



ARK ENERGY

Doughboy Wind Farm

Community Information Session - Wongwibinda

4-6pm Thursday, 7 March 2024

Acknowledgement of Country

We acknowledge the Traditional Custodians of the land upon which we meet and their continuing connection to lands, waters and communities.

We pay our respects to Elders past and present.

Introductions

- Andrew Wilson, General Manager Development - NSW.
- Daniel Jacobs, Project Manager.
- Melissa Pisani, Communications & Engagement.
- Jacinta West, Communications Officer.
- Ben Meng, Project Officer.



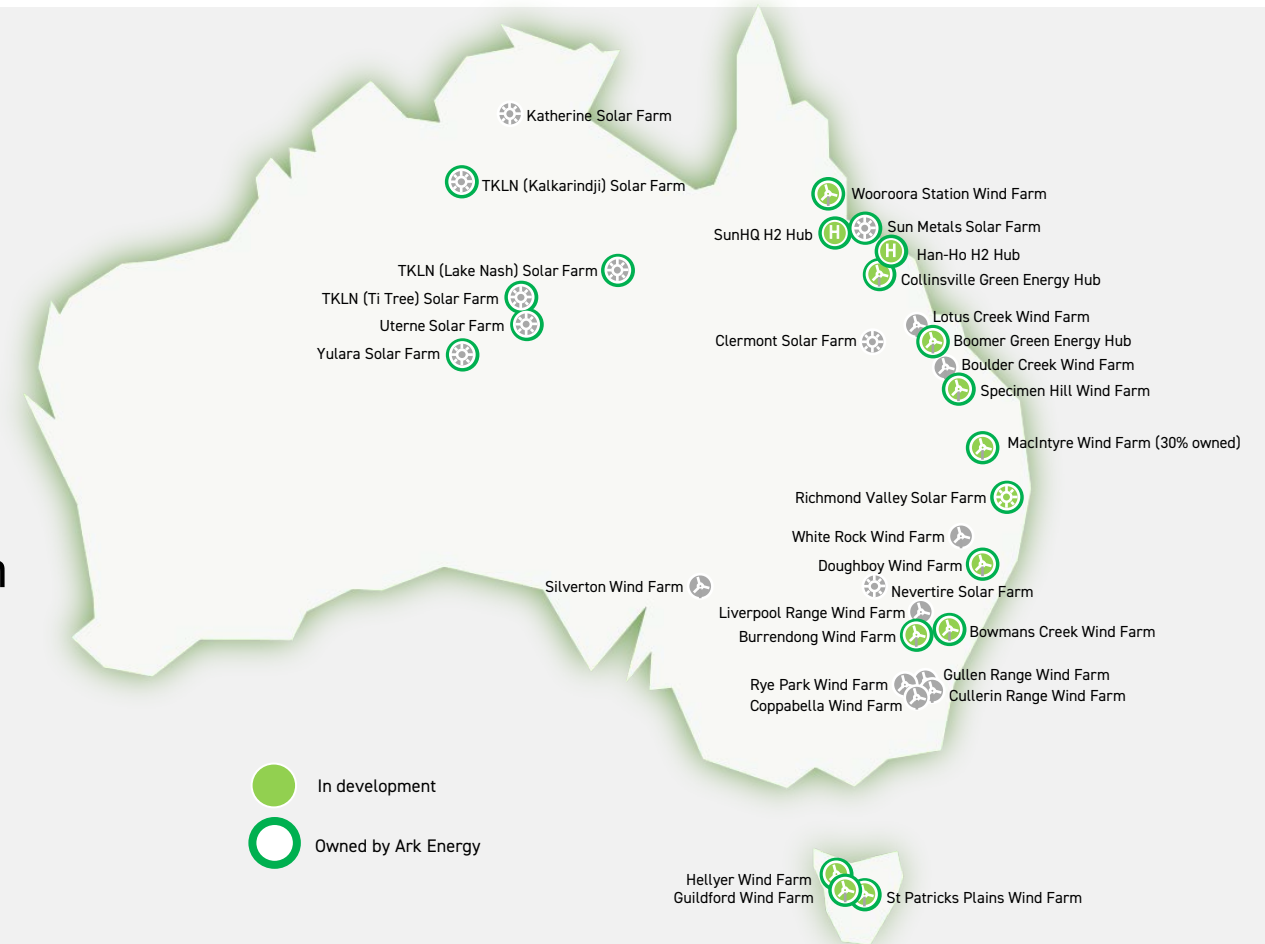
Agenda

- Ark Energy
- Energy transition context
- Project details
- Current status
- Next steps
- Questions



