



68TH AMEU CONVENTION 2022

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A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA

Strengthening Equitable and Sustainable Municipal Service Delivery in Informal Settlements: Lessons from a socio-technical Energy Innovation in PJS Settlement, Khayelitsha, Cape Town

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Hosted by



Introduction

- SA urgently needs positive examples of how energy access and energy poverty alleviation initiatives can be implemented and sustained to upscale just energy interventions.
- The case study is useful for grappling with South Africa's unfolding just energy transition, specifically within the context of urban informal settlements.
- The case study examines an off-grid (solar-powered) public lighting innovation in an informal settlement called PJS Settlement in Khayelitsha, Cape Town.

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Introduction

- Top-down decision-making processes and centralised energy infrastructure, such as high mast lights might miss vital opportunities to enhance energy justice outcomes at a community level.



Source: Mail and Guardian, 2019

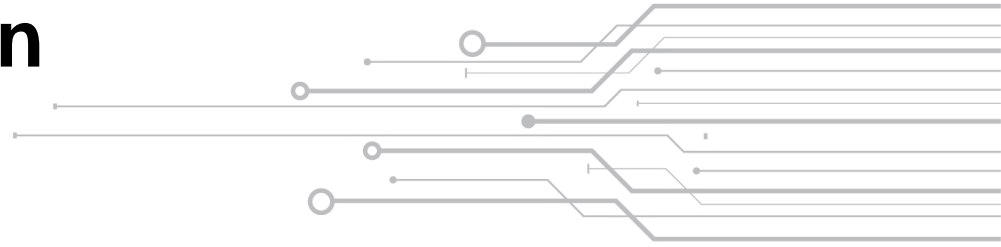
- RE based lighting innovations might help address municipal service delivery to marginalised households and communities in urban informal settlements.

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Literature: Just Urban Energy Transitions



- SA's energy transition is underway.
- Context matters (not simply a matter of producing clean energy but also how much energy is produced, for whom, and to sustain what kind of life).
- Understand how technology interacts with the population in a given context.
- Collaboration of stakeholders is vital to redistribute benefits of the energy transition.

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Literature: Just Urban Energy Transitions

- Over 67% of SA's total population resides in cities.
- The energy transition has significant implications for cities, as high population growth and urbanisation is happening where energy access and poverty are prevalent today.
- Urbanisation offers an important opportunity for just energy interventions.
- Understanding the everyday life of households or communities helps identify potential sites for facilitating just energy interventions.

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Literature:Energy Poverty and Access

- Energy poverty defined as the lack of access to sustainable modern energy services and products.
- Access to modern energy contributes to developmental outcomes: education, livelihoods, and health.
- South Africa has the highest electrification rate, yet over 40% of South Africans are energy-poor.
- Distributed renewables could play an increasingly significant role in delivering energy access in low-income communities.

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Literature: Energy Justice

- The energy justice literature is centred on the notion that all individuals should have access to affordable, safe and sustainable energy and be able to sustain a decent lifestyle, as well as participate in and lead energy decision-making processes, with the power to make a change.
- 4 principles of justice: distributional justice ; procedural justice; recognition justice; restorative justice
- Community engagement/ involvement is important in addressing energy access and poverty alleviation.

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SA's Energy Transition

- SA's energy transition allows us to address social equity issues, such as lack of access to energy and energy poverty, which are prominent in the current energy system.
- Local governments are closest to communities, they must be concerned about solving energy poverty and access because of its interlinkage with other socio-economic issues.
- Addressing energy access & poverty challenges is essential in addressing inequality in our cities.

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SA's Energy Transition



- The energy transition helps us reflect on whether the existing governance structures, infrastructure and financial models for service delivery are suitable for allowing for a just energy transition or need to change.
- As the just energy transition discourse grows, there needs to be a stronger focus on the urban dimension and, particularly, urban informal settlements.

