



POWERING AFRICA THROUGH FEED-IN TARIFFS

Advancing renewable energy to meet the continent's electricity needs

AFRICA ENERGY CONTEXT – I



- Africa is facing an **energy crisis**: Existing production capacity cannot meet **growing demand for electricity** to power and grow the economy, drive local development and tackle poverty
- Traditional sources have become unreliable, unaffordable or increasingly unacceptable
- Energy is seen as '**missing MDG**' that enables others to be achieved, yet less than 25% of Sub-Saharan households have access to electricity, falling to 10% in rural areas

AFRICA ENERGY CONTEXT – II

Biggest obstacles to firms in SSA

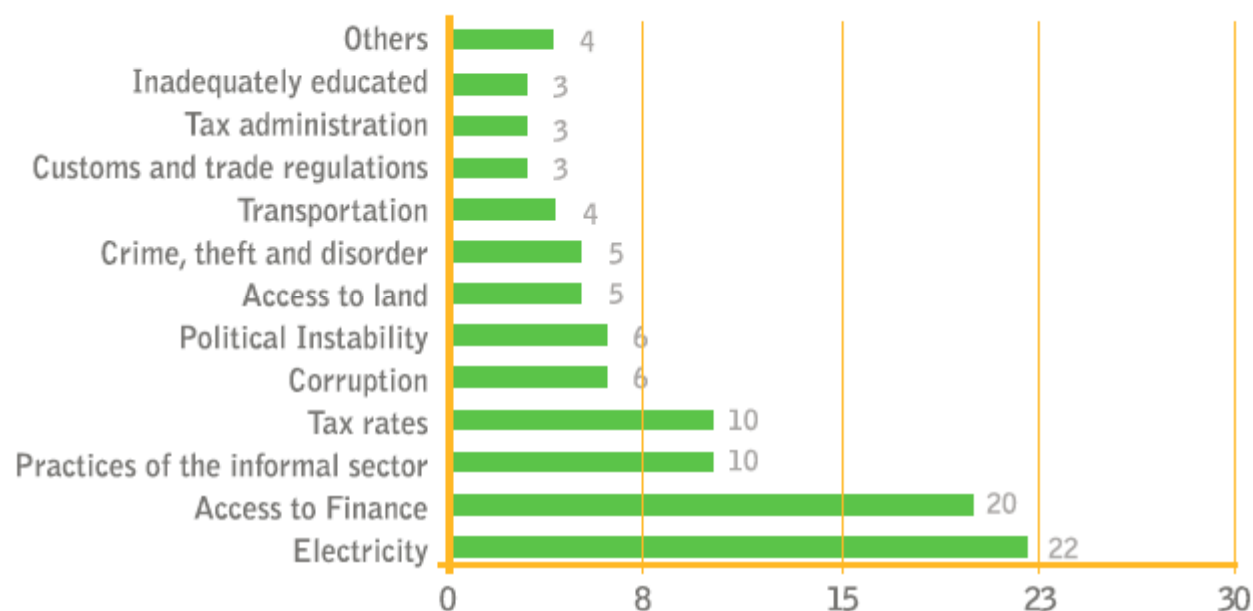
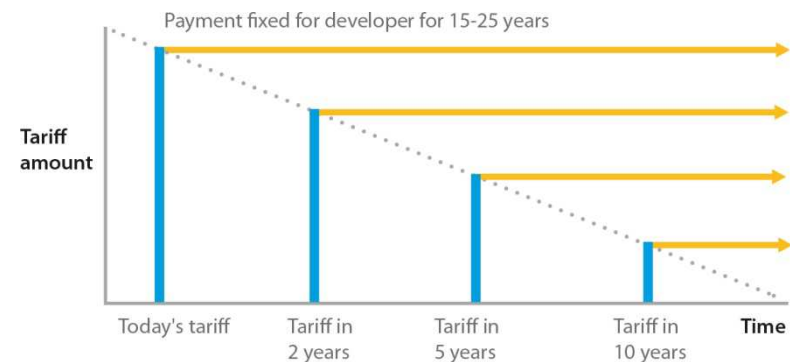
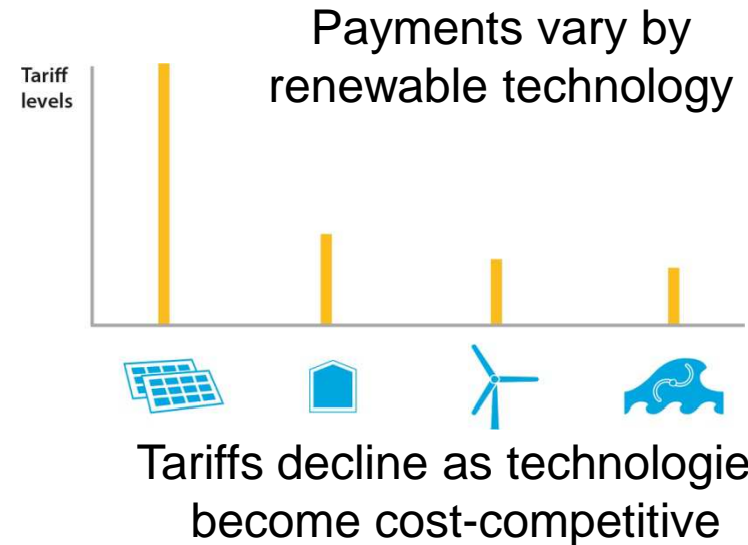
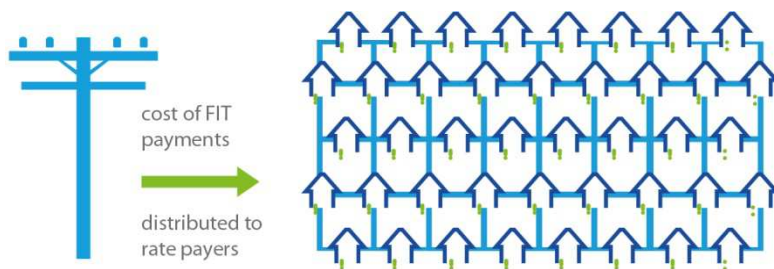
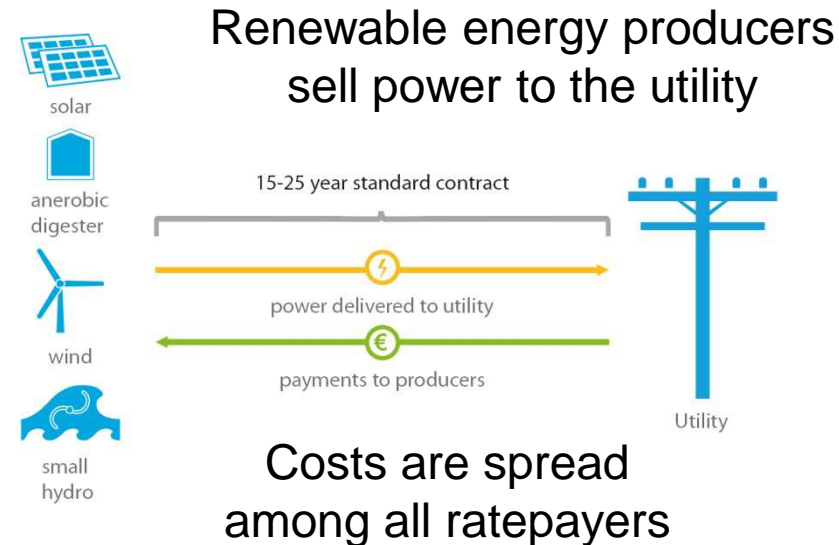


Figure I.1: Biggest obstacles to firms in SSA. Numbers rounded. Source: African Development Bank, 2012. African Economic Outlook 2012: Promoting Youth Employment, OECD Publishing.

