



# Standby power

## > **Case History**

Angaston Power Station

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### **Where:**

Barossa Valley wine country, South Australia

### **What:**

Design and build of South Australia's largest and lowest emission diesel power station. 50 MW diesel peaking plant featuring 30 QSK60 generator sets with Selective Catalytic Reduction (SCR) after-treatment, housed in sound-attenuated buildings to reduce noise.

### **Purpose:**

The peaking plant is designed to support the Australian power grid during times of high peak demand and power outages.

### **Cummins Power Generation builds South Australia's largest and cleanest diesel power station.**

BAROSSA VALLEY, AUSTRALIA – Cummins Power Generation has risen to the challenges posed by an extremely demanding and complex project. Infratil, a New Zealand-based and listed company, and specialist investor in infrastructure and utility assets, asked Cummins to design and build a low-emission power station that would meet critical performance targets dictated by its sensitive location in one of Australia's premier wine producing regions.

The result is South Australia's largest and cleanest diesel power station. The £40 million peaking plant, which generates a maximum 50 MW, is already achieving critical low-emissions performance targets. Connected to the national electricity grid, the peaking plant operates when market demand or pricing is very high.



Inside the power station are (from left) David Sheldon, site and construction manager for Cummins Energy Solutions Business (ESB); Tony Blaubaum, general manager of Cummins ESB; Joe Loughrey; Anthony Mitchell, project and technical manager for Cummins ESB; and Cummins Asia Pacific managing director Gino Butera.

“The location of the plant in such a sensitive area demonstrates how far we’ve come in emissions control for a diesel power station,” said Joe Loughrey, Cummins Inc President and Chief Operating Officer.

The 30 Cummins QSK60 generator sets at the unmanned plant can start up, synchronise and be on-line with 50 MW in less than two minutes.

#### **Reliable in high ambient temperatures**

“The ability of the plant to reach full capacity quickly in any conditions is critical, especially when the wholesale market price for electricity can spike at £10,000 per megawatt hour,” says Tony Blaubaum, General Manager of Cummins South Pacific’s Energy Solutions Business.

“In fact, this happened on January 16 this year when the power station hit its 50 megawatt capacity for the first time during a major breakdown in the electricity network caused by bushfires. The temperature at the Angaston site actually reached 50 degrees Celsius (122 degrees Fahrenheit) which confirmed the ability of the power station to operate at maximum capacity in very high ambient temperatures.”

#### **Emissions and noise reductions**

The low emissions are achieved using SCR (Selective Catalytic Reduction) technology, which uses a urea spray to convert oxides of nitrogen (NOx) emissions into nitrogen



Cummins QSK60 engine

gas and water vapour, both harmless components of the atmosphere. The SCR technology reduces NOx emissions by up to 98 per cent.

The generators are housed in acoustic buildings that restrict maximum noise level to only 45 dB(A) at the nearest residential property line.

Although Cummins Power Generation operates and maintains the power station, it is owned by Infracore, which also owns airports in New Zealand and Europe as well as electricity and waste-to-energy investments in New Zealand and Australia. The company also owns another power station that was designed and built by Cummins in the Adelaide suburb of Lonsdale. This 20 MW power station, which continues to be operated and maintained by Cummins Power Generation, won a prestigious Institution of Engineers Australia award for environmental excellence.

“The Angaston power station was a very demanding and complex project requiring the expertise of a team of engineering and project personnel from Cummins’ Energy Solutions Business, headed up by Anthony Mitchell and David Sheldon,” Blaubaum concludes.

For more information about peaking power systems or other energy solutions, contact your local Cummins Power Generation distributor or visit [www.cumminspower.com](http://www.cumminspower.com)

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