Ark Energy

- Renewable energy company specialising in greenfield utility-scale wind, solar, battery storage and green hydrogen.
- 20+ years of experience, 13 projects in development in NSW, Qld., Tas.
- Australian subsidiary of Korea Zinc; signatory to RE100 and committed to powering global operations from 100% clean energy by 2050; 25-years in Australia with Sun Metals zinc refinery and solar farm.
- Goal to decarbonise the energy supply of Korea Zinc, help third-party customers accelerate their energy transition and contribute to the transition of Australia's electricity market.



Energy transition

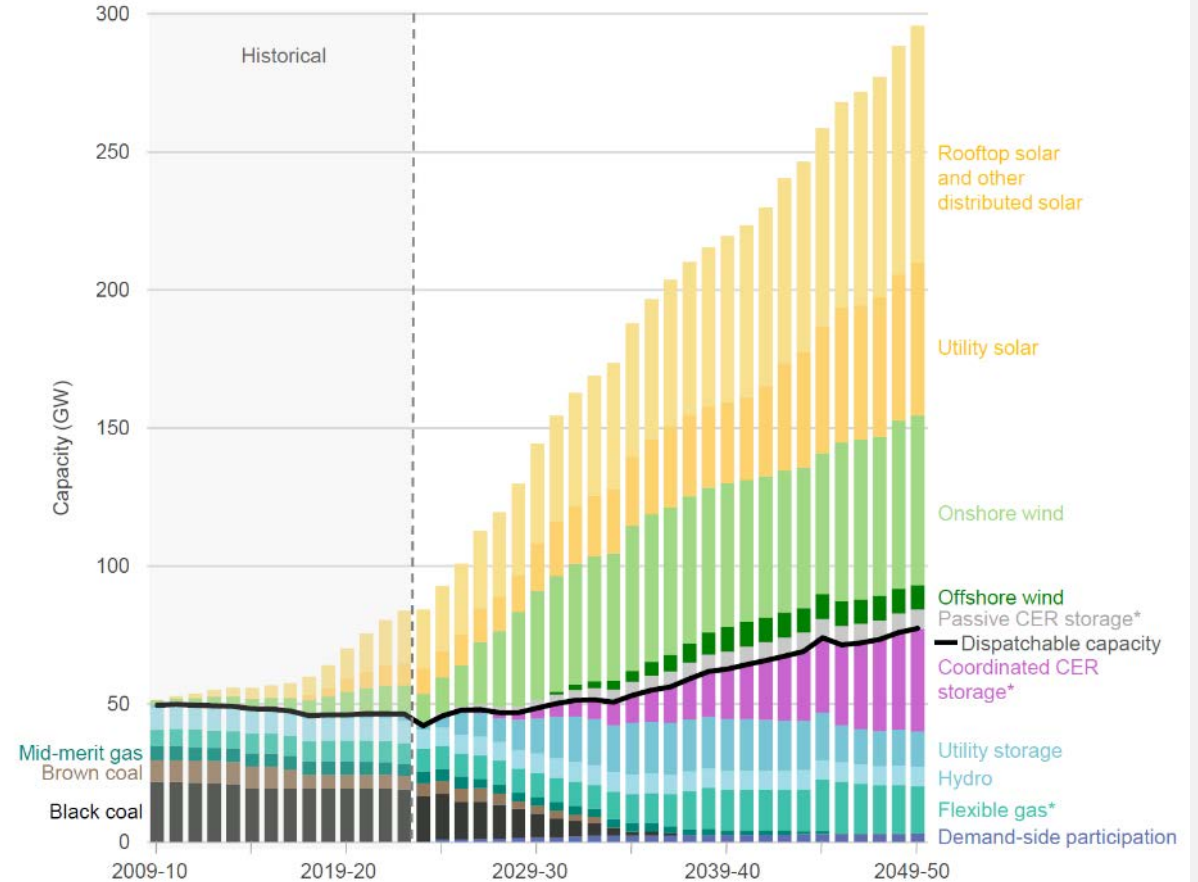
Australian Energy Market Operator's 2024 Integrated System Plan, 'Step-change scenario' predicts:

- 57 GW VRE and 19 GW battery storage required by 2030.
- Coal out of the National Electricity Market by 2038.
- 6 GW new RE generation required each year for the next decade.
- Requires speed and scale.

