

NEWS FROM:



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UCT students to harness the wind to power high school PC lab – and inspire future engineers

**Unveiling of turbine at Oaklands High School in Lansdowne, Cape Town
Thursday, 2 December 2010 at 12h00**

The student branch of the Institute of Electrical and Electronics Engineers (IEEE) at the University of Cape Town will unveil a wind turbine and a small solar panel installation at Oaklands High School in Lansdowne, Cape Town, on Thursday, 2 December at 12h00 as the first phase of a project they are spearheading to double the school's computer lab capacity while reducing the costs of running it. At the same time, they have been teaching basic principles of electrical engineering to high school learners, who designed and built two models of the project.

"The aim of our project is to establish a new computer lab at an under-resourced high school in Cape Town, using 20 computers donated by the UCT Engineering and Built Environment [EBE] Faculty," said project manager Mr Nana-Ampofo Ampofo-Anti. "One of our goals is to increase access to information and educational tools in under-resourced schools. Another is to expose high school learners to engineering as a possible career path, and to encourage the learners to be innovative."

The new lab at Oaklands High School will be fed by a combination of power from the Eskom grid and renewable power produced on site by the wind turbine and solar panels. Two models of the project have been designed and built by high school learners. Eleven grade 10 learners (five from Oaklands High School and six from Oude Molen Technical High) were

selected by their schools to take part in the wind turbine project. The learners were taught basic electrical engineering principles in three technical sessions held on UCT campus. The sessions included a briefing on the importance of using renewable energy and energy conservation.

The learners participated in an energy audit of the existing lab at Oaklands High School, and then developed the design for the project model, which was constructed at Oude Molen Technical High School. Eventually the group was split in two, with each team led by one of the learners, and the teams each designed and built their own model. The models will be on display at the unveiling ceremony.

Through its partnership with the Khanya project (a Western Cape Education Department initiative) the projects committee identified Oaklands High as a highly under-resourced school. The school currently has one computer lab of 20 machines that service about 1000 learners and staff members. The Western Cape Education Department will build new school buildings for Oaklands High starting in January 2011, so the project has been split into two phases. The first phase is the installation of the wind turbine; the computers will be installed once the new school buildings are complete. The second phase of the project, to take place in 2011, will be led by EBE student branch projects committee vice-chair Mr David Oyedokun.

UCT encourages students to volunteer for projects that will benefit under-developed communities, and the EBE faculty provides different opportunities throughout the academic year for students to use their engineering skills in social responsiveness projects.

The UCT IEEE branch secured funding to purchase the Oaklands High wind turbine from the IEEE Power and Energy Society, which donated \$10 000 towards the project. Cape Town-based suppliers Earthpower and MLT provided the wind turbine at a discounted cost. The second phase of the project will be the installation of the 20 new computers in the new computer lab. UCT IEEE members are now developing additional learning software that will be installed on the computers in the new lab.

To find out more about the unveiling ceremony or the project, please contact:

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