GOVERNMENT OF WESTERN AUSTRALIA

Infrastructure Western Australia

Major Infrastructure Proposal Assessment

Synergy

King Rocks Wind Farm

Summary Assessment Report

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Acknowledgment of Country

Infrastructure WA acknowledges the Traditional Custodians of Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of the Aboriginal communities and their cultures; and to Elders both past and present.

Major Infrastructure Proposal Assessment Summary Report

Purpose

This assessment report has been prepared in carrying out Infrastructure WA's (IWA) legislative function to assess and report to the Premier on major infrastructure proposals. The assessment is of Synergy's King Rocks Wind Farm (KRWF) Business Case (October 2023 version), additional supporting information, and consultation with stakeholders.

1. IWA observations

KRWF is strongly aligned with the State's strategic needs and contributes to Government's decarbonisation commitments, which include a $3.8 billion commitment to deliver generation, storage, and network infrastructure, and recent announcements committing to a further $708 million investment in electricity transmission in the South-West Interconnected System (SWIS).

The KRWF business case and supporting information addresses the requirements of the Strategic Asset Management Framework (SAMF) Business Case Guidelines. IWA considers that the information and analysis contained within the business case sufficiently addresses the identified problem and justifies the preferred option.

IWA considers that there are risks to the delivery schedule, and notes that Synergy is working to mitigate these risks.

2. Context

2.1 Project background

The Government committed to KRWF as part of the 2023-24 state budget. This followed previous Government announcements regarding a preferred decarbonisation pathway that will result in the retirement of state-owned coal power stations by 2030. KRWF was first identified in 2009 by Verve Energy, with the proposal supported by over 10-years of wind monitoring data.

3. Strategic Merit

3.1 Alignment

KRWF has strong alignment to government decarbonisation policies and related strategic documents. This includes:

- The WA Government target to achieve net zero greenhouse gas (GHG) emissions by 2050.
- The WA Government commitment to an 80 percent reduction in state government GHG emissions by 2030 as compared to 2020 levels, supported by the decision to close Collie Power Station in late-2027 and Muja D in late-2029.
- Development of business cases and associated investment for 810 MW of large-scale wind generation.
- Allocation of $708 million for electricity transmission in the SWIS, including $575 million to the networks northern section between Malaga and Pinjar, and $133 million for planning new lines.

KRWF also aligns with recommendation 10b of the State Infrastructure Strategy, which includes a focus on "preparing and implementing net zero transition plans and identifying actions with associated timing, for Scope 1 and Scope 2 emissions reductions.'

3.2 Problems and opportunities

KRWF is proposed to address a number of problems, including:

- the transition of Synergy's energy generation assets away from coal.
- assists in mitigating energy security concerns in a relatively short timeframe.
- meets customer renewable energy demand.

Significant generation capacity is required to meet forecast energy demands, and the retirement of coal fired generation capacity. The Australian Energy Market Operator 2023 Wholesale Electricity Market Electricity Statement of Opportunities predicts a significant gap between energy supply and demand, noting that the "supply-demand outlook indicates an urgent need for investment by capacity providers to supply the SWIS to meet the Wholesale Electricity Market reliability standard".

4. Options assessment

Government has investigated the broad issues and strategic options required to meet the challenge of increasing demand for electricity generation, demand for renewable energy from customers, and to meet its decarbonisation targets (including for example the SWIS Demand Assessment).

This includes recommendations for Synergy to procure battery energy storage capacity, investigate hydro power storage options, develop large scale wind generation proposals, and Western Power to develop a substantial transmission network to support renewable energy projects.

IWA considers that this strategic work, combined with the material in the business case, presents a sound portfolio view of required investments, and timing of project development requirements from which the development of KRWF has been developed as a project option. IWA notes that other further required generation proposals are also being considered or are currently in development.

5. Societal impacts

5.1 Economic and financial assessment

The business case does not contain a comprehensive economic analysis of the costs and benefits of the KWRF. Without having undertaken any further analysis IWA considers that there are likely economic benefits for the proposal, including improvements in energy system reliability, GHG emissions reduction throughout the project life cycle, and benefits to the local community over and above forecast financial benefits.

While limited economic analysis of KRWF is provided, the detailed financial analysis of KWRF demonstrates the financial impacts for Synergy, and therefore Government. IWA considers that the financial analysis and its underpinning assumptions are sound.

5.2 Social assessment

The business case contains minimal information about estimated social benefits of KRWF. However, Synergy is working with the local community to identify opportunities for employment and the use of local contractors for the delivery of the proposal. This includes setting a up a proposed community benefit fund to be administered by the local community throughout the life of the project.

