



Original research article

Large-scale renewable energy developments on the Indigenous Estate: How can participation benefit Australia's First Nations peoples?

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ABSTRACT

The transition to renewable energy in Australia represents a significant opportunity for First Nations communities to benefit from developments on their land. In partnership with the Indigenous Land and Sea Corporation and the First Nations Clean Energy Network, the authors conducted research exploring this opportunity, with a specific focus on the barriers preventing First Nations from achieving these benefits and what different groups of actors could do to help overcome these barriers. In this paper we present the findings from a series of semi-structured interviews with Traditional Owners, First Nations groups, renewable energy developers and industry representatives, legal experts and other academics. We identified two groups of barriers – overarching barriers including ongoing disadvantage and a lack of funding and resourcing for First Nations groups, and barriers specific to renewable energy developments such as the absence of Indigenous free, prior and informed consent in project approval processes and unclear, non-uniform legislative frameworks. To overcome these barriers, we recommend strategies for different actors. For example, governments could implement Indigenous free, prior and informed consent in regulatory regimes and the renewable energy industry could establish cultural education and training programs for company staff.

1. Introduction

The latest report from the Intergovernmental Panel on Climate Change (IPCC) has been declared by the UN Secretary General to be a “code red for humanity” [1]. According to the report, global mean temperatures are set to exceed 1.5 and 2 °C during the 21st Century “unless deep reductions in carbon dioxide (CO₂) and other greenhouse gas emissions occur in the coming decades” [2]. To increase our chances of a sustainable future, immediate action is required including the need to urgently transition towards renewable forms of energy and away from the use and export of fossil fuels [3]. Australia is a country that has relied heavily on the export of fossil fuels to drive its economy in the past, yet also has some of the world's best solar and wind resources [4]. Australia's First Nations peoples have also been suffering from ongoing disadvantage since the arrival of European colonisers in 1788, with significant gaps in health, income, and standards of living persisting in the present day [5]. The IPCC reports, along with other research, show

that climate change disproportionately affects Indigenous communities, thereby entrenching this disadvantage [6–10]. With much of the suitable land for new renewable energy developments located on the Indigenous Estate¹ (see Fig. 1), there will likely be significant opportunities for First Nations to participate in and benefit from these developments, an opportunity that could be “the biggest opportunity to occur in [Australia] for decades” [11] at 1. This makes Australia both an interesting and important case study to explore, especially given that there are no guarantees that renewable energy developments will deliver beneficial outcomes for First Nations peoples unless measures are taken to ensure this occurs [12].

In this paper we present the findings from a series of semi-structured interviews exploring the opportunity for large-scale renewable energy developments on Country in Australia. In this context, Country refers to the lands, waterways, and seas to which Aboriginal and Torres Strait Islander peoples are connected. The term Country encompasses all living things as well as spiritual beliefs, culture, language, family and identity

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¹ The Indigenous Estate refers to any land to which First Nations have legal rights or interests, as defined by various forms of legislation, including the Native Title Act. Altogether, it covers over 50 % of the land mass of Australia.

[13]. Specifically, we focus on the barriers preventing Australia’s First Nations from achieving benefits and what different groups of actors could do to help overcome these barriers. In this way we contribute to the small but growing literature examining the inclusion of First Nations in Australia’s renewable energy transition, and provide valuable insights for policymakers, the renewable energy industry, and First Nations communities. We find that many of the barriers relevant to the extractive industry, such as the absence of Indigenous free, prior and informed consent and a lack of funding and resourcing for First Nations groups, remain relevant for the renewable energy industry. To overcome these barriers, we recommend strategies for different actors, such as for the government to implement Indigenous free, prior and informed consent in regulatory regimes and for the renewable energy industry to establish cultural education and training programs for company staff.

2. Background

Australia has a legislated emissions reduction target of 43 % by 2030

other states and for which a number of Renewable Energy Zones have been proposed [17].

Despite this progress, unlike countries such as Canada and New Zealand, there is no literature analysing agreements made between Australian First Nations parties and the renewable energy industry. There is, however, an extensive body of research analysing agreements made with the extractive industry, which includes mining for coal, oil, gas and minerals. In this context, agreement outcomes have been found to be highly variable, with anticipated benefits for First Nations parties not always being realised [18–21]. Barriers preventing the negotiation and realisation of benefits include legal regimes, such as the Native Title Act, that do not protect the rights of Indigenous peoples [22]; a lack of funding and resourcing for First Nations groups [23–26]; power imbalances during the negotiation of agreements [20,27–29]; and poor implementation and governance of agreements [30–32]. Important factors determining the success of benefits from agreements include the specific legal, policy and institutional setting [33], the meaningful involvement of Indigenous leaders and community actors in decision-

