Challenges and Vision

Correlation - Human Development Index and primary energy use

- Barbades
- Japan
- Brazil
- China
- Russia
- India
- Pakistan
- United States of America
Support mechanisms – Mix

Grid
- Feed-in tariffs and Net metering way to go
  - Quite straight-forward!
  - What are needs for sharing of experiences of detailed design and approaches?

Off-grid/minigrid islands
- Generation-based incentives likely the way to go
  - Not as clear and proven on ground projects
  - Need pilots
  - Scalability and ambition from the beginning
A bold programme

Envision and enable full energy access by all in 20 years

- How much more energy is needed? Where is convergence for responsible well-being? For Africa a 5-20 fold increase in per capita energy use. Need to further clarify energy access.

- 700 Twh/year —> 3000-4000 Twh/year (?) for African continent.


- Feed-in tariffs to drive these investments: likely USD 80 billion per year at peak, over 40 years (average +USD 40 billion per year).

- Revenues from the overall increase of energy likely to provide enough funds for directed extra funding for off-grid support (Uganda example of 5% internal taxation to fund off-grid programme). How can such off-grid support be secured?

- How ensure that the on-grid support favours distributed energy and diverse ownership with strong focus on communities?
A bold programme

Conditions/incentives for off-grid and access

- Make added grid connections conditional to access to on-grid feeding tariff support?

- Incentivise through bonuses and additional payments/support for additional off-grid access (that is removed if/when grid-connection) – on top of feed-in tariffs/payment guarantees for generation.

- Ensuring access and no regulatory or technical barriers for feeding into the grid (including minigrids/off-grids). Must be a condition. Develop clear norms.

Upfront financing

- Key challenge for RE expansion –

- Soft loans for middle size and off-grid/minigrids = key. Grants for capacity and additional requirements.

- Must be integral to the support programme.
Capacity = key!

Support

- Must be integral to a support scheme.
- Separate and distinct funding stream
- ‘Challenge Fund’ for creative experimentation

Activities

- Exchange programmes key and must be enabled/supported
- Policy/decision-makers exchanges at scale
- Implementers to work at in each others’ countries for e.g 6 months
- Technicians at ground level – massive demand!
- South-South exchanges = key
- Support for cooperatives/communities that can engage and inspire other communities
Transformation towards a new model

- The very nature of feed-in tariffs drives towards a breakup of current concentration of ownership and a much more distributed system with much smaller owners, including communities.

- But – is this enough? What additional policies and principles are needed at country as well as international levels to ensure community energy and distributed solutions?

- Must ensure that support for/conditions early enough include support for grid (have to be conducive to lots of distributed energy and a future with virtual power plants and embedded RE) – how set new path dependencies early?

- Cost situation very favourable now: it’s not more expensive, but we must make it possible to deal with high upfront investment costs and risk. Every avoided fossil fuel plant is a significant win – must be enabled now, across the line.