National targets

- 82% energy in the National Electricity Market (NEM) from renewable sources by 2030.
- Emissions reduction of 43% (on 2005 levels) by 2030, net zero by 2050 - *Climate Change Act 2022*.
- RE in NEM FY22-23 = 36.8%

Figure 2 Capacity, NEM (GW, 2009-10 to 2049-50, Step Change)

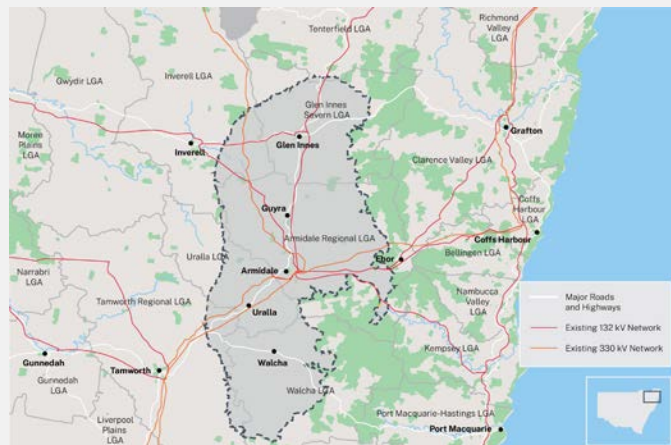
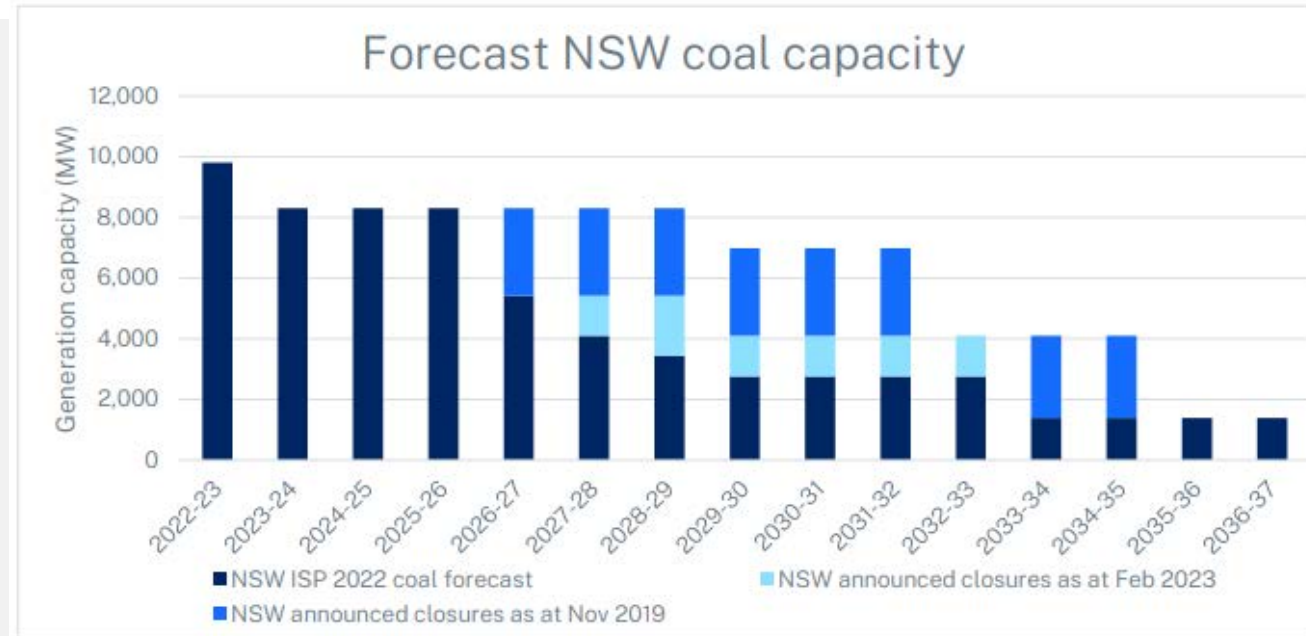


Notes: Flexible gas includes gas-powered generation, and potential hydrogen and biomass capacity. "CER storage" are consumer energy resources such as batteries and electric vehicles.



