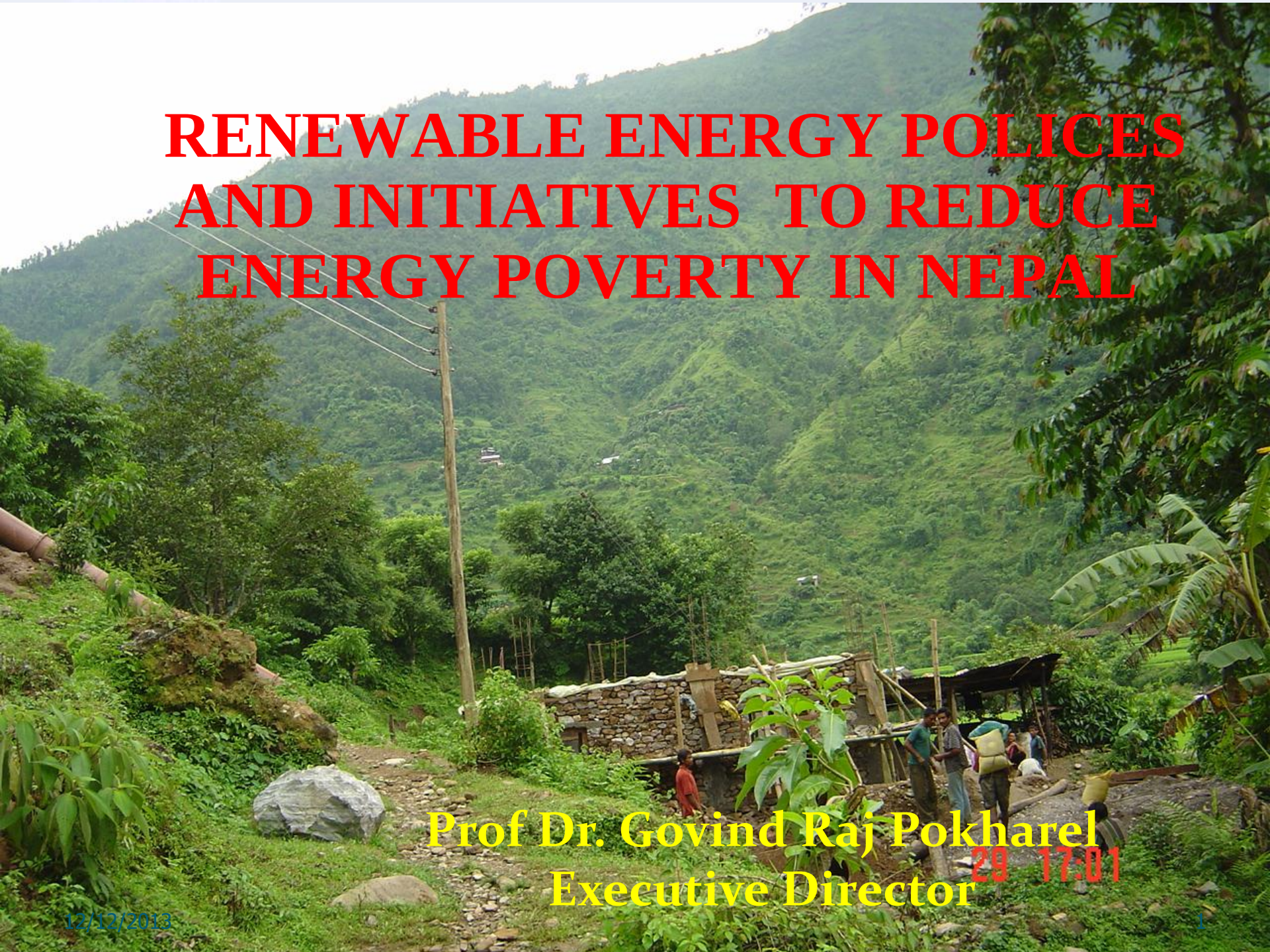
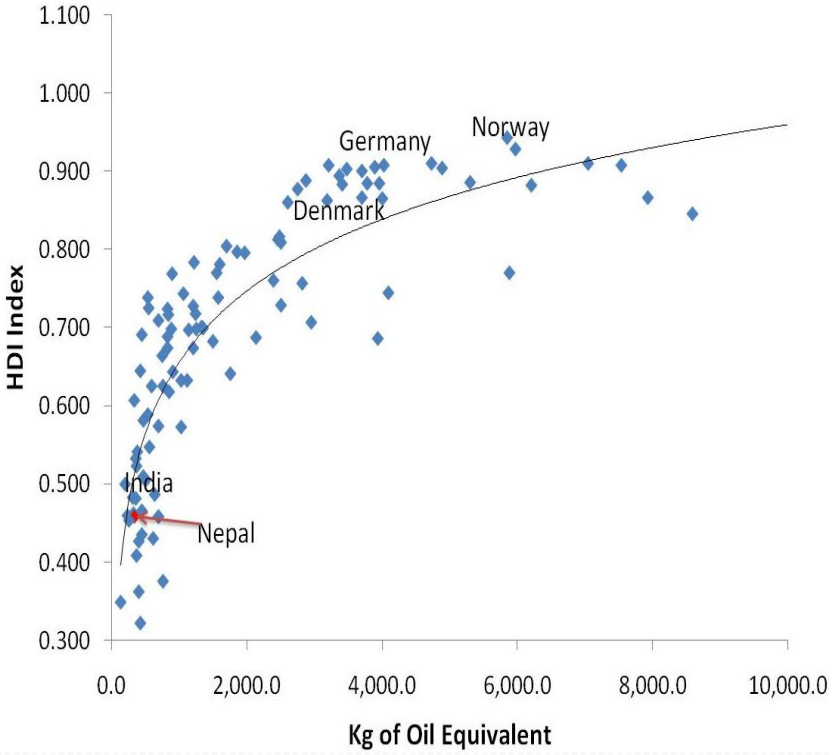
RENEWABLE ENERGY POLICES AND INITIATIVES TO REDUCE ENERGY POVERTY IN NEPAL

