

An Australian First: Revolutionising Solar Technology for Mining Operations

CASE STUDY

The pioneering deployment of Cambridge Energy's NOMAD by ResourcesWA and CrossBoundary Energy is set to revolutionise renewable energy for Australian mining and resources operations – demonstrating the potential to execute projects simply, cost-effectively, and with less risk.

The energy challenge

The pilot site, a heap leach gold processing facility at Binduli, Western Australia, is powered by a diesel power station, presenting a prime opportunity to transition to solar energy. However, the site presented two main challenges; a short mine life and difficult geotechnical conditions requiring an easily-deployable solar solution that would deliver superior economic benefits over a short-term deployment.

ResourcesWA and CrossBoundary identified the NOMAD technology as a solution to the challenges presented, providing a new approach to support mining and resource companies in Australia.

An innovative solar solution

Cambridge Energy's prefabricated NOMAD solar tracking technology was identified to deliver the most cost-effective solution.

The integration of solar tracking within a prefabricated design was the key advantage – significantly increasing the energy yield per dollar spent – while its quick installation process, innovative anchoring system and ability to be redeployed made it the ideal solution to the unpredictable terrain and short mine life.

LOCATION

Binduli Operations

Western Australia, Australia

SIZE

140 units

CAPACITY

2.3 MWp

TIME TO DEPLOY

20 days

PEOPLE ON SITE

10

**“We now have
firm proof of the
advantages of NOMAD
and additional
enhancements in
efficiency and cost
for future projects”**

Andre Garnaut
Director
ResourcesWA

The NOMAD Advantage

▲ **50%**
greater
energy yield*

▼ **3,674t**
CO₂ emissions
per year

1MW
installed
per week


zero safety
incidents


minimal ground
disturbance


expandable &
redeployable


lowest Levelised
Cost of Energy


wind rated for
region A & B

*than other prefabricated solar solutions

"I believe this will be the first of many similar projects delivered through the strong relations between Cambridge Energy, CrossBoundary Energy and ResourcesWA."

Lola Dedekind
Head of Project Development
CrossBoundary Energy



Simple, safe, efficient installation

Delivering the project by the required in service date, safely, was a key consideration for ResourcesWA and CrossBoundary in selecting the NOMAD. NOMAD's modular prefabricated design minimises inefficiencies in procurement, transport and installation, enabling a small, local crew (with no prior experience installing this system) to deliver fast deployment – safely and cost-effectively.

Despite minor weather delays, the deployment was completed on time and without any safety incidents, with an installation rate of 1MW per week. Total installation and commissioning time inclusive of all underground works, substation works, and electrical connections were completed in under four months.

Adaptable to difficult terrain

During project development, the team identified geotechnical challenges, for which the purpose-built NOMAD provided a significant advantage in reducing the diverse needs of Australian mining environments.

Designed to be installed where other technologies can't, NOMADs innovative anchoring system was adaptable for use in the hard, compact soil and uneven subsurface conditions at Binduli, without additional site preparation, drilling, or concrete. This low geo-technical risk enabled a predictable installation timeline, minimal ground disturbance, and significant civil work cost savings – magnifying the economic and environmental advantages for the project.

A flexible, future-focussed investment

Long-term viability was another key consideration for ResourcesWA and CrossBoundary's investment in solar technology. The Binduli solar farm is expected to be operational for approximately six years, providing renewable energy for the internal operations network, with the modular design of the NOMAD enabling, easy expansion by adding more units as required.

Beyond this, unlike traditional single-axis solar technologies, the NOMAD is precision-engineered for reuse, allowing it to be easily disassembled, packed up and redeployed on other projects. This made it a cost-effective investment through a long-term supply contract, while significantly reducing the ecological footprint.

ResourcesWA and CrossBoundary Energy are proud to be at the forefront of this revolution, delivering a holistic solar energy solution for Binduli's operations, and highlighting our commitment to driving innovation, decarbonisation and sustainability in the Australian mining industry.

Join the Solar Revolution

Contact us today to discover how NOMAD can transform your solar project.

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