

Executive Summary

Energy landscape in South Australia

South Australia (SA) is a global leader in renewable energy.

Driven by high quality wind resources and rooftop solar in a smaller electricity market, renewable energy supplies around 70 per cent of the state's electricity consumption (having shifted from below 1 per cent renewables to 70 per cent in just over 16 years). SA has one of the highest market shares for renewable energy in the world and has a target for 100 per cent renewable energy by 2030.

SA energy policy is focused on increasing energy storage from the renewable grid, increasing the flexibility of electricity use that aligns with generation and the export of renewable energy. The Government is making plans for longer term future export with its Hydrogen Jobs Plan and initiatives to secure affordable, reliable electricity for low-income households.

SA's transmission network, operated by <u>ElectraNet</u>, extends over approximately 200,000 km² of terrain in SA, from Roxby Downs and Leigh Creek in the north to Port Lincoln in the west, connecting SA to the National Electricity Market. The Australian Energy Market Commission has <u>published a resource</u> showing SA's changing mix of electricity generation over time.

Land rights, native title and renewable energy resources in SA

First Nations rights and interest in land are recognised at the state level through three different statutory land rights laws and at the Commonwealth level, through the *Native Title Act 1993* (Cth). Most pastoral lease land is subject to native title determinations.

A key SA Government initiative presently under development is the proposed <u>Hydrogen and Renewable Energy Act</u>. The SA Government says this will introduce a 'one window to government' licensing and regulatory system for the lifecycle of large-scale hydrogen and renewable energy projects in SA. Although regulations accompanying the proposed Act are yet to be released, the draft Bill includes welcome mechanisms such as a requirement for Indigenous Land Use Agreements to be in place prior to the grant of various licences.

Exploration of renewable energy options are also underway as part of the Remote Areas Energy Supply (RAES) scheme and there are examples of Traditional Owners successfully negotiating renewable energy projects on their land.

Renewable energy projects in SA

SA has a unique mix of renewable energy resources with abundant wind resources and outstanding solar resources. SA's <u>Renewable Energy Atlas</u> helps identify the potential for solar, wind and other renewable energy infrastructure projects in SA.

SA presently has about <u>2 GW of solar PV</u> generating capacity across the state, and over one in three households have solar panels. Three large scale solar farms are in operation with a fourth under construction. In terms of onshore wind, <u>SA has over 2,000 MW</u> of installed capacity in onshore wind developments in SA.

First Nations-led energy projects

Across SA there are many potential sites that could be viable for First Nations-led clean energy projects, and clearly there is great opportunity for First Nations to play a leading role in the clean energy industry in SA, particularly given the scale of wind, solar and storage projects proposed in SA (see **Figure 4**, below).

The <u>Yoorndoo Ilga Solar</u> project, detailed further below, will be built and leased on land which is owned in freehold by the Barngarla Determination Aboriginal Corporation and which is also being designed to create additional wider community benefits through economic multiplier flow on effects.

Information in this document should not be relied upon as legal advice. Each situation will be different and you should obtain and rely on legal advice for your own situation.

Thanks to the team at the University of Technology Sydney (Indigenous Land and Justice Research Group and Institute for Sustainable Futures) for assisting to compile this overview.

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First Nations data and information for South Australia

The First Nations population of SA numbers around 52,000, just over 5% of the national Indigenous population.

Around one person in every 34 in SA is Aboriginal and/or Torres Strait Islander. While the non-Indigenous population of SA is rapidly ageing, with a median age of 41, the Indigenous population is relatively youthful, with a median age of 24.

As in other jurisdictions, the First Nations population of SA is also growing rapidly. Between 2016 and 2021, the First Nations population of SA increased by almost 12,000 persons (ABS 2018, 2023a). This implies a population growth rate of 5.2% per year over this period, an extraordinarily fast growth rate.

Around three quarters of the First Nations population of SA live in the Adelaide region which covers the southeast corner of the state (ABS, 2023b).

Land rights, Native Title and renewable energy resources

South Australia was the first Australian Government to pass laws recognising Aboriginal interests in land in 1966 and today in SA there are four main mechanisms that recognise First Peoples rights and interests in land across the state.

These are through:

- 1. the *Native Title Act* 1993 (Cth) (NTA)
- 2. the Aboriginal Land Trust Act 2013 (SA) (ALTA)¹
- 3. the Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981 (SA) (APY Act)² and
- 4. the Maralinga Tjarutja Land Rights Act 1984 (SA) (MTLR Act).³

The Indigenous Land and Sea Corporation (ILSC) has also assisted buy back land in SA in accordance with its functions.

Land tenure snapshot

As displayed in **Figure 1**, below, native title has been determined to exist in 55.8% of South Australian land, while a further 22.6% of SA is subject to one of the statutory land rights regimes listed above or through land buybacks facilitated by the ILSC.

¹ The Aboriginal Land Trust (established by the ALTA) holds titles to 65 properties covering over approximately 500,000 hectares of land in SA.

