



# Industrial Energy Efficiency Project shows local impact, reaps international acclaim

Over the past decade, the Industrial Energy Efficiency (IEE) Project has helped South African industry realise energy savings of 6 500 000 MWh, translating to GHG emission mitigation of 6.4 million tonnes CO<sub>2</sub>e and financial savings of R5.2 billion – to put in perspective, approximately equivalent to five years of Eskom load shedding at the highest 2019 rates.

**T**his feat and the tenacity to accomplish it earned the project, implemented by the National Cleaner Production Centre South Africa (NCPC-SA), the award for International Energy Project of the Year, during October 2020. Competing with 25 other projects, the award was presented by the Global Association of Energy Engineers during a virtual award ceremony.

The NCPC-SA is hosted and managed by the CSIR on behalf of the Department of Trade, Industry and Competition.

The IEE Project, led by the NCPC-SA and the United Nations Industrial Development Organization, received the award in recognition of its efforts to transform the energy use patterns in South African industry, and to mainstream energy management systems across economic sectors. The project is further set apart by its methodology of partnering with and equipping industry to tackle practical energy management in companies of any size.

The project has led the way in driving the adoption of the international standard for energy management, ISO 50001, and supports companies to achieve certification, with the end goal being continuous improvement and on-going savings.

Apart from the tangible energy and financial savings, the project's training initiatives have developed a cadre of energy management and energy systems optimisation experts across South Africa. Energy management training continues – online for the remainder of 2020 – adding to the more than 6 000 professionals already trained at technical level and 200 men and women at IEE expert level. The project also focuses on gender mainstreaming and promoting the participation



**Energy Project  
of the Year:  
International**



The Hulamin aluminium rolling operation in KwaZulu Natal is one of the industry plants that has benefited from energy and water savings through the NCPC-SA.

of women in energy. To date, 43% of the professionals trained through the project were female, and the project team itself comprises 67% women.

The skills identified as vital for the project – from graduate engineers who understand the fundamentals to process technicians who are familiar with the troubleshooting of industrial systems – were improved through training and the success demonstrated by the energy efficiency experts. Effective and sustainable change and performance improvement were achieved across all industrial sectors.

Looking back, the IEE Project started small in 2010, triggered by the rolling blackouts two years earlier. Then, it was a world first and it became the international model for UNIDO to run other IEE projects around the globe. The NCPC-SA at the CSIR was the obvious choice to manage the project, as the programme already focused on reducing waste streams in water, energy and materials through resource efficient and cleaner production (RECP).

While efficiency is the first step, the NCPC-SA notes that companies that have matured in their RECP journeys are experiencing diminishing returns. The IEE Project now helps them to implement cleaner energy combinations of PV solar, wind, natural gas engines and energy storage, hybrid solutions that not only reduce emissions and improve energy efficiency, but also reduce dependence on an unreliable electricity grid.

The NCPC-SA's IEE Project has benefited the triple bottom line – people, planet and profit – and its award is well deserved. It believes that if such a holistic approach and commitment to achieve targets that can be measured by industry, as well as the skills development of South Africans, can be replicated in other areas, the country's socio-economic and environmental sustainability will reap similar rewards.

## Training offered at introductory, end user and expert levels

- RECP training – how to conduct RECP assessments and implementation in companies
- Energy Management Systems – based on SANS/ISO 50001 standard
- Energy Systems Optimisation – including compressed air, fans, pumps, steam and motors.

### ENQUIRIES:

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