



# Energy research is elevated to a new level institutionally

Prof Tinus Pretorius

**As a research-intensive university, the University of Pretoria believes that it can make a positive contribution to the economic and social development of the country. Its research agenda is focused on a number of carefully selected themes on which proven capacity exists within the University, and which build on the work of excellent researchers and research leaders. This has led to the establishment of a number of institutional research themes (IRTs), one of which is Energy.**

A study by the University's Institute for Technological Innovation in the Faculty of Engineering, Built Environment and Information Technology found that the University was the most prolific publisher of energy research in South Africa over the period 1997–2007. This led to the establishment of the University's IRT on Energy, which was officially launched by the Vice-Chancellor and Principal in September 2012.

The IRT on Energy was designed to recognise and foster excellence in research, and is aimed at enhancing multi- and transdisciplinary research that cuts across faculties to strengthen the University's reputation as one of South Africa's leading research universities. The IRT aims to coordinate research being done in a number of faculties and partner institutions, which focuses on topics that are relevant to South Africa's future energy security. Such a focused and concerted research effort is necessary to ensure that the country succeeds in achieving the goals of government's Integrated Resource Plan 2010 (IRP2010).

In order to develop an appropriate strategy for the IRT on Energy, the IRP2010 was evaluated, together with other government energy policies and strategies. The main goal of the IRT on Energy is to concentrate on research related to electricity generation, transmission and distribution. A number of selected research subthemes

include energy production (with the emphasis on clean coal, nuclear and renewable energy), energy distribution (smart grids and energy storage), energy optimisation, advanced materials, energy policy and economics, and ensuring a sustainable environment.

The IRT on Energy is in a position to create excellent opportunities for the development of research capacity at postdoctoral level, as well as for collaboration between different academic departments (especially in the faculties of Engineering, Built Environment and Information Technology, and Natural and Agricultural Sciences). Collaborations are also established with local and international organisations, universities and industrial partners.

The IRT on Energy strives to provide the best balance between the University's current research activities and the energy focus areas that are prioritised by government, with an initial focus on electrical energy.

A number of research projects that form part of the IRT on Energy are highlighted in this issue of *Innovate*, and illustrate the varied and interdisciplinary nature of the research that is being conducted under the auspices of this research theme, which will set the University on the road towards national relevancy as it searches for solutions to South Africa's energy problems. ➔

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