² The APY Act grants inalienable freehold title over approximately 103,000 square kilometres in the north-west corner and west of SA.

³ The MTLR Act grants inalienable freehold title over an area of 80,764 square kilometres in the west of SA. Under both the APY and MTLR Act, freehold land is vested in a body corporate bound by statutory functions and powers. Leases of variable periods can be granted under the APY and MTLR Acts. A traditional owner can be granted a lease for any length of time. The Crown can be granted a lease of up to 50 years, and any other party can be granted a lease of up to 10 years (APY Act) or five years (MTLR Act). None of these leases can be mortgaged.

Amata Kanpi Pukatja Dunjiba Coober Pedy Oak Valley Roxby Downs Koonibba Hawker Broken Hill Ceduna Quorn Port Augusta: Streaky Bay Whyalla Port Pirie Waikerie, Renmark Port Lincoln Akenta Towns and communities Gerard Adelaide Native title recognised Yorketown Native title exists (exclusive) Raukkan Native title exists (non-exclusive) Registered native title claims Bordertown Land rights lands Anangu Pitjantjatjara Yankunytjatjara Maralinga Tjarutja Aboriginal Lands Trust Mount Gambier Indigenous Land and Sea Corporation

Figure 1: Land restitution in SA (2023)

The Aboriginal Lands Trust Act 2013 (SA)

The *Aboriginal Lands Trust Act (1966)* (ALTA 1966) as passed in 1966 acknowledged Aboriginal people's distinct connection to land and waters and sought to recompense Aboriginal people for the losses they had suffered because of European settlement.

To administer and manage Aboriginal Lands Trust land, the ALTA 1966 established a body corporate, the Aboriginal Lands Trust (ALT), with perpetual succession and powers to 'receive, accept, hold, acquire by means of agreement, or exchange, possess and to dispose of property of any kind' (ALT 1996, Part 1, 5(2)) for the Aboriginal people of Adelaide. The ALT had three key purposes:

- 1. to ensure that Aboriginal people held title to existing Aboriginal former missions and reserves, where many lived;
- 2. to receive statutory royalties arising from mineral exploitation and to use these funds to acquire further land; and
- 3. to receive and disburse funds for the purpose of developing lands.

In 2013, the ALT Act was reviewed and reformed to clarify the ALT's functions and responsibilities, especially the requirement to consult with Aboriginal communities, and its relationship with the SA Government.

In 2013, three substantive changes were made to the operation of the ALT. First, the role of the Minister was reduced within the ALT. Whereas under the 1966 legislation, the Minister had an active role in approving every land dealing, since 2013 the ALT itself has had autonomy to make decisions about the use of ALT lands, particularly regarding the granting of leases and sub-leases. Second, the ALT is now required to consult with Traditional Owners and residents on ALT lands before decisions are made under the Act that may affect them. Third, the governance of the trust was changed. The Trust is now governed by a 'skills-based' Board of 8 Aboriginal people. Board members are appointed by the Minister based on their knowledge of SA Aboriginal life and culture, as well as relevant professional experience. In August 2023, there are currently 7 members appointed and one vacancy.

The ALT presently holds title to 65 properties, covering more than 500,000 hectares of land in SA. The land estate consists of freehold land, transferred Crown land, and properties which have been donated, purchased or otherwise acquired. Land use across the ALT estate includes agricultural, residential and conservation. Some properties owned by the ALT are leased back to Aboriginal communities. Aboriginal communities that lease ALT lands include Davenport, Gerard, Koonibba, Nipapanha, Point Pearce, Raukkan, Umoona and Yalata.

Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981 (SA)

The Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981 (SA) (APY Act) established the incorporated body Anangu Pitjantjatjara Yankunytjatjara (APY), a member-based organisation for all Pitjantjatjara, Yankunytjatjara and Ngaanyatjarra traditional owners.

The APY Act saw the return of approximately 103,000 km² of arid former-reserve land in the far northwest corner of South Australia, to Traditional Owners who hold inalienable freehold title. The main communities on the Lands include: Indulkana, Mimili, Kaltjiti, Pukatja, Amata, Pipalyatjara, and Watarru. There are several homelands as well, the larger ones being Kalka, Kanpi, Nyapari and Yunyarinyi.

A separate land rights regime exists for APY lands that recognises Anangu Pitjantjatjara ownership and control of their traditional lands. A meeting in January 1977 at Amata, Pitjantjatjara adopted the principle that they did not want the title to their lands to be held by the ALT and wanted freehold title over their former missions and reserves.

Maralinga Tjarutja Land Rights Act 1984 (SA)

The passing of the *Maralinga Tjarutja Land Rights Act* in 1984 resulted in the handing back of a significant portion of the Maralinga Prohibited Area as freehold land to the Pitjantjatjara people.

