GREEAT PROGRAMME

Global Renewable Energy And Energy Access Transformation

Defining Energy Poverty

No universally accepted definition of minimum energy access

- Affordability definition:
  - British: A household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain an adequate level of warmth.
  - France: ‘energy precariousness’ based on a household spending more than 10 per cent of its income to meet energy needs.

Region	Population without electricity millions	Electrification rate %	Urban electrification rate %	Rural electrification rate %
Developing countries	**1,257**	**76.5**	**90.6**	**65.1**
Africa	600	43	65	28
Developing Asia	615	83	95	75
India	*306*	*75*	*94*	*67*
Rest of developing Asia	*309*	*87*	*95*	*80*
Latin America	24	95	99	81
Middle East	19	91	99	76
Transition economies & OECD	**1**	**99.9**	**100.0**	**99.7**
World	**1,258**	**81.9**	**93.7**	**69.0**

Source: World Energy Outlook 2013

ENERGY POVERTY: ELECTRICITY

Region	Population relying on traditional use of biomass millions	Percentage of population relying on traditional use of biomass %
Developing countries	**2,642**	**49.4**
Africa	696	67
Sub-Saharan Africa	695	79
Nigeria	*122*	*75*
South Africa	*6*	*13*
North Africa	1	1
Developing Asia	1,869	51
India	*818*	*66*
Pakistan	*112*	*63*
Indonesia	*103*	*42*
China	*446*	*33*
Latin America	68	15
Brazil	*12*	*6*
Middle East	9	4
World	**2,642**	**38.1**

Source: World Energy Outlook 2013

ENERGY POVERTY: BIOMASS

Defining Sufficiency

Qualitative definition: a certain minimum level of services

- Minimum lighting (6 hrs)
- Adequate level of comfort (26 OC)
- Clean drinking water
- Clean & adequate cooking energy
- Entertainment on demand

Basic minimum energy as human right plus energy on demand -- with most efficient energy system and appliances

THE CHALLENGE

- There are 1.3 billion people who do not have access to electricity in the world
- Energy consumption has a direct link to human development
- Average US citizen 13,246 units of electricity as compared to 52 units of an Ethiopian citizen – i.e 255 times
- On the other hand, to keep the global temperature from rising beyond 2 degrees, our emissions should have already peaked or have to peak in the next couple of years

Since 1992, Global CO2 emissions increased by 65% and reached 40 billion tonnes in 2014 and number of people who did not have access to electricity remained more or less the same: 1.5 billion in 1992 to 1.3 billion in 2013.

Proliferation of RENEWABLE ENERGY that has two benefits attached –

- Renewable energy can be used to increase energy access in various countries across the globe.
- Since we replace fossil fuel power generation from the energy mix, it will help us decline the emissions of such generation

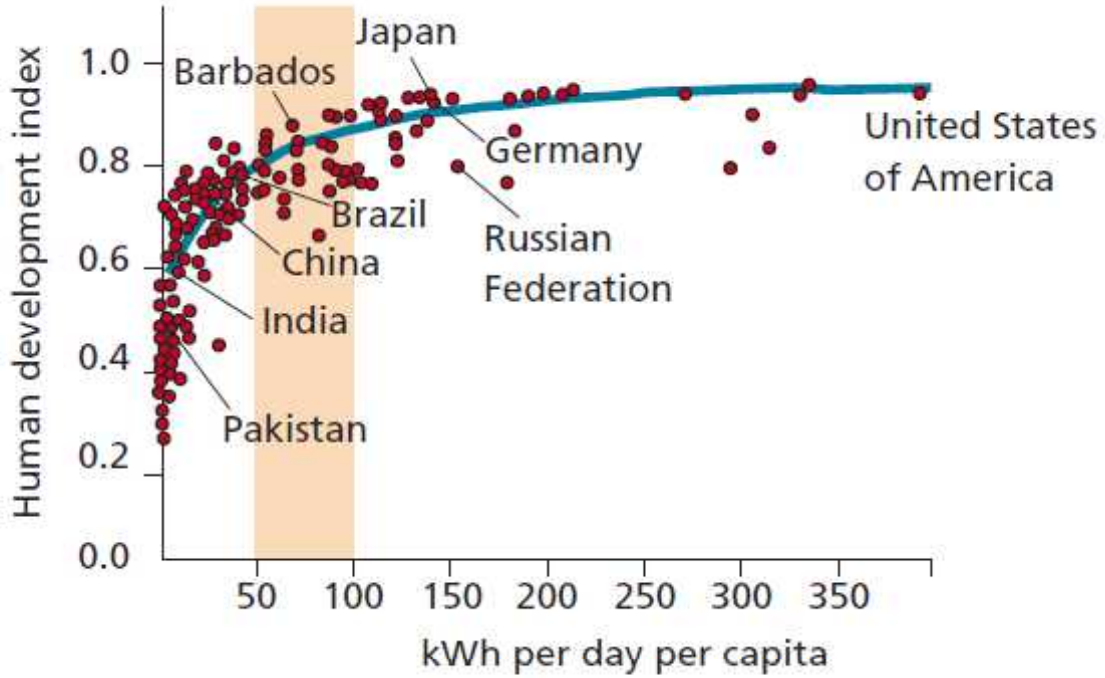
This was deemed as *'Global Co-Benefit Agenda'.*

