

Bulk Renewable Generation: The Path to Rigorous Sustainable Development

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Overview

- ❑ Water, Energy, & Food Security in DCs (SEI, Bonn2011)
- ❑ Status Quo of the Energy Supply Model
- ❑ Recommendations
- ❑ The Way Forward



Water, Energy, & Food Security in DCs

- ❑ The “Bottom Billion” lives with no secure food supply, and limited access to clean water, sanitation or modern energy services;
- ❑ Over-exploitation of natural resources in DCs! by the developed world have seriously downgraded many terrestrial and aquatic ecosystems.
- ❑ “Rapidly Increasing Demand for Development and Climate Changes Issues are intensifying pressure on natural resources and hence adding to the vulnerability of poor people and their ecosystems!



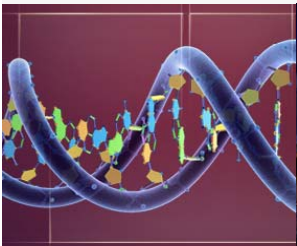
Water, Energy, & Food Security in DCs

- ☐ Urbanization is inviting more slum dwellers to embrace more resource intensive lifestyles that simply lead to unsustainable consumption patterns and waste production;
- ☐ No clear **global plans** to reconciliation: Climate protection and equity goals to secure non-negotiable human rights to water, food, and energy;
- ☐ Bad governance with institutions that lack required capacities, change agents, and serious political will - IRENA!



Water, Energy, & Food Security in DCs

- ❑ Move from resource-based economy to Green Economy;
- ❑ GE is an economy that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities;
- ❑ Approach includes seeking to unite under a single banner the entire suite of economic policies of relevance to sustainable development (another term for Whole System Approach)!
- ❑ The role of **Renewable Energy** is envisioned big in this transition



Status Quo of Energy Supply in DCs

- Major consumers of gas and petroleum products:
 - **Transport (43%);**
 - Residential (18%);
 - Industry (17%)
- Major consumers of generated electricity:
 - **Residential (56%);**
 - **Industry (26%)**



Status Quo of Energy Supply in DCs

Access: 20+ million, mostly in rural areas, have no access to appropriate energy services esp. electricity; further more about 30 million are severely undersupplied.

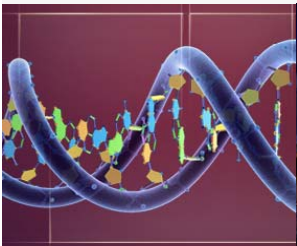
→ 50+ million need to be reconsidered for basic energy services.

Fossil fuel is significantly consumed in cities & towns, while its very form of supply to rural areas hinders growth & development (due to lack of infrastructure) making it unsustainable both in short & long terms for rural development!



Status Quo of Energy Supply in DCs

- Breakdown of Sub-Saharan Africa Population:
 - Remote Rural Areas (16%);
 - Rural hinterlands (50%);
 - Periurban Cities (10%);
 - Intermediate Cities (10%);
 - Megacities (14%)
- 76% of our population lives in rural areas! How fair is the current energy model?



Recommendations

IRENA (Energy Ministers);

- Clear and stable policy frameworks to attract investors and private sector;
- Explore opportunities for local manufacturing;
- Assess specific technologies at national level and design roadmaps to tailor RE to local conditions;
- Include RE in development strategies



Recommendations

- IRENA (Energy Ministers);
- Budapest WSF 2011;
- David Jacobs; Powering the Green Economy: The FIT Handbook



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The Way Forward (national levels)

- Demand flexibility in the mandates of IRENA to allow of necessary frameworks;
- R&D Setup: Create a detailed database of all previous pilot projects to carry necessary analysis and find out solutions to past problems using new and innovative technologies (examples later);
- Implement selected pilot projects (demo and hands on training) using an Integrated approach, e.g. RURAL ZERO-Fossil Fuel Development Roadmap (later)



😊THANK YOU😊

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