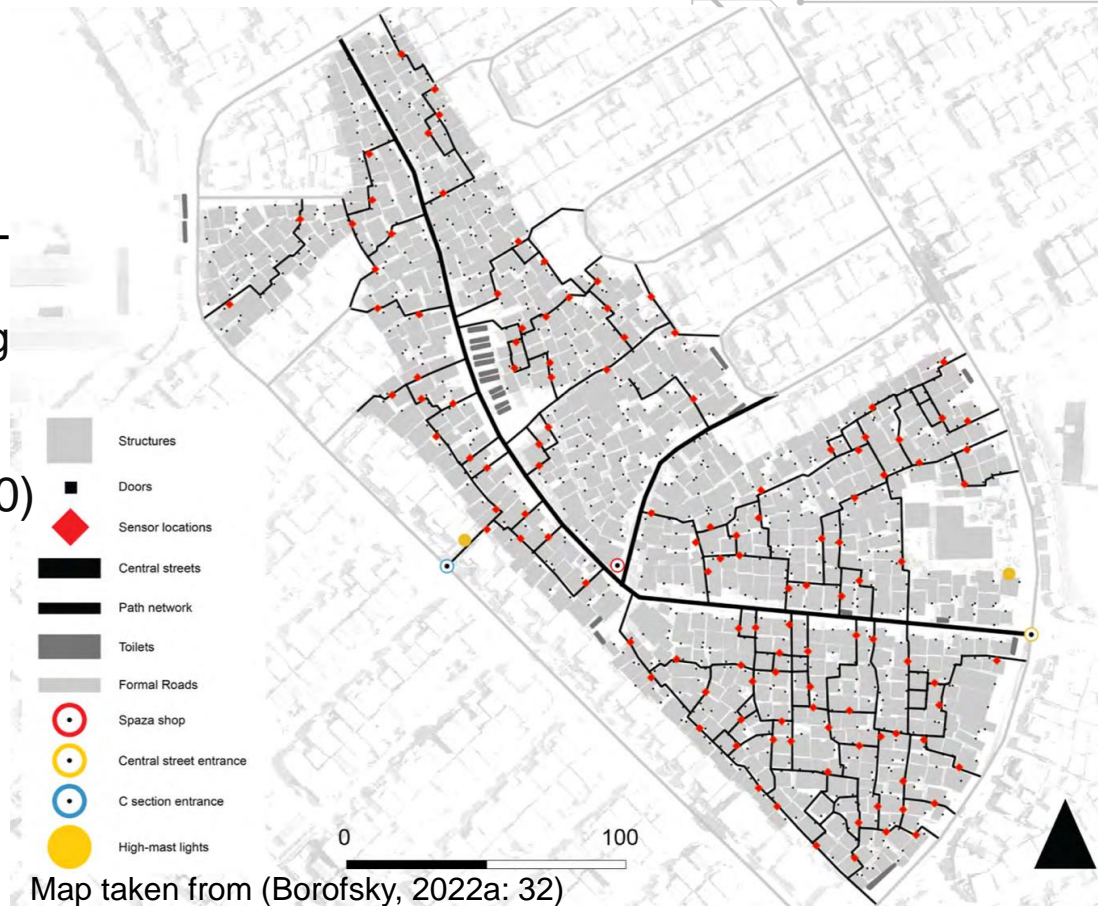
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Solar- Powered Public lighting at PJS Informal Settlement, Khayelitsha

- PJS Informal settlement
 - Located in Khayelitsha, site B
 - Approx. 30 years old
 - 793 Structures (incl. homes & non-residential structures)
 - Access to basic services, including grid electricity
 - 2 high mast public lights
- Project Implementation (2018 -2020)
 - Various stakeholders (NGOS, Community, students)
 - Settlement household data collection, path mapping and digitization, pedestrian activity sensor installation, decentralized solar-powered light installation



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Solar- Powered decentralized public lighting

- Mounted above or near the front door of dwellings on the selected paths.
 - HH engaged about the installation i.e.. community meetings and pamphlet
 - Youth hired for data collection, installation and maintenance
 - Community leaders vital
 - Support from a professional engineer
 - 1 year after the installation, very little vandalism or theft reported
 - Improved light quality in pathways



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Key Take-Aways

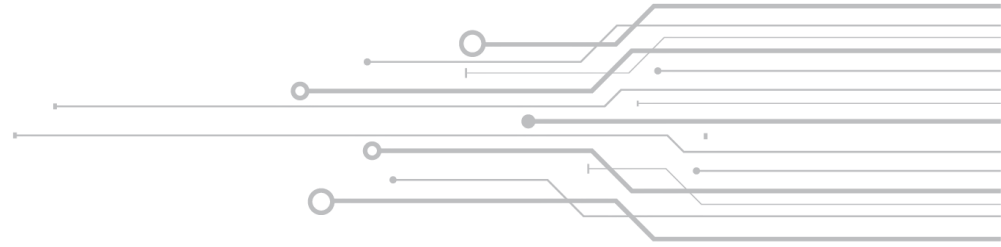
- The case study showcases how RE systems fulfil societal functions whilst simultaneously addressing equity concerns around energy poverty and access in the energy transition.
- It showcases that, similarly to other interventions that deal with informality, people (intended beneficiaries) should be at the centre when designing energy policies and interventions.
- For SA to have a just energy transition, community governance is the key to the success of projects addressing community energy access.

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Key Take-Aways



- Collaborations are critical in delivering local just transitions.
- The case study has further revealed that focusing on urban environments of the energy transition is crucial and that the transition's justice element is especially relevant in urban informal settlements.
- It is an example of how RE based socio-technical innovations might support more successful, effective, impactful approaches to public lighting in urban informal settlements and thus positively impact a critical component of municipal service delivery.

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Thank you

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