SOLUTION – COBENEFIT AGENDA

- Climate negotiations have been disappointing to say the least and the impasse we have been stuck in for a while, needs to change.
- We need different development models that emphasise wellbeing, sufficiency and creativity.

The idea of ***'Global Renewable Energy Support Programme'*** arrived from the need to move to a fossil fuel free economy across the world and the aim to provide affordable electricity to all those who currently do not have any.

SOLUTION – COBENEFIT AGENDA

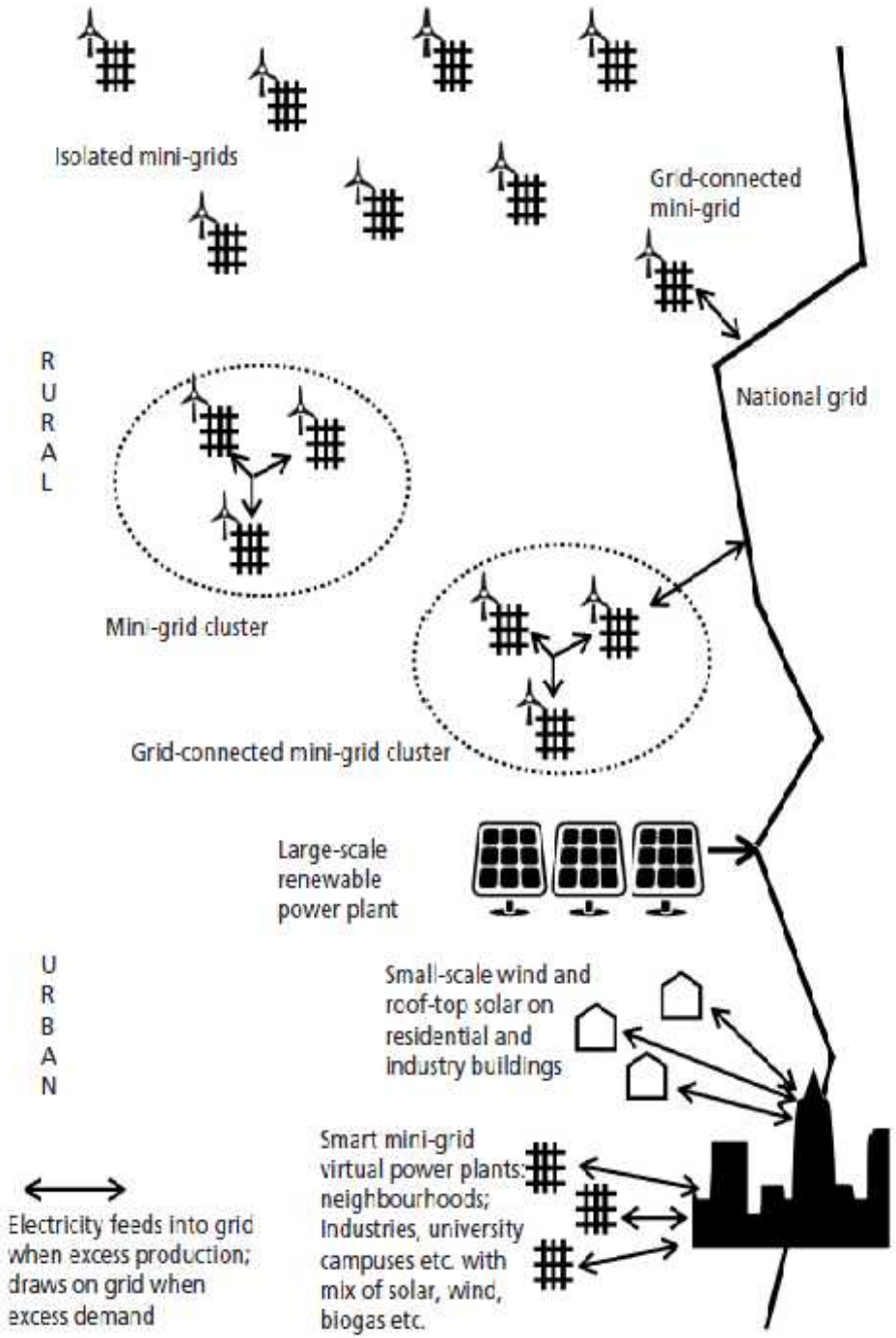


- Round-the-clock supply of clean energy who currently do not have any
- The rich need to scale back energy use through both increase in energy efficiency and changes in lifestyle.
- Primary energy must converge at a level of 50-100 kWh per day per person or less

Area of 'responsible well-being'

VISION FOR PROGRAMME

The Future Energy Model: Decentralised, Distributed & Renewable



- Renewable energy cannot compete with fossil fuel power generation in terms of costs even though the costs of renewable energy technologies have come done significantly
- We need a massive investment in renewable energy to bring in the economies of scale and drive down the costs of generation for the renewable source of power.
- Global South needs the investment in energy access
- Global North are historically responsible for the amount of CO2 emissions in the atmosphere
- We need ambitious political will, directed public investments and planning, additional costs for capacity building, grid upgrades – and efforts explicitly directed at energy access and rural electrification.

