



Graphic courtesy IRL Limited

US Short-Term Power Supply Contracts Spur Power Generation Rental Market

A new study by Frost & Sullivan, the international marketing consulting company, projects demand for power generation rental - comprised almost exclusively of diesel generator sets - to escalate with the growing trend towards short-term power supply contracts

A new study by Frost & Sullivan, the international marketing consulting company, projects demand for power generation rental - comprised almost exclusively of diesel generator sets - to escalate with the growing trend towards short-term power supply contracts.

Power rental solutions offer a cost-effective method of utilising power while avoiding capital outlay, equipment obsolescence, maintenance costs and manpower overheads. Growth has been evident across all sectors, however, the construction, industrial and events sectors clearly emerge as the most lucrative applications.

"Growing corporate trends towards short-term return strategies have been adopted by top-level echelons. Also, fears of an economic meltdown have augmented the appeal and viability of equipment rental. The uncertainty of profit outweighing the initial outlay for equipment investment will increasingly entice companies to use their capital in a more effective manner, most prominently to generate new and repeat business," reports Ian French, Industry Analyst at Frost & Sullivan.

Other key elements driving the engine of the power generation rental market's steady growth include ramped-up investment across key end-user applications and a growing awareness of the benefits associated with power rentals. The substantially increasing gross margins will put the European power generation rental market on the path to greater profit. Such substantial margins have attracted an increasing number of

Centre for Advanced Engineering

- not-for-profit organisation, established as a trust in 1987
- is funded by Trust Fund distributions and donations plus revenue from fees and sales
- is based at the University of Canterbury campus
- is governed by a board of directors representing industry and academia
- is helping transform New Zealand's technical infrastructure to advance economic growth and social progress

For more information on our energy programme work, visit the CAE website: www.caenz.com

companies to home in on the European power rental markets. As competition grows fiercer, price levels will decrease, making it more attractive for end-users to include hire/lease options in their business strategies rather than exercise purchase options.

As the market has grown, some companies have focused on value-added services, such as the provision of cooling solutions, specialised units and dedicated engineering consultations. These services have a number of market contenders to exploit some of the existing potential within several end-user sectors.

Olympics use DG

The 2002 Winter Olympic Games in Salt Lake City, Utah, are drawing on 350 portable generators to supply 100 megawatts of power for such critical functions as broadcasting, security, timing and results operations, and information technology.

CAE Distributed Generation Programme Timeline

December '01	Principal contracts for work signed
February '02	Case studies questionnaire released
April '02	Fuel study completed for peer review
June '02	Delivery of findings at workshop event
August '02	Publication of study report
October '02	Seminar comparing New Zealand with international developments

For more information on our Workshop event and October Seminar, contact bywateri@caverock.net.nz

Engines to Power the Future

A fan that could remove all the air from a lecture theatre in half a second, a turbine blade cast as a single crystal, a combustion chamber operating above the melting point of the metal it is made from - the technology in a modern gas turbine aeroengine is quite breathtaking.

Although the first test flight of a jet-powered aeroplane took place over 60 years ago, in 1941, the technology shows no sign of settling into staid middle age. Dr Julia King, who is Director, Engineering Technology-Marine at Rolls-Royce plc, showed in the recent Daphne Jackson Memorial Lecture at IEE Savoy Place (London) how innovations in design, analysis, materials and manufacturing have all made essential contributions to the safe, reliable engines which power today's large passenger aircraft.

Moreover, the applications of the gas turbine are not confined to aircraft. If there is no requirement to generate thrust with gas, the front fan and the exhaust can be removed and

the core of the engine modified to power a shaft which, via a gearbox, can drive a propeller. This principle is used to give the modern-day marine diesel propulsion engine.

The marine engine can be further modified to drive an alternator, generating electricity. In this application it burns gas, not diesel, so much of the design effort went into developing a combustor capable of maintaining the optimum temperature for minimum CO and NOx emissions while responding rapidly to changes in demand.

Over the next 20 years, developments are likely to be driven by pressure for increased power and efficiency coupled with lower emissions, lower noise and lower prime cost.

The key developments in the near future will be in power electronics, advanced materials and combustion technology, said Dr King, with particular need to miniaturise the power electronics.

Source: IEE News