Energy transition - NSW

- NSW RE in 2022 = 30.7%
- Emissions reduction (compared to 2005 levels) of 50% by 2030, 70% by 2035, net zero by 2050 - *NSW Climate Change (Net Zero Future) Act 2023*.
- NSW Electricity Infrastructure Roadmap (20-year plan to transform electricity system). Support private sector to deliver 12 GW of new RE generation and 2 GW of storage by 2030.
- Renewable energy zones x 5
- New England REZ, centred around Armidale – expected to unlock 8 GW capacity, \$10.7 B private investment, 830 operational jobs, 1,250 construction jobs.

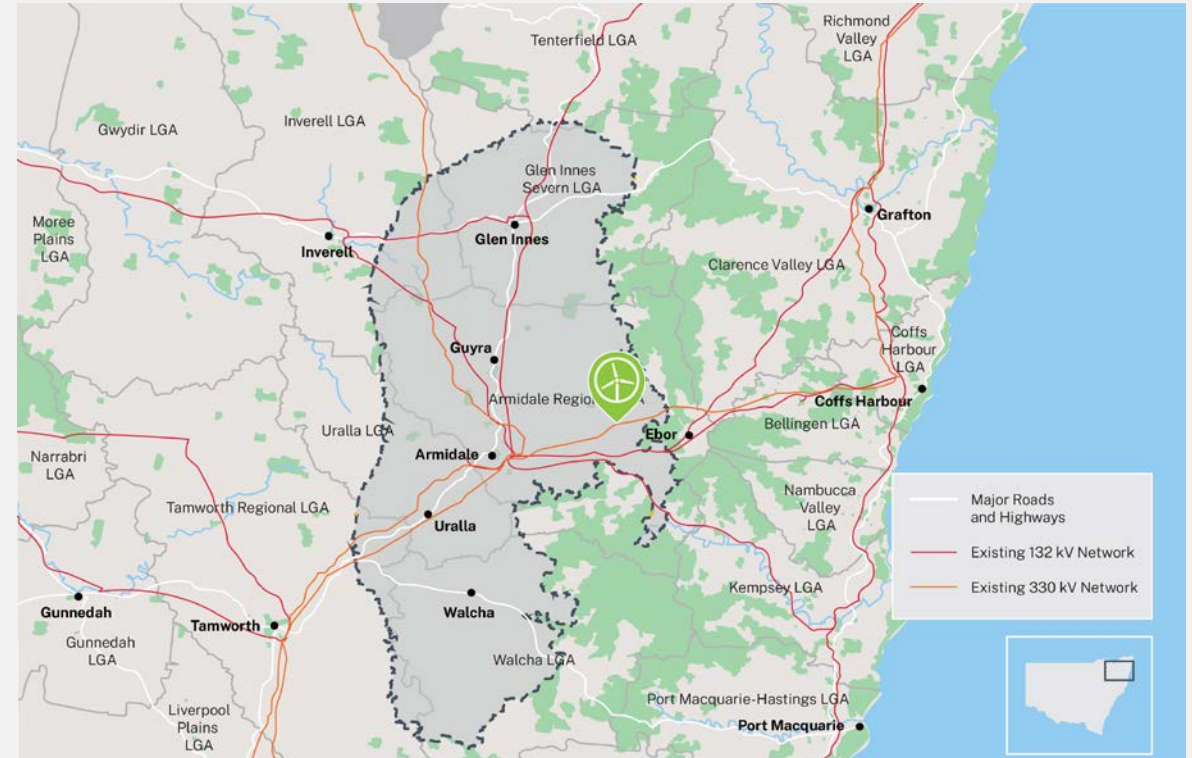
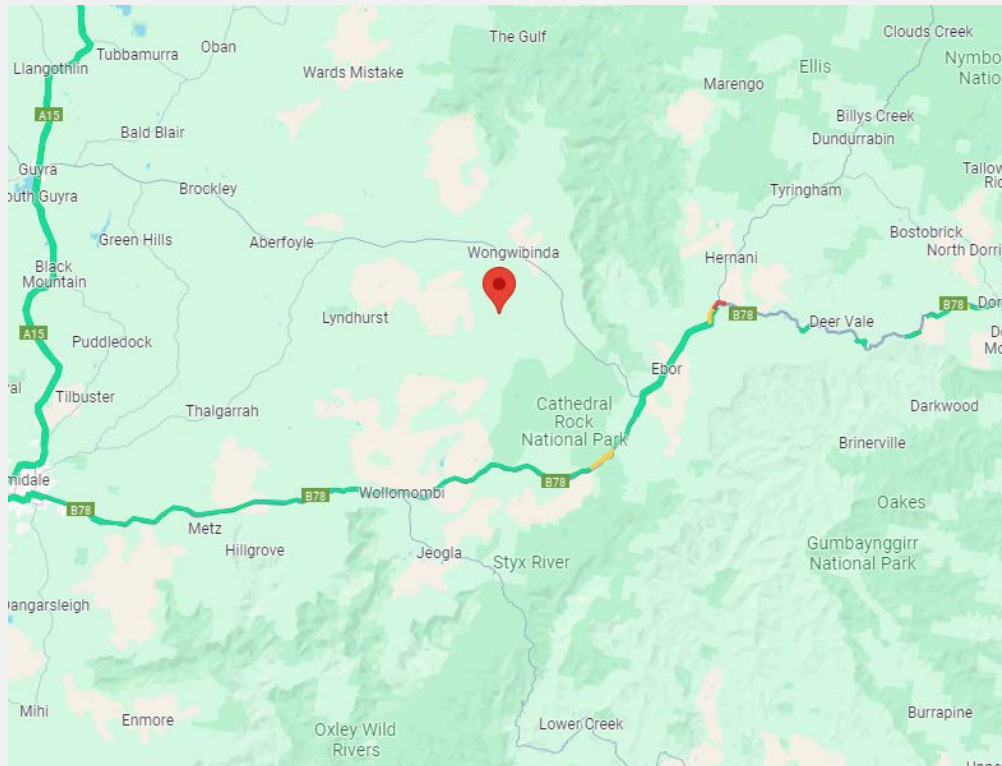