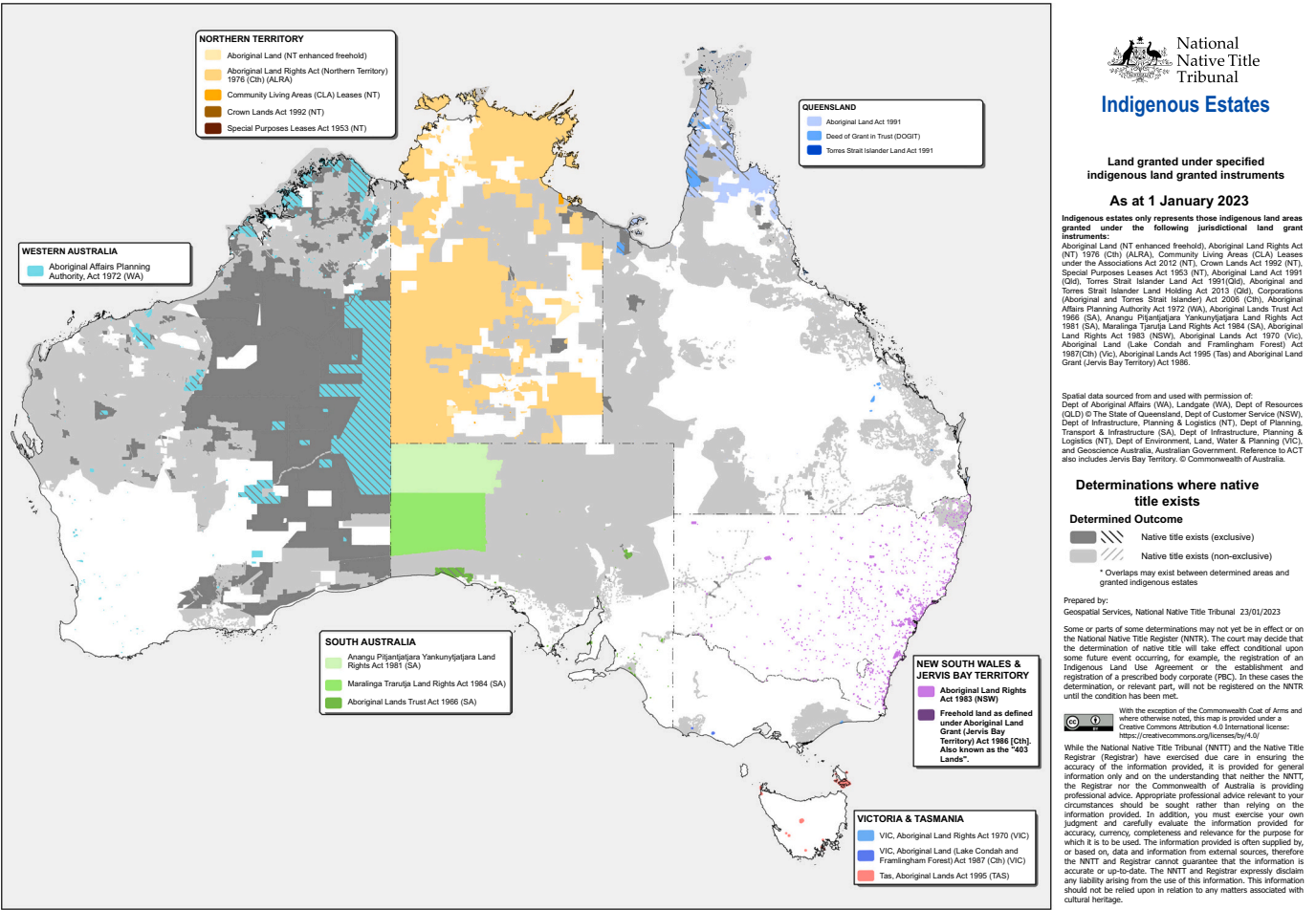


Fig. 1. The National Native Title Tribunal’s Map of the Indigenous Estate as at 1 January 2023. Accreditation: National Native Title Tribunal. Source: http://www.nntt.gov.au/Maps/Indigenous_Estates_and_Determinations_A1L.pdf.

and net-zero by 2050 [14]. As of 2023, renewable energy comprised 35 % of total electricity generation, of which there was 16 % solar, 12 % wind, and 6 % hydro [15]. The industry is growing rapidly, with the federal government targeting 82 % renewable energy generation by 2030 [16]. Although there are several electricity grids across the country (including two in Western Australia and three in the Northern Territory), the largest is the National Electricity Market which services all

making roles [12,32] and the political and organisational capacity of

Traditional Owners² to provide the necessary resources to support negotiations and insist that companies meet their demands [19].

Early research into renewable energy developments on the Indigenous Estate in Australia indicates that beneficial outcomes for First Nations are not guaranteed [12]. In Canada, First Nations groups have been negotiating renewable energy agreements for longer, up to 30 years in some cases, and as such there are many more legislated and financial supports for First Nations co-investments (see for example [34]). This literature highlights that government policy has played an important role in determining whether the impacts of renewable developments on First Nations communities are positive or negative and that a business-as-usual approach may result in the further marginalisation of First Nations peoples [28,35,36]. Our contribution with this study is to further extend the literature with a focus on the Australian context by establishing whether findings from the extractive industry are relevant to the renewable energy industry, what barriers currently exist for First Nations' participation in renewable energy, as well as making recommendations for how to overcome some of these barriers.

3. Methods

Our research methodology is informed by the Australian Institute for Aboriginal and Torres Strait Islander Studies (AIATSIS) Code of Ethics for Aboriginal and Torres Strait Islander Research [37]), which has at its core the principles of integrity, Indigenous self-determination, Indigenous leadership, impact and value, and sustainability and accountability. As non-Indigenous researchers, to ensure alignment with these principles we partnered with the Indigenous Land and Sea Corporation (ILSC), a corporate Commonwealth entity whose primary purpose is to assist Aboriginal and Torres Strait Islander people to enjoy opportunities and benefits associated with the return and management of Country; and the First Nations Clean Energy Network (FNCEN), a network of First Nations peoples and organisations working to ensure that First Nations communities can share in the benefits of the clean energy boom. The role of the ILSC and FNCEN has been to provide steering, guidance, and leadership for the research and to help connect us to stakeholders and ensure the project aligns with the goals and aspirations of First Nations peoples.

After completing our literature review, we began our engagement with the ILSC and in March 2022, co-hosted with ILSC a hybrid in-person/online workshop in Melbourne to discuss what could be learnt from past experiences with the extractive industry, and to identify new approaches to ensure First Nations' participation in and benefit from large-scale renewable energy developments on Country. Workshop invitations were sent to potential participants based on their expertise in at least one of three focus areas – Indigenous issues relating to resource development projects, the large-scale renewable energy industry or legal frameworks relevant to resource development on Indigenous lands – and with an aim to promote gender balance and representation from different states and territories of Australia.

With the ILSC and FNCEN as research partners, we then obtained ethical approval from the UNSW Human Ethics Committee (HC211027) to conduct a series of one-on-one, semi-structured interviews discussing the opportunity for large-scale renewable energy on Country, with a specific focus on the barriers to achieving benefits for First Nations and strategies that could be implemented to overcome these barriers. Beginning with participants of the Workshop, we used snowball sampling to increase the number and diversity of participants to include

Traditional Owners, First Nations stakeholders and leaders, renewable energy project developers, representatives from government, the renewable energy industry and First Nations' organisations, and entrepreneurs (see Table 1). In total 38 interviews were conducted, nine in person and 29 online, between June 2022 and November 2022, with each interview lasting between 30 and 75 min. Interview questions were

Table 1

Breakdown of interview participants. Roles have been intentionally left broad to protect the anonymity of participants.