This step followed ongoing petitioning and occupation by the Pitjantjatjara people on their land and established an outstation at Oak Valley, 140 kilometres northwest of the Maralinga. The Federal Labor Government initiated an inquiry into the nuclear tests where, between 1953 and 1963 the British, in collaboration with the Australian Government, conducted atmospheric atomic tests and other nuclear weapons trials at Emu Field and Maralinga in the Great Victoria Desert of South Australia. The Commissioners investigated the effects of the tests on the Aboriginal people of the region. At long last the stories of contamination, alienation and dispossession were aired

and admitted as evidence and Aboriginal testimony heard 'land-claim style', in the bush and in their own words. The Commission reported in 1985 and recommended immediate action to decontaminate Maralinga and Emu Field to the satisfaction of the Australian Government so that they were fit for habitation by the Traditional Owners as soon as practicable. Central to the recommendation was an understanding on the part of the Commissioners that the Maralinga lands were contaminated, they belonged to Aboriginal people, and it was the duty of the Australian and British Governments to clean them up so they could be repossessed.

Maralinga Tjarutja is established under the *Maralinga Tjarutja Land Rights Act 1984* (SA). As with the APY Act, the statutory functions of the Maralinga Tjarutja are to ascertain and enact the wishes and opinions of Traditional Owners in relation to the use and control of their lands; protect the interests of Traditional Owners in relation to land and negotiate access to lands.

Table 1 - summary of SA's statutory land rights schemes

Statute	Aim	Landowner	Form of title	Private sale permitted?	Leasing or subleasing permitted?
Aboriginal Lands Trust Act 2013 First enacted in 1966.	Provides for the grants of land to Aboriginal people in South Australia.	South Australian Aboriginal Lands Trust (a statutory authority)	Freehold or leasehold or any other purchased titles	Yes, but must have support of the Parliament of South Australia	Yes, subject to conditions
Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981	Provides for the respective grants of land in the north-west of South Australia.	Body corporate	Inalienable freehold - vested in perpetuity	No	Yes, subject to conditions
Maralinga Tjarutja Land Rights Act 1984	Provides for the respective grant of land in the west of South Australia	Body corporate	Inalienable freehold title	No	Yes, subject to conditions

Native Title in SA

As depicted in **Figure 2**, native title has been determined to exist in a significant portion of SA. To date (September 2023), there have been 43 native title determinations in SA (which have included two native title compensation matters) and there are presently 17 active claimant applications on foot (which includes one native title compensation application).

Registered native title claim groups have rights under the *Native Title Act 1993* (Cth), including in relation to notification, consultation and negotiation in relation to infrastructure and projects, notwithstanding that their claim has not been determined.

South Australia

Figure 2: Native Title in South Australia - determined areas and areas claimed

What are the prominent First Nations institutions in SA

The <u>South Australian Aboriginal Community Controlled Organisation Network</u> (SAACCON) is a representative body made up of South Australian Aboriginal Community Controlled Organisations and peak bodies. SAACCON was established in June 2019 to lead engagement with the Aboriginal community about the Closing the Gap refresh and to work with the Coalition of Peaks.

SAACCON Members include:

- Aboriginal Drug & Alcohol Council (SA) Aboriginal Corporation
- Aboriginal Family Support Services
- Aboriginal Health Council of South Australia Inc.
- Aboriginal Legal Rights Movement
- Aboriginal Sobriety Group Indigenous Corporation (ASG)
- Family Violence Legal Service
- First Nations of SA
- InComPro
- Kornar Winmil Yunti
- Kura Yerlo Inc
- Mobile Language Team
- Narungga Nation Aboriginal Corporation
- Ngaanyatjarra Pitjantatjara Yankunytjatjara Women's Council
- Ngarrindjeri Ruwe Empowered Communities
- Nunga Mi:Minar
- Nunkuwarrin Yunti of South Australia Inc
- Nunyara Aboriginal Health Service; Pangula Mannamurna (Health)
- Port Lincoln Aboriginal Health Service
- SA Aboriginal Education and Training Consultative Council (SAAETCC)
- South Australian Native Title Services
- South Australian Stolen Generations Aboriginal Corporation
- Tauondi Aboriginal College.

The Office of the Registrar of Indigenous Corporations lists 203 corporations in SA.

Governance arrangements for native title in SA

South Australian Native Title Services is the native title service provider for the SA.

When a determination is made recognising the native title of an Aboriginal or Torres Strait Islander group, the group must establish a registered native title body corporate (RNTBC). These are more commonly known as prescribed bodies corporate (PBCs).

PBCs either hold native title rights and interests on trust for native title holders or act as their agent in respect of those rights and interests. Native title PBCs must be registered under the *Corporations (Aboriginal and Torres Strait Islander) Act 2006* (CATSI Act).

In SA there are presently 21 PBCs (these are listed in **Appendix 1**). A map of relevant areas and further information about these PBCs can be located on <u>Native Title Vision</u> (hosted by the National Native Title Tribunal).

Governance arrangements for areas where statutory land rights schemes exist in SA

Aboriginal Lands Trust

The Aboriginal Lands Trust (ALT) is a body corporate acting for the continued benefit of Aboriginal South Australians.