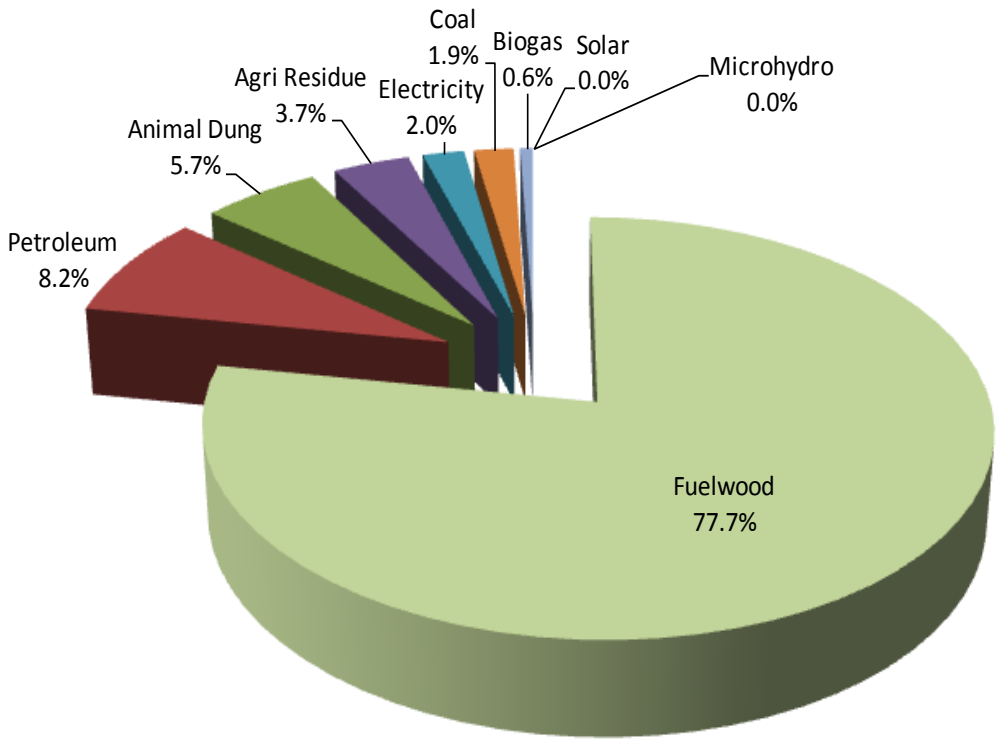


Prof Dr. Govind Raj Pokharel
Executive Director

Energy Poverty in Nepal

- Energy use per capita in Nepal is about 340 kg of oil equivalent .
- Use of energy is tied to rising Human Development Index (HDI)