Participant	Role	Indigenous	Region	Gender	Mode of interview
1	Academic	N	ACT	M	Online
2	Academic	N	ACT	M	Online
3	Academic	N	VIC	F	Online
4	Academic	N	QLD	M	Online
5	Academic	N	VIC	M	In-person
6	Academic	N	VIC	F	Online
7	Academic	Y	NSW	F	In-person
8	Academic	Y	WA	M	Online
9	First Nations organisation	N	VIC	M	In-person
10	First Nations organisation	N	VIC	M	In-person
11	First Nations organisation	N	VIC	F	Online
12	First Nations organisation	N	SA	M	In-person
13	First Nations organisation	Y	NT	M	In-person
14	First Nations organisation	Y	VIC	F	Online
15	First Nations organisation	N	NSW	F	Online
16	First Nations organisation	N	NSW	M	Online
17	First Nations organisation	Y	NT	M	Online
18	First Nations organisation	N	NT	M	Online
19	First Nations organisation	Y	WA	M	Online
20	First Nations organisation	N	VIC	M	Online
21	Government	N	NT	M	In-person
22	Government	N	VIC	M	Online
23	Government	Y	NSW	M	Online
24	Government	N	VIC	M	Online
25	Legal representative	N	QLD	M	Online
26	Legal representative	N	NSW	F	Online
27	Renewable energy industry	N	NSW	M	In-person
28	Renewable energy industry	N	VIC	M	Online
29	Renewable energy industry	N	VIC	M	Online
30	Renewable energy industry	N	QLD	M	Online
31	Renewable energy industry	N	NSW	M	Online
32	Renewable energy industry	N	VIC	M	Online
33	Renewable energy industry	N	VIC	M	Online
34	Renewable energy industry	N	ACT	M	Online
35	Traditional Owner	Y	VIC	M	In-person
36	Traditional Owner	Y	WA	M	Online
37	Traditional Owner	Y	WA	M	Online
38	Traditional Owner	Y	QLD	F	Online

² A Traditional Owner is an Aboriginal and Torres Strait Islander person who is a direct descendent of the original Aboriginal and Torres Strait Islander inhabitants of a culturally defined area of land or Country, and has a cultural and historical association with this Country that derives from the traditions, observances, customs, beliefs or history of the original Aboriginal and Torres Strait Islander inhabitants of the area.

developed based on the ideas and themes that came out of the Workshop discussions together with the literature review. The semi-structured nature of the interviews allowed for follow-up questions to be included to help create a fluid conversation allowing for related topics to be explored while keeping the participants' focus on the primary research topic. All interviews were audio recorded with participant consent except for one interview for which written notes were made. Interviews were subsequently transcribed, de-identified and coded in NVivo using an inductive coding method. These codes were then categorised according to key themes that are presented as our results in the following sections.

This research has its limitations. Here we present the findings as expressed to us by interview participants, and as such it is not intended to represent a full typology of the barriers or potential solutions. We acknowledge that our findings are dependent upon the specific participants selected to be interviewed, and hence we have taken care to select participants from diverse roles and regions with expertise that is representative of the issues at play (see Table 1 above). Additionally, the renewable energy industry in Australia is fast-moving, and it is therefore important to recognise that these interviews were conducted in 2022, and it is possible that the opinions of participants or the issues discussed may have evolved since then. Nevertheless, this research records the expert opinions of these informed players and provides a contribution to the small but growing literature on First Nations' participation in renewable energy in Australia, an issue that is crucial if First Nations are to benefit from this significant opportunity.

4. Barriers preventing beneficial outcomes

Participants identified a range of different barriers that are preventing beneficial outcomes for Australian First Nations peoples. To begin with, we discuss the overarching barriers that apply to the participation of First Nations' groups in the economy and could apply to other developments, not just renewable energy developments. These include ongoing disadvantage, a deficit view of First Nations peoples, ignorance of First Nations' culture, and a lack of funding and capacity for First Nations groups and organisations. Following this, we outline barriers that apply specifically to renewable energy developments and the negotiation of favourable agreement outcomes. These barriers include a lack of requirement for First Nations' involvement in decision making, an unclear/non-uniform legislative framework, excessive regulatory and administrative hurdles, and access to capital. A full list of the barriers identified through participant interviews is summarised in Table 2 below.

4.1. Overarching barriers

4.1.1. Ongoing indigenous disadvantage

Participants identified that the ongoing disadvantage faced by Australia's First Nations peoples can act as a barrier preventing opportunities from being realised. Jonathan Kneebone, Director of Policy Engagement at the FNCEN, explains:

When people talk about the millions of jobs and the great business opportunities for renewables, there needs to be an appreciation that First Nations communities are often starting the race to access that opportunity from quite some distance back.

One example of how this ongoing disadvantage can act as a barrier to the realisation of benefits from renewables is by creating barriers to employment, particularly in regional and remote areas where there are already high levels of unemployment amongst First Nations communities [38]. Participants noted that in these areas there are a lack of educational and training opportunities that can make it difficult for First Nations peoples to acquire skills for employment unless they move to the cities. As recounted by one participant, many people in regional and remote areas are also lacking legal documentation such as birth

Table 2
Summary of barriers preventing First Nations' benefit from large-scale renewable energy developments on Country.

Type of barrier	Examples of barriers
Overarching barriers to Indigenous participation	<ul style="list-style-type: none">• Ongoing Indigenous disadvantage• A deficit view of First Nations peoples• Ignorance of First Nations culture• A lack of funding and resourcing for First Nations groups• Factors influencing the capacity of First Nations groups to take advantage of opportunities• Government focus on protecting industry interests
Barriers preventing the negotiation of favourable agreements	<ul style="list-style-type: none">• A lack of requirement for First Nations' involvement in decision making• An unclear/non-uniform legislative framework• Excessive regulatory and administrative hurdles for developments on First Nations land• A lack of requirement for transparency of agreements• An assumption that renewable energy projects are inherently 'good'• Corporate requirements for profit resulting in an unwillingness for companies to offer equitable benefits to First Nations groups or to deviate from fast-paced Western timelines
Barriers preventing agreement outcomes from being realised	<ul style="list-style-type: none">• A lack of implementation mechanisms within agreements• A lack of agreement enforcement through monitoring and compliance
Barriers preventing long-term benefits from being achieved	<ul style="list-style-type: none">• A lack of effective governance structures and financial expertise within First Nations' organisations• Access to capital• Ad hoc project-based approach to employment

certificates and Tax File Numbers that are necessary for getting a job. These areas may also lack childcare programs which can create an additional barrier to employment, especially for women.

4.1.2. Deficit view of First Nations peoples

While the existence of widespread ongoing Indigenous disadvantage is widely accepted within the literature, and has been measured for example through poor performance on the Australian Government's Closing the Gap targets [5], there is an emerging parallel discourse problematising the framing of disadvantage in a deficit-based approach that can cause Aboriginal and Torres Strait Islander People to be viewed as inherently dysfunctional [39]. This deficit view was identified by several participants. Those adopting a deficit view see First Nations people as lacking in skill and workplace discipline, their traditional knowledge systems are undervalued, and they are not viewed as being capable of running successful businesses or participating in leadership roles, with one Traditional Owner saying (when talking about the government) that "they think we're babies". Larrakia Development Corporation CEO Nigel Browne recounted in his interview how a deficit view has negatively affected their plans to develop their own renewable solar project.

