GOYDER
RENEWABLES ZONE

Community Information Booklet

NEOEN

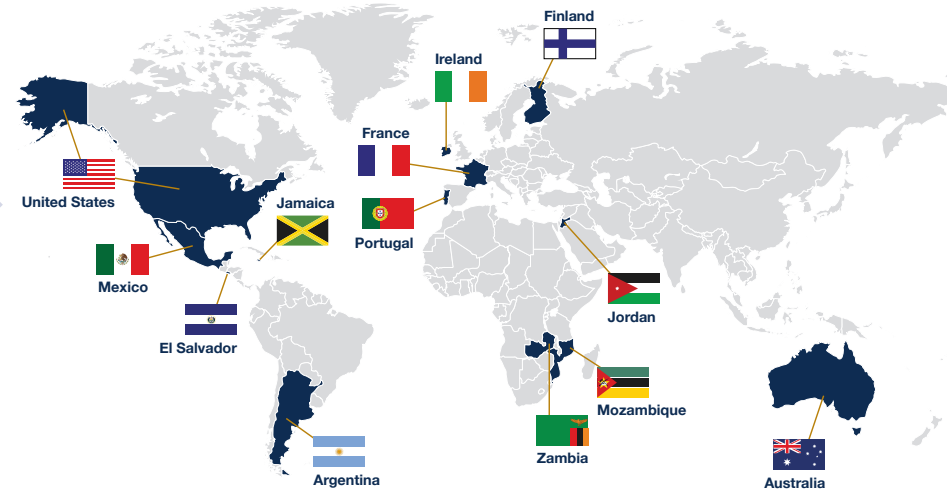
www.goyderenergy.com.au
1800 966 166
contact@goyderenergy.com.au

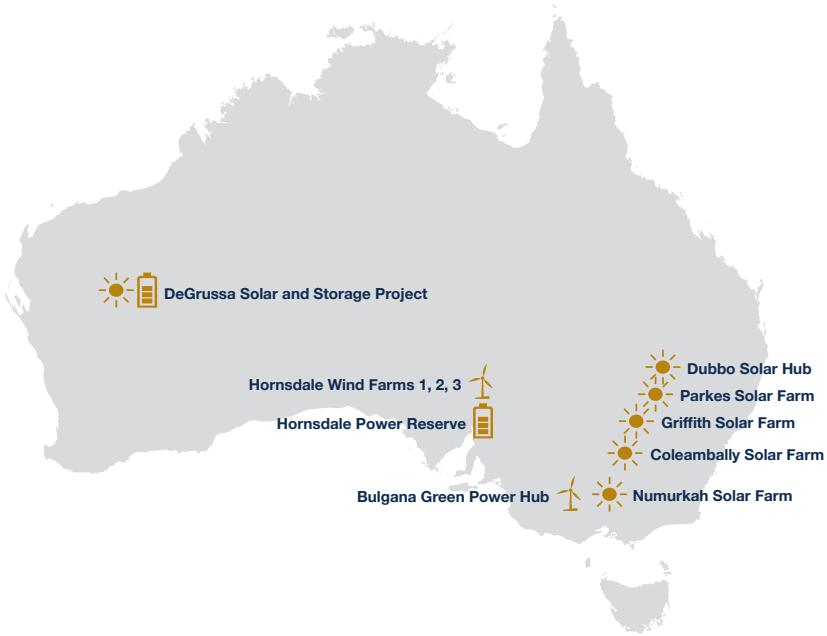
NEOEN

GLOBALLY

The company is headquartered in Paris, France, and has two Australian offices – in Sydney and Canberra.

We operate across renewable energy technologies including solar, wind, storage and biomass in Europe, Central America, Africa, the Middle East and Australia.





LOCALLY

Neoen Australia began operations in 2012. Over the last seven years the company has initiated the development of more than 1GW of solar and wind projects through organic growth, local partnerships and strategic acquisitions.

Neoen produce green electricity from renewable sources such as sunlight and wind using mature, tried and tested technologies. We are also leaders in energy storage.

WORLD'S LARGEST BATTERY HORNSDALE POWER RESERVE

LESS THAN SIX MONTHS
FROM PROJECT INCEPTION TO COMPLETION

- 100MW Lithium-ion battery located next to Hornsdale Wind Farm
- Owned and operated by Neoen
- Installed and maintained by Tesla

- Provides grid stability services
- Puts downward pressure on energy market prices
- Generates revenue

REDUCES RISK OF BLACKOUT
IN SOUTH AUSTRALIA

PROJECT VISION

FIRM RENEWABLES

The Goyder region is home to some of the best wind and solar resources in the country. Also unique to the Mid North, the wind tends to blow most strongly at night, when the sun is not shining.

We plan to take advantage of this through combining wind, solar and storage in one integrated project. This means we can deliver a steady, reliable output of power throughout the day and night whenever consumers need it.

Firm renewables will support South Australia's grid and industrial economy.

CUTTING-EDGE TECHNOLOGY

1. We'll use bifacial solar panels which generate electricity on both sides, using light reflected from the ground.
2. Modern turbines are larger and more powerful, requiring fewer machines to produce the same amount of energy. As a result, construction becomes faster and more efficient, with less traffic, road infrastructure and concrete producing better outcomes for local residents and the environment. Modern turbines also have improved aerodynamics and are typically quieter than smaller, older models.
3. We'll deploy lithium-ion battery storage. Our Big Battery in Jamestown has been essential in keeping the lights on in SA since 2017, saving consumers over $50 million.

GOYDER'S INFLUENCE

When George Goyder first drew 'Goyder's Line of Rainfall' in 1865, he had no idea that his work would be used to help site large-scale renewable energy.

The project will enable local farmers and the community to be more drought resilient.

Renewables are compatible with continuing to use land for farming- wind turbines occupy less than 1% of the land on which they are sited and our solar farms combine agriculture in the form of sheep grazing among panels.