Under the ALT Act, the ALT is required to consult and act in accordance with the wishes Aboriginal people who have an interest in particular Trust Land. This includes Aboriginal Traditional Owners, residents, and community members with a historical connection to the site.

Anangu Pitjantjatjara Yankunytjatjara Land and Maralinga Tjarutja Land

The Anangu Pitjantjatjara Yankunytjatjara (APY) and Maralinga Tjarutja are Traditional Owner representative organisations.

The Executive Board of Anangu Pitjantjatjara Yankunytjatjara consists of 14 members elected from 7 electorates established by amendments to the *Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 2017*. They are elected pursuant to Section 9 of the Act and hold meetings in accordance with Section 10 of the Act. The Executive Board is the governing body of Anangu Pitjantjatjara Yankunytjatjara and is responsible for carrying out the day-to-day business of the organisation. The Executive Board must endeavour to always advance the interests of Anangu and must comply with resolutions made at Annual or Special General Meeting. An act of the Executive is binding on Anangu Pitjantjatjara Yankunytjatjara.

The Maralinga Tjarutja is governed by a Council, and members are Traditional Owner leaders who are selected by the community. The key functions of the Anangu Pitjantjatjara Yankunytjatjara (APY) and Maralinga Tjarutja under the respective Acts are to ascertain and enact the wishes and opinions of Traditional Owners in relation to the use and control of their lands; protect the interests of Traditional Owners in relation to land and negotiate access to lands.

A description of the levers, capacities and capabilities to negotiate an equitable benefit for renewable energy projects

What opportunities exist to develop projects on tenure held by First Nations?

There is much potential to develop clean energy projects on First Nations title lands in SA. There is also potential to develop projects for the extraction of critical minerals deemed essential for the national (and global) transition to renewables.

In late 2022 the South Australian Government announced their renewable energy industry expansion plans which included the release of the Hydrogen and Renewable Energy Act Issues Paper about a proposed Act (the Hydrogen and Renewable Energy Act (proposed)) to establish a comprehensive new regulatory framework to facilitate the development of hydrogen and broad scale renewable energy projects in SA across freehold and non-freehold (e.g. pastoral lease areas) in SA.

Approximately 40% of SA is non-freehold pastoral leasehold land where native title rights and interests are likely to exist - consequently the proposed *Hydrogen and Renewable Energy Act* is significant for native title holders in SA.

The <u>Hydrogen and Renewable Energy Act Issues Paper</u> highlighted that 'the next wave of renewable energy transformation in South Australia will largely occur on land under Native Title and will impact on Aboriginal people's interests, activities, and cultural and spiritual connections to their land'. The Issues Paper consequently identified the need for 'Informed, early and ongoing participation of Aboriginal people is essential to achieving the development of a globally significant sustainable renewable energy and hydrogen sector in South Australia'.

The Department for Energy and Mining has invited input from PBCs and community members on the proposed development of the Hydrogen and Renewable Energy Act to regulate large scale hydrogen and renewable energy projects on their land and waters.

<u>Consultation on the draft Bill</u> for the proposed *Hydrogen and Renewable Energy Act* closed on 26 June 2023.

In consultation material, the SA Government outlined their intention to 'work in partnership with Native Title groups that are ready and willing to host hydrogen and renewable energy projects on their land and will work with other Traditional Owners to respect their rights and interests'.

The energy transformation, the Government argued 'must deliver Aboriginal empowerment and greater self-determination' and along with commitment to restart treaty negotiations and a Voice to the SA Parliament, will ensure ongoing participation in regulating the sector. The government said they would 'like to discuss the best ways to support Aboriginal people to participate and engage with project proponents on their terms through the *Native Title Act 1993* (Cth) and *Aboriginal Heritage Act 1988* (SA) agreement making processes, to derive benefits and opportunities determined by them'.

Given the existence of native title rights and interests over most pastoral land the future act provisions of the *Native Title Act 1993* (Cth) will need to be complied with if any future dealing or activity on these areas affects native title.

In many cases, a project proponent is likely to need to negotiate an Indigenous Land Use Agreement (ILUA) with any registered native title claim group or PBC - indeed the proposed *Hydrogen and Renewable Energy Act* envisages that ILUAs will be concluded and registered before licences to proponents are granted under that Act . (An ILUA typically sets out how a proposed activity may occur and provides for a form of compensation or benefits package for the native title party. In these cases, the *Hydrogen and Renewable Energy Act* (proposed) creates a framework for there to be strong opportunities for the negotiation of equitable benefits by the PBC or native title claim group.)

Existing relationships between First Nations and the renewable energy sector in SA

Remote Areas Energy Supply (RAES) scheme

The South Australian government owns the electricity infrastructure that supplies 10 remote towns and 15 Aboriginal Communities across APY Lands, Yalata and Oak Valley. Around 3,400 customers in 13 remote townships and 15 remote Aboriginal Communities are provided with electricity under the Remote Areas Energy Supply (RAES) scheme.