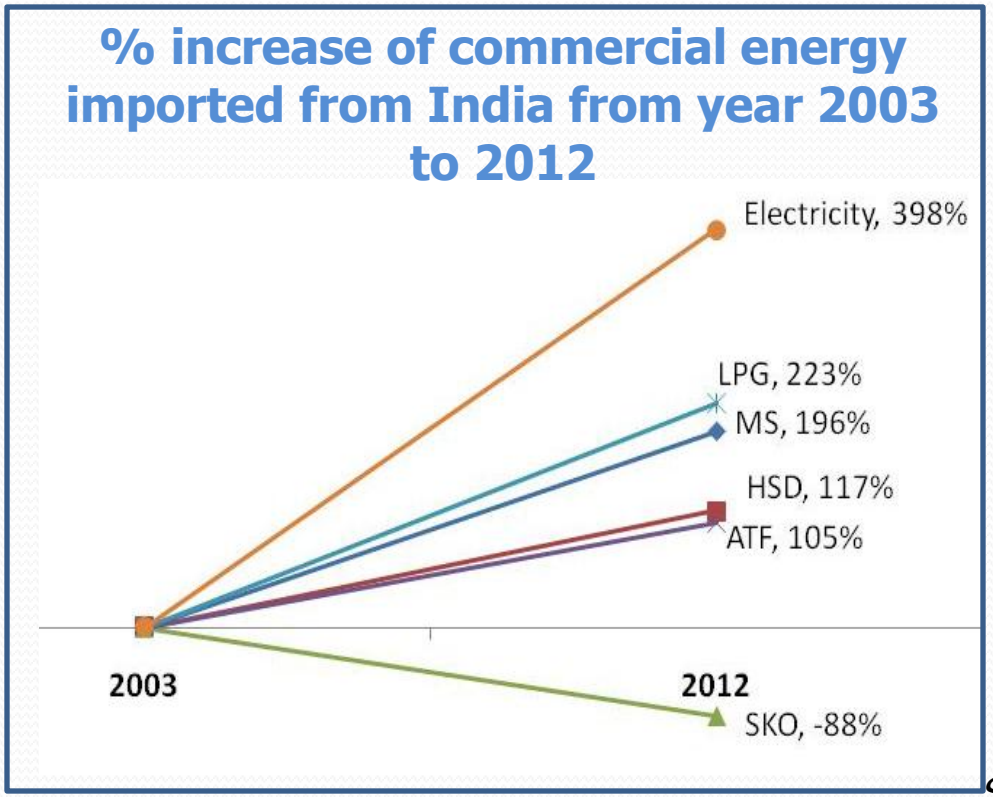




Source: World Bank data series and UN HDI index, viewed on 09 May 2013

Consequence of Energy Poverty

- **Energy Crisis has affected both economic and social development.**
- **Increased dependency on Import for commercial energy supply**



- **Total commercial energy import from India in FY 2011/12 is almost 25% of country's budget**