5.3 Environmental assessment

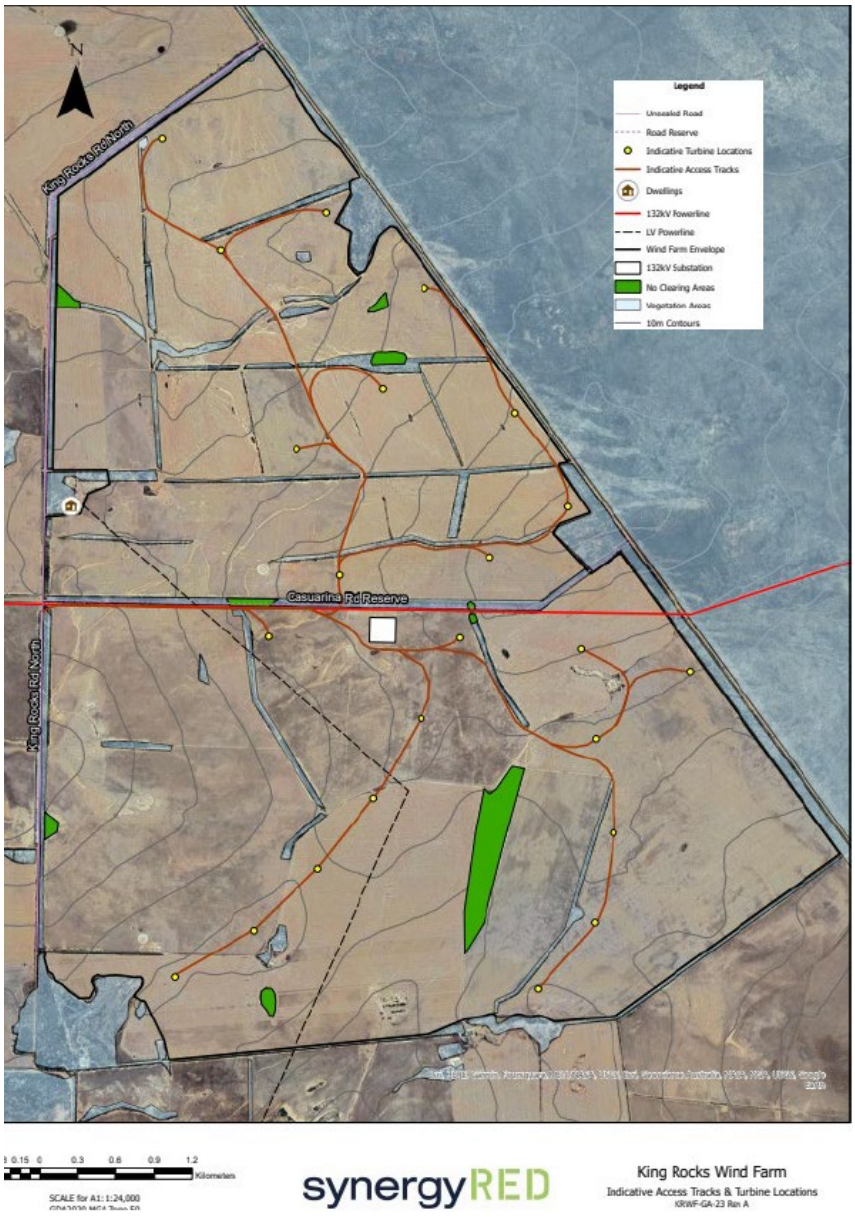
Synergy estimates that the development of KRWF will result in a decrease of 120,000 to 360,000 tonnes of Carbon Dioxide equivalent (CO2-e) emissions per annum, between 2026 and 2035. Synergy has advised that it will monitor and aim to minimise the amount of carbon emitted as part of construction and operational activities for KWRF.

IWA notes that the proposal already has development approval.

6. Recommended option and project definition

The proposal recommends the development of a wind generation facility at KRWF, 35km North East of Hyden in the eastern Wheatbelt region of WA.

The recommended option for KWRF has an estimated cost of $504 million. The proposal includes 23 wind turbines, with 142 megawatt (MW) of capacity and connection works to existing transmission infrastructure from Western Power. The proposed wind turbines will have a total height of 205 metres, with a turbine diameter of 79 metres. These turbine sizes are within current parameters for the KRWF development application. A map of the KRWF site with the current indicative design layout is provided below, noting that this may change during further project development.



7. Deliverability

IWA considers that Synergy has implemented a comprehensive approach to understanding and mitigating risks to project delivery, although considers that there are risks to the project schedule.

Synergy has considered a variety of deliverability issues including:

- attraction and retention of staff, and availability of contractors to complete project works.
- accommodation requirements for the relatively remote location.
- schedule risks associated with connection to Western Power's transmission network.
- modern slavery considerations.
- consultation with the local community.
- freight and logistics requirements for the delivery of the wind turbines, which have specific requirements for Over Size Over Mass loads.

The preferred project option is scheduled for delivery by mid-2026.

Further due diligence will be progressed following appointment of the preferred contractor for the delivery of wind turbines and development of the proposal.