Goyder was nicknamed 'Little Energy' for his extreme efficiency – Neoen is hoping to turn this into 'Big Energy'.

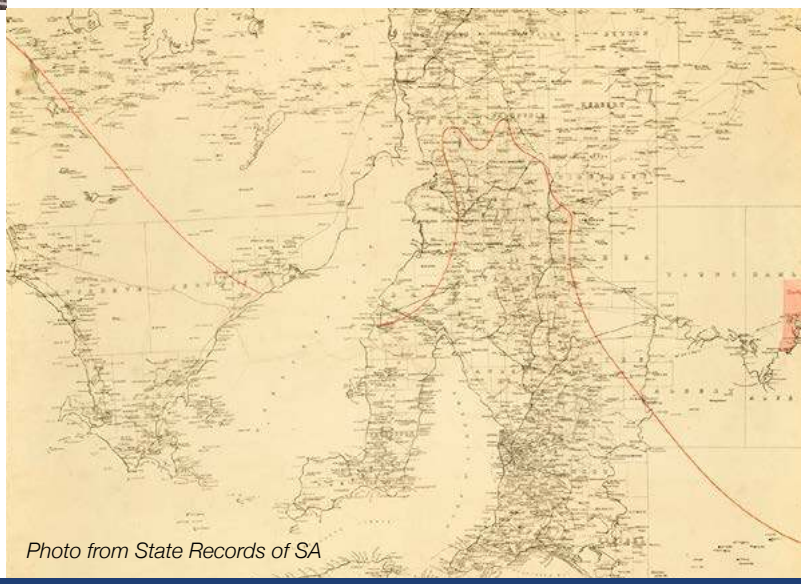
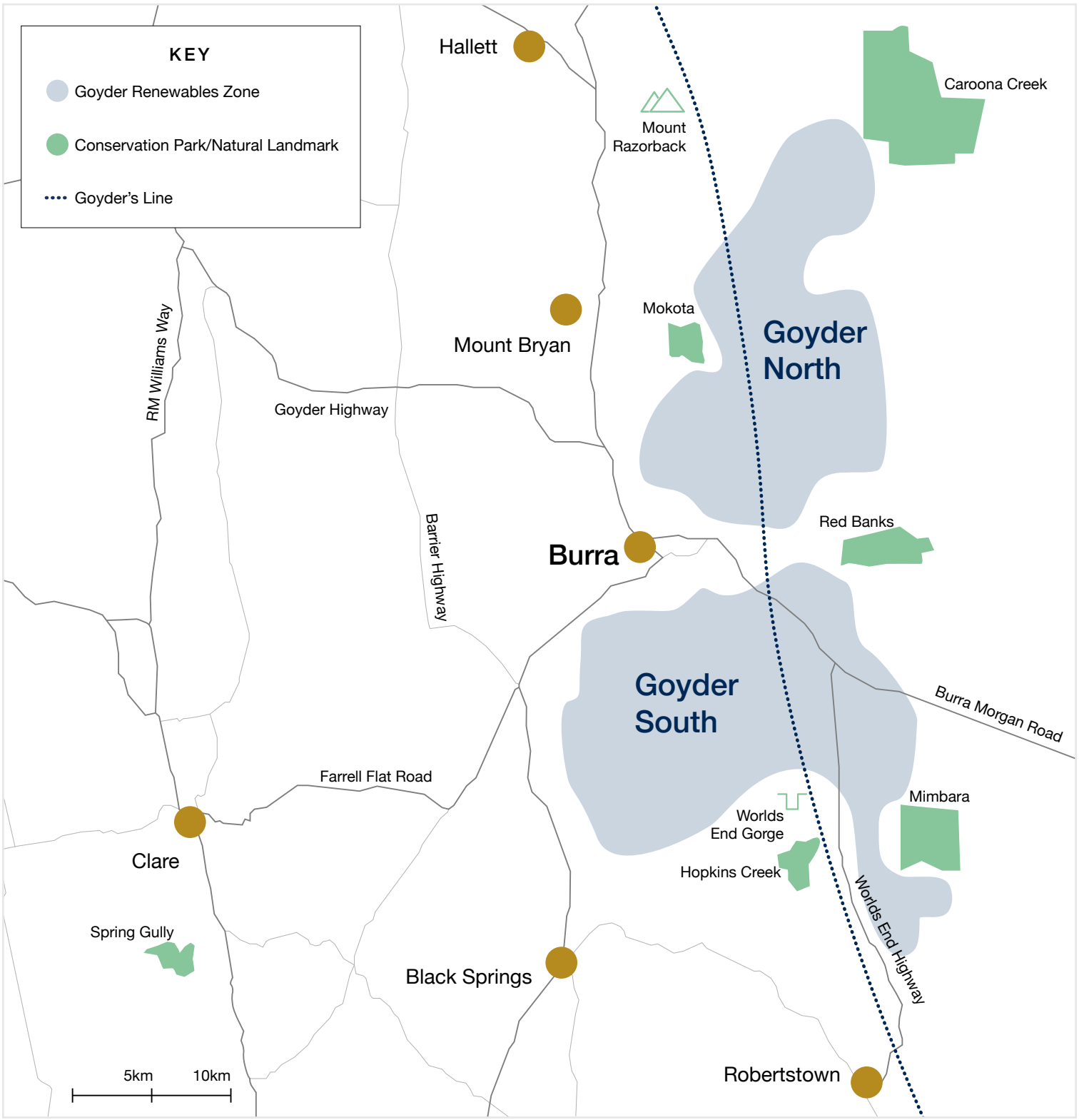