Source: NEA Annual Report 2011/12, NOC website

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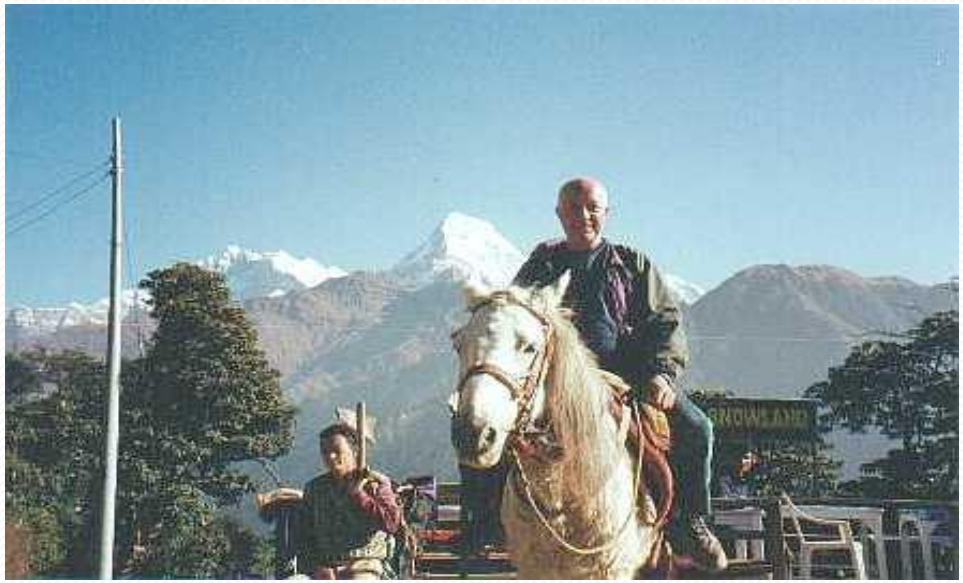
Animate Energy in Rural Areas



S.N	Animal	Average Power in watts	Av. Working power per day
1	Horse	760	10 Hours
2	Donkey	200	4-6 Hours
3	Buffalo	520	8 Hours