Source: NSW Electricity Infrastructure Roadmap benefits modelling report June 2023



Doughboy Wind Farm

Located south of Wongwibinda, ~10 km west of Ebor, ~20 km north-east of Wollomombi and ~50 km east of Armidale. In the Armidale Regional Council area and the New England Renewable Energy Zone.



Doughboy Wind Farm

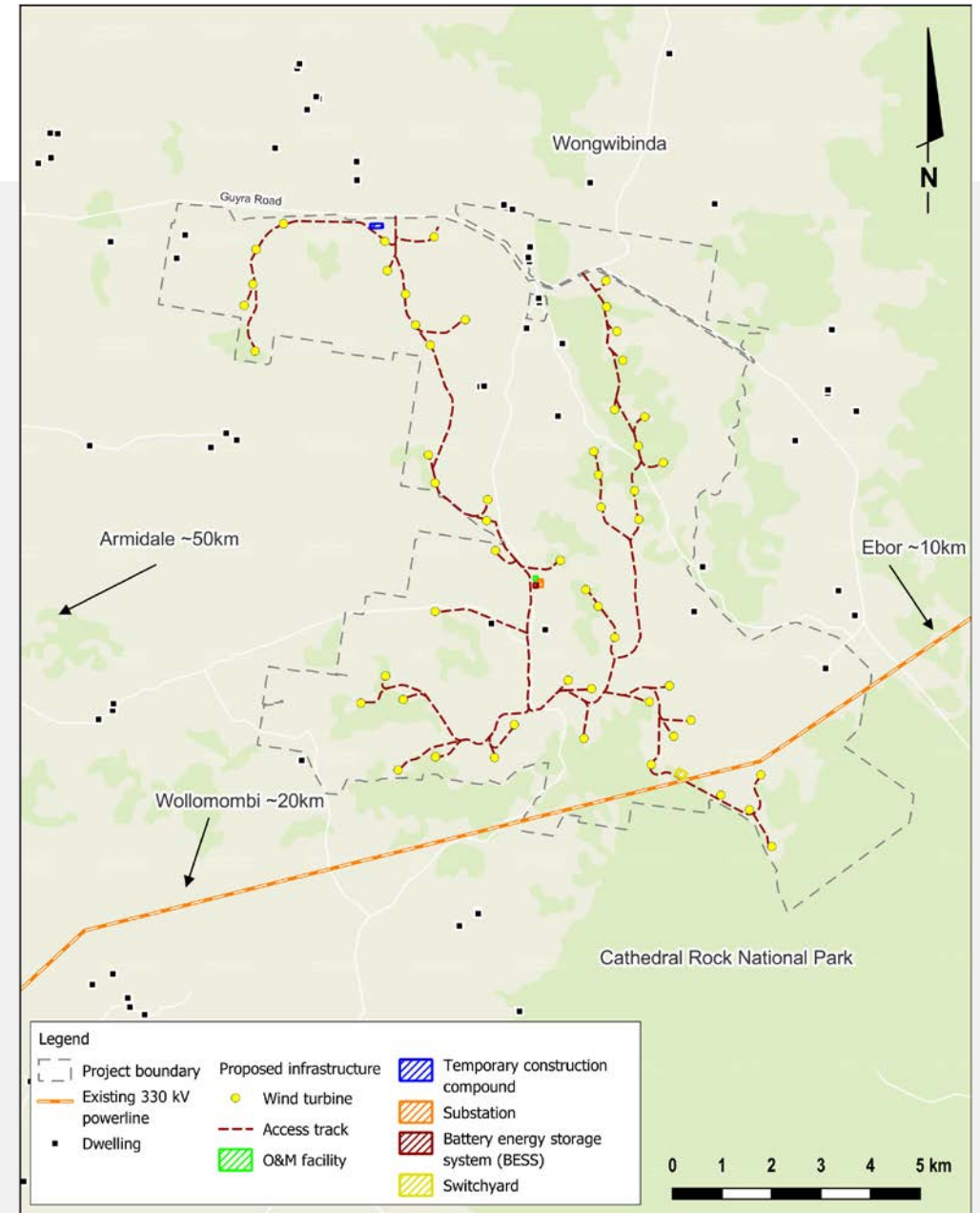


Photographs of the project area.



Doughboy Wind Farm

- Up to 55 wind turbines
- Generation capacity ~340 MW
- Grid connection to Transgrid network – existing Armidale to Coffs Harbour 330 kV transmission line
- Local employment opportunities and economic benefits incl:
 - Economic boost for the region.
 - Community benefit program from the start of construction and for life of the wind farm.
 - Neighbour benefit program.
 - Expected to generate about 300 construction jobs and 12 ongoing FT jobs for operation.