Renewable energy

Five sites on the RAES scheme operate a hybrid power generation system using renewable generation options (solar, wind or batteries) to provide clean, renewable electricity to the local community. Diesel generators are used when renewable generation is not available or not supplying enough electricity to meet demand.

The 2019-20 SA Budget provided \$5.6 million over five years to implement a package of measures aimed at improving service delivery and realising operational efficiencies across the entire RAES scheme. Further funding (\$6.1 million) was allocated in the state's 2023-24 budget to investigate cost-effectiveness of implementing Renewable energy solutions, further integration of renewable technology, and upgrade/replacement of generation and distribution infrastructure at other RAES sites.

Smart Meters and tariffs

The government introduced charges for electricity on remote Aboriginal townships and communities accessing the Remote Area Energy Supply (RAES) scheme. According to the Government, the future sustainability of the RAES scheme includes the introduction of 'Smart Meters' commencing in 2021 and Tariffs in 2022. The 3-stage process to ensure the future sustainability of the RAES scheme incorporates:

- the installation of Smart Meters to improve energy efficiency and service delivery.
- the introduction of more flexible payment options, including the development of a customer prepayment framework, to reduce the level of customer indebtedness.
- the staged introduction of electricity charging for residents in the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands, Oak Valley and Yalata.

Tariffs for residential customers in community housing in the APY lands, Oak Valley and Yalata were phased in from July 2022, starting at a low level to provide time to adjust to the changes and with education campaigns to prepare the community for the new charging system.

Traditional Owner-led clean energy projects - an overview of the Yoorndoo Ilga Solar Project

The Barngarla people have successfully negotiated with a private company to build a solar project on their land. The Barngarla people have worked through the courts for 25-years to secure their rights and interests for their country through the Native Title system. In September 2021, the courts ruled in their favour determining their recognition of Barngarla country to 44,500 km² of the Eyre Peninsula.

In the Barngarla Traditional Owners negotiated a solar energy deal. The Agreement for Lease relates to land secured by Barngarla Determination Aboriginal Corporation RNTBC (BDAC) in accordance with the terms of an ILUA with the SA Government.

The <u>Yoorndoo Ilga Solar Project</u> is a 300 MW solar, and 250 MW/500 MWh battery storage project located on approximately 665 ha of land north of Whyalla. The project is being developed by EPS Energy and AMP Energy in partnership with the Barngarla Community, on land which is owned freehold by the Barngarla Determination Aboriginal Corporation (BDAC).⁴

The key project goals are to provide significant positive economic, social and environmental outcomes for the Barngarla people, Whyalla region and the state of South Australia.

For Barngarla people, the agreement includes equitable participation in the South Australian renewable energy sector, long term revenue to BDAC from sustainable use of their land for the

⁴ For additional information about the project, see the First Nations Clean Energy Network's <u>Traditional</u> Owner Negotiations Webinar

benefit of their people and will create industry and employment diversity for the Barngarla community and Whyalla region.

Notwithstanding this success story, BDAC also <u>highlights on their website</u> a challenge that is common for many Traditional Owner and native title representative organisations - an overwhelming number of active matters and new requests arriving every week whilst also not receiving adequate Government funding to progress or deal with these matters.

Are there energy security/access/justice issues for First Nations in SA?

Although SA is a national leader in rooftop solar for many First Nations there are significant energy justice issues (including for accessing the health and economic benefits of rooftop solar), and especially for people living in social housing, rental housing and remotely. For these cohorts, accessing the benefits of rooftop solar can be particularly challenging, often because of the <u>policy</u> and <u>regulatory barriers</u> that need to be overcome.

The South Australian government owns the electricity infrastructure that supplies remote towns and Aboriginal Communities across APY Lands, Yalata and Oak Valley.

Around 3,400 customers in 13 remote townships and 15 remote Aboriginal Communities are provided with electricity under the Remote Areas Energy Supply (RAES) scheme. They rely on diesel generators for back-up electricity. Renewable energy supply is being installed in some communities.

In July 2022 amendments to the RAES saw remote Aboriginal residents move to a prepay scheme for electricity. In a <u>submission</u>, the SA Council for Social Service highlighted concerns about prepayment schemes for electricity and the possibility that more frequent disconnections could worsen chronic health conditions.

Is there finance / funding available for First Nations renewable energy projects?

The SA Government's <u>2023-24 Budget</u> delivered on 15 June 2023 did not provide any specific First Nations funding for renewable energy projects, however, <u>other funding streams</u> may be relevant or provide some assistance. Information on other funding sources (Australia-wide) is <u>available here</u>.

The SA Government's <u>Aboriginal Economic Participation Strategy</u> focuses on leveraging opportunities for Aboriginal employment and business enterprise from government procurement. Through the <u>Aboriginal Business Register</u> the Strategy is focused on increasing Aboriginal businesses winning government procurement contracts. The Industry Participation Policy includes an online portal that connects the Aboriginal business sector to procurement and contracting or subcontracting opportunities.

