



Faculty of Engineering,
Built Environment and
Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en
Inligtingtegnologie / Lefapha la Boetšenere,
Tikologo ya Kago le Theknolotši ya Tshedimošo



mineral resources
& energy

Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA



SHORT COURSE ON ENERGY SAVINGS OPPORTUNITIES IN BUILDINGS AND WASTEWATER TREATMENT PLANTS

ONLINE - COMMENCING 20 JULY 2022

UNIVERSITY OF PRETORIA

TO BOOK, REGISTER VIA THIS [LINK](#)

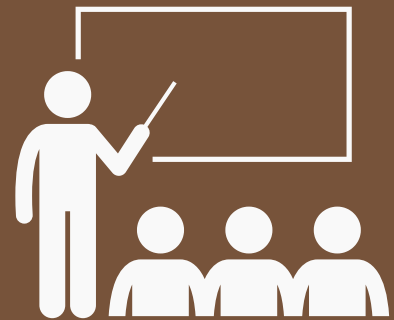
Much has changed in recent years in buildings and wastewater industries. The key drivers are environmental regulations, increasing operating costs, technology advancements, and improved opportunities for load management. Buildings and wastewater treatment utilities can take advantage of improved technologies to reduce operating costs. Optimising the energy efficiency of these facilities could therefore result in a significant carbon footprint reduction, as well as operating cost savings. One of the key projects identified by DMRE in the short to medium term is to support municipalities through plant optimisation at buildings and municipal wastewater plants so that they are operated optimally and cost effectively, whilst complying with environmental legislation and regulations. Understanding the energy inputs and costs are key to achieving savings. It is crucial for municipalities to explore potential energy-saving measures as a mechanism to ultimately minimise costs. The course presents the opportunities in buildings and wastewater treatment plants. Topics include: power and energy systems, loads in buildings such as HVAC, how water heating, and pumps at wastewater treatment plants and opportunities for energy savings and carbon reduction.

WHO SHOULD ATTEND

The course is designed to support utilities or organisations involved in managing energy in buildings and wastewater treatment plants. This course is designed to help:

- Staff working to reduce building and industrial energy usage
- Wastewater plant managers
- Policy & regulatory officials
- Analysts working for national regulators in the power sector
- Energy Managers
- Facility managers
- Project managers
- etc.

PRESENTERS



RAJ NAIDOO

Raj Naidoo has more than 20 years of teaching, research, and industrial experience. He received his Ph.D. in electrical engineering from the University of Cape Town, South Africa, in 2008. He is currently a Full Professor and Head of the Department of Electrical, Electronic, and Computer Engineering at the University of Pretoria, South Africa. Raj has supervised a number of Masters and PhD students in the field. He has published many research articles in various journals and conferences and has diversified research interests in the areas of the smart grid, renewable energy, and power systems.

RUSSEL MHUNDWA

Russel is currently employed as the Field Manager at Energo Power Solutions Consultant (Pty) Ltd. He has over 8 years' experience in the Energy Efficiency, Renewable Energy, Measurement and Verification, design and installation of data acquisition systems for performance monitoring of energy systems as well as energy modelling. Russel has a PhD Physics (Energy Efficiency). He is a member of the South African Institute of Physics (SAIP) as a Professional Physicist. His research interests are in energy efficiency and solar photovoltaics.



AGENDA ITEM	TIME	PRESENTER
Introduction to the course	09H00	Prof. R. Naidoo
Loads in buildings	09h00-09h30	Prof. R. Naidoo
Opportunities for energy savings in buildings	09h30-10h30	Prof. R. Naidoo
TEA BREAK	10h30-11h00	
Loads in wastewater treatment plants	11h00-12h30	Dr. Russel Mhundwa
LUNCH BREAK	12h30-13h30	
Opportunities for energy savings in wastewater treatment plants	13h30-15h00	Dr. Russel Mhundwa