

Renewable energy at home can be a reality for all South Africans

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ACSA-supported project installs more than 580 home solar systems for informal settlement households



President Cyril Ramaphosa recently announced an Energy Action Plan to address South Africa's power crisis. One of the five proposed interventions will look at making it easier for households and businesses to produce electricity from solar panels. Practical solutions at a low income level are already available, and implementing these solutions to scale can contribute to seeing the Energy Action Plan benefit all South Africans.

"Low-income households that are not yet connected to the grid should not be left behind in this plan," said Damian Conway, director at The Sustainability Institute Innovation Lab (SIIL).

This is exactly what Airports Company South Africa (ACSA), GreenCape's Alternative Services Delivery Unit (ASDU), in partnership with The iShack Project (a project of The Sustainability Institute Innovation Lab), have been working on in the informal settlement communities of Malawi Camp and Freedom Farm in Cape Town since 2019. The programme seeks to provide the community with alternative energy solutions to improve their living conditions while they wait to be relocated to formal housing.

This programme demonstrates with the right collaborations and partnerships, renewable energy at homes can be a reality for all South Africans. Through the programme, unemployed community members were trained in solar installation and maintenance. This will ensure the sustainability of the programme.

"Making a positive difference is needy communities surrounding our airports is the cornerstone of the company's socio-economic development strategy. The programme provides skills development to assist with much-needed job opportunities. It is also a life-changing opportunity for communities who have for the longest time depended on unsafe and sometimes dangerous forms of energy to access affordable and safe solar-generated energy electricity," says Laurie Less, group

executive of corporate services at ACSA.

Since the implementation phase of the project started, and post an extensive mobilisation phase, by April 2022, a total of 580 solar home systems had been installed.

Residents join the service voluntarily by paying a subsidised joining fee. Monthly, they end up paying less for the solar lighting than what they used to pay for the candles and paraffin. They can also now charge their cell-phones at home and power other low-energy appliances. This is an affordable alternative given the challenges of high unemployment, and sometimes lack of appropriate infrastructure in informal settlements.

“Two packages are on offer. The basic package includes three LED lights with cell-phone charging plus extra energy capacity to add music systems and tablets. The upgraded package includes a 24-inch LED TV. All packages include basic maintenance support for a small monthly fee,” said Cisomo Banda, the iShack field operations manager.

Co-creating alternative service delivery solutions

Prior to commencing the roll-out, the project team held numerous workshops with the community leaders and town hall sessions with the wider community in order to build a solid understanding of the offer and to establish a strong social contract to underpin the sustainability of the service. The project team worked with community leaders to facilitate the employment of enumerators and installers. The solar service has been set up as a durable utility service, rather than ‘drop-and-go’ infrastructure. Thus, ‘iShack Ambassadors’ have been recruited from the community; they receive ongoing training and support to continue marketing the service and, crucially, to assist clients with any maintenance needs.

Impact

Some residents have lived in these informal settlement areas for up to 30 years, without formal electricity infrastructure. This project has given them the opportunity to have a clean, safe, and affordable renewable energy source to get electricity in their homes. The project has improved households’ ability to be active citizens by contracting formally with the service, making regular co-payments, and thus securing access to ongoing maintenance support.

About 50 new jobs were created during the project, including enumerators and trainee installers. The iShack Project have established the foundations for a sustainable social enterprise related to the provision of energy to the communities which has now been in operation for almost two years.

Enabling partnerships

GreenCape managed to secure additional funding from Wärtsilä and Friedrich Naumann Foundation to build on the successful foundation in Freedom Farm and Malawi Camp, generously supported by the Airports Company of South Africa.

Normally, municipalities deliver mandated Free Basic Electricity (FBE) to indigent, grid-connected households by providing up to 100 free electricity units per household per month. But this excludes the most under-served, ‘un-electrified’, communities: those without grid access. However, it has been shown by some municipalities, that the rand-value of the FBE units can be repurposed to subsidise the purchase and maintenance of solar home systems for un-electrified households while they wait for grid connections. Although these off-grid solar systems can only power lights, television and cell-phone charging, this can be a meaningful improvement in quality of life, safety and health, at least as an interim step up the clean-energy ladder.

The implementation partnership with The iShack Project, is central to demonstrate, at scale, a viable and financially sustainable public-private business model for the provision of incremental energy services to under-served communities.

The video case study aimed to showcase the ASDU model and the value of co-design with communities, namely in Freedom Farm and Malawi Camp, which has been made possible through the generous support of ACSA and the work of

the The iShack Project team on the ground.

This video case study can be viewed online: <https://www.youtube.com/watch?v=MRIDM9N9TRs&t=1s>.

This project demonstrates that renewable energy can be a cost-effective and inclusive solution for all South Africans.

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