South Australian Energy Policy

Overview of SA energy policy

South Australia is one of the global leaders in renewable energy. Driven by wind farms taking advantage of high-quality resources and strong uptake of rooftop solar in a smaller electricity market, renewable energy supplies around 70 per cent of the state's electricity consumption. South Australia therefore has one of the highest market shares for renewable energy in the world and a target for 100 per cent renewable energy by 2030.

Consequently, South Australia is a policy laboratory for operating a high renewable energy grid which is of international interest.

Whereas most states are focussed on increasing the share of renewable energy, the primary focus of South Australian policy is how to operate a high-renewables grid by increasing energy storage (South Australia installed the first large battery in the world) and increasing the flexibility of electricity consumption to match generation, especially to shift electricity consumption into the middle of the day when there is surplus solar generation and low demand for grid electricity creates technical challenges.

South Australian policy is focussed on the export of renewable energy.

The <u>Energy Connect project</u> to build transmission lines between South Australia and NSW will enable more renewable energy to be built in SA and export output. The <u>Hydrogen Jobs Plan</u> is also a major focus for SA which aims to develop a future export sector.

Whilst there are no current policies or programs specifically focussed on First Nations people, the SA Government has sought to engage with Traditional Owners and Aboriginal people in SA in the development of the proposed *Hydrogen and Renewable Energy Act*. The draft Bill includes requirements that ILUAs be concluded prior to the grant of licences under that proposed Act (where native title rights and interests are relevant).

There are other SA Government programs such as low-income household energy efficiency requirements for retailers and hot water storage pilots that could be leveraged to deliver benefits for low-income First Nations households.

SA's current energy mix

As noted above, renewable energy sources made up 70% of SA's electricity generation in the past year, as follows (see also **Figure 3**, below):

- Wind farms are the dominant source of electricity in SA, contributing almost 46 per cent of consumption in the last year, reflecting an abundance of sites with high wind speeds.
- <u>Solar</u> accounted for almost one-quarter of generation, comprising rooftop solar (18.6 per cent) and solar farms (5.5 per cent). The high concentration of rooftop solar creates very low minimum demand for grid electricity in the middle of the day. This is referred to as the 'duck curve' which illustrates how low midday electricity demand contrasts with higher demand peaks in the mornings and evenings. This is a major focus for energy bodies in SA as it creates issues in grid stability.

- SA's <u>grid</u> doesn't utilise coal for electricity production since the closure of the Northern power station in 2016. However, over 11 per cent of demand was met through importing electricity from other states which is primarily brown coal from Victoria.
- SA relies <u>significantly on gas</u>, with 22 per cent of electricity produced by combined cycle gas turbine, open cycle gas turbine and gas (steam).
- The Hornsdale Power Reserve (also known as the Tesla Big Battery) supplies 150 MW of the 470 MW <u>battery storage</u>. The primary role of battery storage to date is grid services (e.g. quick-response frequency management) and it makes only a minor contribution to demand.

Figure 3: Electricity Generation, SA, August 2022-2023⁵

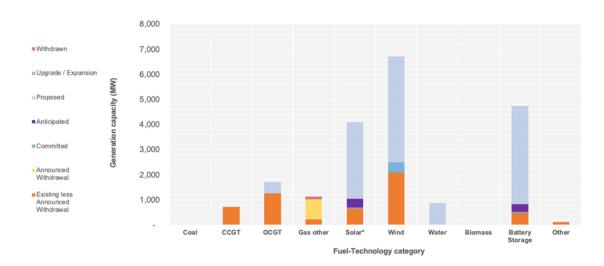
	15	Aug 2022 – 20	O Aug 2023
Default	Energy GWh	Contribution to demand	Av.Value \$/MWh
Sources			
Solar (Rooftop)	2,643	18.6%	\$17.33
Solar (Utility)	774	5.5%	\$44.60
Wind	6,517	45.9%	\$60.58
Battery (Discharging)	75	0.5%	\$248.63
Gas (Reciprocating)	260	1.8%	\$277.85
Gas (OCGT)	442	3.1%	\$335.76
Gas (CCGT)	2,068	14.6%	\$193.76
Gas (Steam)	624	4.4%	\$147.19
Distillate	17.4	0.1%	\$823.97
Imports	1,585	11.2%	-\$105.11
Loads	-912		
Exports	-814	-5.7%	\$9.95
Battery (Charging)	-98	-0.7%	\$51.02
Net	14,094		
Renewables	9,934	70.0%	

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⁵ Source: OpenNem. https://opennem.org.au/energy/sa1/?range=1y&interval=1w. Accessed August 21, 2023.

Renewable energy project pipeline - SA

As set out in **Figure 4**,⁶ there is a large renewable energy, storage and transmission project pipeline in SA.