All we are wanting to do is push for the opportunity to secure land for this solar renewable project to provide energy, electricity, to the gas plants ... [But] at the moment, we're not looked at as a serious contender as compared to other larger companies from outside of the territory ... And this isn't just the territory government, I think this is governments everywhere, they need to get rid of the deficit view that they have of Aboriginal people, Aboriginal capacity and Aboriginal business.

4.1.3. An ignorance of First Nations' culture

Qualitative research conducted by Taylor and Habibis [40] indicates that non-Indigenous people are largely ignorant of the history of colonisation and First Nations culture in Australia. "They are ignorant of Aboriginal law, cultures and languages, and of the extent of their own ignorance" [26] at 354. Taylor and Habibis argue that this ignorance is implicated in the maintenance of Indigenous disadvantage and that addressing ignorance is a largely overlooked capacity-building opportunity within Australia's non-Indigenous population. Several participants expressed concerns regarding this ignorance and its manifestation in the lack of cultural competency within the renewable energy industry, which they considered to be homogenous and non-diverse, mostly consisting of white men with a lack of representation of First Nations people and women, particularly in leadership roles. According to participants, ignorance amongst this predominantly white industry can result in engagements that are centred around "Judeo-Christian-Anglo" priorities and operate according to Western timelines and timeframes which can be fundamentally different to Aboriginal ways of doing things, especially when it comes to decision making. Ignorance of First Nations culture can also result in what Sangha et al. [41] describe as the 'mainstreaming' of policies, particularly related to training and employment opportunities. Several participants had concerns that in the context of agreement making, this could lead to benefit-sharing opportunities that do not necessarily align with the aspirations of First Nations communities, but rather revolve around non-Indigenous assumptions about benefits (see also [42]).

The way in which governments and corporations approach agreement making is typically to try and define the outcomes for Aboriginal people in terms of mainstream economic development. But my experience of Aboriginal people is that their aspirations are far more nuanced around maintaining their link with the past, their livelihoods in the present and the future of their descendants. And so they typically do have much broader and non-mainstream aspirations, which are largely not accommodated by agreement frameworks that envisage very much mainstream economic development; jobs, business, that kind of thing.

4.1.4. A lack of funding and resourcing for First Nations groups

Many participants highlighted that a lack of funding and resourcing is a continued concern for First Nations groups negotiating with the renewable energy industry (also a problem in extractive industries: [24–26]). Sufficient funding is required for these groups to carry out their statutory requirements, to be able to authenticate cultural heritage claims, to respond to complex environmental impact statements, and to obtain independent legal, scientific, business, accounting and other advice for negotiations. Providing funding for negotiations is not currently a priority for Australian governments, and project proponents typically only want to provide funding for their immediate priorities. In the view of Professor Jon Altman, "not only is the regulatory and legislative playing field tilted against Native Title interests, but ultimately, negotiation power will be determined by financial resources." First Nations are also disadvantaged when it comes to other resources. Renewable energy projects themselves are often highly technical and in the words of Justin Punch, Chairman of the Australian Renewable Energy Agency (ARENA), developers are "highly sophisticated commercial parties" conducting "highly sophisticated commercial negotiations". Often the companies developing these projects, especially the very large projects, have "virtually unrestricted access to resources, engineers, lawyers or other technical people". Adding to this power imbalance, these negotiations take place in the context of a Western scientific paradigm and the cross-cultural translation can be "extraordinarily challenging". Even in situations where companies provide First Nations groups with detailed information about the project, participants flagged that this information may be in a format that is not easily

understandable and therefore inaccessible to these groups who could be left with a limited capacity to question the project.

4.1.5. Factors influencing the capacity of First Nations groups to take advantage of opportunities

Several factors relating to the capacity of First Nations organisations and local communities put these groups at a significant disadvantage and are a known barrier to the achievement of beneficial outcomes within the extractive industry. At the negotiation stage, for example, O'Faircheallaigh [19] found that the political organisation and capacity of groups to insist that proponents meet their expectations was one of the key factors determining outcomes from agreements. Once an agreement has been negotiated, if for example the skills or requirements for jobs are not targeted at the existing skill level of people from the local community, and training is not provided to develop these skills, this can prevent First Nations people from accessing benefit opportunities such as employment that may be part of the agreement [43]. Finally, a lack of financial expertise and good governance within First Nations organisations can hinder a group's capacity to convert benefits into long-term wealth generation [31]. Many participants identified that shortfalls in capacity remain a barrier to the realisation of benefits for First Nations groups from renewable energy developments. Professor Ciaran O'Faircheallaigh explained the importance of capacity.

It doesn't matter how good the opportunity is. And we know, for example, from the experience with the Aboriginal Land Rights Act in the Northern Territory where Aboriginal people have a veto over development, we know that that in itself hasn't guaranteed positive outcomes. It's only when people have had the capacity to take advantage of it that the outcomes have been good.

4.2. Barriers specific to renewable energy developments

4.2.1. A lack of requirement for First Nations' involvement in decision-making

The right for First Nations people to be involved in decision-making processes regarding renewable energy developments is not currently mandatory across all of Australia. Where First Nations do have legal rights afforded through legislation such as the Native Title Act,³ the level of involvement in decision making, if any, is dependent upon the specific legal context in which negotiations are taking place. Free, prior and informed consent (FPIC) is an international human rights standard that is stipulated as part of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and is a recognised principle of best-practice agreement making [11]. Although the Commonwealth of Australia has endorsed the UNDRIP, it is yet to enshrine these principles into domestic law. According to O'Neill et al. [22], the legal rights afforded to Traditional Owners within the native title framework, for example, are far from that of FPIC and do not represent best-practice. In most states and territories FPIC is also lacking as a legal requirement, with the notable exception of the Aboriginal Land Rights Act in the Northern Territory, although even this has been questioned as to whether it is a true portrayal of FPIC due to the Commonwealth Government's right to compulsory acquisition [44]. Throughout participant interviews, the absence of FPIC and thus the lack of requirement for First Nations' involvement in decision-making was one of the most commonly identified barriers to First Nations participation in large-scale renewable

³ The Native Title Act 1993 (Cth) is federal legislation passed by the Australian Parliament that recognises the rights and interests of Aboriginal and Torres Strait Islander people in land and waters according to their traditional laws and customs. It established a process through which Traditional Owners could claim native title over land and waters if they could prove a continuous connection to those lands and waters [66].

energy developments.

