



Press Release

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Immediate Release

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### **GIZ-SANEDI partnership creates app for better lighting decisions**

With the growing emphasis on energy efficiency in South Africa, the South African German Energy Programme (SAGEN), implemented by the German Development Agency (GIZ) and the South African National Energy Development Institute (SANEDI) are excited to announce a new app set to improve investment decisions around energy use in lighting of buildings across the country. The first of its kind in SA, the app has been tailored especially for the local market and will be available for download in early 2021.

Individually, a lightbulb may not be considered a major energy consumer in a building, especially in a home or small office. However, considered collectively on a larger scale such as in a government facility, school or hospital, the energy efficiency of lighting can have a significant impact on a building's energy use. Streetlighting and outdoor area lighting also use a lot of energy but is necessary for a secure environment. Managing area lighting is more difficult than indoor lighting and energy efficient lighting has an important role to play in reducing costs associated with this expense.

With this in mind, the Tshwane University of Technology (TUT) was appointed by the GIZ to develop an app that helps users implement energy efficient lighting. The app was created in collaboration with SANEDI and the Department of Defence (DOD) and funded by the German Development Agency (Deutsche Gesellschaft für Internationale Zusammenarbeit – GIZ).

“Developed for both mobile and PC use, the app guides the user through a lighting energy audit of a building,” explains Dr Karen SurrIDGE, manager of the Renewable Energy Centre of Research & Development for SANEDI. “As you work your way through a building and its grounds, you count the lights and note their specs, thus gathering data that you enter into the app. The app then provides information on alternative lighting solutions, their cost, energy usage, the investment required and – importantly – the return on that investment in

terms of energy and costs saved." The information gathered is housed securely on the SANEDI server, and users do not have access to other users' data.

Marlett Balmer of the GIZ says they funded this project due to the growing importance of energy efficiency: "It is estimated that replacing lighting systems with the latest LED technology could save between 30% and 60% of an organisation's lighting bill. Investing in energy efficient lighting offers an immediately affordable intervention as a first step towards energy efficiency and sustainability with a direct monetary benefit." She explains that organisations find it challenging to calculate the replacement cost of existing lighting systems as well as the potential savings that could be realised with energy efficient lighting solutions. "The user-friendly tool assists in overcoming this challenge," says Balmer.

The app has been designed with municipal and government buildings in mind as the primary target market, however both GIZ and SANEDI hope to see uptake in the private sector, too. "While the app could have a huge impact on public sector energy use, there are many large electricity consumers who could benefit from the app, which offers a valuable decision-making tool for those looking to reduce electricity use," says Surridge. "Further, we would ideally like to see not just app downloads, but also actual implementation of the recommendations made by the app."

Effort was placed on ensuring the app provides the right suggestions based on correct and current technology and cost data. To this end, the app adapts its recommendations based on the user's location, taking into account the price of lightbulbs in that area, as well as the relevant electricity tariff. "We don't expect users to make immediate complete facility-wide changes, unless they plan to do so," explains Surridge. "However, the app's recommendations can be used to inform decisions on future replacement, repair and maintenance plans."

The app has been tested in an extreme application, in collaboration with SANEDI partner the DOD with varied and unique lighting requirements. "The team used the app to audit the lighting of a defence base near Pretoria, which has very specific lighting needs for security and surveillance. Initial auditing revealed that the base could save as much as R200 000 a year, with an ROI of less than 12 months, should the base choose to implement all the app suggestions." Importantly, the app suggestions ensure the user would ultimately have the benefit of the same if not better lighting quality, and environmentally friendly reduced energy use.

A team of five technologists at TUT were supported by relevant professors as they worked on the app throughout 2020. "The app surpassed our expectations and includes additional functionality and information not originally anticipated. We really appreciate TUT's dedication and hard work to make the app a reality" notes Marlett Balmer from SAGEN.

Efforts are currently underway to have the app available for download from Google Play store in early 2021.

Ends 805 words

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### **About SANEDI**

The South African National Energy Development Institute (SANEDI), established by the Government, directs, monitors and conducts applied energy research to develop innovative, integrated solutions to catalyse growth and prosperity in the green economy. It drives scientific evidence-driven ventures that contribute to youth empowerment, gender equity, environmental sustainability and the 4<sup>th</sup> Industrial Revolution, within the National Development Plan (NDP), through consultative, sustainable energy projects. For more information, go to [www.sanedi.org.za](http://www.sanedi.org.za).

### **About SAGEN**

The South African-German Energy Programme (SAGEN), implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), supports renewable and energy efficiency stakeholders to maximize investment opportunities presented by the energy sector. Since 2011, SAGEN has collaborated with South African partners from Government and the private sector to promote a diverse and inclusive energy transition for all. The programme's activities are closely coordinated and implemented with the Department of Mineral Resources and Energy (DMRE), National Treasury, Eskom, SALGA and municipalities. For more information visit [www.sagen.org.za](http://www.sagen.org.za)