The key takeaways are from Figure 4 are:

- 1. There is currently a large volume of wind farms (around 4200 MW), battery storage (3900 MW) and solar farms (3000 MW) under development. To put this in perspective, South Australia's renewable mix is made up of wind farms (2070 MW), solar farms (660 MW) and battery storage (470 MW)
- 2. Of these projects, most are 'proposed' (which under AEMO's definition means they are in the planning system but do not yet have finance for construction). A relatively small amount is 'anticipated' (i.e. early-stage), and an even smaller proportion 'committed' (i.e. the projects are proceeding to construction)
- 3. With South Australia's already high renewable penetration (70 per cent), many of these projects are contingent on new sources of demand for electricity either from future hydrogen projects (a 200 MW hydrogen power plant is set to open by 2025), electrification or exports to other states (that is, they are currently projects without markets, although see below about Project EnergyConnect).

Project EnergyConnect - energy interconnector between SA and NSW, with a connection to Victoria

<u>Project EnergyConnect</u> is a partnership between ElectraNet (South Australia) and Transgrid (NSW) to establish an energy interconnector between the SA and NSW power grids, with an added connection to Victoria (<u>see also here</u>). The finished infrastructure will have an 800 MW transfer capacity and expected completion is late 2025/early 2026. This will allow significant transfer of

Note: AEMO uses criteria relating to land, planning, finance, contracts and construction to define projects as either 'anticipated' (i.e. announced but not yet advanced), 'proposed' (projects that are somewhat advanced but do not yet have finance for construction) and 'committed' (projects that have finance for construction).

⁶ Source: AEMO, Generator Information, https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/for ecasting-and-planning-data/generation-information, Accessed August 21 2023.

electricity between NSW and SA, primarily to enable the export of renewable energy from South Australia which has higher-quality resources, but also to support grid management by increasing energy flexibility.

Key energy market institutions in SA

ElectraNet operates the main transmission network in South Australia. The main electricity distributor in South Australia is SA Power Networks (SAPN).

Institution Type	Organisation and Roles
Electricity Networks	<u>ElectraNet</u> owns and operates South Australia's high-voltage transmission network. The transmission network is also connected to interconnectors to export South Australia's power to other states through the National Energy Market (NEM).
	<u>SA Power Networks</u> (SAPN) owns the lease to and manages South Australia's distribution network. Electricity is transported from transmission substations to local substations within the distribution network at a reduced voltage. Localised transformers reduce the voltage further to supply electricity to homes and businesses.
Energy Regulators	 Essential Services Commission of South Australia (ESCOSA) fulfils roles including: Administering the licensing regime for electricity entities Monitoring and reporting on the performance of licensed entities with regulatory obligations Making industry codes regulating the behaviour of licensed entities Enforcing compliance with licensees' regulatory obligations
Government agencies	 Department of Energy & Mining (DEM). Functions include: regulatory frameworks provide a secure, reliable energy system and lower energy process for South Australia increase exploration and resource investment to support job creation, economic growth and royalties for South Australia grow the South Australian economy. Office of Hydrogen Power SA oversees the design and delivery of the South Australian Government's Hydrogen Jobs Plan.

Clean Energy Targets and Strategies in SA

Policy Domain	Targets and Strategies
Greenhouse Emissions	South Australia aims to achieve a 60% reduction by 2050 (relative to 2005 levels). This has been legislated via Climate Change and Greenhouse Emissions Reduction Act 2007.
Renewable Energy	South Australia aims for 100% net renewable energy generation by 2030.
Energy Efficiency	Under the South Australian <u>Retailer Energy Productivity Scheme</u> , there are annual energy productivity targets for electricity retailers to reduce electricity and gas use. Targets increase annually, from 3,029,222 GJ in 2023 to 3,750,000 GJ in 2025.
Low-income households	Under the South Australian Retailer Energy Productivity Scheme, there are specific energy productivity targets for retailers to achieve electricity and gas savings in priority group low-income households, targeting 500,000 GJ of savings every year until 2025.

Key renewable energy policies in SA

As South Australia already has a high proportion of renewable energy, the state's policies focus primarily on initiatives to manage the use of renewable energy more efficiently through storage and demand flexibility.

Policy title	Key initiatives
The Federal Government / South Australian Energy and Emissions Reduction Deal	The only major initiative is the joint commitment of \$1.08 billion between the Commonwealth and South Australian Governments, administered through ARENA and the CEFC. Announced initiatives include: Project EnergyConnect (see above). Vast Solar Port Augusta Concentrated Solar Thermal Power Project, contributing 30 MW / 288 MWh (estimated commissioning in late 2025). Port Bonython Hydrogen Export Hub (in planning stages)

Energy storage policies in SA

Policy title	Key initiatives
Grid Scale Storage Fund (GSSF)	\$50 million fund to accelerate the deployment of grid-scale storage infrastructure to address intermittency issues associated with solar and wind energy.
	The fund is 'technology-neutral' and supports battery storage (both large-scale and also 'behind the meter' for households and businesses), pumped hydro storage, gas storage, solar thermal and bio-energy.
	Projects include the Hornsdale Power Reserve and additional expansion and funding to fast-track four pumped hydro storage projects.