A global support programme to help societies in both North and South to effectively tackle climate change by accelerating the transition to renewable energy.

NEED FOR SUPPORT

- Focus of the programme will be ambitious support for medium and small-scale RE generation – both on and off-grid
- It seeks to incentivize and support development of mini-grids and virtual power plants
- Develop smart, compatible grid infrastructure at both minigrid and national grid levels.
- Capacity building must take place at all levels – from international organisations to national decision-making to implementing agencies to local actors.

PROGRAMME

GREEAT

GOALS

A global programme to attain the goals of:

- Access to sufficient energy for all by 2025
- Immediate transformation towards 100% renewable energy (to be concluded by latest 2050 in developing countries and much earlier in developed countries)

The **international climate finance support** for provided through the programme would be three:

1. For energy access/rural electrification and off-grid development
2. For renewable energy investment through supporting costs associated with feed-in tariffs/payment guarantees for production of renewable energy,
3. Funding for capacity building and development of domestic manufacturing capacity.

FINANCIAL SUPPORT

- Developers of renewable energy installments are guaranteed payments - covering the difference between investment costs and the revenue from sales of the energy (at lower, affordable prices for the consumers), with a reasonable premium profit.
- These support systems often include a right to feed into another grid (usually the national grid) excess electricity that the producer does not consume him/herself, again at a guaranteed price.