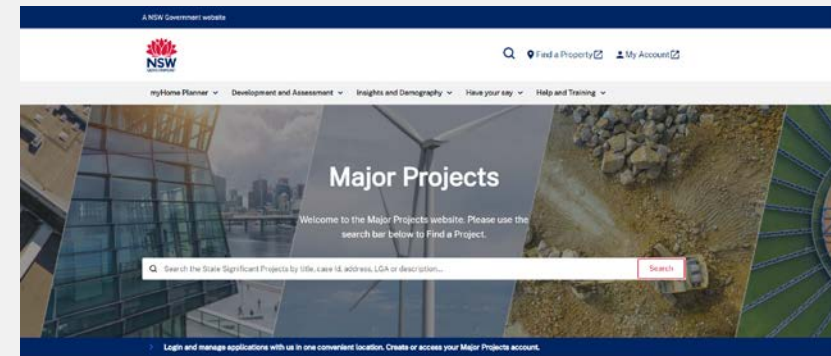


Construction



Application assessment and determination


- Assessed by the NSW Department of Planning, Housing and Infrastructure (DPHI) under *Environmental Planning and Assessment Act 1979* (NSW).
- Considered State Significant Development – NSW Government is approval authority.
- Scoping Report submitted to DPHI in October 2023.
- Planning Secretary's Environmental Assessment Requirements (SEARs) for the project issued by DPHI in November 2023 = requirements for the environmental impact statement (EIS).
- Determined a controlled action under Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* – requirements incorporated into EIS and assessed under bilateral agreement.
- After EIS lodged and deemed adequate, it will be placed on public exhibition for submissions (online).
- Ark Energy must respond to submissions.
- Assessment and determination by DPHI (or IPC)



