Submission to the Joint Select Committee on Northern Australia's inquiry into energy, food and water security

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Attention: Committee Secretariat

Submission by:

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We commend the Committee for holding this Inquiry into energy, food and water security as we acknowledge that these matters are together some of the most pressing for remote communities and families that we work with. They are also interconnected in ways that are poorly documented and not well understood.

By way of background, we note that the extent of energy poverty in remote Indigenous Australia has only very recently come to light. We know from studies in the Northern Territory that disconnection rates for people on prepay meters increase dramatically as temperature increases (Longden et al 2022). We also know that the only people in Australia on prepay meters (PPM) are remote Indigenous households – and that some of the poorest Indigenous households in Australia are in the Kimberley, where the cost of living is already high (Markham 2023).

Remote Northern Australian populations have also been identified as being at severe risk of increasing impacts of climate change in the form of rising temperatures, increased flood risks and insufficient housing infrastructure, poor insulation and

inefficient air conditioning to reduce heat stress and related health impacts (Dudley 2022; Green et al 2009).

Our submission is concerned to address all of your Committee's Terms of Reference but limited to the subject of energy security specifically.

We feel qualified to contribute to your inquiry based on the following:

- Engagement with a number of remote communities in the Kimberley region who are seeking to improve their access to renewable energy options in a self-determined way so as to improve household energy security and affordability;
- Involvement in a number of remote community clean energy feasibility studies;
- A deep understanding of challenges associated with the above;
- Lived experience with energy security at a remote community level;
- Our involvement as on-the-ground researchers conducting a survey into the impacts of Prepay Meters in remote Australia, commissioned by Energy Consumers Australia and overseen by Original Power in the NT and by the University of Western Sydney's Dr Tom Longden.
- Our ongoing engagement with First Nations clean energy interests across the region, and with the only utility in the Kimberley, Horizon Power.

We acknowledge significant gaps in research in the field of energy security for First Nations households in the region, gaps which we are presently engaged in attempting to fill.

Our focus in this submission is on remote households that are grid-connected, but we alert the Committee to the many dozens of remote outstations across the state of WA most of whom have energy systems established under the Bushlight system (Cain 2024) and whose energy future is now uncertain. In the Kimberley, funding for the installation and maintenance of these outstation energy systems have historically been the responsibility of the Commonwealth government. Presently however, there does not seem to be an established way forward for their maintenance and they continue to fall into disrepair.

For your reference we have attached a recent paper – still in draft form - by Ruby Heard et al which expands both on the precarity of power supply to these more remote outstations, and also on the ways in which energy supply in these contexts is made more expensive and less reliable as a result of the poor condition of housing. (R. Heard, M. Berris et al. 2025)

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Prepaid meter survey – some observations

In partnership with Original Power and the University of Western Sydney, we have recently completed a survey of over 90 remote households on the issue of the prepaid electricity system to which they are subject.

Significant research has recently been conducted in the Northern Territory into the impacts of this system of payment, particularly during temperature extremes (Longden et al 2022) and based on analyses of enormous datasets of household electricity disconnections.

The prepaid meter research that we are contributing to has been conducted across four Australian jurisdictions: the NT, Qld, WA and SA. The results of this research will be made public in the first half of 2025, and we expect that committee members will find these results informative. (First Nations-led project invites energy suppliers to be part of the solution)

As community-based researchers we engaged in informal wide-ranging discussions beyond the content of the survey itself.

We would like to share with the Committee some of the content of these conversations.

We know from community electricity usage data accessed prior to the survey that there are widely variable patterns of electricity usage between remote community households in the Kimberley. Our conversations with householders confirm the following:

1. That electricity disconnection is very normalised for remote community families in the Kimberley - a part of the everyday struggle that families contend with.

2. That households with very low electricity expenses, and also disconnection rates, also tend to be households with very low incomes. Families with low incomes have minimal appliances, often no air-conditioning or refrigeration, and keep energy costs extremely low.

3. Families put aside money to pay for electricity as a priority, even before they have bought food or fuel.

4. Generally speaking, the prepaid system works for remote families in the Kimberley because it enables resource sharing across family networks. We know that this kind of moral economy is uncompromising, that families will find a way to share financial and energy resources with others who need it.

5. This previous point indicates that disconnection rates reveal some issues, but disguise others. Disconnection rates do not reveal the extent to which extended family members assist each other to reconnect their electricity – nor do they reveal the ways in which the pressure to stay connected to electricity supply is spread across family networks.

6. The notion of 'heat refuges' is already being enacted in communities and families we visited – those households with family members on salaries, and who were able to afford to keep the power on, tended to have extended family living with them – and on hot days, these numbers would increase as people sought refuge from the heat. Some of the people we spoke to observed that their fortnightly power expenditure was much greater than their rent.

7. Electricity disconnection data, while useful, does not tell the whole story of the different kinds of energy security challenges being faced by remote First Nations families in the Kimberley.