Key energy efficiency and demand management policies in SA

Policy title	Description
South Australian Retailer Energy Productivity Scheme (REPs)	Under the REPs, electricity retailers are required to achieve energy productivity savings. Households and businesses receive free or discounted energy efficiency and energy productivity activities from energy retailers participating in REPS (e.g. energy-efficient lighting, water efficient shower heads, hot water upgrades, AC upgrades, energy efficient appliances). While various approved activities can be offered by providers under the REPS, providers do not offer all REPS activities and some activity types may not be available.
	In 2022, approximately 2.6 million GJ of energy savings were made by 17,246 households and businesses.
	Further information on the REPS is <u>available here</u> .
Demand flexibility trials	There are several innovative pilots to increase demand flexibility to better match consumer demand and variable renewable energy supply including:
	 a 'solar sponge' tariff, which reduces the network charge to 25 per cent of standard rates from 10am – 3pm to encourage users to shift consumption or use battery storage during these times when there is a surplus of solar power.

- pilots funded by ARENA to shift the timing of household water heating from night-time to the middle of the day.
 Switching the timing of household water heating can also use surplus solar power and enable low-income households that can't afford batteries to save money
- a 'Virtual Power Plant' (VPP) pilot, a network of up to 50,000 household solar and battery systems that are coordinated by electricity retailers, to use power at low-price times and export power at high-demand/price times. As of May 2023, 3,100 South Australian households are part of the VPP.

Notable hydrogen policies in SA

Policy title	Description	
Hydrogen Jobs Plan	The SA Government has allocated \$593 million to the construction of:	
	 250 MW of electrolysers (for hydrogen production) 	
	200 MW of hydrogen-fuelled electricity generatorsHydrogen storage infrastructure	
This plan aims to support the development of hydrogen sector by:		
	 demonstrating hydrogen production and generation at scale to enable further investment 	
	 establishing Hydrogen Power SA, a government owned enterprise to own and operate the hydrogen production and power plant 	
	 developing a Hydrogen Export Strategy to position SA as a leading hydrogen exporter 	
	 establish initial infrastructure to develop and give a competitive advantage to SA's energy export industry 	

Key policies for local workforce and businesses

South Australia does not have a clean energy skills or training fund or major programs. Under the <u>South Australia Manufacturing Strategy</u> being developed, the State Government will set out the plan to grow and transition SA towards a green economy.

Policies for social housing and low-income households

Policy title	Description
SA Retailer Energy Productivity Scheme (REPs)	Under the REPs, retailers are required to meet distinct energy productivity targets for priority group households, with 500,000 GJ targeted every year until 2025. In 2022, 555,736 GJ of energy savings from 10,909 activities were delivered to priority group households. Priority group households are a group of low-income
	households, such as holders of a pensioner concession card and low-income health care cards.

Policies or Programs for First Nations

Whilst there may be First Nations households that benefit from the REPs, there are no policies or programs that focus specifically on First Nations in SA.

Both the REPs and the demand-flexibility pilots could offer opportunities for First Nations households to participate in and benefit from clean energy, through energy audits that make homes cheaper to power and more comfortable and initiatives to upgrade and use hot water storage to use surplus renewable energy in the grid.

As noted above, the SA Government has released a draft Bill for its proposed *Hydrogen and Renewable Energy Act* which provides that licences for 'native title land' will not be able to be issued without registered native title holders or claimants entering into ILUAs with proponents.

Information in this document should not be relied upon as legal advice. Each situation will be different and you should obtain and rely on legal advice for your own situation.

Thanks to the team at the University of Technology Sydney (Indigenous Land and Justice Research Group and Institute for Sustainable Futures) for assisting to compile this overview.

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Appendix 1 - List of Prescribed Bodies Corporate in SA

Adnyamathanha Traditional Lands Association (Aboriginal Corporation) RNTBC

Antakirinja Matu - Yankunytjatjara Aboriginal Corporation RNTBC

Arabana Aboriginal Corporation RNTBC

Barngarla Determination Aboriginal Corporation RNTBC

Bundi Yamatji Aboriginal Corporation

De Rose Hill - Ilpalka Aboriginal Corporation RNTBC

Far West Coast Aboriginal Corporation RNTBC

Gawler Ranges Aboriginal Corporation RNTBC

Irrwanyere Aboriginal Corporation RNTBC

Kaurna Yerta Aboriginal Corporation

Kokatha Aboriginal Corporation RNTBC

Ngadjuri Adnyamathanha Wilyakali Native Title Aboriginal Corporation

Ngarrindjeri Aboriginal Corporation RNTBC

Nukunu Wapma Thura (Aboriginal Corporation)

The Dieri Aboriginal Corporation RNTBC

The River Murray and Mallee Aboriginal Corporation RNTBC

Tjayiwara Unmuru Aboriginal Corporation RNTBC

Walka Wani Aboriginal Corporation RNTBC

Wangkangurru Yarluyandi Aboriginal Corporation RNTBC

Yandruwandha Yawarrawarrka Traditional Land Owners (Aboriginal Corporation) RNTBC

Yankunytjatjara Native Title Aboriginal Corporation RNTBC