For First Nations groups without any legal land rights, there is no requirement for their involvement in decision-making. The Larrakia People are one such group that find themselves in this position.

We approach it from the view that it's Larrakia Country and that's our starting point. But government officials are only too eager and keen to not want to enter into those discussions because they know that they don't have to, because we don't have any existing land rights or Native Title rights to those areas.

In the absence of recognised rights, although companies may still choose to seek First Nations' involvement in order to achieve a social license to operate, this is not mandatory, and First Nations groups could find themselves dependent upon a company's ethos to 'do the right thing'. As one First Nations representative said, "if there's not a way to make them do the right thing, are these companies really going to do the right thing?" This view was shared by several other participants and is backed up by empirical research by O'Faircheallaigh [23] in which he found that a company's position on the corporate social responsibility spectrum is a key factor influencing a company's dealings with First Nations people.

4.2.2. An unclear/non-uniform legislative framework

Across Australia there are various legislative frameworks governing the rights of First Nations peoples and agreement making processes between renewable energy developers and First Nations groups. Often, these legislative frameworks are complex and involve processes established by Western law that Traditional Owners may find culturally alien [29]. The Native Title Act, for example, has been described by Altman [45] at 23, as "extremely complex" and was designed with the extractive industry as the primary focus, resulting in a lack of clarity as to how it will be applied to the renewable energy industry. Additionally, the Native Title Act and the various state-based land rights acts are not uniform across the country, but rather operate as a patchwork regime (see Fig. 1), leading to wide variation in access to rights and levels of access to land for First Nations. In any given state or territory, there may be multiple legislative frameworks of relevance to developments. In the Northern Territory, for example, there is the Aboriginal Land Rights (Northern Territory) Act 1976 (NT), the Native Title Act 1993 (Cth), the Northern Territory Aboriginal Sacred Sites Act 1989 (NT) and the Heritage Act 2011 (NT). The legislative framework in one state or territory can differ from the corresponding framework in other states and territories. The Heritage Act 2011 (NT), for instance, is not the same as the Aboriginal Heritage Act 1988 (SA) or that of other states [46]. Electricity law is similarly complex, with responsibilities divided between state and federal governments creating a general sense of confusion [47]. In the view of participants, this complexity and lack of clarity can act as a barrier to First Nations groups being able to negotiate beneficial outcomes from agreements. As one participant noted, "two big, complex, flawed regimes interacting is very complicated". Navigating this complexity requires a high level of legal expertise to which First Nations groups may not have access. Similarly, from the renewable energy industry's perspective, one of the most common barriers raised by participants was that in many cases a lack of clarity has meant that project proponents are unclear on which First Nations groups and people they need to engage with. This can slow down the engagement process and has the potential to cause disputes within communities if some groups feel their interests have been neglected.

Renewable resources such as solar and wind, unlike mineral resources, are typically widely geographically dispersed. This means that there are likely to be several neighbouring Traditional Owner groups whose land would be suitable for hosting a development that wants to capture this resource [21]. As explained in the following section (4.2.3), First Nations land rights are often viewed as an impediment to the development of projects. Given this, participants have identified that a

patchwork regime in combination with the dispersed nature of renewable resources can be problematic for First Nations groups as it can lead to project developers 'shopping around' for sites with the least native title and/or state-based land rights [22,48].

4.2.3. Excessive regulatory and administrative hurdles for developments on First Nations land

Regulatory and administrative hurdles, such as lengthy environmental approvals and permits, have been recognised as a barrier to the development and deployment of renewable energy in Australia and internationally [49]. In a context where there are already so many regulatory hurdles to overcome, participants raised concerns that agreement making with First Nations could be seen to be 'too hard'. Choosing to locate a project in an area where there are one or more registered Indigenous interests means an additional layer of regulatory tape, an additional layer of negotiation and an additional financial cost to the project. This could lead to project developers avoiding First Nations land altogether and instead choosing to negotiate with private landowners, such as pastoralists, for whom the legislative requirements of the Native Title Act, for instance, do not apply. Participants from New South Wales and Victoria, where First Nations rights are relatively scattered across the state, expressed specific concern for this issue.

The thing that's happening in Victoria is we're watching companies choose to put their solar farm where they negotiate with pastoralists instead of negotiating with us.

Even when projects do go ahead on First Nations land, participants were concerned that excessive regulatory hurdles could lead to engagement and negotiation with First Nations groups not being prioritised. Nicholas Aberle, Policy Director for Energy Generation and Storage at the Clean Energy Council (CEC), spoke about this issue in his interview.

Another part of the challenge is just the sheer volume of stuff that project proponents are required to do and consider [...] and often quite small teams working on these projects means that they just don't always have the bandwidth to prioritize everything that they might ideally want to prioritise.

4.2.4. Access to capital

Finally, large-scale renewable energy projects are characterised by high upfront costs [50]. This can act as a barrier to First Nations' ownership and development of renewable energy projects.⁴ Byrnes et al. [51], for example, found in their research on remote Western Australian communities that none of the First Nations groups had capital available for renewable energy projects. This could be exacerbated by the nature of Indigenous land tenure, where lending organisations may be reluctant to use community title as security [52]. This issue is not unique to Australia, nor to remote communities. The Canadian literature has consistently identified access to capital as a barrier to the deployment of Aboriginal renewable energy, including ownership and part-ownership of large-scale projects [28,53,54]. Consistent with the literature, participants were concerned that if First Nations groups are unable to access sufficient capital, they may be unable to develop their own renewable energy projects or to purchase an equity stake in projects being proposed on their lands.

5. Overcoming barriers to indigenous participation

In this section we first consider strategies that governments could implement to facilitate First Nations participation, followed by

⁴ There are also other risks and challenges associated with equity and project ownership. For a more detailed discussion see [67].

strategies for other actors including the renewable energy industry, project proponents, First Nations groups and investors/customers. A full list of the strategies identified through participant interviews is summarised below in Table 3.

5.1. Strategies for governments

5.1.1. Implement FPIC to ensure First Nations are central to decision-making

Participants emphasised that the most effective way to ensure that Country is protected, and that First Nations share in the benefits of renewable developments is to have them centrally involved in decision making processes. As Professor Ciaran O’Faircheallaigh said:

Table 3
Summary of recommendations to ensure First Nations’ participation and benefit from large-scale renewable energy developments on Country.

