rooftop market whereby panels are largely reaching their end of life. For this reason, given many installations are approximately 15 years old and are now being replaced, we expect this number to grow.

Furthermore, and of significant consideration for the NQROC, we understand that over 3,200MW of solar farms are planned as part of the North-West Queensland Renewables and Critical Minerals Project Pipeline, running between Townsville and Mt Isa. This equates to over 9 million solar panels being installed, of which we understand 5-10% are damaged during transport and installation, representing a significant emerging waste stream. We are not aware of any planned recycling plants within our region and can only assume these panels will be transported to southern recycling markets at a great environmental and logistical cost. It would be more prudent for industry to locate a solar panel recycling plant within the NQROC area to ensure the benefits of the projects are captured within our local economy.

## **2. Current disposal practices and trends**

The NQROC currently manage end-of-life solar panels through a combination of landfill disposal and small-scale aggregation / recycling. Where local electrical companies deliver panels mixed within commercial and industrial waste loads, because there are no regulatory restrictions preventing landfill disposal, these panels are often buried. All other source separated panels not in mixed loads are stockpiled for periodic collection by a local collection / recycling contractor. We understand the panels are then de-framed to maximise transport efficiency and are transported to south-east Queensland via road for recycling.

There has at times been interest from industry to establish a recycling plant in Townsville, however these are yet to eventuate.

## **3. Comparative costs of solar panel reuse, recycling and landfill disposal, including valuation processes behind landfill disposal prices.**

As per the above, NQROC members only landfill solar panels if they arrive at waste facilities in mixed commercial and industrial loads. These prices vary across the region, however, they attract a fee of approximately \$250 per tonne inclusive of the Queensland Waste Levy.

Where accepted as a separate item for aggregation and recycling, Councils look to match or slightly exceed the local recycling contractor's fees to encourage direct drop off to industry. This has resulted in fees of between \$16 to \$30 per panel, (however noting the lower fee does not meet the recyclers' charge but is being incrementally increased year on year as a result). We understand at \$30 per panel, the full cost of transport to south-east Queensland and payment of a gate fee at the processing plant is matched. However, Councils do not charge on top of this for the additional staff time and transport costs that are incurred due to the transfer of panels between sites that lack suitable storage and this cost is currently uncaptured and unquantified.

#### **4. Potential benefits of expanding onshore reuse and recycling of solar panels**

Expanding the domestic industry for the reuse and recycling of solar panels offers significant economic, environmental and strategic benefits. Recycling solar panels will unlock the economic value of the critical minerals contained within the panels, at the same time as creating jobs within local engineering, logistics and processing sectors. Recycling will recover critical minerals such as silver, copper and silicon, reducing Australia's reliance on volatile global markets and virgin material mining. Reuse and recycling on a more local scale will reduce carbon emissions associated with transport and mining, will avoid the risks associated with offshore disposal in unregulated landfills, and will help create a local closed loop system whereby over 90% of the constituent materials within panels can be reused domestically.

#### **5. State of development of Australia's solar panel reuse and recycling capabilities, domestic markets for second hand solar panels and recycled materials, and relevant policy and regulatory frameworks at state and federal levels.**

As above mentioned, NQROC members are unaware of any recycling plants existing or planned in the near future within the region, however we emphasise there is a growing need for investment by this industry. We understand that our local recycling collector / aggregator undertakes a testing process and identifies panels fit for reuse, with plans to utilize these in the Pacific Islands area, however we are unsure of the status of this operation.

The policy and regulatory frameworks in force at present are not working in favour of the prompt establishment of a domestic reuse and recycling industry. There has been discussion for over 10 years on the development of a national product stewardship scheme for solar panels, however one is still not in force. Whilst we do recognize the work being undertaken with the prior Queensland, and now National Solar Panel Recycling Pilot, we implore that the government establish clear timeframes and a pathway towards the introduction of a scheme to give industry the signal needed to invest.

#### **6. Barriers to reusing and recycling solar panels at scale in Australia, including technical, commercial, regulatory or other challenges**

The NQROC note broader barriers that the Committee should consider, including limited local processing technologies, the absence of consistent policy settings, and the lack of coordinated national frameworks for handling end-of-life solar panels. Our local experience is also that there is the need for a subsidised regional collection and transport framework to avoid Councils having to manage the costs associated with recycling end-of-life panels.

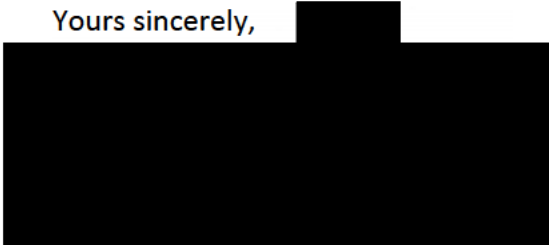
#### **7. Alternative policy options for governments to help overcome these challenges**

Several areas of regulatory reform have been identified that would improve recycling outcomes. These include introducing landfill bans for solar panels to prevent disposal as a cheaper alternative to recycling, implementing mandatory product stewardship schemes, and supporting regional councils by reducing transport costs so recyclers can accept smaller loads more economically. Such measures would address both cost barriers and storage limitations.

We appreciate the Committee's attention to these issues and strongly advocate for a coordinated approach that is underpinned by regulatory reform to achieve a circular economy for end-of-life solar panels in Australia.

Please do not hesitate to contact us for further discussion or clarification.

Yours sincerely,



Chair, North Queensland Regional Organisation of Councils (NQROC)  
Mayor, Charters Towers Regional Council