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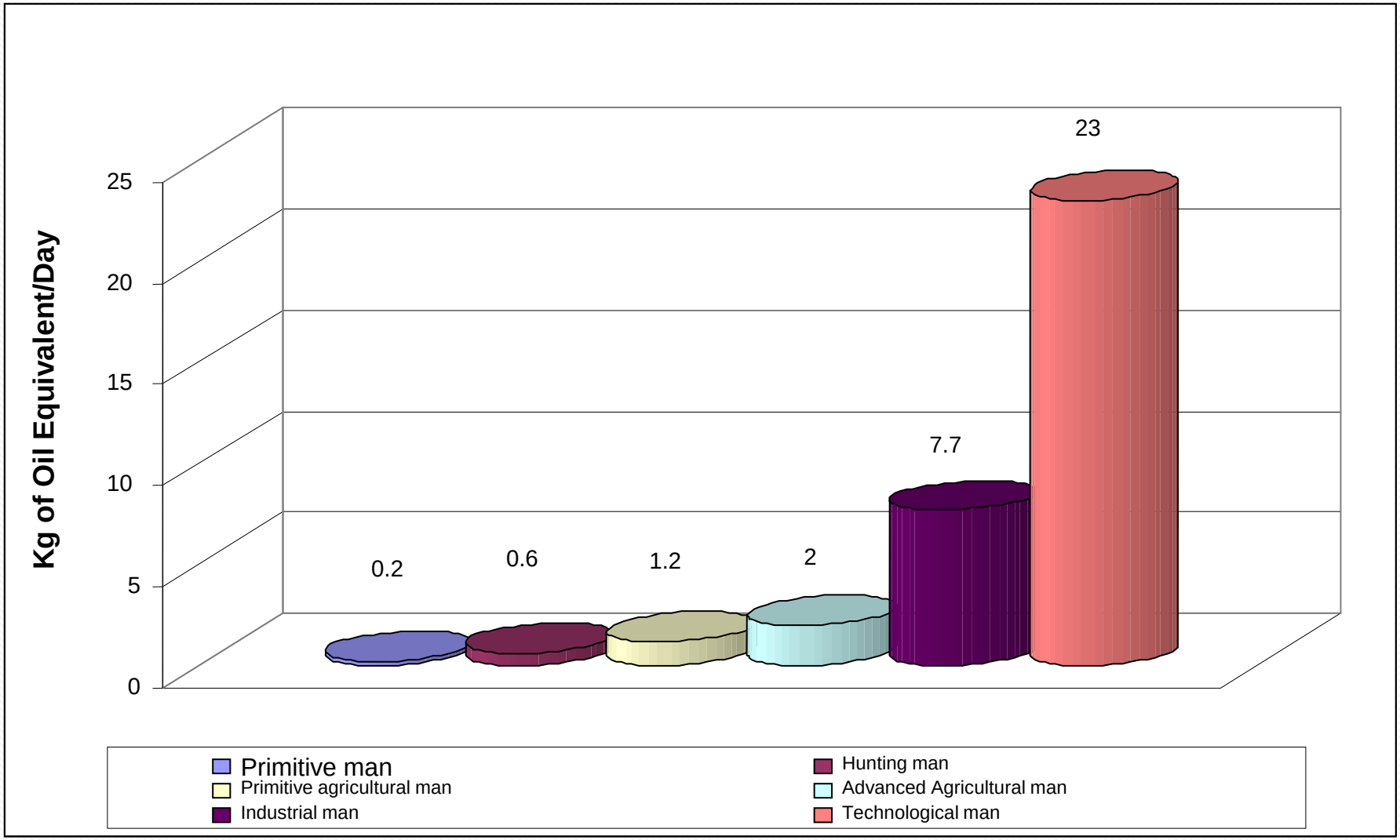
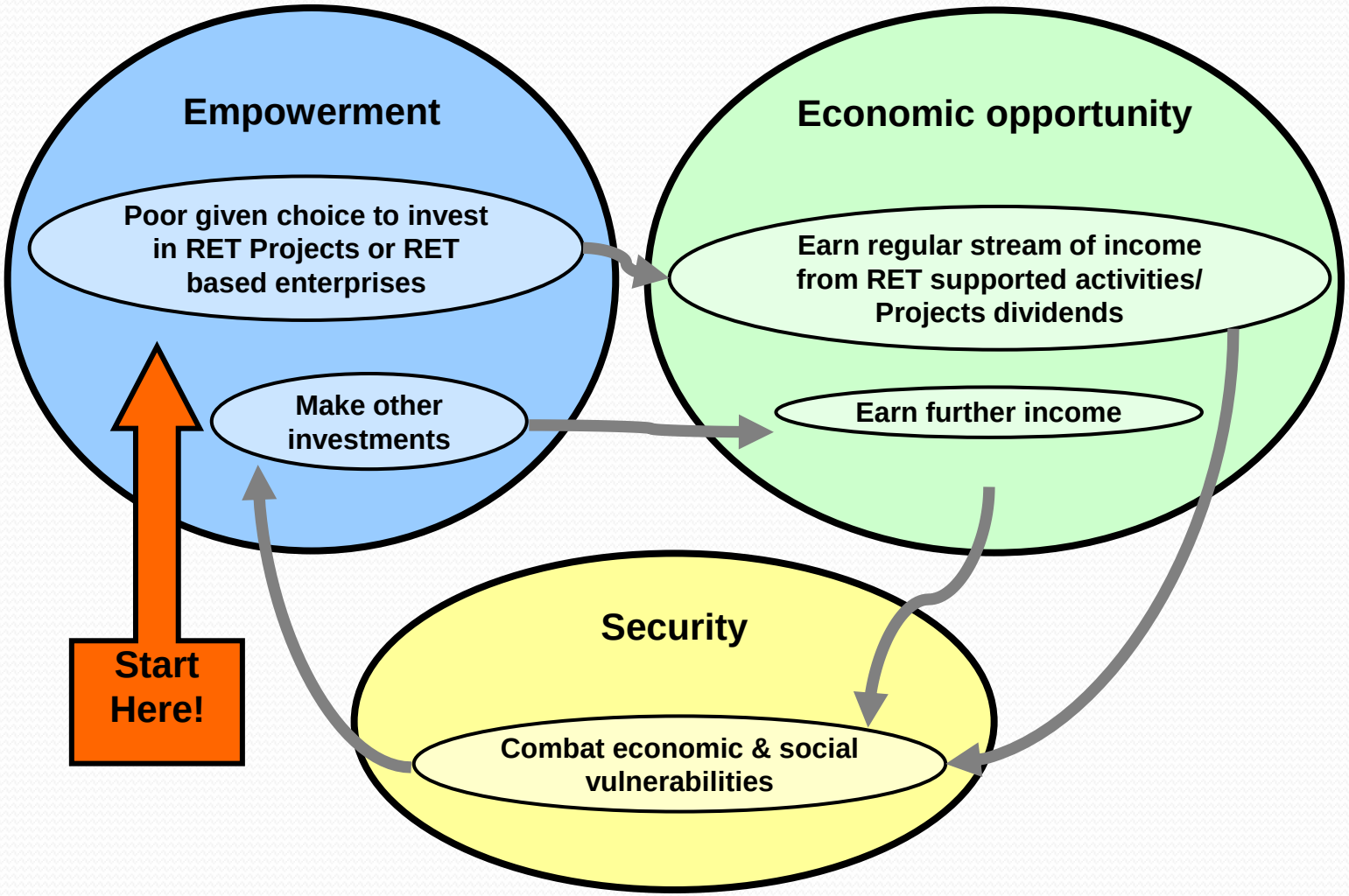