Actor	Recommendations
Governments	<ul style="list-style-type: none">• Implement FPIC to ensure First Nations are central to decision-making• Establish a uniform national framework for the agreement making process• Increase resourcing and funding for First Nations groups• Establish targeted capacity building programs for First Nations groups• Provide incentives to encourage development on First Nations’ land• Establish legislation or policies to encourage First Nations’ ownership of projects• Establish programs and/or partnerships to ensure long-term employment opportunities• Establish a voluntary and independent agreement certification scheme as proof of meeting best-practice principles• Provide funding to facilitate a proactive approach to renewable energy developments on Country so that First Nations groups can be prepared before developments are proposed on their land
Renewable energy industry representative organisations	<ul style="list-style-type: none">• Establish industry-wide best practice principles to be adhered to• Establish cultural education and training programs to increase cultural awareness and an understanding of the importance of best practice within industry
First Nations representative organisations	<ul style="list-style-type: none">• Facilitate the sharing of information with and between First Nation groups• Assist groups to shift from a reactive to a proactive approach to renewable energy developments on Country• Establish a certification scheme for First Nations owned projects• Educate First Nations groups about the use of PPAs to secure funding for their own projects• Educate communities, particularly those without legal rights, about the power of their campaigning options to leverage the increasing pressure on companies to uphold their corporate social responsibility
Project proponents	<ul style="list-style-type: none">• Commit to adhering to best practice principles• Implement specific strategies for effective engagement
Legal representatives	<ul style="list-style-type: none">• Secure contractual regimes early on in the negotiations to ‘beef up’ the legislative regime• Establish a code of ethics for the minimum standards that will be agreed to and a principle of transparency of agreements
Investors	<ul style="list-style-type: none">• Only fund projects that meet best-practice standards (or are certified if an agreement certification scheme is established)
Customers	<ul style="list-style-type: none">• Use PPAs to insist that project developers meet best-practice standards

Indigenous people have to be centrally involved in decision making. Because everything else flows from that. Aboriginal people in Australia and Indigenous people overseas have shown that if they’re given a role in decision making, they have a great capacity to look after their own interest. If they’re excluded in decision making, we simply cannot assume that their interests will be protected.

The most robust way to ensure that First Nations are central to decision making is to require FPIC when seeking to access and use land on the Indigenous Estate. All participants agreed that implementing FPIC in Australia would be a critical starting point and hugely beneficial for First Nations groups.

All over the country, free prior and informed consent should be the starting point. Because if you don’t have that, it affects every dealing you have, whether you’re dealing with government, whether you’re dealing with industry or whether you’re dealing with other Aboriginal groups. If Aboriginal people aren’t properly informed as to what’s occurring in their space, on their lands and their waters, and are not given enough time to digest the information that’s being presented as to what is proposed to occur, or if they’re constrained in their decision making so that it’s not free, that just sets you up to fail right from the start.

Most participants agreed that legislating FPIC would be the ultimate goal, but many thought that given the current political climate this would be unlikely to occur in the short term. One participant noted that while legislating FPIC may be the long-term goal, there are smaller changes that could still be made in the short term to move Australia in the right direction.

Given that FPIC is stipulated as part of the UNDRIP, one way to implement FPIC would be to ratify the UNDRIP in Australian domestic law. Such an approach has been taken by the federal government of Canada, also a signatory to the UNDRIP, who in 2021 introduced legislation requiring that the Canadian governments’ activities in relation to renewable energy projects must adopt the principle of FPIC [55],⁵ however it remains to be seen how this will impact Canadian renewable energy policy. Further research assessing the strengths of these laws is required, however if the Commonwealth Government of Australia were to introduce similar legislation with regards to the UNDRIP, this could see renewable energy projects occurring on First Nations land in Australia subjected to the requirements of FPIC (see [56–59] for a discussion of FPIC, its requirements and its interpretation within the UNDRIP and other legislation).

The Native Title Act predates the renewable energy industry in Australia and as such does not specifically refer to renewable energy projects. While it is not yet clear how the law will be applied, the more persuasive view, according to O’Neill et al. [28] at 4, is that “renewable energy developers, unlike mineral extraction proponents, likely require native title holders to consent [through the Indigenous Land Use Agreement (ILUA) process] to the grant of any interests required for any renewables development – unless a government moves to compulsorily acquire the land”. One participant with legal expertise in native title suggested that the government could use this to enforce FPIC in practice, without needing to go through the process of legislative reform.

I wouldn’t say that we have laws where FPIC is specifically referenced or brought in, but I think there’s places or legislative contexts where you do actually need the community’s consent in relation to a particular project. For example, under the Native Title Act, depending on what you’re doing you might need the community to consent to an ILUA unless the government is looking at compulsorily acquiring the land. Now the government could say we’re not going to

⁵ The Government of British Columbia had previously taken similar measures to give the UNDRIP status in the province of British Columbia in 2019 [68].

compulsorily acquire land, because we believe in FPIC and we believe in ILUA negotiations for any project. So I think there's existing ways where we can use the legislative framework that is there to ensure [FPIC], if governments made particular commitments.

However, other participants were of the view that legislative reform to strengthen the rights of First Nations groups under the Native Title Act would be the most robust way to ensure the implementation of FPIC. Similar recommendations were made by the Juukan Gorge⁶ parliamentary inquiry in their final report, *A Way Forward*, in which they recommended that the Native Title Act be reviewed to ensure consistency with the requirements of FPIC [60].⁷

5.1.2. Establish a uniform national framework for the agreement making process

To address the issues associated with legislative complexity and a patchwork legal regime, one approach could be for the federal government to introduce a uniform national framework for the agreement making process. Participants across all groups expressed mixed views regarding such an approach. Potential benefits include greater consistency of best practice standards nationwide, and creating opportunities to include all First Nations people under the framework, even those without existing legal rights. Some participants believed that strong federal guidelines would likely prompt states and territories to align, similar to the federal Indigenous Procurement Policy's success.⁸ The greatest concern that participants had was the risk that states or territories with strong existing standards may be harmonised down to meet the national minimum standard which could weaken existing strong regional frameworks. To mitigate this, participants recommended setting the national benchmark at or above the highest current standard. Participants also cautioned against overly prescriptive guidelines that might discourage innovation. To be most effective, the framework should focus on the agreement making process, rather than the specific content of agreements, allowing flexibility to accommodate diverse community aspirations. Participants also stressed the importance of clear implementation pathways and careful coordination to prevent conflicts with existing regulations.

5.1.3. Increase resourcing and funding for First Nations groups

All participants agreed that there needs to be greater funding and resourcing for First Nations groups, particularly to help even out the playing field during agreement negotiations and to ensure that the 'informed' requirement of FPIC is being met. One participant suggested the use of a revolving fund, which they observed being used by some First Nations groups in Canada.

