



PARTNERING TO POWER QUEENSLAND'S FUTURE

CASE STUDY | DUGALD RIVER SOLAR FARM

Economic Development Queensland
Creating and investing in sustainable places for Queensland to prosper



**Queensland
Government**



ECONOMIC DEVELOPMENT QUEENSLAND IS ILLUMINATING QUEENSLAND'S ENERGY LANDSCAPE

The Dugald River Solar Farm (DRSF) is a shining example of Economic Development Queensland's (EDQ) commitment to renewable energy and our regions. This substantial initiative project in EDQ's Mica Creek Industrial Precinct,

spearheaded by APA Group, is not only delivering clean energy to the North West Minerals Province (NWMP) but also paving the way for a sustainable future.

APA GROUP: A LEADER IN ENERGY INFRASTRUCTURE

APA Group, an ASX-listed energy infrastructure business, manages a \$27 billion portfolio of gas, electricity, solar, and wind assets. They deliver 50% of Australia's gas usage and connect Tasmania to Victoria, Victoria to South Australia and New South Wales to Queensland. APA Group is also a major owner and operator of renewable power generation assets across Australia, including wind and solar projects.

APA Group has demonstrated a commitment to delivering safe, reliable, and affordable energy security to the region, having already invested more than \$1 billion in energy assets in the NWMP.



Photo courtesy of APA Group



Photo courtesy of APA Group

PROJECT OVERVIEW



LOCATION

Mica Creek, Mount Isa, Queensland.

This project is located on the lands of the Kalkadoon people. A cultural survey, conducted in collaboration with the Kalkadoon people, has informed the development footprint to respect areas of cultural significance.



CAPACITY

88MW (enough to power approximately 90,000 homes)



LAND SIZE

198 hectares



KEY PARTNERS

APA Group, Economic Development Queensland



OFF-TAKERS

MMG Limited, Glencore, and New Century Resources

INTERESTING FACT

Dugald River Solar Farm is Australia's largest remote-grid solar farm by megawatt capacity and its 184,000 panels cover an area 116 times the size of a football field. That's a massive area dedicated to harnessing clean energy.





KEY FEATURES

- Largest remote-grid solar farm in Australia: (outside the National Electricity Market (NEM) and Western Australian Electricity Market (WEM).
- 184,000 bi-facial solar panels: These innovative panels capture sunlight from both sides, maximising energy generation.
- Integrated with the Diamantina Power Station (DPS): This ensures a reliable and secure energy supply.
- Connected to the strongest location in the grid: This further enhances energy security for the region.
- Servicing three mining customers: MMG Dugald River, Mount Isa Mines (a Glencore company) and New Century Resources.

TECHNICAL SPOTLIGHT: BI-FACIAL SOLAR PANELS

- The Dugald River Solar Farm utilises innovative bi-facial solar panels, maximising energy generation capabilities. Unlike traditional solar panels that capture sunlight only from the front side, bi-facial panels can capture sunlight reflecting off the ground as well - particularly in areas with reflective surfaces like light-coloured ground or nearby bodies of water. This increases overall energy production by up to 30% compared to conventional panels.

INTERESTING FACT

Bi-facial solar panels are a relatively new technology with significant potential. As the technology matures and production costs decrease, we can expect to see bi-facial panels become even more widely used in solar farms around the world.



TANGIBLE OUTCOMES

- **Reduced reliance on fossil fuels:** The DRSF contributes significantly to the State's goal of achieving 50% renewable energy by 2030.
- **Affordable clean energy:** The solar farm provides a reliable and cost-effective power source for the NWMP, supporting its ongoing development.
- **Job creation:** Over 300 people were employed during peak construction, with ongoing positions for operation and maintenance.
- **Supporting critical minerals industry:** The NWMP is rich in critical minerals essential for renewable technologies. Affordable and reliable energy from the DRSF will be crucial for unlocking this potential.

