

GENSETS POWER UP TO 20% OF NATIONAL GRIDS IN SOME AFRICAN COUNTRIES

FSE top 100 company, Aggreko, which has a worldwide genset fleet of about 6,000 MW, is supplying some 1,000 MW of power generation capacity across 17 countries in Africa.

This places Aggreko among the largest suppliers of new power generation capacity across the continent over recent years. The majority of the company's business across Africa has been in the form of contracts to provide temporary power to support national utilities over periods ranging from several months up to several years.

"We do not sell gensets; we are in the business of selling power," Aggreko CEO Rupert Soames tells *ESI Africa*. "In Africa we operate our plants ourselves and sell the power. And in comparison to the demand for more power across the continent, what we are supplying is a drop in the ocean."

One of the most recent contracts Aggreko achieved in Africa was signed with the national utility company of Côte d'Ivoire to provide 70 MW of temporary power, fuelled by natural gas, to support the country's national grid for the next two years. The estimated value of the contract is about €35 million.

Soames says that the two countries in Africa that have progressed the furthest with the Independent Power Producer (IPP) model are Côte d'Ivoire and Kenya. Aggreko was awarded its Côte d'Ivoire contract when one of the gas-fired turbines failed. The timeframe between award of the contract and supply of power was about ten weeks, with the contract having been awarded in March 2010. The plants were in place and operational in May 2010.

The contract, awarded by the Société de Gestion du Patrimoine du Secteur de l'Electricité (Sogepé) and the Société d'Opération Ivoirienne d'Electricité (Sopie), will help alleviate power cuts and stabilise Côte d'Ivoire's national power grid. It is the first contract Aggreko has been awarded in Côte d'Ivoire, and will be the company's largest gas-fuelled project.

Soames says, "We use gas as a fuel wherever it is available as it is usually the cheapest option. Four years ago



Aggreko's power project in Embakasi, Kenya.

we started investing in gas-fuelled power generation and we now have a fleet of over 250 MW." It is this that enabled Aggreko to supply the power within such a short period. A key to the business Aggreko is in revolves around providing quite large amounts of power capacity availability at very short notice.

The units are 1,250 kVA modules and Soames says this fits the philosophy that everything is done in 20 ft containers. So much so that he jokes, "If you were to stand around at



Aggreko provided power solutions for the Fifa world cup in South Africa.

our factory for long enough you would probably end up being housed in a 20 ft container." Transporting the gensets to site and logistics management are key aspects of Aggreko's business and this is one of the secrets as to how one of the world's most successful companies in this field achieves it.

The significance of the company in this space is illustrated by the fact that it is the uptaker of over 10% of the global supply of high horsepower motors. Soames puts the utilisation of the company's international power generation fleet at about 85% while that of the local business fleet is some 60% to 70%.

During the first half of 2010 Aggreko began demobilising from another of its large African contracts, this one in Kenya, where it has been supplying 290 MW to replace hydro generation capacity affected by drought. In May 2010, this supply was down to 140 MW as the country's hydro capacity began to improve again. At its peak the Aggreko contract, which lasted some 2.5 years, provided some 20% of the country's grid capacity and was operated from three locations within the country.

Of course genset power is not cheap, mostly due to the fuel cost, which in Kenya's case was diesel. Soames says that Aggreko aims for a genset cost of about US5c/kWh, but the fuel, which is usually supplied by the client, typically costs about three times that. The life of the genset fleet owned by Aggreko is about eight years before a major overall or rebuild is required.

Another country where Aggreko has a big presence is Angola where it is supplying 300 MW to national utility ENI and this too accounts for some 20% of the national grid. This is a long term contract and the company, which has been active in Africa for a decade, has been supplying power in Angola for four to five years.

Aggreko also has a large contract in Uganda where it is providing temporary power while the new Bujagali hydroelectric



Power for broadcasting.

power station is being built. The 250 MW Bujagali plant is due for completion in 2012 or 2013 and the gensets supplying the power in the interim are located on five different sites.

Other countries where Aggreko is supplying or has recently supplied power include Ethiopia, where it has been present for some 18 months providing hydroelectric replacement capacity, Mali, Mauritania, Senegal and Rwanda.

In addition to its international power projects business, which covers all the projects described thus far and which dominates the company's activity on the continent, Aggreko recently expanded in Africa to provide more of what it calls local business solutions. The international power projects business features contracts lasting from several months to years, while the localised short term temporary power business provides power and temperature control solutions to customers who need them either very quickly, or for a short length of time. To that end it established a service centre in South Africa's Midrand region of Gauteng province last year. This is the only such depot in Africa, with others being located in Dubai, Rotterdam, Panama and Singapore.