Photo from State Records of SA

SITE MAP

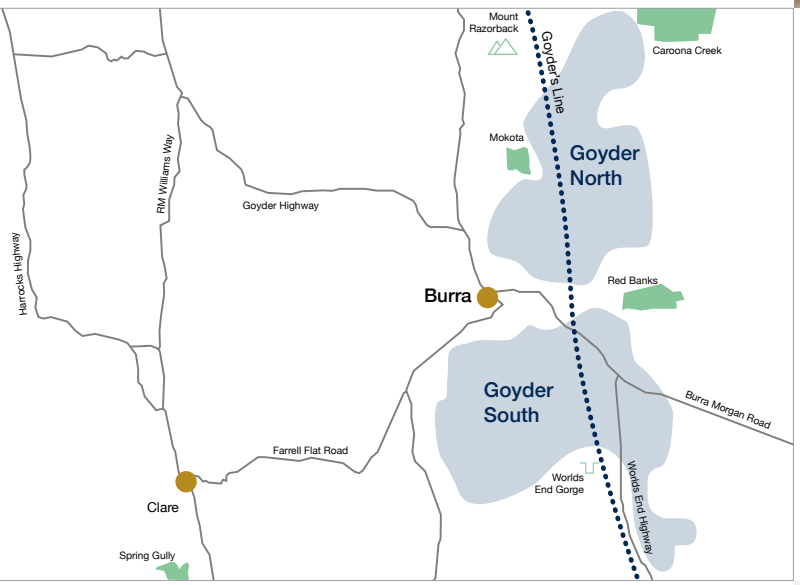


Please note: this map is indicative only and subject to further refinement.

PROJECT ROLL-OUT

— Due to the size of the project, it will need to be constructed in multiple stages. This has the advantage of spreading the benefits of construction over a longer period, creating a more sustained economic boost to the region.

— We expect there will be five stages- three stages of Goyder South and two stages of Goyder North.



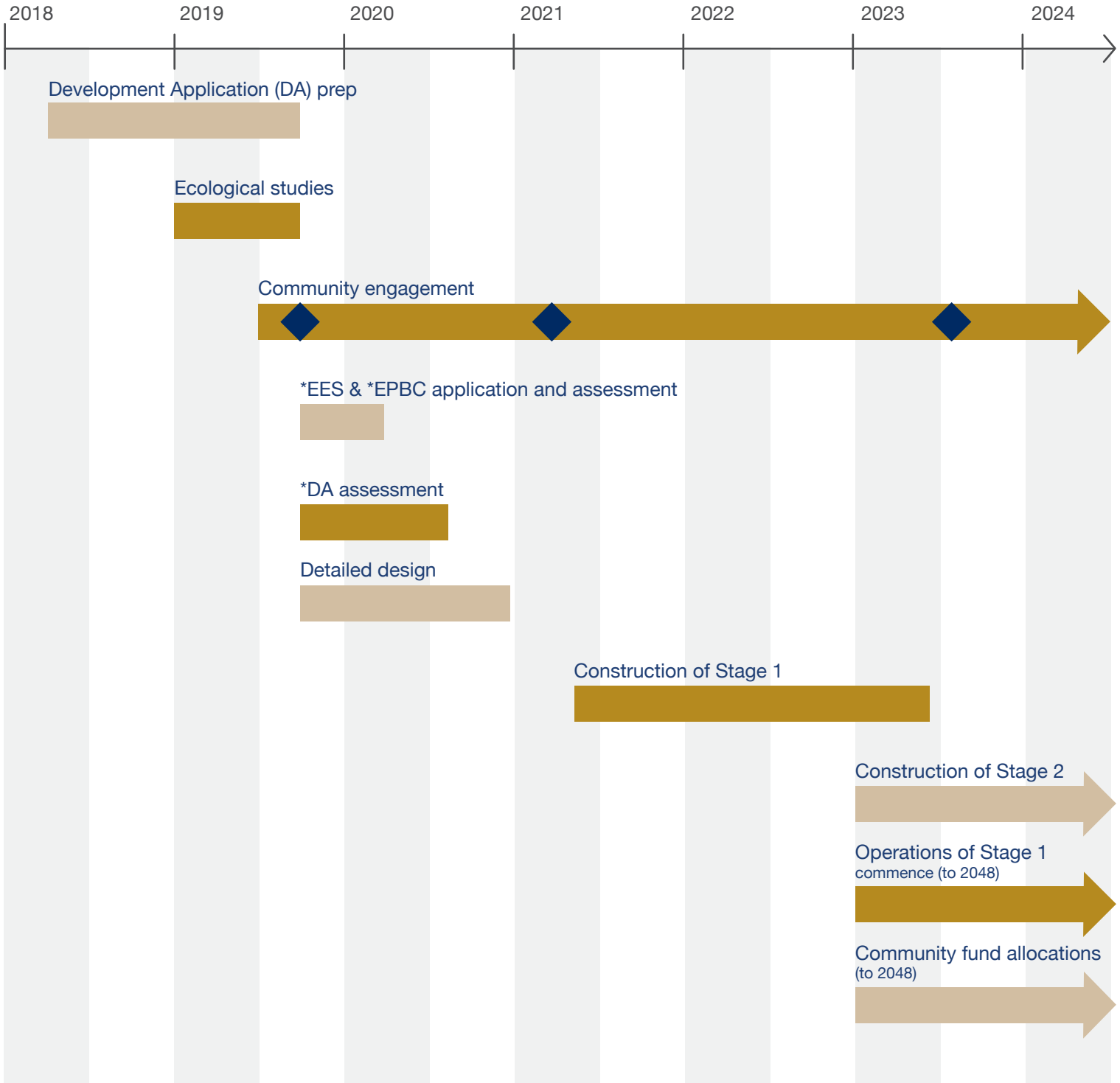
— Neoen envisions that each stage will consist of approximately 400MW of wind generation, 200MW of solar generation and 300MW of battery storage. Even a single one of these stages will be larger than the current largest renewable generator in Australia.