Environmental impact statement (EIS)

SEARs issued in November 2023 prescribe the information and independent technical assessments required, including:

- Detailed Description
- Capital Investment Value and Employment
- Independent technical and specialist assessments for:
 - Landscape and Visual
 - Noise and Vibration
 - Biodiversity
 - Cultural Heritage
 - Transport
 - Water and Soils
 - Land
 - Hazards and Risks, such as aviation safety, telecommunications, bushfire and blade throw.
 - Social Impact
 - Economic
 - Waste
- Proposed environmental management and monitoring measures.



Department of Planning and Environment

Planning Secretary's Environmental Assessment Requirements	
Section 4.12(8) of the <i>Environmental Planning and Assessment Act 1979</i> Part 8 of the <i>Environmental Planning and Assessment Regulation 2021</i>	
Application Number	SSD-64152463
Project	Doughboy Wind Farm, which includes: <ul style="list-style-type: none">• the construction, operation and decommissioning of a wind farm with an estimated capacity of 340 megawatts (MW), up to 55 turbines and a maximum height of 250 metres (to blade tip);• battery energy storage system up to 100 MW / 400 MWh; and• ancillary infrastructure including access tracks, road upgrades, a temporary construction compound, operational facilities, underground and overhead electricity cabling, substations, transmission lines and grid connection to the transmission network.
Location	Approximately 40 km east of Armidale in the Armidale Regional Council Local Government Area.
Proponent	Ark Energy Australia Pty Ltd
Date of Issue	29/11/2023
General Requirements	The Environmental Impact Statement (EIS) must meet the minimum form and content requirements as prescribed by Part 8 of the <i>Environmental Planning and Assessment Regulation 2021</i> (the Regulation) and must have regard to the State Significant Development Guidelines and the NSW Wind Energy Guideline. In particular, the EIS must include: <ul style="list-style-type: none">• a stand-alone executive summary;• a full description of the development, including:<ul style="list-style-type: none">- details of construction, operation and decommissioning, including any proposed staging of the development or refurbishing of turbines over time;- all infrastructure and facilities, such as substations, transmission lines, battery energy storage system, construction compounds, concrete batching plants, internal access roads, and road upgrades (including any infrastructure that would be required for the development, but the subject of a separate approvals process);- plans for any buildings;- high quality site plans and maps at an adequate scale with dimensions showing:<ul style="list-style-type: none">o the location and dimensions of all project components including coordinates in latitude / longitude and maximum AHD heights of the turbines;o existing infrastructure, land use, and environmental features in the