ECONOMIC POWERHOUSE: THE NORTH WEST MINERALS PROVINCE

The NWMP is a treasure trove of critical minerals like copper, zinc, vanadium, and silver. These minerals are essential for renewable energy technologies, including solar panels, wind turbines, electric vehicles, and batteries. As the world transitions towards a more sustainable future, the demand for these critical minerals is expected to soar.

The NWMP has the potential to be a major economic driver for Queensland, and the DRSF plays a crucial role in unlocking this potential. By providing affordable and reliable clean energy, the DRSF makes it more feasible for mining companies to operate in the region. This, in turn, will create jobs, boost the local economy, and contribute to Queensland's overall prosperity.



ECONOMIC DEVELOPMENT QUEENSLAND: FACILITATING GROWTH

Economic Development Queensland (EDQ) is the Queensland Government's land use planning and property development agency. EDQ works in partnership with government, industry, and the community to lead and deliver infrastructure and property projects for Queensland's economic benefit.

Facilitating Land Lease:

- EDQ arranged a 32-year lease for 198 hectares of industrial land at Mica Creek, with an additional 30-year option, to APA Group for the Dugald River Solar Farm. Following the commissioning of the DRSF, APA Group will uphold a 15-year offtake agreement to supply renewable electricity to Mount Isa Mines Limited (MIM), a Glencore Company.
- **Unlocking Development Potential:** Faced with limited freehold land in Mount Isa, EDQ employed an innovative strategy by negotiating an Indigenous Land Use Agreement (ILUA) with the Kalkadoon people to establish the Mica Creek Industrial Precinct, thereby facilitating the solar farm's development.
- **Supporting Project Success:** EDQ provided APA Group with flexible lease terms, accommodating the complexities of large-scale projects. This flexibility allowed APA Group sufficient time to secure necessary approvals and off-take agreements, ensuring the project's feasibility before beginning lease and construction.
- **Building for the Future:** In recognition of the region's potential for heavy industry, EDQ not only supported the solar farm's development but also mandated the construction of an access road by APA Group. This infrastructure is crucial not just for the DRSF but also for future developments within the Mica Creek Industrial Precinct.
- **Enhancing Collaboration:** EDQ facilitated introductions between APA Group and key inter-agency contacts, promoting collaboration and expediting the project's progress.
- **Emphasising Sustainability:** Throughout the lease term, EDQ remains a committed and proactive stakeholder, requiring APA Group to provide regular land management reports. This ensures adherence to responsible land stewardship and best practices, including care for Country.



“The Dugald River Solar Farm showcases the exciting potential of collaboration between industry leaders like APA Group and government agencies like EDQ to drive Queensland's transition to renewable energy. This project not only demonstrates the strong demand for clean power across all sectors, but also promises to be a key driver of sustainable development and job creation in the North West Minerals Province.”



John White, Executive Director Industrial Development, EDQ



Photo courtesy of APA Group

“APA has invested more than \$1 billion in energy assets in the North West Minerals Province and we are proud of our partnership with the Queensland Government and EDQ as we continue to work to deliver safe, reliable and affordable energy to the region.”



**Petrea Bradford,
Group Executive Operations, APA Group**

A SUSTAINABLE FUTURE

The Dugald River Solar Farm is a significant step towards a cleaner and more sustainable future for Queensland. It showcases the viability of large-scale renewable energy projects in remote locations and paves the way for further innovation in the sector.

The collaboration between EDQ and APA Group demonstrates the power of collective action in driving positive change. As we move forward, continued investment in innovation, collaboration, and grid modernisation will be key to unlocking the full potential of renewable energy in Queensland.

PARTNER WITH EDQ

Seeking innovative solutions for your next development? [Partnering with EDQ](#) can unlock possibilities. We offer a comprehensive approach, aligning your project vision with our land opportunities and leveraging our expertise to assist in project success.



CONTACT US

Email: edq@dasilgp.qld.gov.au
Phone: (07) 3452 7880
Post: Economic Development Queensland
Department of State Development, Infrastructure
GPO Box 2202
Brisbane Queensland 4001 Australia
Website: edq.qld.gov.au

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