Source: Modified from Goldemberg 1996

Dimensions of Poverty and Energy intervention



5P-Capitalization and Ownership Mechanism

- Capitalization and ownership to be participatory in nature
- Depend on case by case basis
- One example/scenario is:

Capitalization	Share	Ownership	Share
Bank	15%	Private Sector	51%
Community	20%	Community	49%
Private Sector	15%		
Grant AEPC/ESCAP	50%		

Rural (Renewable) Energy Policies and Initiatives

- RE Plans as Part of National Plans since 1985
- Rural Energy Policy 2006
- Subsidy Policy for RE 2013
- Subsidy Delivery Mechanism 2013
- 3 Year Approach Paper
- Single Program Modality till 2017
- Initiative to provide access to clean cooking solution to all by 2017

History of Policy formation on RETs

- RETs were first addressed by 7th five year plan (1985-1990): Adopted policy of encouraging RETs incorporating private sector
- 8th plan (1992-97): Separate policies on energy and alternative energy, Involvement of private sector increased.
- 9th plan (1997-2002) : Renewable Energy Subsidy Policy and Delivery Mechanism promulgated.
- 10th Plan (2002-2007): The approach was focused on economic development and commercialization of RETs, Rural Energy Policy 2006 promulgated.
- Interim Plan (2007-2010)

  Long term vision to enhance economy and quality of life of rural people. Promotion of RETs along with CDM

Rural Energy Policy 2006

Overall goals

- Reduce **dependency on traditional energy & conserve environment** by increasing access to RETs.
- Increase **employment** and productivity through RETs.
- Increase **living standard** of rural population by integrating RETs with **social and economic** activities.

