

MTN planning to free itself of Eskom

MTN, which has participated in the Carbon Disclosure Project (CDP) for the past three years and has steadily improved the levels of transparency of its greenhouse-gas emissions, as its CDP scores show, plans to function completely independently of Eskom power in due course, says Willem Weber, the telecommunications group's senior manager for mechanical and electrical infrastructure.

A successful example of MTN's progress in this regard is the 2MW tri-generation project at its offices in Roodepoort. This is the first project of its kind in Africa, Weber says, and involves the generation of electricity from natural gas and the production of hot and cold water by recovering the heat of exhaust gases, water and oil from the generating engines.

Tri-generation refers to the three ways in which energy is obtained from the process, namely: electricity from the combustion of the natural gas, hot water from the recovered heat, and cold water produced by chillers that use some of the recovered heat as a source of energy.

The gas comes from the Temane gas field in Mozambique and is pumped through Sasol's pipeline to Egoli Gas in Johannesburg and then to Roodepoort via the Egoli Gas network. The cooled water is used in the MTN building's air-conditioning system.

MTN spent about R22m on the project and hopes to recoup R12m of this money through the carbon credits earned from the project. MTN started planning the project in 2008 and registered it at the UN Clean Development Mechanism by 2010.

Weber says they were fairly surprised when the UN told them there's no methodology for the specific kind of project they were planning and that MTN had to devise a methodology by itself and then reapply. The project was finally approved, and MTN recently even obtained a buyer for its carbon credits – French energy company EDF, which bought up in advance all the carbon credits the project will earn over the next eight years.

MTN is now working on a similar project at its Centurion offices, and it plans to earn credits with that too. In terms of the current rules of the UN's Framework Convention on Climate Change, the project must be registered before the end of next year.



Another way that MTN is reducing its carbon footprint is the 21 base stations it put up in the Northern Cape, which function completely independently of the Eskom power grid. Weber says this decision arose partly out of the problems that Telkom is experiencing with the theft of copper wire in the area. No sooner had they replaced the stolen cable, than it was stolen again. In this sparsely populated area, it was simply not cost-efficient to replace. MTN started determining whether a wireless communications infrastructure would perhaps be a better option and then decided to build the 21 base stations in the Northern Cape to run solely on solar or wind power, whichever was applicable. Initially a hydrogen fuel cell was installed as a back-up power source, but it was soon discovered that the solar power was sufficient.

Weber says the base stations are already making a real difference in the region and are promoting economic activity. Where guest farms in the Kalahari for example had previously kept a reservation book in Upington where people had to phone in their reservations and the guest-farm owners only found out what their reservations looked like when they drove to Upington once in a while, they can now receive phone calls directly on their farms. Even people in the remote settlement of Riemvasmaak now have cellphone reception.

Weber says initially theft of the solar panels was a problem. In some cases, the solar panels were stolen within two weeks of being installed. But new technology these days allows for flexible solar panels – designed by solar power technology group SolarWorld – to be glued to steel plates, and these have so far not been stolen.

Weber admits that theft is undoubtedly a greater problem in more densely populated areas, like KwaZulu-Natal, and then the solar panels aren't even stolen for their "proper purpose". It was found that people were using the stolen solar panels as doors or coffee tables.

In addition, MTN has a number of other projects where renewable energy will be used. One is a 300 kW wind turbine for its exchange in Port Elizabeth. Another is the use of biofermentation agents to convert plant material into biogas to drive generators. Weber explains that the group wants to focus on local solutions – in Port Elizabeth, for example, the focus is on wind power and in Nelspruit, where there's an abundance of macadamia shells, they are considering using them as the raw material for biofermentation.

MTN's vision of independence from the power grid is naturally also driven by the need to cut operating costs, of which electricity is becoming an increasing portion. ■