PAYMENT GUARANTEES/ FEED-IN TARIFFS

Time-bound feed-in-Tariffs

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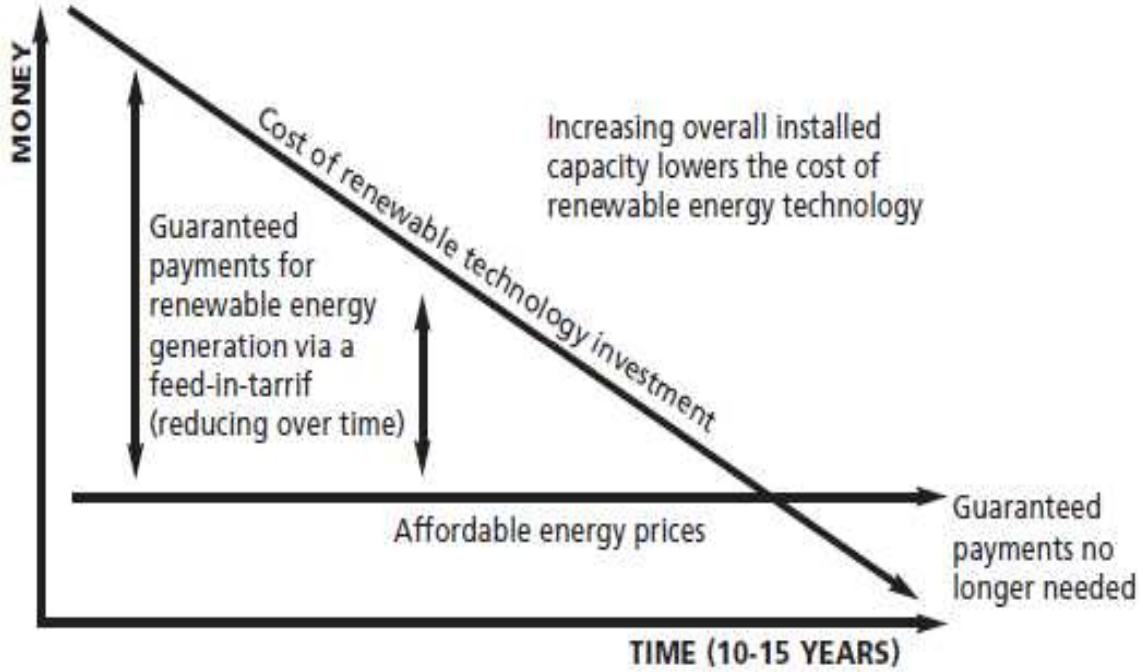
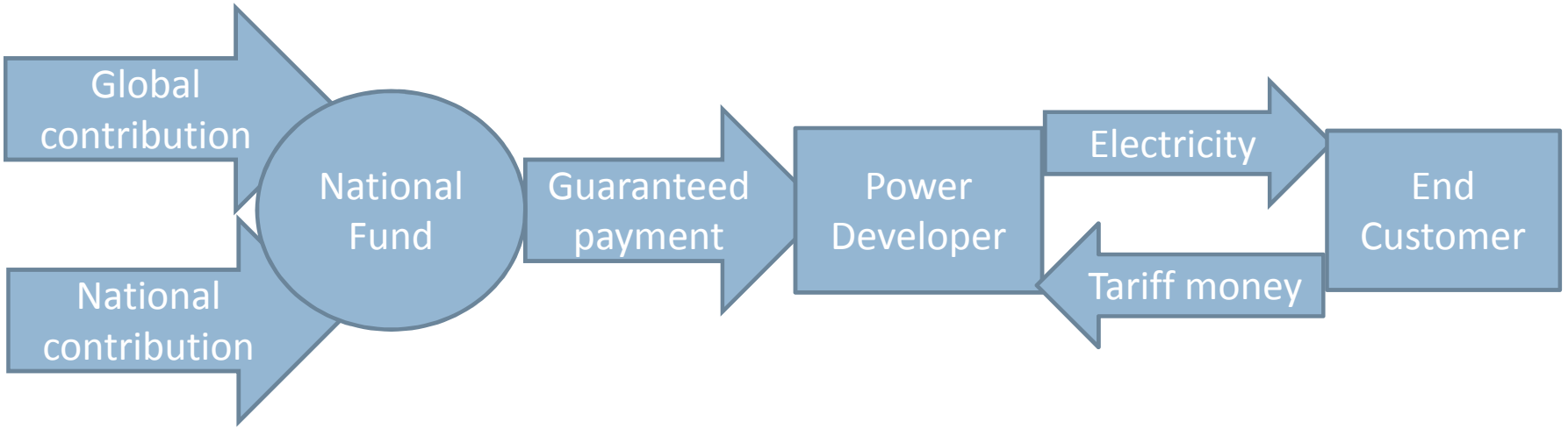
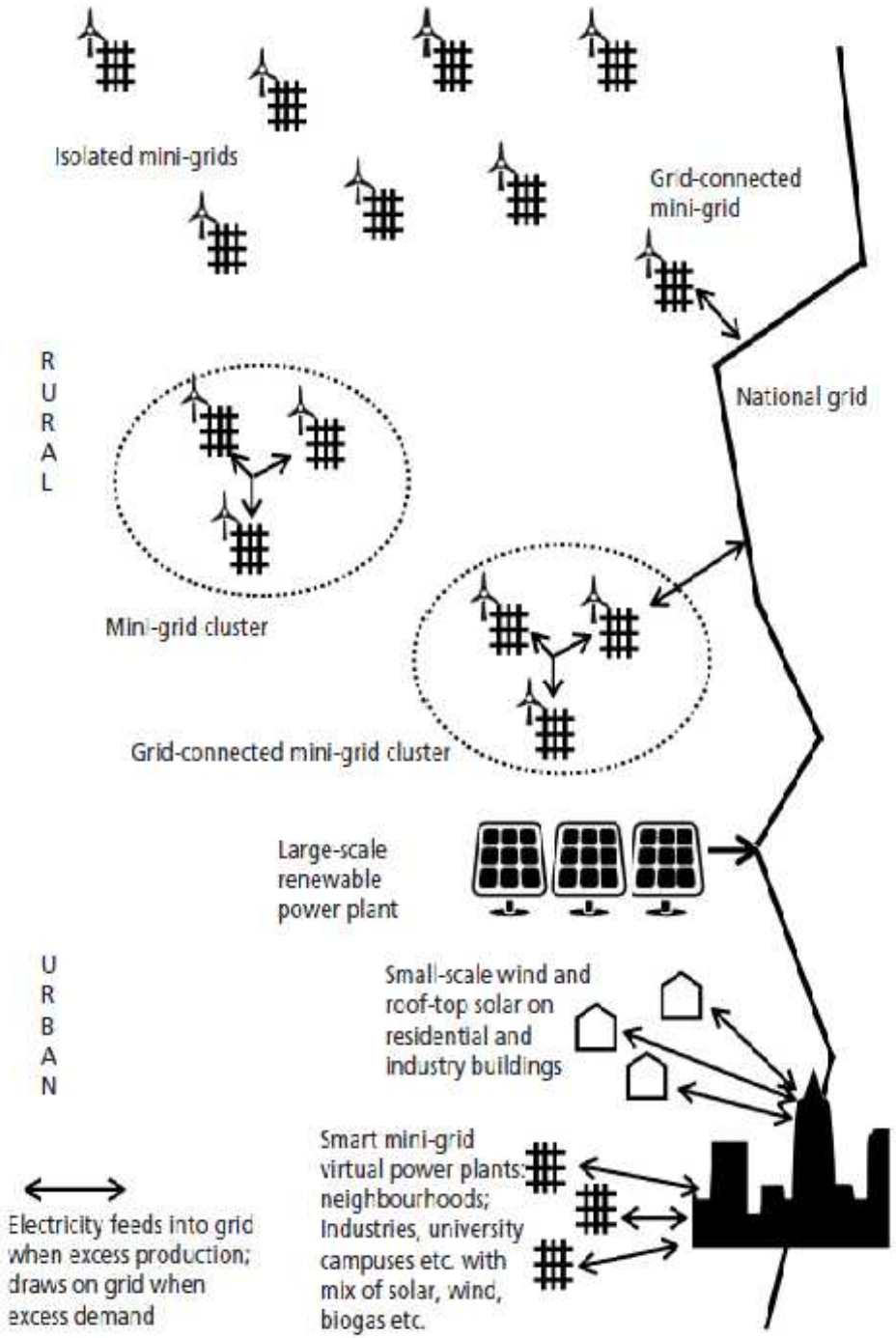