One model that is used in Canada is that they have a revolving fund. Essentially, when a community is faced with a negotiation, they draw down funding from that for their negotiation and assuming that their

negotiation is successful and they have a revenue stream, then over time they repay the funds that were drawn out. If there isn't a successful outcome, they don't have to repay.

The advantages of such a model are that the community can access the money they need without being vulnerable to the company, but since they know that they will need to repay the money if successful, there is an incentive for them to minimise costs. However, in this participant's opinion, the model is still not ideal because the community is required to use some of the money that should be going towards benefits to instead repay the fund.

To support First Nations groups wanting to develop their own projects but facing barriers accessing capital to fund these projects, one suggestion is for governments to be the first loss investors, helping to de-risk projects and making it more attractive for other investors to come in and support the project.

You get a bunch of investors who are equity players, but then you have the government saying we're the first loss investor. So we'll put the last quarter of the money on top and if the project goes belly up or it hits rough times, it's actually our money that goes first, which means everyone else might be able to hold on for longer and see the project through a rocky period. So I think it's a reasonably well established and known way in the international development space of getting government funding in to de-risk projects and therefore make it more attractive for those other investors to come in with their capital.

5.1.4. Establish targeted capacity building programs for First Nations groups

All participants agreed that targeted capacity building programs should be implemented in Australia, across various areas. To be negotiation ready, First Nations communities need to build up their literacy around climate change and renewable energy, including all the technical terms associated with project proposals and an understanding of the scale and likely impacts of large-scale projects. Information should be presented to communities in a format that is easily understandable and accessible, and should be provided to them by independent, high integrity partners that can be trusted by the community. One participant suggested that there could be clean energy roadshows to travel around regional and remote areas helping to build up this literacy. First Nations groups also need a certain level of commercial skills and an understanding of how negotiations work in a Western-commercial paradigm. Ideally, community members themselves should build up these skills, however this takes time and effort and in circumstances where groups could be under time pressure to respond, they should as a minimum have access to trusted experts with the necessary commercial skills to match those of the 'highly sophisticated commercial parties'. Finally, to be in the best possible negotiating position, First Nations groups need to build up their political and organisational capacity, which has been found to be the most significant factor in determining the success of agreement outcomes [19]. Groups with a high level of political and organisational capacity are best placed to insist that companies meet their expectations of minimum standards.

Capacity building is also needed is for First Nations peoples to be employment ready. In addition to training and apprenticeship opportunities that could be negotiated as part of an agreement, governments could fund and implement workforce capacity building programs, especially in regional and remote areas where there may not be any existing training opportunities. As several participants recommended, these workforce capacity building programs should not just train local community members with the skills for jobs in construction, but should also develop the capacity of key individuals to become board members and executives within renewable energy companies.

The third key area in which capacity building is needed is to develop skills within First Nations groups and organisations to be able to

⁶ In May 2020, mining company Rio Tinto legally blasted and destroyed sacred rock shelters at Juukan Gorge containing evidence of continuous human occupation for over 46,000 years despite urgent objections by Traditional Owners to protect the rock shelters. Public outcry and media attention following the destruction triggered a parliamentary inquiry into the incident.

⁷ The report also recommended that state and territory heritage protections should be consistent with UNDRIP.

⁸ The Australian federal government's Indigenous Procurement Policy aims to increase Indigenous procurement through annual targets for the volume and value of contracts awarded to Indigenous enterprises, a mandatory set aside to provide Indigenous enterprises the opportunity to demonstrate value for money before a general approach to market for procurements with an estimated value between \$80,000 - \$200,000 and all procurements to be delivered in remote Australia, and mandatory minimum requirements for Indigenous participation for high value contracts [69].

translate benefits and income streams into long-term wealth generation. This is an area which is often overlooked, but participants have stressed the importance of these skills in ultimately deriving real and lasting benefits for First Nations communities. The type of skills necessary for long-term wealth generation include good governance structures within organisations and developing long-term investment strategies. There have been several successful capacity building programs implemented by state and federal governments in Canada (see for example [40]). Governments in Australia could look to implement similar programs to build up capacity across these three key areas.

5.1.5. *Facilitate the sharing of information between First Nations groups by establishing greater transparency of agreements*

Participants identified that the sharing of information with, and between, First Nations groups can help them to gain a better understanding of what they want and help them to be more assertive in their negotiations. Professor Ciaran O'Faircheallaigh explained the importance of being able to share information about what is possible in an agreement.

There's always a critical meeting that has to happen between what people want and what's possible. And those two things interact, because often a community starts off with quite a limited view of what it wants, because it doesn't have a good grasp on what's possible. Once you start providing information to people on what's possible, then that can start influencing on what they want to achieve and what their priorities are.

It is important when sharing this information that the necessary technical assistance is provided to groups to be able to interpret this information across different spatial and temporal contexts, another key aspect of the 'informed' requirement of FPIC. Jon Altman explained in his interview why such assistance is necessary.

Indigenous parties really need high quality technical assistance to know the real meaning of what's paid in other contexts ... There's no point in just saying, well, in Canada, Tribe X got 10% because that agreement would be made in a particular context and a particular historical moment ... which may or may not be relevant to a deal that you want to strike in WA or the Northern Territory in 2022.

Some participants, including those with legal expertise and experience, were of the view that (with the exception of certain commercial aspects of the agreements and sensitive information relating to cultural heritage) everything else in the agreement should be made public, as was the case with the Argyle Diamonds Mine Agreement. Other participants were of the view that it should be the choice of the First Nations group as to whether or not to share the agreement publicly. Governments could play a role in facilitating the sharing of information by passing legislation or creating enforceable policies to require greater transparency of agreements, with the consent of First Nations groups.