Rural Energy Policy 2006

Main Policies

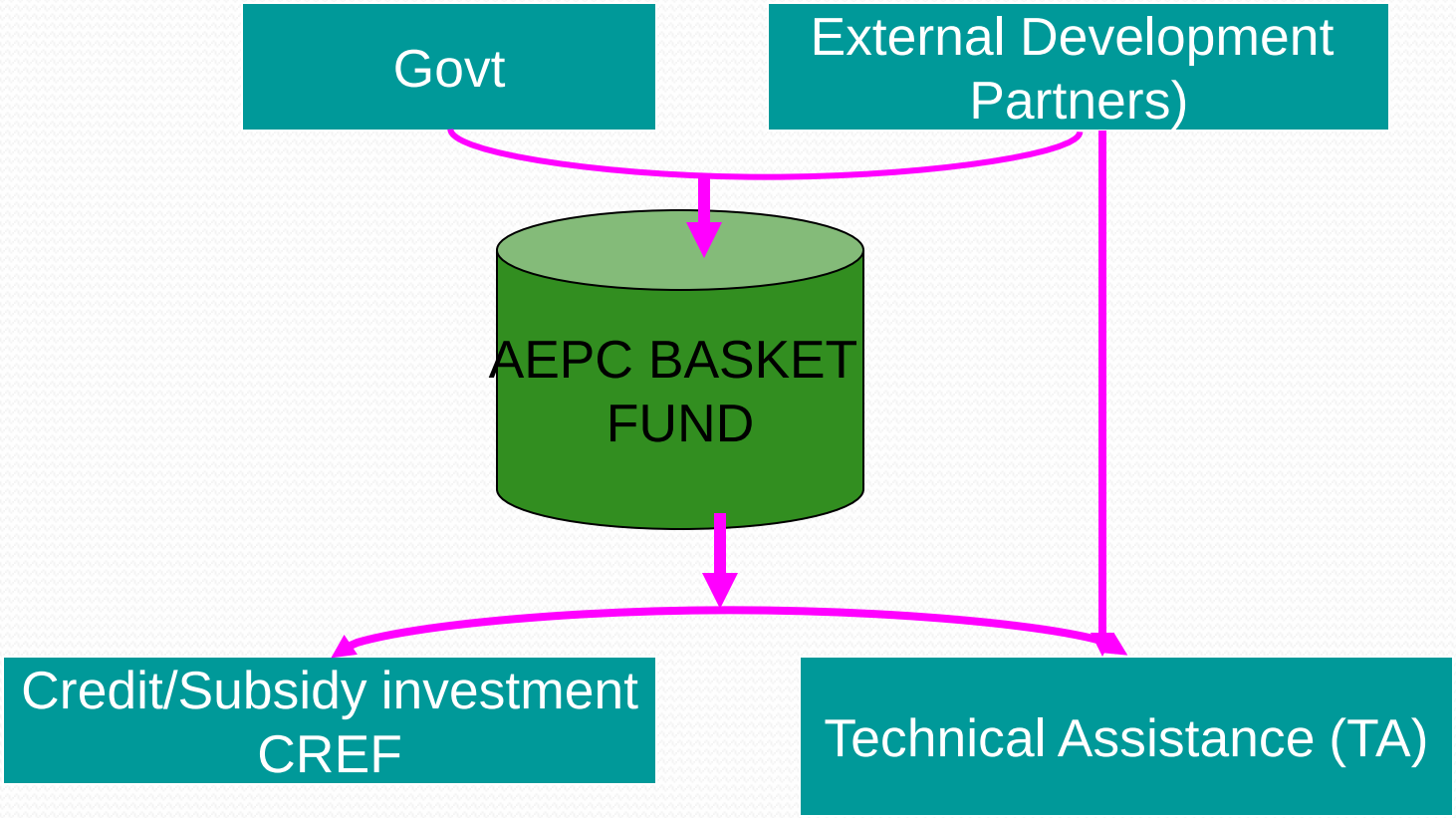
- Emphasis to environment friendly, affordable and sustainable RETs
- Enhancing capacity of local bodies and facilitation
- Integration of RETs with economic and other developmental activities
- Special promotional activities focusing poverty reduction & positive impacts on women and children.
- Involvement of private sector, community, CBOs and NGOs.