— Goyder South will be constructed first due to its proximity to Robertstown substation, where the power will connect in to the grid.

— When the first stage of Goyder North is constructed, a new transmission line will run from Goyder North to the Goyder South.

— Each stage is likely to take between 18-24 months to build. We hope the stages will be constructed on a rolling basis with construction beginning on a new stage as the previous stage is finished.

PROPOSED PROJECT TIMELINE: GOYDER SOUTH



***KEY**

EES Environment Effects Statement

EPBC Environment Protection and Biodiversity Conservation Act

DA Development Application

◆ Community event

Please note that the project is at the early stage of development and the timeline is subject to change. The latest information can be found on our website.

NEOEN

GOYDER NORTH

ECONOMIC BENEFITS

UP TO $4 MILLION
ANNUAL INCOME PAID TO LOCAL LANDOWNERS AND NEIGHBOURS

AROUND 300
CONSTRUCTION STAFF

UP TO $2 BILLION
TOTAL PROJECT INVESTMENT AT FULL BUILD-OUT

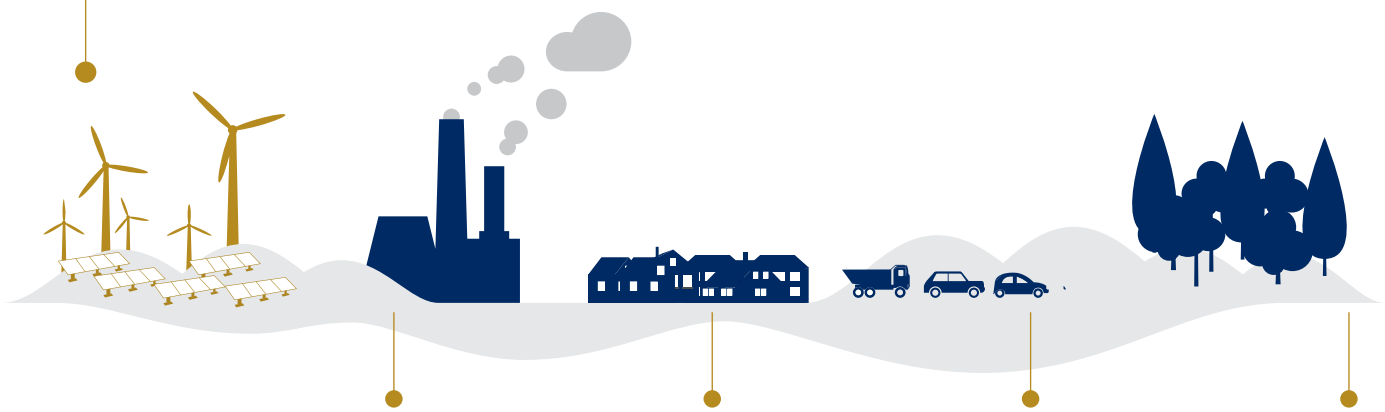
UP TO 20
PERMANENT STAFF AT FULL BUILD-OUT

LOCAL COMMUNITY BENEFITS

$400,000 PER YEAR
FUNDING COMMUNITY PROJECTS

ENVIRONMENTAL BENEFITS

ABILITY TO PRODUCE OVER
3,000,000 MWh
PER YEAR WHICH IS EQUIVALENT TO:



DISPLACING
1,500,000 TONNES
OF CO^2 EMISSIONS

POWERING
650,000 HOMES

REMOVING
630,000 CARS
FROM THE ROAD

PLANTING
25 MILLION TREES

GOYDER SOUTH

ECONOMIC BENEFITS

UP TO $6 MILLION
ANNUAL INCOME PAID TO LOCAL LANDOWNERS AND NEIGHBOURS

AROUND 300
CONSTRUCTION STAFF

UP TO $3 BILLION
TOTAL PROJECT INVESTMENT AT FULL BUILD-OUT

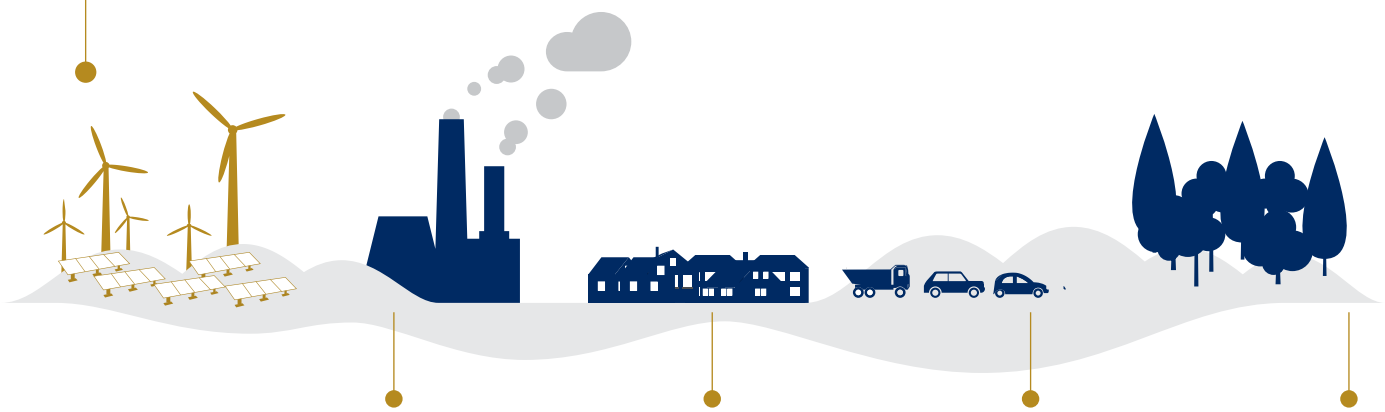
UP TO 20
PERMANENT STAFF AT FULL BUILD-OUT