ENERGY POLICY CONTEXT – REFIT PRINCIPLE

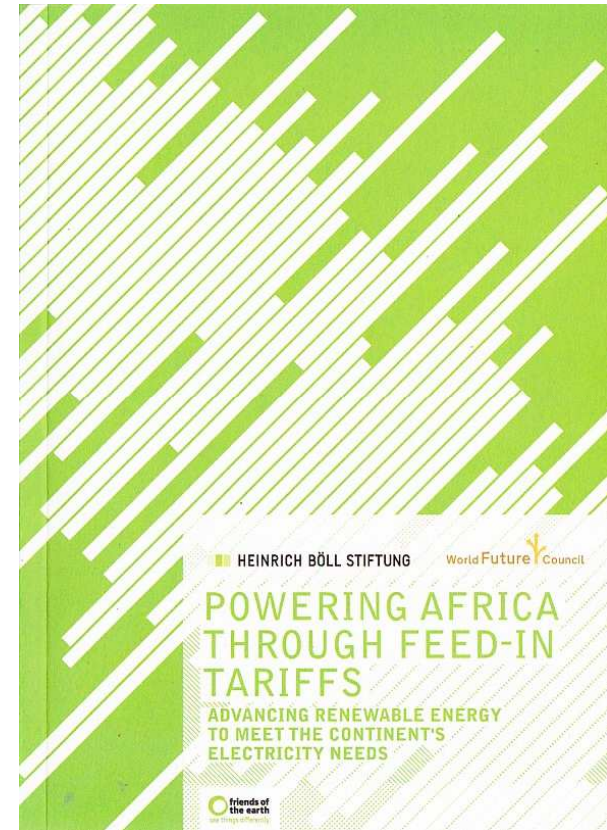


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ENERGY POLICY CONTEXT – II

As of 2012, 65 countries worldwide have implemented some form of a REFiT, driving **64%** of global **wind** installations and **87%** of global **photovoltaic** installed **capacity**.

While the majority of these installations have occurred in industrialised countries, particularly Europe, the **African** continent has **significant untapped renewable energy potential**.



SCOPE OF THE STUDY - I

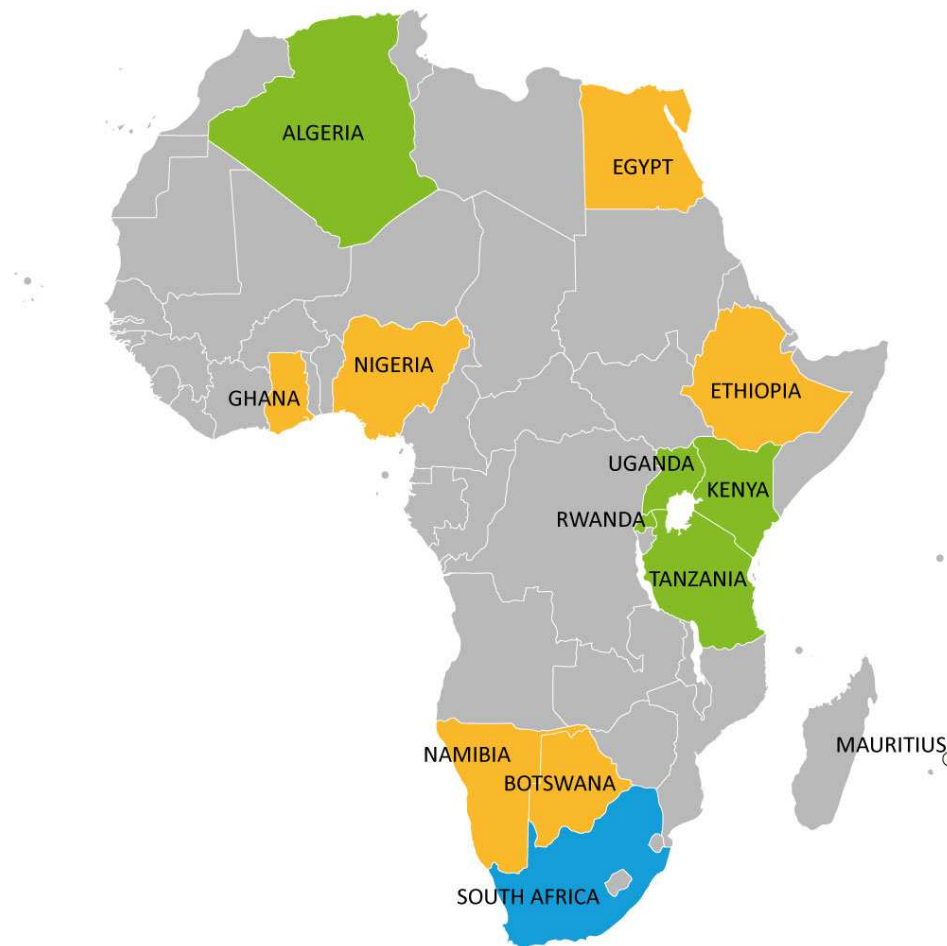
13 African countries examined:



