

# LC Energy supplies the first diesel reduction system to a Queensland mine operator. First in a series of high-quality off-grid power solutions.

## Off-grid power for Downer at Commodore Mine, Queensland

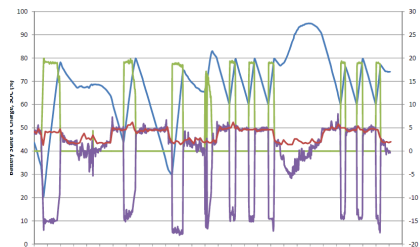
The Commodore open cut coal mine is situated approximately 200 kilometres west of Brisbane in Queensland's Surat Basin. It is adjacent to the 850 megawatt coal-fired Millmerran Power Station, for which the mine is the sole source of coal fuel supply.

Commodore mine employs around 80 people on site, with approximately 20 field personnel who work out of demountable buildings. As coal mining progresses, the buildings are relocated. Grid-connected electricity supply is therefore not a practical option and, in the past, the easiest solution has been to use diesel generators.



Downer commissioned LC Energy to supply a renewable energy system that would reduce dependency on diesel fuel and lower carbon emissions. At the same time, it needed to be reliable, easy to install and relocate, and had to meet stringent safety requirements.

LC Energy developed the system with the support of the AusIndustry Clean Technology Innovation Program. For this system 12 kW of PV arrays are coupled, using micro-inverters, with 100kWh of batteries to buffer a 30kVA 3-phase diesel generator. Advanced features ensure that the system can be monitored and controlled remotely. It has reduced the running cost of the generator by more than 80% while providing cleaner power that is not interrupted for servicing or refueling. The savings pay off the system in less than five years.



LC Energy has a proven track record of successful system design employing process integration. Our knowledge of sourcing allows us to employ off-the-shelf components wherever practical in order to minimize the downtime and maintenance cost of our clients. Consequently, we deliver integrated systems at the best possible cost that will meet or exceed your production requirement, goals and expectations.



Advanced energy system design is led by Dr Andrew Dicks, industry advisor to LC Energy. You can get in touch with Andrew at LC Energy via the website

[www.lcenergy.com.au](http://www.lcenergy.com.au)

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## Case Study

## Off-grid power for diesel reduction , Commodore, Queensland

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