Examples of local business would be the supply of power to an industrial site which needs to service its permanent power supply, supply to a whole city in times of power shortage, or provision of power and cooling systems to a major sporting event.

Though a small contributor in Africa, the local business division accounts for about half the group's revenues internationally. In this case Aggreko hires out its equipment to customers, who operate it for themselves. Aggreko retains responsibility for servicing and maintaining the equipment.

In the international power projects business, Aggreko operates as a power producer. It installs and operates power plants and charges its customers both for providing the generating capacity, and for the electricity produced. Soames says the equipment is manufactured at Aggreko's factory in Dumbarton, Scotland.

The highest profile contract Aggreko's local business division was awarded in Africa was to supply backup power to the International Broadcasting Centre (IBC) at Soccer City, for the Fifa world cup, as well as for the broadcasting facilities at the ten world cup stadia. The contract entailed the supply of 30 MW of standby power, as well as 300 km of cable. Half the gensets provided were 1,250 kVA units and the rest were 800 kVA units. Of the total, 16 MW were provided for IBC itself where the load was not expected to exceed 8.0 MW, and realistically Soames says he would be surprised if it exceeded



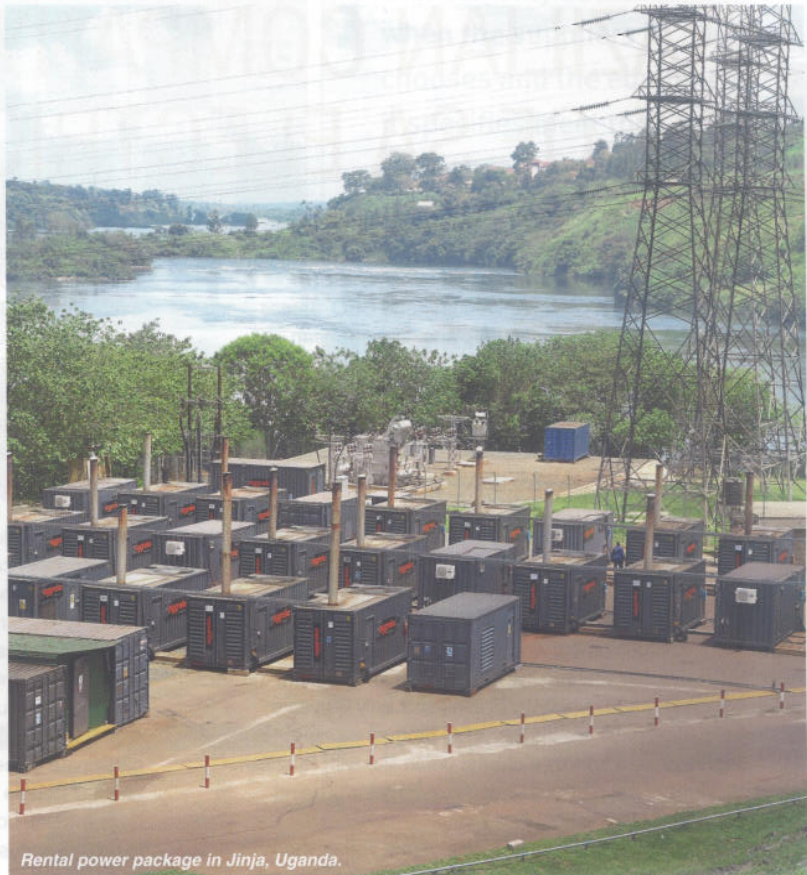
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4.0 MW with the cooling requirement accounting for half the total.

"We did not only supply the backup power but also provided the temperature control for the IBC," Soames says. In South Africa, where the company has Cyril Ramaphosa's Shanduka group as its BEE partner, it employed 360 people to undertake the IBC contract, of which 320 were local. The IBC itself required 600 tonnes of specialised broadcasting equipment to be imported from around the world and was responsible for broadcasting the world cup images to billions of people. This content, captured by 32 cameras at each match, was suited to media forms such as television, computer screens, mobile phones and an experiment with 3D broadcasting.

The supply of backup power and temperature control services for major international events is not new to Aggreko. It also supplied the Beijing 2008 Olympics, and the Vancouver 2010 winter Olympics, as well as the rugby world cup, Formula One, and British Open. "The backup equipment is sometimes called into play, as there were two power failures in Vancouver which required the gensets to operate," Soames notes. ES1



Rental power package in Jinja, Uganda.

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