- Interviews been conducted with political decision makers, business community and civil society representatives
- Countries with REFiT: **Algeria, Kenya, Mauritius, Rwanda, Tanzania, and Uganda**
- **South Africa** abandoned its REFiT in favour of a bidding process (Renewable Energy Independent Power Producer Procurement)
- REFiT in the making: **Botswana, Egypt, Ethiopia, Ghana, Namibia, Nigeria**

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SCOPE OF THE STUDY - II



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QUESTIONS TO STAKEHOLDERS



- Major policy **drivers**
- Political & economical **obstacles**
- Role of **civil society**
- **Ownership models** of independent RE producers
- **Entity buying** the RE electricity generated
- **Timeline** of drafting first bill to proper implementation
- What **results** are achieved (projects developed, electricity produced and delivered)
- Impact on **electricity** consumer **prices**
- **Financial models** chosen
- Effects on local **employment** and **industrial output**
- **Social and economic impact**, e.g. avoided costs
- **Impact on energy poor** (affordability and access)

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FINDINGS – I

Diversity of energy sectors

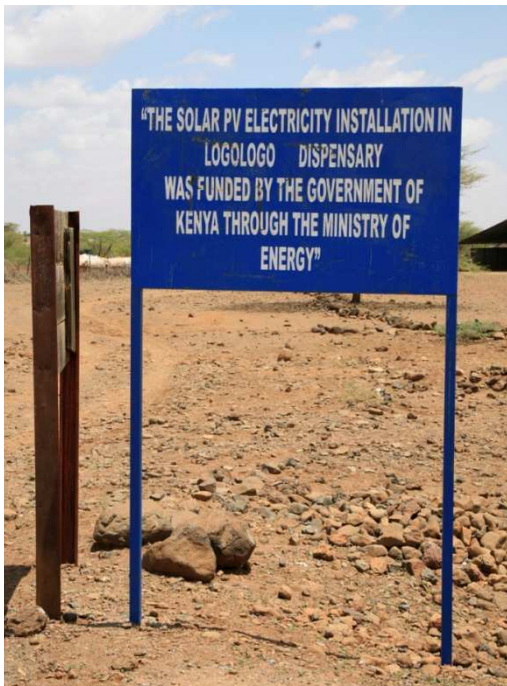


- Countries such as Algeria and Egypt have near **universal electricity access**
- Some countries have significantly **low levels of electrification** such as 3% in rural Tanzania
- Some countries are **heavy polluters** due to their carbon heavy energy mix – specifically, South Africa
- Electricity **consumption** per capita – 20kWh in Rwanda vs. 4,532kWh in South Africa

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FINDINGS – II

Motivation for establishing REFiTs



- **Diversification** of energy mix, e.g. fossil fuel generation Algeria
- Electricity generation **expansion** e.g. South Africa
- **Rural Electrification** e.g. Tanzania
- **Democratization** of energy generation e.g. Mauritius
- **Energy crisis** – increasing fossil fuel costs and declining reliability of large hydro e.g. 75% of countries evaluated
- **International pressure** related to emissions and climate change e.g. South Africa