LOCAL COMMUNITY BENEFITS

$600,000 PER YEAR
FUNDING COMMUNITY PROJECTS

ENVIRONMENTAL BENEFITS

ABILITY TO PRODUCE OVER
5,000,000 MWh
PER YEAR WHICH IS EQUIVALENT TO:



DISPLACING
2,550,000 TONNES
OF CO^2 EMISSIONS

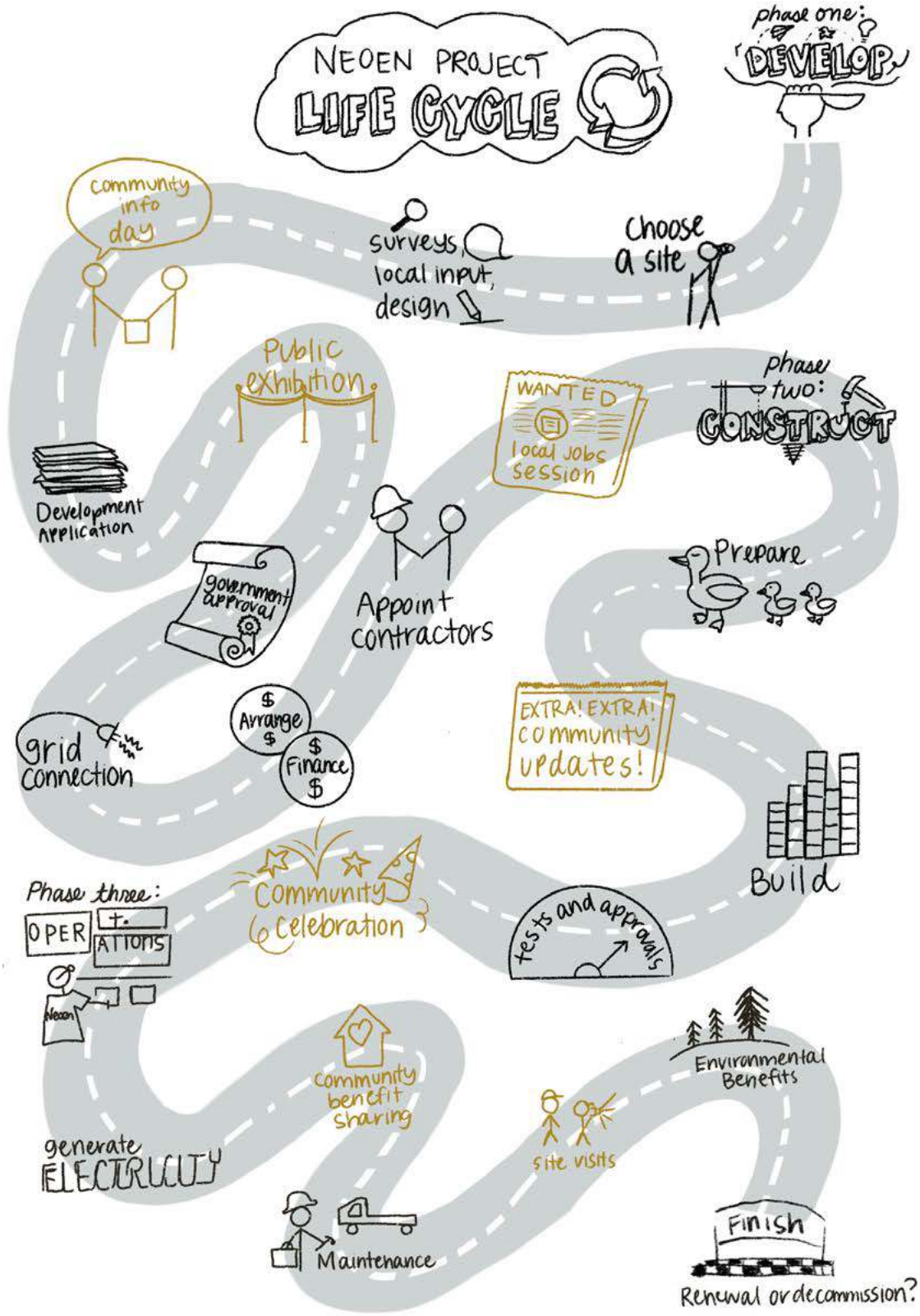
POWERING
1.1 MILLION HOMES

REMOVING
1 MILLION CARS
FROM THE ROAD

PLANTING
41 MILLION TREES

GET INVOLVED

HOW YOU CAN INTERACT WITH THE PROJECT



COMMUNITY BENEFITS

$600,000 PER YEAR
FOR THE LOCAL COMMUNITY

Some of the options Neoen is investigating for community benefits:

COMMUNITY BENEFIT FUND

The funds would be allocated to local community projects through a competitive annual grants process. The fund would be administered by either a counsel or a local organisation.

DISCOUNTED ELECTRICITY BILLS

Through a partnership with an energy retailer, we would offer residents of Culcairn and Walla Walla the opportunity for a discount on their energy bill every year during the life of the project.

SUBSIDIES FOR SOLAR AND STORAGE

We could provide grants through approved installers to make rooftop solar and home battery storage more affordable.

IMPROVED MOBILE RECEPTION

We could support a local initiative to address poor mobile phone coverage in the area.

POSSIBILITY TO INVEST IN THE SOLAR FARM

Community co-investment in renewables is common overseas and just starting in Australia. Would you like the opportunity to invest some of your money in this project and make an annual return?

