



Perspectives on selection and deployment of low-carbon technologies from Northern Jutland

What role can international sources of knowledge on low-carbon technologies play for Kenya in the development towards sustainable energy access? Ensuring that the most adequate low-carbon technologies are selected and that they are diffused and used in a way that ensures increased electrification rates and better living conditions for the population (ultimate outcome) is a major challenge. What policies and incentives need to be in place? What types of capacity building are most urgently needed? And can experience from other countries such as e.g. Denmark help Kenya develop more effective policies and better outcomes in the field?

In June 2017 the IREK research team went on a study tour in Northern Jutland to visit the Port of Aalborg, Nordic Folkecenter for Renewable Energy, The National Test Center for Large Wind Turbines in Østerild and Access2innovation – all examples of institutions and organisations working with different aspects of and perspectives on selection and diffusion of low-carbon technologies. The following are some of the key take-away points.

Visiting the Port of Aalborg

<https://aalborghavn.dk/the-port-of-aalborg.aspx>

- Integration of solar PV into energy consumption systems is a feasible option for both developed and developing economies and is worth pursuing in the Kenyan context.
- Collaboration between universities and specific companies or utilities such as Port

authorities can help develop new models for this purpose and be useful in monitoring and adjusting the systems.

Meeting with Access2Innovation

<http://access2innovation.com/>

- More needs to be done in the Kenyan context to synchronize energy demand with consumption patterns thereby minimizing wastage. This would enable trickle down of every watt generated to improve living conditions in Kenya.

Visit to Nordic Folkecenter for Renewable Energy and the National Test Center for Large Wind Turbines in Østerild

<http://www.folkecenter.eu/>

<http://www.vindenergi.dtu.dk/english/test-centers/oesterild>

- It is important to establish collaborations and partnerships between industry and universities for development to be realized back at home. Such collaborations will allow for sharing of resources and ideas for greater and faster development.
- Renewable energy research in Kenya needs to be taken to the next level to ensure maximum benefits from the abundant renewable resources available in the country. The contribution of just one efficient research centre in Kenya has the potential of immensely improving energy delivery in Kenya, the East African region and Africa as whole.
- It is important to develop innovative and appropriate solutions to meet people needs (particularly suitable for developing countries in sub-Saharan Africa) such as Solar based welding machines.

General overall take-away points

- Test centers where all innovators and technology developers can have their prototypes tested in a secure setting can spur and motivate technology development.
- Political goodwill is key for national innovations to be incubated and nurtured. This can happen through tax rebates, supportive policies, availability of resources

to attain national goals of up scaling green energy development.

- The Danish story as a world leader in on-shore and offshore wind power generation is worth emulating so as to solve the perennial power problems in Kenya.
- The electricity export –import between Norway and Denmark whereby Norway’s power is mainly from hydro sources and Denmark’s power mainly from wind addresses problem of power storage. This is directly applicable in the Kenyan context to mitigate the power problem.

As the IREK team continues to investigate the role of global technology collaboration and the role of local policies and institutions in innovation and renewable electrification in Kenya, the researchers will include the experience and take-away points of meeting some perspectives on selection and deployment of low-carbon technologies from Northern Jutland.

IREK researchers participating in the fieldtrip were: PhD Fellow at Moi and Aalborg University Faith Wandera, PhD Fellow at Moi University Dominick Samoita, Senior Lecturer Charles Nzila, Associate Professor Mike Korir (both from Moi University), PhD Fellow Cecilia Gregersen, Senior Advisor Margrethe Holm Andersen and Associate Professor Rasmus Lema (all from Aalborg University).

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Read more about the IREK project at

IREKPROJECT.NET