FINDINGS – III

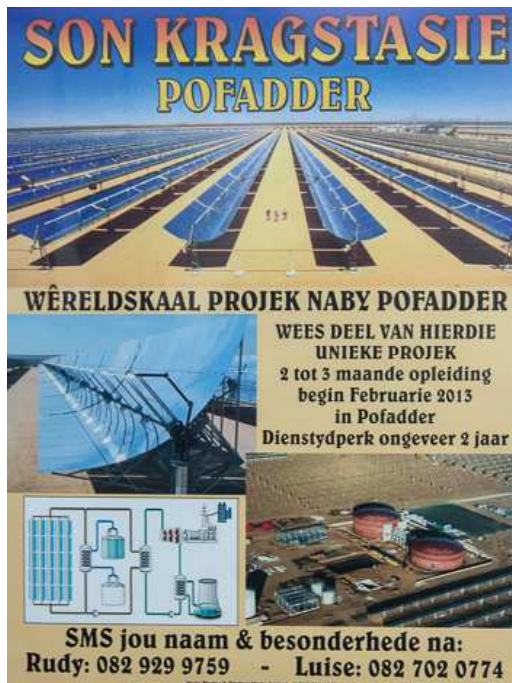
Diversity of renewable energy resources



- Solar thermal
- Solar PV
- Wind
- Small Hydro
- Biomass
- Geothermal

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SUMMARY I – OUTCOME IN A NUTSHELL



Solar power station
recruitment ad, South Africa

- REFiTs have potential to **transform energy systems and societies** in profound and tangible ways
- Tailored to **local context**, REFiTs can:
 - Increase overall energy production both on and off-grid
 - Boost economic development
 - Improve access to clean energy for all
 - Avoid green house gas emissions and other problems related to unsustainable development

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SUMMARY II



- Decentralized approach of REFiT allows for alternative **ownership and governance** models
- Provides the opportunity to **empower communities** and to refresh **local democracy** and self-governance
- It's not only about electricity generation, but **leading the direction** of a country's future development
- Leapfrogging fossil a fuel based economy is setting the course towards a **sustainable society**

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LESSONS & RECOMMENDATIONS - I



High level political support is imperative

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LESSONS & RECOMMENDATIONS - II



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17 February 2014

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LESSONS & RECOMMENDATIONS - II

Enabling Environment:



- Simplify the administrative process
- Resolve land Issues
- Provide access to finance
- Raise awareness, build technical capacity
- Consider infrastructure, e.g. roads
- Prepare detailed information on RE resources, e.g. wind and solar atlases
- Ensure human capacity at authorities – sufficient knowledgeable staff

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LESSONS & RECOMMENDATIONS - III