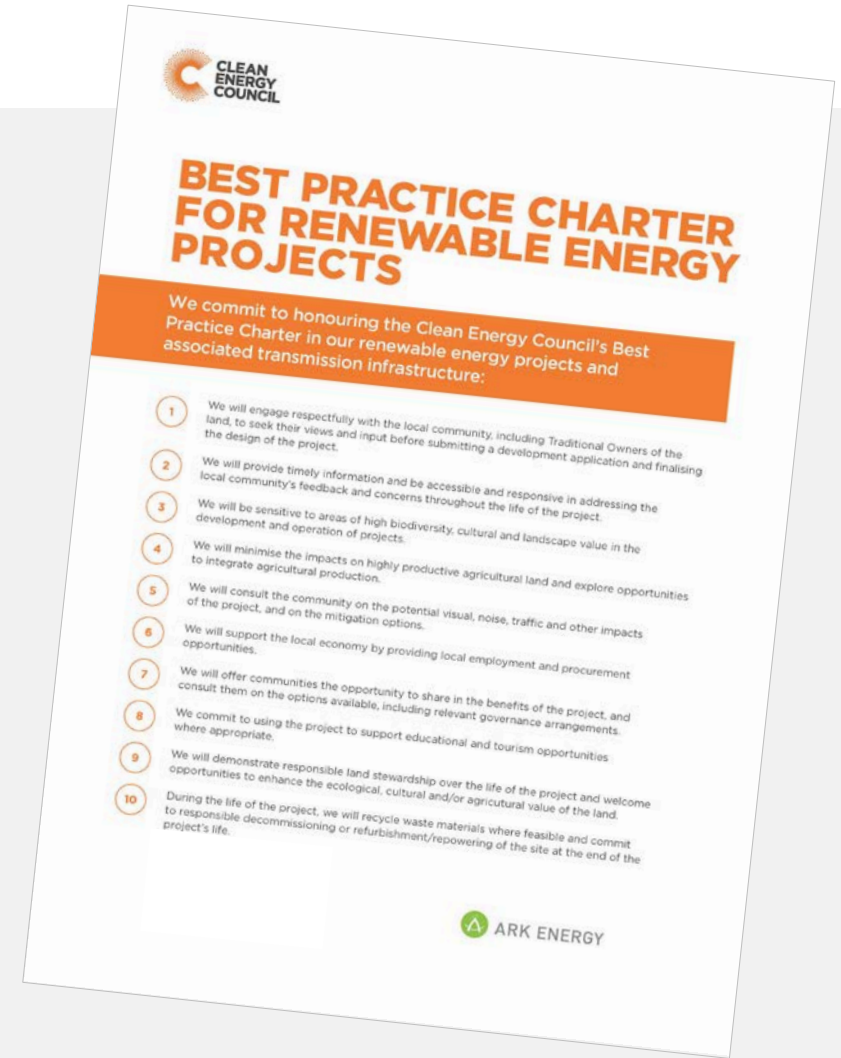
Community engagement

- Guided by best practice and International Association for Public Participation (IAP2).
- Signatory to the Clean Energy Council's *Best Practice Charter for Renewable Energy Projects*.
- Open, accessible, transparent.

Focused on:

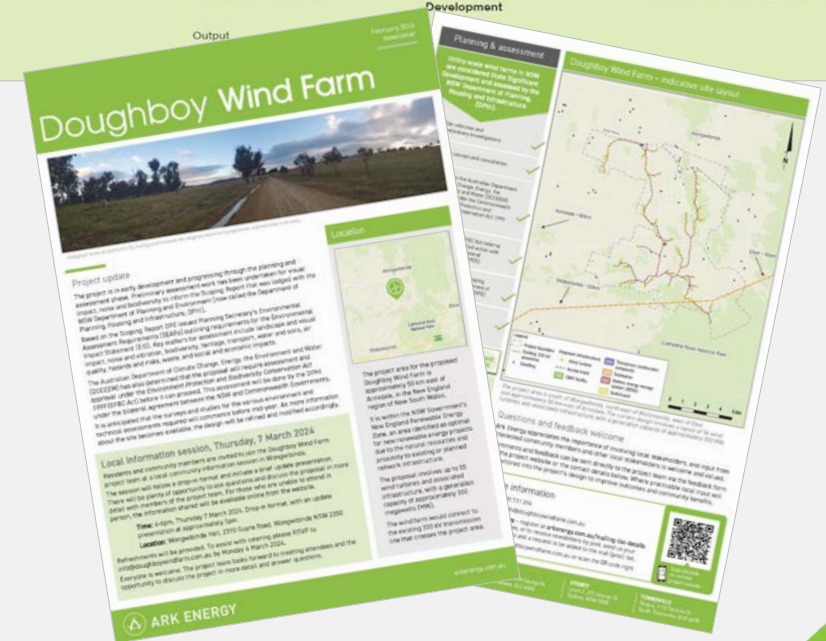
- Providing opportunities for interested community members and stakeholders to participate in the process.
- Maximising opportunities for the local/regional community to benefit in meaningful ways.

Community input is welcome and valued, and where practicable will be incorporated into the project design to improve outcomes and local benefits.



Information, questions, feedback

- Website with online feedback form: doughboywindfarm.com.au
- Project team direct contact details, anytime – info@doughboywindfarm.com.au and 1800 731 296.
- Newsletters – available by email (register online at <http://arkenergy.com.au/mailling-list-details>) and/or by mail (provide postal address to the project team).
- Information sessions – advertised on website and in newsletters.
- Meetings / briefings as required.



Next steps

- Work on EIS assessments and reports – Q2 2024 onwards
- EIS submission and exhibition – Q2 2025
- DPHI collates public submissions
- Response to submissions – Q3 2025
- Approvals – Q1 2026
- Procurement & pre-construction – Q2 2026 to Q4 2026
- Construction commencement - 2027



Thank you

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