TELL US YOUR IDEAS

FILL OUT A SURVEY AT

WWW.GOYDERENERGY.COM.AU

TO SHARE YOUR IDEAS

EMPLOYMENT OPPORTUNITIES

We expect the following roles to become available once the project begins construction:

ENGINEERING, PROCUREMENT AND CONSTRUCTION CONTRACTOR

ELECTRICAL

Electricians
Electrical Trade Assistants

CIVIL & MECHANICAL

Loader
Excavator
Grader
Roller
Dump Truck
Watercarts
Forklift and/or Telehandler
Trucks
Pile Driver
Concreters
Pipelayers

GENERAL

Land manager
Equipment maintenance
Administration
General Labour

SUPPLIER OPPORTUNITIES

Goods and services we expect to be procured:

Accommodation
Cleaners
Crane (minor lifts)
Concreters
Concrete supply (offsite supply)
Earthworks plant (wet and dry hire)
Fencing and gates
Food and catering service
Freight
Fuel
Material testing
Mechanical fitter/maintenance
Operation and maintenance facility construction
Quarry products
Septic pump out services
Small equipment hire
Transport (minor)
Waste management (liquid and solid)
Water (construction and potable)
Welding & engineering fabrication (site services)

If you're interested in working on the project, please let us know via email: **contact@goyderenergy.com.au.**

In the pre-construction period, we will hold a Local Employment and Supplier Networking session.

DELIVERING CHEAPER ENERGY FOR INDUSTRY

LAVERTON STEELWORKS
VICTORIA

Laverton Steelworks have agreed to take power from Neoen's 128 MW Numurkah Solar Farm under a 15-year deal. GFG Alliance's Executive Chariman Sanjeev Gupta said the deal would help lower energy costs at Laverton.

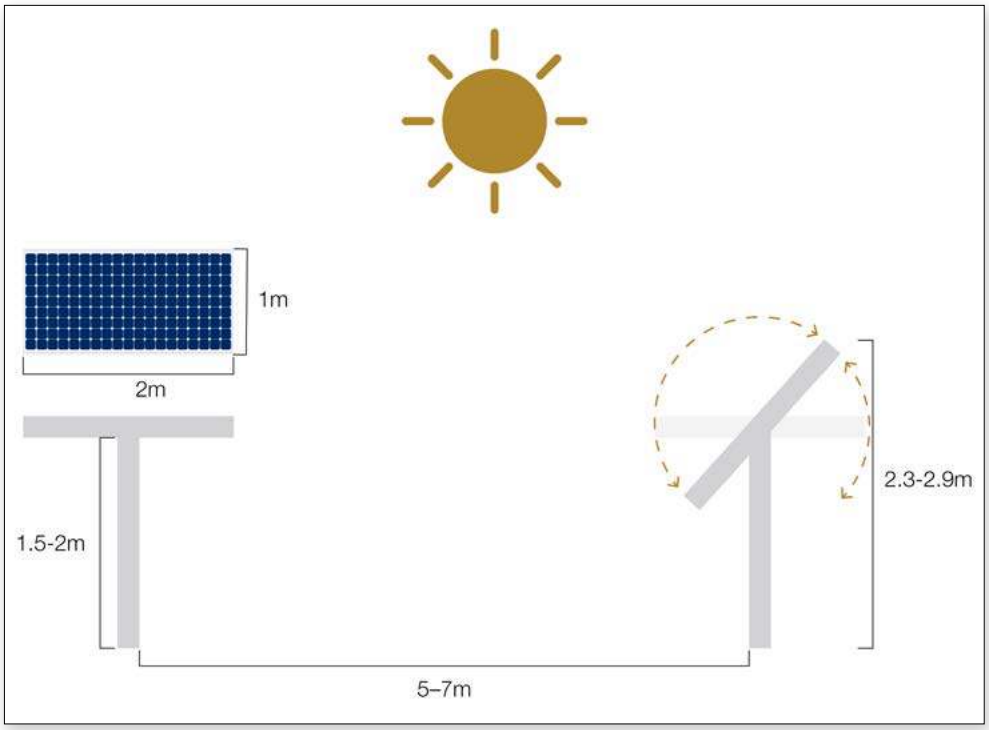
DEGRUSSA MINING
WESTERN AUSTRALIA

Degrussa is the largest off-grid solar battery storage project in Australia. It powers a gold and copper mine in remote WA. Commissioned in June 2016, it provides a solar and storage solution to the majority of the mine's daytime electricity requirements, offsetting up to 20% of total diesel consumption annually.

NECTAR FARMS
VICTORIA

Bulgana Green Power Hub, consisting of 196 MW of wind backed by a 20MW battery, is co-located with agri-business Nectar Farms to provide secure and affordable energy. Nectar Farms is using the latest in hydroponic glasshouse and plant technology to create a 10 hectare state of the art facility and over 130 local jobs.