5.1.6. *Provide incentives to encourage development on First Nations' land and First Nations ownership and co-ownership of projects*

In response to the trend occurring in places like Victoria and New South Wales where project developers are choosing to locate their projects outside of Aboriginal land, participants have suggested that incentives may be needed to encourage development with First Nations groups. While there are yet to be any examples of this in Australia, there have been examples of successful policies implemented in Canada to incentivise First Nations participation and partnerships in renewable energy projects (see for example [53,61]). The Australian government could look to implement similar policies. Similarly, given that First Nations project ownership was viewed by many participants as the "ultimate goal", it is recommended that federal and state governments introduce policies to help facilitate First Nations co-ownership. [62]

5.2. *Strategies for other actors*

5.2.1. *Establish industry-wide best practice principles to be adhered to*

Rather than relying solely on governments to introduce a national framework or other regulatory changes that will strengthen the rights of First Nations peoples, the renewable energy industry could mandate their own minimum standards with respect to agreement making and benefit sharing. Examples of existing principles include the FNCEN's Best Practice Principles for Clean Energy Projects [62], the CEC's Best Practice Charter for Renewable Energy Projects [63] and the CEC and KPMG's Leading Practice Principles [64]. Currently these are voluntary principles. Historically, voluntary industry initiatives have been shown to be highly variable across companies and projects, may be abandoned in tough economic times and suffer from serious compliance issues [18]. To combat this, some participants suggested that adherence to these principles could be linked to whether the project receives funding from organisations such as the Clean Energy Finance Corporation, ARENA, or government-backed infrastructure funds such as the Northern Australia Infrastructure Facility, which would be one way to ensure compliance. Private investors such as banks could follow a similar approach and make a commitment to only fund projects that follow the specified principles. To ensure this is done well, it was suggested that there could be an accreditation that would be required to be able to ethically finance renewable energy projects. One participant also gave an example of how customers can enforce best-practice through Power Purchase Agreements (PPAs).

Probably the reason why that project had a community fund and actually was the only project that had quotas around Aboriginal employment on the project was because of the Power Purchase Agreement ... The owner of the PPA specified that they wanted a community fund in that project, so it forced the owner developer to do it. And I think that's a real example of what should be done. If it's not there, it should be asked for from those who are investing in it.

As a minimum, even if neither the government nor industry makes it a requirement to adhere to best-practice principles, project proponents could still choose to commit to these principles themselves. For example, actualising FPIC processes can be beneficial for companies and their investors by reducing their financial, legal, operational and reputational risk. Riley [65] argues that these are compelling reasons why companies should fully endorse the UNDRIP and respect FPIC rights regardless of whether or not it has been explicitly mandated in domestic legislation.

5.2.2. *Legal representatives to secure contractual regimes early on in the negotiations to 'beef up' the legislative regime*

During agreement negotiations, legal representatives can secure contractual regimes early on to "beef up" the legislative regime to include the principles of FPIC. One participant with extensive legal experience negotiating projects between First Nations groups and the extractive industry spoke about this approach.

Get in early and secure a contractual regime that beefs up the legislative regime. The legislative regimes are vague and we're usually dealing with lawyers from the big end of town acting for resource companies [...] so you need to beef up the arrangements through contracts. Usually by getting in early, it is not that difficult to get a reasonable instruction. They're generally trying to show off that they're good corporate citizens, so if we wheel out the concept of free prior and informed consent, which of course is a coverall, an over-arching principle, then at that stage usually they're not argumentative.

5.2.3. *Establish industry-wide cultural education and training programs*

Participants strongly recommended that the renewable energy industry should establish industry-wide cultural competency and cultural

awareness training. By better educating the industry, this could help to address the deficit view of First Nations peoples and ignorance of First Nations culture and is in line with similar recommendations from the literature (see [40]). Industry-wide education around First Nations peoples' history in Australia and their ongoing disadvantage could help to improve the ethos of companies and their willingness to do the right thing. In the context of extensive regulatory processes, as one participant emphasised, "the more renewable energy companies understand the importance of that work, the more they will prioritise it". This cultural competency and cultural awareness training is especially important for international companies who may not be as familiar with the Australian context.

5.2.4. First Nations groups to use power purchase agreements to secure funding for their own projects

For First Nations groups wishing to develop their own projects, as an alternative to governments being the first loss investors, it was suggested that First Nations groups could use PPAs to secure funding from investors, particularly those looking to invest in First Nations owned and approved projects.

The key thing with these projects is actually being able to have someone take the power that you're generating, and that's called a power purchase agreement [PPA]. If you can say that you've actually got access with free, prior and informed consent to Country and as a Traditional Owner, you've also negotiated with other Traditional Owners and you have secured the conditions for ethical production to a solar farm or a wind farm or whatever it is, that [PPA] is what you can go to investors, to banks with, to be able to finance the project.

With increasing pressure for companies to uphold their corporate social responsibility, First Nations owned projects could use this to their advantage. Some participants suggested there could be an accreditation scheme set up to approve First Nations owned projects, making it easier for them to use these PPAs to seek financing for their projects.

5.2.5. Educate communities about the power of their campaigning options

In addition to working with governments to help facilitate the sharing of information between First Nations groups, First Nations organisations, such as the FNCEN, can play a role by helping to educate communities about the power of their campaigning options, as distinct to the power of their Native Title rights and interests, for example. There has been mounting pressure for companies to do the right thing and uphold their corporate social responsibility, particularly in the wake of Juukan Gorge. First Nations groups can use this pressure to their advantage when campaigning against a development. Professor Jon Altman explains:

If you can get into the ears of proponents who are sensitive to the reputational risk that they might face globally if Native Title interests mount a campaign against the development, that is probably the most powerful leverage that Indigenous proponents have.

6. Conclusion

The opportunity presented by the renewable energy transition is one that could be truly transformative for Australia's First Nations peoples. A wide range of different benefit opportunities are available to First Nations communities, some of which can provide pathways to economic independence and self-determination, however this potential is currently being stifled in Australia.

While there are barriers to these opportunities as outlined in this paper, some of which are complex and multifaceted, with appropriate collaboration and action from governments, industry, project proponents and First Nations groups, many of these can be overcome. Key

recommendations include for governments to implement free, prior and informed consent over all renewable developments, to unify the different legislative frameworks under one national framework, to increase funding and resourcing for First Nations groups, to introduce policies and programs to build capacity and promote First Nations ownership of projects, and for the renewable energy industry to establish cultural education and training programs. The findings are crucial for policymakers, the renewable energy industry, and First Nations communities, offering actionable recommendations to enhance Indigenous participation and benefits in the renewable energy transition, without which research has shown there are no guarantees that inclusive Indigenous development will be achieved.

Most participants were of the view that large-scale renewable energy developments on Country do indeed have the potential to provide significant opportunities for First Nations groups to benefit from. Through participant recommendations and an analysis of the literature, this paper has outlined a way forward. Now, it will be up to government, industry and project proponents to work with First Nations groups to transform this opportunity into a reality, thereby determining the future of Australia's First Nations peoples for generations to come.

CRedit authorship contribution statement

Katie Quail: Writing – original draft, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **Donna Green:** Writing – review & editing, Supervision, Methodology, Conceptualization. **Ciaran O'Faircheallaigh:** Writing – review & editing, Methodology, Conceptualization.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability

The authors do not have permission to share data.

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