



Amidst the energy crisis in South Africa, are you interested in the societal impact of Energy Research conducted at UJ? Do you want to know what our experts are working on?

Sustainable Development Goal 7: Affordable and Clean Energy

PANEL DISCUSSION



7 AFFORDABLE AND CLEAN ENERGY

Access to electricity and clean cooking fuels has improved in many parts of the world, but 675 million people are yet to be connected to the grids and 2.3 billion are still cooking with unsafe and polluting fuels. The war in Ukraine and global economic uncertainty continue to cause significant volatility in energy prices, leading some countries to raise investments in renewables and others to increase reliance on coal, putting the green transition at risk. If the current pace continues, about 660 million people will still lack access to electricity and close to 2 billion people will continue to rely on polluting fuels and technologies for cooking by 2030. To ensure access to energy for all by 2030, we must accelerate electrification, increase investments in renewable energy sources and invest in improving electricity grids. (Sustainable Development Goals, 2023, <https://myanmar.un.org/en/sdgs/7>).

The Research Capacity Development Unit of the Postgraduate School at the University of Johannesburg (UJ) invites you to our Affordable and Clean Energy (SDG 7) Panel Discussion. We are hosting a panel of experts to present their research and grapple with some critical questions, highlighting their research's societal impact in line with Sustainable Development Goal.

THEME ■ Sustainable Development Goal 7: Affordable and Clean Energy

DATE ■ 9 October 2023

TIME ■ 12:00 – 14:30

To register, click Zoom link https://zoom.us/webinar/register/WN_wWo7Yh3sRTqfgTC_FRN8sg#/registration

For further inquiries, contact Dr Tony Shabangu at rcdenquires@uj.ac.za / sshabangu@uj.ac.za

PANELISTS:

- Prof Hartmut Winkler** – Physics Department, University of Johannesburg.
- Prof Reinout Meijboom** – Chemical Sciences Department, University of Johannesburg.
- Prof Nicola Wagner** – Geology Department, University of Johannesburg, and Director of the DSI-NRF Centre of Excellence in Integrated Mineral and Energy Resource Analysis (CIMERA).
- Dr Obafemi Olatunji** – Process Energy and Environmental Technology Station (PEETS) Engineering Team, UJ.

We hope that this discussion will provide an opportunity for everyone to learn from one another while also emphasising the gravity of this scarce resource in the face of a changing world. The importance of preserving energy speaks for itself in South Africa and we hope to bring about positive change with this panel discussion.



The Future Reimagined

Nahno Marques / Unsplash.com



Panelist BIOS

Prof Hartmut Winkler

Physics Department, University of Johannesburg.

Prof Hartmut Winkler is a member of the UJ Department of Physics, and specializes in astrophysics, atmospheric physics, solar radiation, and energy studies. He has published widely in these topics and has written 34 articles for The Conversation related to South Africa's energy options, with a focus on solar and nuclear energy. He is also frequently interviewed on radio and television on these topics. Prof. Winkler has an NRF C-2 rating and is a former recipient of a Matsumae International Fellowship, a DAAD fellowship and the UJ Vice-Chancellor Award for Distinguished Teaching. He is also a former Head of the UJ Physics Department and during his previous employment at Vista University he was Dean of the Science and Acting Deputy Vice-Chancellor: Academic.

Prof Reinout Meijboom

Chemical Sciences Department, University of Johannesburg.

Reinout graduated in the group of Prof Jan H Teuben at the Rijksuniversiteit Groningen (Netherlands) in 1996 on a project involving the catalytic oligomerisation of cycloalkenones using $[\text{Cp}^*2\text{YH}]_2$ and $[\text{Cp}^*2\text{YH}]_2$ as the catalysts. In 1997 he started his PhD in the group of Prof John R Moss at the University of Cape Town (South Africa). The research involved the synthesis of organometallic dendrimers. These dendrimers were of the carbosilane type, often containing air-sensitive organometallic fragments on its periphery. One of the great successes of that project was the synthesis and characterisation of the pyrophoric poly-lithiated carbosilane dendrimers. After completing the PhD in 2001, and a short post-doc period in the same group, he moved to work with Prof André Roodt at the Rand Afrikaans University (now University of Johannesburg) in August 2003. Research in the Roodt group mainly involved modified cobalt catalysed hydroformylation. The interest in synthetic, structural and catalytic properties of organometallic compounds resulted in the involvement with a number of research projects. Together with the rest of the group he moved to the University of the Free State in January 2005. Since October 2008 he was appointed at the University of Johannesburg.

Prof Nicola Wagner

Geology Department, UJ and Director of the DSI-NRF Centre of Excellence in Integrated Mineral and Energy Resource Analysis (CIMERA).

Prof Nikki (Nicola) Wagner is the Director of the DSI-NRF Centre of Excellence in Integrated Mineral and Energy Resource Analysis (CIMERA) and Professor in the Geology Department at the University of Johannesburg, Johannesburg, South Africa. Prof Wagner interests lie in the energy space, and, through CIMERA, she is involved in Africa's mineral wealth and human capacity development. Her specialist research areas include organic petrology, coal petrography, trace elements and critical raw materials in coal and associated products, coal geology, carbon dioxide capture and storage, coal oxidation, underground coal gasification, coal conversion, ash utilization, and so on. Prof Wagner has over 70 peer reviewed publications and produced a book on coal petrology. She has graduated over 45 postgraduate students, and is an active peer reviewer for over 10 research journals, is accredited by the International Committee for Organic Petrology (ICCP), and is the elected editor of the ICCP News, where she also serves on the Council. Prof Wagner is a Fellow of the Geological Society of South Africa (GSSA), and member of the FFF-C, SEG, and SACNASP, and has a B NRF rating. Prof Wagner has three children.

Dr Obafemi Olatunji

Process Energy & Environmental Technology Station (PEETS) Engineering Team

Dr Olatunji completed his PhD degree at the University of Johannesburg (UJ), South Africa. His PhD research was based on renewable energy utilization and artificial intelligence. He has published more than seventy (70) accredited research articles. His academic research has gained peer recognition as reflected in his h-index of 18 and more than 800 citations to his credit. He has established local and international research collaborations both in academia and industry. He has attended more than sixteen (16) international conferences and workshops and he is also a trained energy manager.

He currently heads up the Energy and Resource Efficiency Unit of the UJ Process Energy & Environmental Technology Station (UJ PEETS) as a Program Lead. Under his leadership, UJ PEETS was awarded a multimillion energy strategy development project by USAID. His unit at UJ PEETS supports SMMEs in clean energy and circular economy through capacity building, research and innovation development. He is a committee member of the American Society of Mechanical Engineers (ASME) code and standard who verifies and validates computational models in energy systems and a registered member of ASME. He is currently an advisory board member of energy utilization Journal and have functioned as technical committee member of reputable conferences such as ICMIMT, PEEE, ASME power and others.

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