VISUAL IMPACT – SOLAR

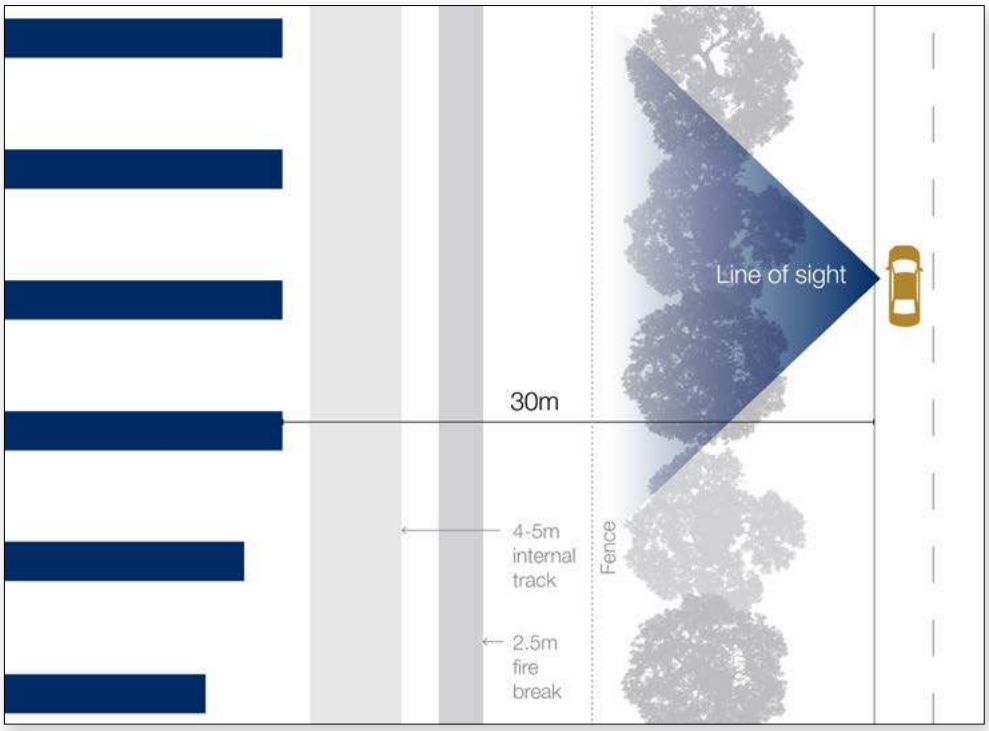


Solar panels are normally 1m x 2m in size.

They are mounted on a single axis structure that tilts from east to west throughout the day to follow the sun and optimise energy generation.

At maximum tilt, the height of the solar panels is between 2.3 – 2.9m and the space between rows of panel is 5–7 m.

In the event that panels are mounted on a higher structure, the maximum height would be 4 m. In this case, the space between rows would be 10+ m.



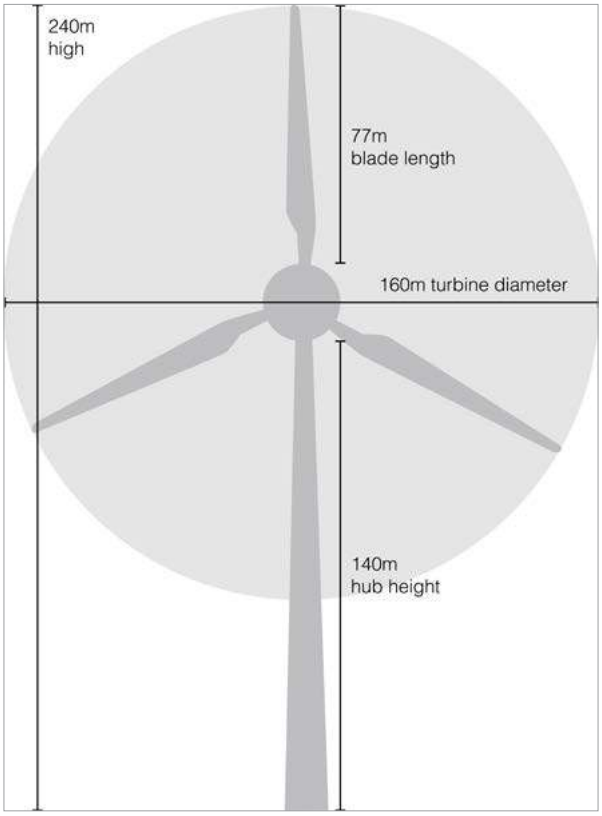
As part of any permit application, Neoen will complete a comprehensive assessment of potential impacts on landscape character and visual amenity. To minimize the visual impact of solar panels:

- A setback of minimum 30 meters from land boundaries will be applied.
- Vegetation screening will be planted along public roads.
- We will work with nearby neighbours of the project to fund tree planting and visual screening.

VISUAL IMPACT – WIND

TURBINE VIEW FROM 2KM

TURBINE VIEW FROM 5KM



GOYDER
RENEWABLES ZONE

DEVELOPMENT CONSIDERATIONS

FIRE MANAGEMENT
- The Country Fire Service (CFS) are consulted during the Development Approval process.
- The CFS typically recognise that infrastructure (especially access tracks) associated with renewable projects can assist ground-based firefighting efforts enormously, while impact on aerial firefighting is relatively minimal once turbines are switched off.
- Neoen will formulate a Fire Management Plan in consultation with the CFS including, at a minimum, the following:
  - Access tracks adequate for fire trucks;
  - Fire breaks;
  - Firefighting water supplies;
  - Vegetation and debris management.

GRID CONNECTION
- The first stage of the project will connect into the grid via a new 275kV transmission line running south to the Robertstown Substation.
- Later stages of the project are likely to connect into the new substation which will be purpose-built for the SA-NSW interconnector.

AGRICULTURAL SIGNIFICANCE
- Land along Goyder's Line is an ideal area to co-locate renewable energy and farming, due to the following:
  - Increasingly unreliable rainfall patterns means that farmers benefit from secure, reliable sources of income such as hosting turbines and solar panels; and
  - Exceptional wind and solar resources.
- Solar is also an ideal complement to grazing (see further our poster on Combining Agriculture and Solar).

CULTURAL HERITAGE SIGNIFICANCE
- Neoen will conduct a full heritage assessment in consultation with local Aboriginal peoples and locate infrastructure to avoid impacting on sites of cultural significance. Where appropriate, artifacts may be moved to a safe location.
- Neoen is also highly aware that Burra township and surrounds contains a significant amount of European heritage which is, among other things, essential to its tourist economy. Neoen will work with Council and State heritage authorities to avoid impacting on the town's heritage values, and will be able to support the maintenance of this heritage via its annual Community Fund.

ECOLOGY
- Local flora and fauna is studied and surveyed within the project investigation area.
- Vegetation and habitats are identified, mapped and assessed for ecological importance.
- The conservation of significant flora and fauna is determined and mapped as constraints.

SURFACE WATER
- All known watercourses and waterbodies within and adjacent to the project investigation area are identified and mapped.
- The environmental values related to the surface water environment are studied and reviewed.
- A stormwater management plan is done to assess the change in water flow and the flood risk.
- The project is designed to minimise and manage any adverse impacts resulting from the discharge of stormwater from the site.