8. In general, we can report low levels of energy literacy amongst these households. People were unsure how to manage air-conditioning use to minimise costs, or how to manage diurnal energy use patterns to maximise energy efficiency. They also did not understand the connection between the installation of rooftop solar and potential savings via self-consumption of energy produced. This has implications for the engagement of First Nations households in the decarbonisation of electricity networks across the Kimberley, which is underway.

The approach by Horizon Power to decarbonising remote community power in the Kimberley

Horizon Power is the state-owned utility which has a monopoly for electricity provision in the Kimberley region, and over much of regional and remote WA. In mid-2023, Horizon Power accepted responsibility for power service delivery to 117 additional remote communities across the state.

Horizon Power is under pressure to decarbonise its electricity networks across the state, and across First Nations communities under its remit.

Keeping our focus on the Kimberley region, the approach of Horizon Power to this process appears to be evolving, however it is our view that it still has a long way to go.

By way of evidence to back this statement, in 2022, Horizon Power kicked off its decarbonisation effort by installing a 929kW solar farm and 1.78MWh battery at the

remote community of Kalumburu. This installation now meets up to 64 per cent of Kalumburu's electricity needs and significantly reduces the community's reliance on diesel-powered generation.

The reduction in diesel consumption is estimated to be 312,500 litres a year.

Horizon Power established a Community Energy Fund in Kalumburu which offers $15K per year to invest in community projects. The savings however that Horizon Power are making per year *by not having to purchase the diesel* are in the order of $.5M.

Residents of Kalumburu continue to pay the same tariff as all other Horizon Power customers. The financial benefit to Kalumburu residents from this decarbonisation process works out to be around $37 per annum per person.

The next two communities to be decarbonised were Warmun in 2023/4 and Bidyadanga in 2024. Perhaps as a result of land access and Native Title challenges, Horizon Power negotiated with community councils to install rooftop solar in these communities. Horizon Power lifted its offer of financial returns in these two places, and all households share equally in electricity credits regardless of whether or not they have rooftop solar installed. The average savings in these communities per annum is estimated by Horizon Power to be around $450/household.

Note that our data analysis indicated that First Nations households in the Kimberley use on average double the energy per year as the average Australian household, with average energy expenditure between $3,500 and $4,000 – again, double the Australian average of around $1,979 per year according to the Australian Energy Regulator. (https://www.myconnect.com.au/post/average-utility-bill)

Horizon Power justifies these limited returns by arguing that the utility retains the 'savings' to offset the cost of capital expenditure to install the systems, and for ongoing maintenance.

In other words, residents in these communities are expected to pay for the installation and maintenance of their own essential infrastructure via tariffs which do not reflect the fact that electricity is being produced much more cheaply in their communities than it ever has been in the past.

As noted above, many remote First Nations householders do not understand that having rooftop solar *could and should* deliver significant savings to their households.

Final observations and recommendations

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1. There is no clear pathway, funding avenue or policy position for First Nations communities in the Kimberley to drive the energy transition on their own terms. Those seeking to investigate options must navigate extremely complex funding landscapes and raise funds to develop their own feasibility studies. Expertise in this area is expensive and in-demand.

2. The policy landscape vis-à-vis remote community energy infrastructure in the state of WA is completely incoherent and/or invisible.

3. There are currently 3 conversations underway in the region where PBCs (Native Title holding entities) are seeking equity positions for renewable energy infrastructure. Currently only those PBCs with access to significant, independent financial resources and technical expertise are able to undertake such investigations.

4. Horizon Power's approach to achieving social justice or equity in the energy transition in this region is inadequate. Their 'equity' position sees them treat remote community households the same as all WA residents (for example through tariff equalisation) – but with the exception that remote community householders are essentially expected to 'pay back' costs associated with renewable energy infrastructure that the state government is building by forfeiting much of the savings. There is no indication how long remote First Nations householders will be indebted for, nor whether at some point they will be able to begin to benefit from the energy transition in a way similar to the approximately 3.6 million Australian households that have installed rooftop solar.

5. Housing upgrades and adequate energy literacy training must also form part of the solution, as well as improving avenues for community input and decision-making power regarding energy services.

6. In December 2024, the Department of Climate Change, Energy, the Environment and Water released the First Nations Clean Energy Strategy. The principles[1] – and associated specific actions - put forward in the Strategy are commendable but are not currently being enacted in this region. The Strategy states that "The

[1] The first of the First Nations Clean Energy Strategy goals was to "Power First Nations with Clean energy". Supporting actions were listed as "review and extend regulatory protections; future proof community infrastructure; document First Nations peoples' experience of energy systems; invest in clean energy systems to transition away from diesel usage, and *improve reliability and affordability*; *improve the energy performance of First Nations housing*; *support better access to renewable energy for First Nations households*."

> Australian Government is working with states and territories to develop a plan to support the roll out of the Strategy."

We strongly encourage the Committee to encourage the implementation of internal State, Commonwealth and utility systems of accountability that will ensure these principles are applied in practice.

Finally, we would be happy to speak to the Committee members in person, via zoom, if that could be useful.

Please contact Dr Kathryn Thorburn for any further discussion at

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