How the mechanism will work

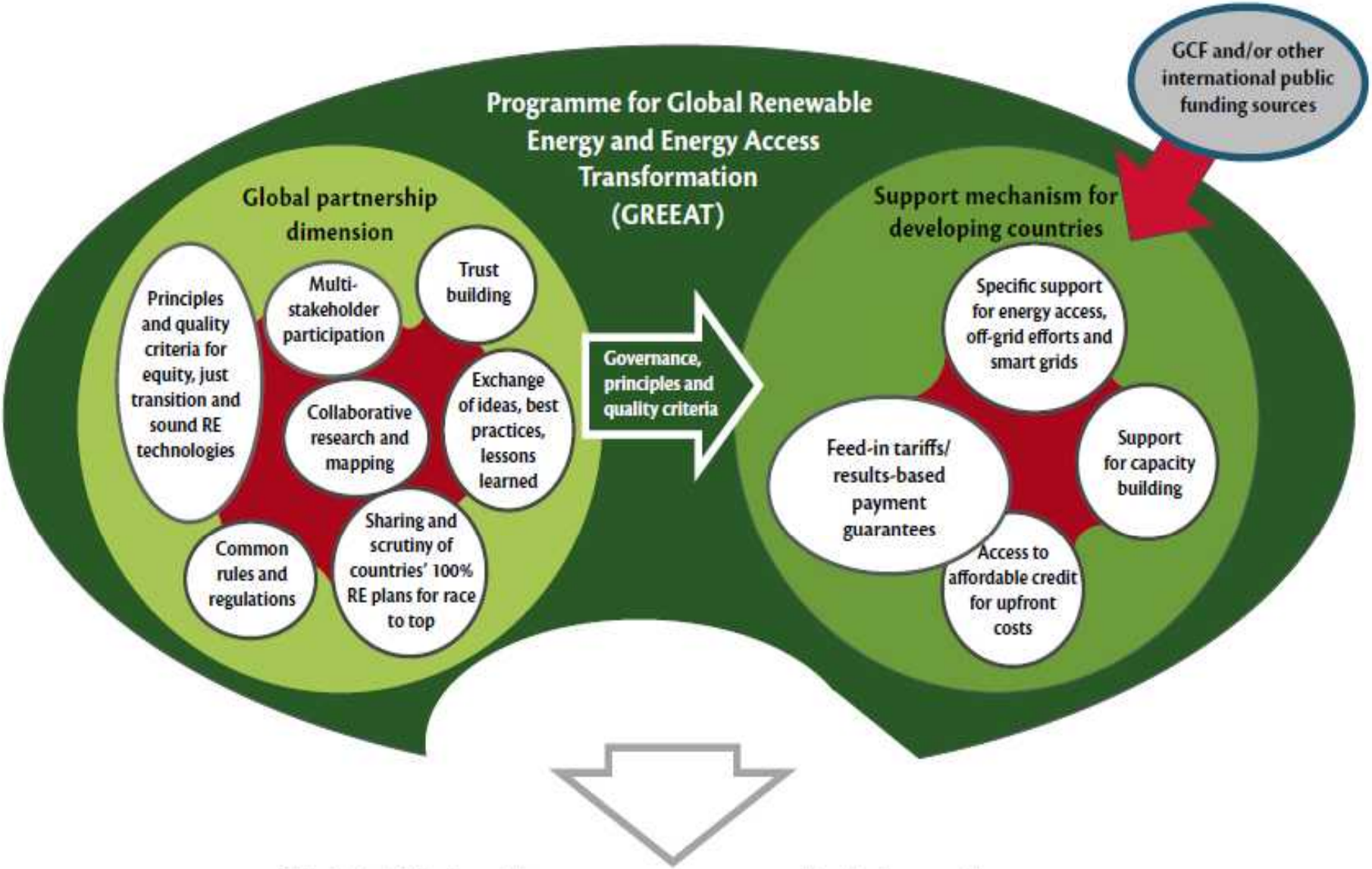
Continued

The Future Energy Infrastructure: Decentralised, Distributed & Renewable



GLOBAL PARTNERSHIP

- Unifying both developed and developing country efforts is the formation of a Global Partnership under GREEAT
  - to ensure that this necessary energy transformation takes place globally
  - provides positive stimulus for other areas within both climate and other international negotiations.



Rich, industrialised countries

- Immediate transition to 100% RE
- New smart, modern, distributed systems
- Sufficiency and curbing of overconsumption
- People-centred energy

Developing countries

- Access to sufficient energy for all
- New, smart, modern distributed 100% RE systems
- Domestic RE manufacturing capacity
- People-centred energy
- Local economic development

Africa Renewable Energy Initiative

- The Africa Group has taken the initiative to form the Africa Renewable Energy Initiative (AREI), and is working along with UNEP to formalize the same.
- AREI framework is conducive with GREEAT programme – talks about prioritizing energy access, DDG systems, mini-grids, community oriented systems
- The G7, G20, Africa Development Bank, IRENA, UNFCCC's Secretary General's office all are on board with the initiative.

Next Steps

- Approaching countries to champion the cause of GREEAT both at UNFCCC as well as ensure that these countries can form alliance and support the African group to push the cause at UNFCCC level.
- We are trying to get more and more countries to buy in the idea and join the association – so far Sri Lanka and Tanzania have been approached.
- Meeting in Nairobi, Kenya for promoting GREEAT
- Side-event at Paris COP 21

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