VISUAL IMPACT
- A full Landscape and Visual Impact Assessment will be prepared by an independent specialist. This report will cover, among other things:
- Shadow flicker from turbines;
- Glint and glare from solar panels;
- Overall effects on visual amenity;
- Predicted views of the project from various vantage points with artificial renderings of turbines (photomontages).

TRAFFIC IMPACT ASSESSMENT
- Traffic routes into the site will be designed to minimise impacts on population centres and local residents.
- The traffic assessment will note any road upgrades required for the project. Neoen will pay for these upgrades, and any repairs necessitated by project traffic.
- If the project receives Development Approval, a full Traffic Management Plan will be designed in consultation with Goyder Regional Council and the Department of Planning and Transport, and construction commencement will be conditional on approval of this plan.
- During construction, project vehicles will be confined to the prescribed access routes to minimize disruption to the local roads and ensure safety. School bus routes and mail routes will be consulted prior to construction.
- The Traffic Impact Assessment report will estimate loads and frequencies of vehicles, access points and provide recommendations to Council to maximize safety.

NOISE IMPACT
- Permissible noise levels from turbines at dwellings are controlled by the South Australian Environmental Protection Authority (EPA) via its 2009 *Wind Farm Noise Guidelines*, which are among the strictest in the world.
- Neoen has engaged acoustic engineering firm Sonus to model (predict) what noise from the turbines will be audible at nearby dwellings, and the turbine layout will be designed to achieve (or exceed) compliance with these limits.
- Because of the 2km setback from all non-host dwellings to which Neoen is voluntarily committing (except where agreed otherwise by owners of dwellings), noise impacts from the project are likely to be minimal.
- Noise monitoring will be conducted at various points around the project both before and after construction. In the unlikely event that noise predictions are incorrect and turbine noise audible at dwellings exceeds acceptable levels, the EPA will test this and require Neoen to remedy the issue by shutting down turbines or reducing their power output. Thus, there is a clear commercial incentive for Neoen to ensure that the project is fully compliant.

ECOLOGICAL SURVEYS

The **Burra and Robertstown regions**, while primarily comprising agricultural land, are nevertheless home to many species of flora and fauna. Neoen has already commenced studies to assess the potential impacts of the project on species that inhabit the region. We will conduct more detailed surveys during detailed design to ensure infrastructure can be 'micro-sited' to avoid sensitive areas.

Survey	Indicative timing
 **1** Desktop flora and fauna assessment	**Completed**
 **2** Initial field surveys	**Completed**
 **3** Pygmy Blue-tongued Lizard habitat assessment and survey	
 **4** Wedge-tailed Eagle nest survey	
 **5** Spring-flowering threatened flora species	
 **6** Spring bird surveys	
 **7** Spring Anabat surveys	
 **8** Summer-flowering threatened flora species	
 **9** Detailed Pygmy Blue-tongued Lizard burrow check	
 **10** Native vegetation loss & SEB offset assessment	

COMBINING AGRICULTURE & SOLAR

After a successful three-week trial at Parkes Solar Farm in 2018, merino sheep are now being grazed under the panels at all Neoen solar farms (Parkes, Dubbo, Griffith, Coleambally, Numurkah).

Neoen are working with agricultural researchers to build and share knowledge about optimising the productivity of sheep grazing under panels.

"There are no issues with sheep-grazing co-existing with solar farms. Providing you have the right breed of merino or merino-cross and get stock numbers right, I estimate that you can reach at least 80% of normal stocking rates. Plus, in areas with a lot of sun the panels provide plenty of shade for livestock. It's an opportunity and a win-win for farmers and renewable energy producers."

– Tom Warren
Host Landowner, Dubbo Solar Farm

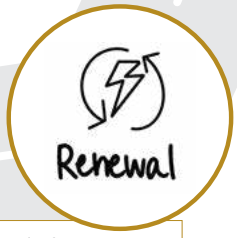
FACT CHECK

Are farmers prevented from farming neighbouring lands?
Neoen doesn't impose any additional requirements on adjacent farming operations.

Is the local climate changed by the solar farm operation?
In some specific weather conditions, a temperature increase creates a slight "island effect" within the solar farm. As its name indicates, this effect occurs as an island and does not extend beyond 25m from the edge of solar panels. There will be at least 30m from the edge of solar panels to the boundary of the solar farm.

DECOMMISSIONING

What happens to the technology at the end of the project's life?



Wind turbines and solar panels have a lifespan of around 30 years. Other infrastructure that will be built, like roads and transmission lines, will last much longer so it is likely that we will replace the turbines and solar panels with new technology and continue operating them for another 30 years.

We make **fully binding and enforceable commitments** to remove all above-ground infrastructure after the end of the project's life. Below ground are turbine foundations and cables. 'Above-ground infrastructure' primarily means wind turbines, solar panels, substations, transmission lines, roads and buildings.

Concrete turbine foundations will be cut off well below the soil surface and backfilled, while underground cables will usually be left in place. This results in a better environmental and visual outcome than removal, which would cause more damage to vegetation which has regrown since the project's construction.

Left in place, underground concrete and disconnected cables do not harm the environment or interfere with agriculture.

After removal of all above-ground infrastructure, the project site will be rehabilitated and replanted with appropriate species for the area, or returned to grazing/ cropping usage in consultation with the landholder.

Back to beginning!

Once removed from the site, all recyclable components will be taken away for processing and re-use, including:

- Steel turbine towers;
- Copper windings in turbine generators;
- Aluminium from cables;
- Lithium and other elements from batteries.

The raw materials in these components have a financial which helps to offset the cost of decommissioning the site. Neoen pays for the rest of the costs in line with its obligations to the government and landholders.

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