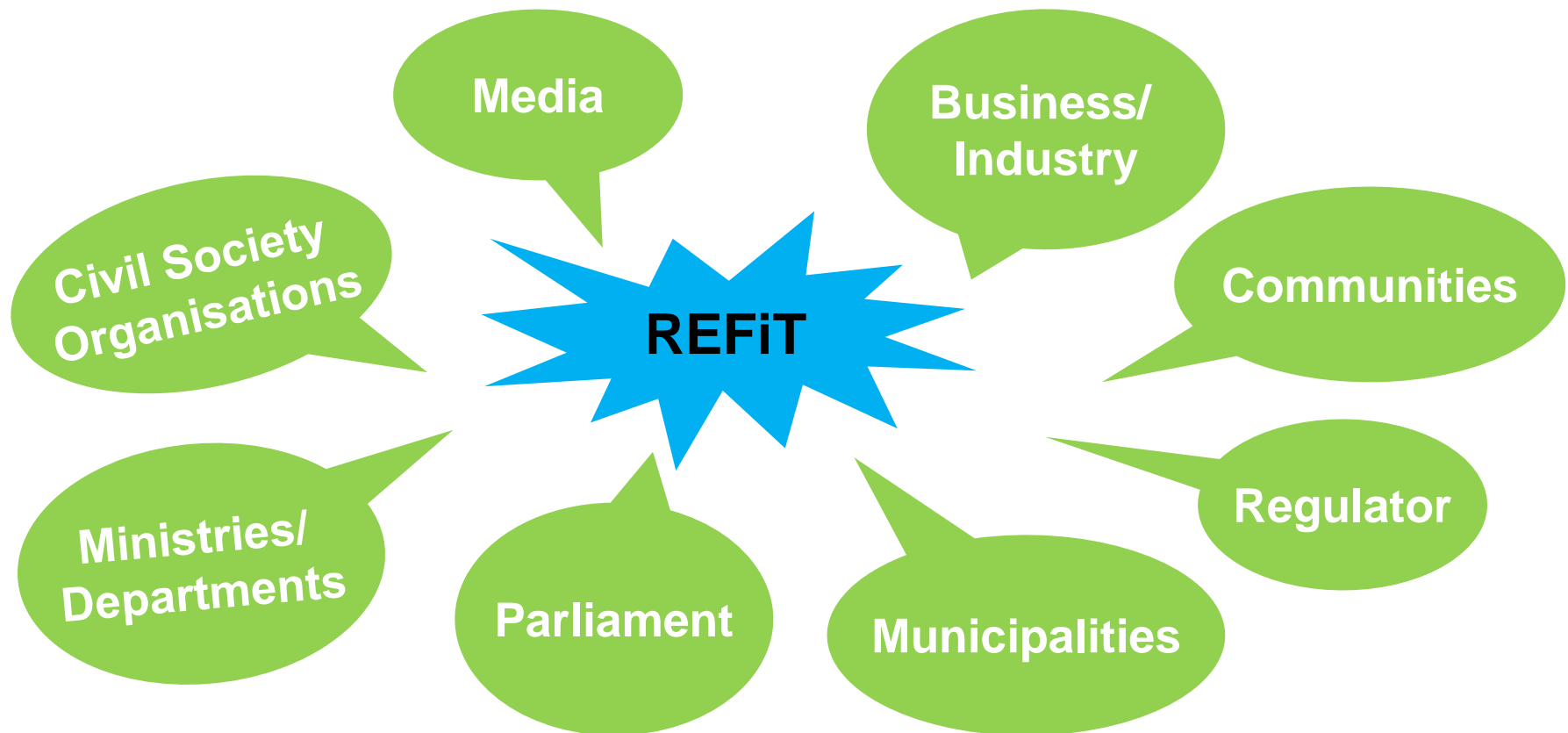


Broad Stakeholder Engagement

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LESSONS & RECOMMENDATIONS - III

Engage in the complete policy design cycle!



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LESSONS & RECOMMENDATIONS - IV



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LESSONS & RECOMMENDATIONS - IV

Design Content:



- In context with the country's wider development plans
- Calculate attractive tariff levels and cost recovery (ROI)
- Solve grid issues
- Enable low threshold for production
- Utilize available financial mechanisms
- Upgrade utility capital:
 - Improve fee collecting
 - Payment behaviour especially of Govt. institutions and large power consumers

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FINANCING REFIT



- **GET FiT** - Global Energy Transfer Feed-in Tariffs Programme, e.g. GET FIT Uganda
- **Cross-subsidising**
More affluent households/ electricity users cover the RE premium for the lower income class

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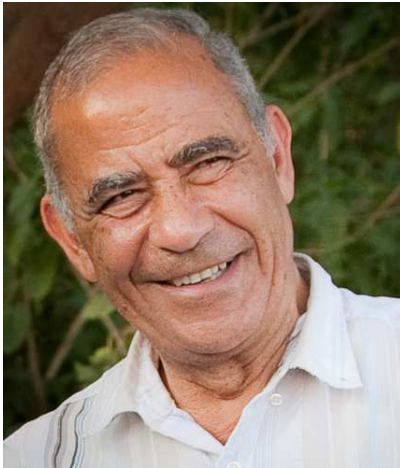
FINANCING REFIT



- Redirecting of **fossil fuel subsidies**
- A **levy on fossil fuels** to finance RE development
- **Climate finance**
e.g. NAMAS's and Green Climate Fund
- IMF - Special Drawing Rights (**SDR**)
- **GEF** and many more options available

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NO NEED TO REINVENT THE WHEEL



“Nothing is more effective in the development of a renewable energy policy than learning from those countries that went through the same exercise, and to access their lessons learned and experiences gained.”

Prof. M. M. Elmissiry,
Head of Energy Programme
New Partnership for Africa's Development
(NEPAD)

BOTTOM LINE



Integrating REFiTs in the wider development strategy –
it's more than just energy generation.

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INFORMATION

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Study as PDF: www.worldfuturecouncil.org/refit_africa_study.html

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