

SUMMARY

SSNC Partner visit to SA hosted by gW (FoE), SA: 28 Oct – 02 Nov 2018

Participants: gW, EEA, SSNC (Sweden), NAPE (Uganda), CFA (India), Ecoaction (Ukraine), MAB (Brazil)

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1. Introduction:

- German Energy Tour (2017): focussed on the 4 pillars of sustainability (economic, social and environmental) and the mapping of SDGs in the transformation of the energy sector
- 2018 examined the SA energy sector to understand how best we can foster a JET that encompasses a bottom-up, democratically- and locally-owned green economy that sustains the environment, livelihoods and generates decent work while promoting a safe circular economy

2. Overview of our Current Energy Situation:

- Similarities include domination by energy producing monopolies, heavily subsidised SOEs or multinational companies mainly in the coal, nuclear and hydro-powered sectors.
- South Africa's history is rooted in the minerals energy complex established in the early 1900's responsible for the apartheid system with low income communities living alongside polluting industries without access to affordable electricity.
- Following power supply crisis and load shedding in 2008, the Department of Energy's IPPPP was established to enhance South Africa's power generation capacity. Challenges with the programme include ownership and policies that govern distribution.
- All countries: Political and debt issues around SOEs, decommissioning aging energy infrastructure and the challenge of disposing waste in a safe manner.
- Current introduction of the renewables energy sector, mainly from solar, wind and biomass sources that are mainly private-owned or community-based.
- Challenges faced in implementing RE transitional plans incl. what energy mixes should look like in 30 to 50 years, which (centralised or decentralised) models will best serve their needs, converting existing transmission networks to accommodate RE and public perceptions about renewables, particularly worker unions.
- KEY QUESTIONS: Who does our current energy serve? What should this energy be used for? What is the cost of this energy to people?

3. What should a Just Energy Transition entail?

- JET should move beyond energy and jobs, must be for everyone i.e. community-based, socially-owned and include food and water
- Move away from entrenched ideas about energy not just at the policy level, but on the ground with civil society
- Unpack and understand various RE options with practical examples to show how it can work
- With its many considerations, the JET is yet to be organically and collectively developed from our joint perspectives, and through this learning process

4. Renewable Energy Models (visited on this tour)

- **Off-grid or microgrid generation sites:** e.g. Doornkop Community Forum (with storage) and Nandi Primary School (Soweto). Both community driven projects demonstrated how ownership of energy infrastructure is empowering. Zonke Energy's business model uses alternative solutions in supplying and upscaling off-grid energy without the sale of energy to communities, but rather the rental of PV with capped energy supply. *Challenges:* high set costs, theft of PV and RE infrastructure, up-scalability, manpower and costs required to upkeep energy systems, threat of electrification in the case of DC power, land ownership, gauging energy demand and usage.
- **Small-scale embedded generation (SSEG):** Available mainly to middle-upper income groups, favourable for business investment with high ROIs within 7-10 years depending on financial model and PV installation. *Challenges:* Uneven/high tariffs, policies preventing energy feed into the grid, unregistered systems, profiting off electricity from resale, creation of energy slums with high income groups leaving the grid

5. Government's Role in the Renewable Energy Sector

- How can government facilitate affordable energy for all?
- Transitioning from passive receptors to active role-players (planning, procuring and supplying of an integrated range of energy services) will require changes in many of the policies restricting energy purchasing abilities by municipalities.
- Will this entail consolidation of the energy sector and nationalisation of the energy debt and then reinvestment of any planned investment (allocated to coal-power) into renewables infrastructure with a complete transformation of the structure of the energy sector including rationalising distributors, particularly around metros with the best infrastructure and skills development for RE as well as every household in the country installed with PV, smart metres and two- way conversion?

6. Integrated Resource Plan (IRP)

- Guides new energy infrastructure and energy mix projected until 2050, based on a least-cost optimisation model i.e. cheapest energy system which transitions towards less carbon intensive energy sources, mainly wind and solar
- Does not cater for transportation
- Available installed capacity coupled with electricity demand fluctuations and disruptive new technologies mean that the IRP should be flexible in accommodating more energy efficient technologies that are safer and more accessible to communities.
- Advances are expected to lead to further RE price reductions and changes in grid-based and commercial supply. Will this accelerate community's access to electricity and RE related jobs?
- High RE set-up costs impact on the transition from fossil fuels and what are the various financial models that may be used to facilitate this?

7. RE Manufacture and promoting a Circular Economy

- How do we incorporate a holistic view of the transition of the energy sector, life cycle perspective and the promotion of a circular economy?
- It is critical that we know which hazardous chemicals are present and in what concentrations, so that they can be separated and destructed safely
- SDG Target 12:4 Less Waste may be promoted through Producer Responsibility Schemes, regulating the design of products and proving substitute chemicals are safer
- Challenges: understanding full impacts, transparency and presence of chemicals that cannot be substituted.
- Circular economy approach continuously identifies problems and continually seeks to address them.

