North-Africa Power Pool Modelling

Paths to a Sustainable Energy Future

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Energy Systems Analysis

IRENA
International Renewable Energy Agency
A known concept applied to Electricity Generation

- Electrification
- Influence of Renewables
- System Stability

**System Sustainability**

**Access to Basic Energy Services**

- Final Electricity Demand
- What technology?
- At what cost?
- How are they interlinked?

**Energy System Analysis**

- Improved energy generation and distribution
- Dealing with increased complexity
- Informed policy making decisions

- System Reliability
- National and Trans-national integration

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- Efficient investment plans
- Long sighted decision making
- Integrated overarching vision
In a second stage, the model is run and fine tuned before result extraction.

A part of iterative model building and data treatment that yields a first functional structure complete with useful data.
A Dynamic and Comparative Scenario Analysis

**Final Goal**

**Answering essential questions through direct result comparison**

- More Renewables
- Higher Costs
- Less stability of supply?
- Not always

- Other Scenarios need Modelling?

- A repeatable and adaptable approach with a flexible structure

- Unserved Electricity Problem
- Decentralised grid solutions
- Local and private Renewables

- Higher Interconnections

- Ressource dispacement

- Regional sharing of Renewables

- More Stability?

- Most Certainly

Fun Facts...

- Open Source model and data pack
- A thesis destined to capacity building in Africa
- Workshops and Knowledge transfer ongoing
- A First attempt at modelling the North Africa
- A real collaboration with IRENA and a will to develop renewable power in the future