Subsidy Policy for Renewable (Rural) Energy 2013

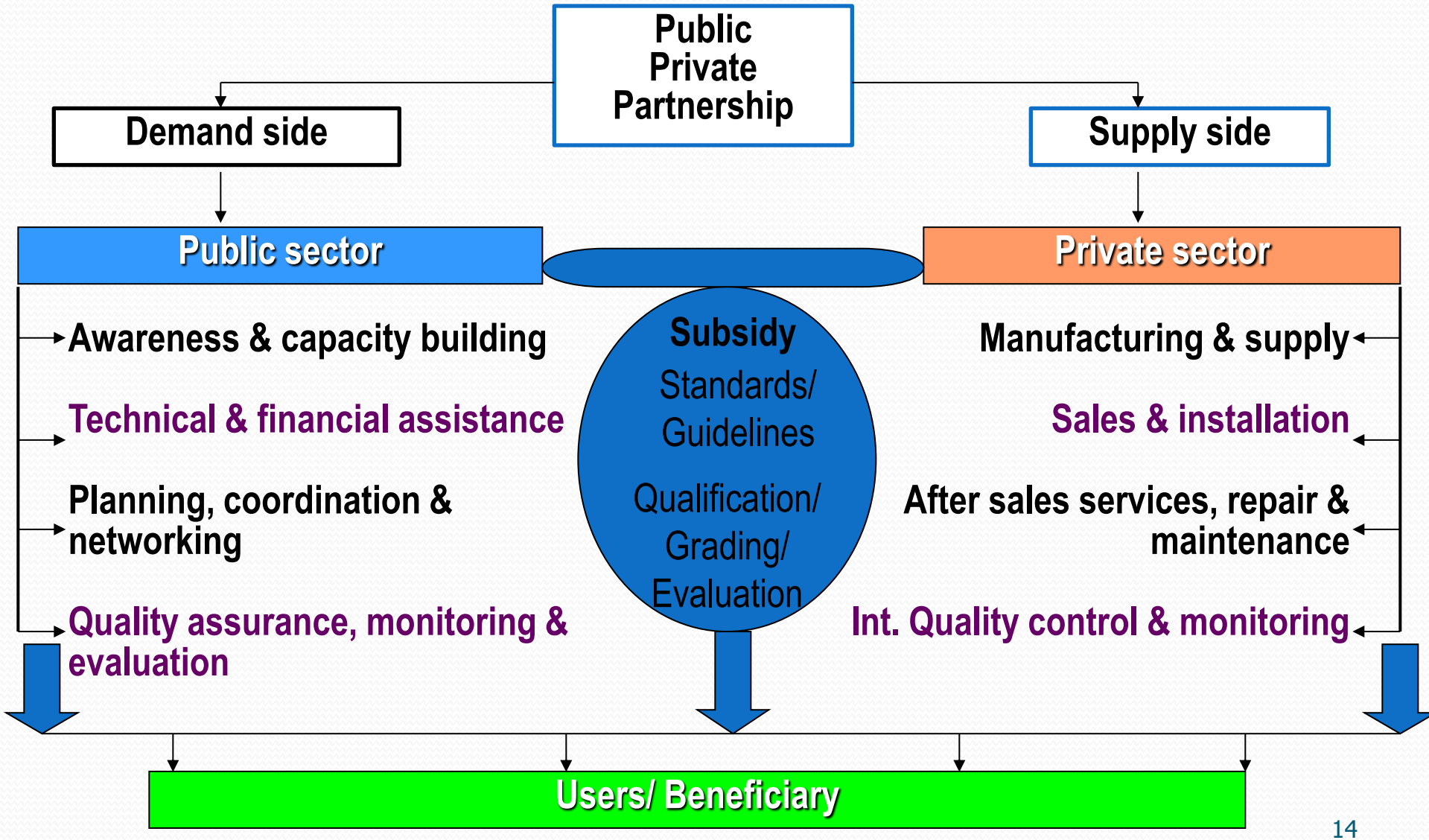
- Additional incentives to poor, women and marginalized groups and community (GESI)
- Reduce supply/consumption gap between rural and urban
- Support RET market by attracting private sector.
- Support long-term target of GoN .
- Replacing subsidy by credit

Management and Coordination

(Basket funding Model)



Govt APPROACH FOR PROGRAM IMPLEMENTATION



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Re Sector's Key Outcomes

- About 14 % of population have electricity from RETs
- Additional > 500 jobs each year (total 30,000 jobs)
- More than 40% reduction in fuel wood consumption by more than 700,000 households through ICSs and targeted to provide 3 million HH ICS by 2017
- More than 300,000 HHs replacing fuel-wood by biogas
- More than 500 Small and Medium Scale Enterprises in RETs sector
- Some Biogas and Micro Hydro Projects are registered in CDM EB

Some Outcome Indicators of domestic biogas

S.N.	Indicator	Result (Per Biogas Plant)
1	Reduced expenditure on cooking fuel, particularly wood	Savings of **US$ ~ 100 /year** due to lower expenditures on firewood alone.
2	Improved soil fertility caused by the use of bio-slurry as fertilizer	Savings of **US 20 /year**
3	Time savings due to reduced need for gathering fuel wood, decrease in cooking time	Savings of **US$ 45 /year** due to some labor days gained from the reduced time needed for cooking.
4	Improved sanitary conditions, cleaner surroundings and decrease in related illnesses due to the connection of latrines	Expenditure avoided is estimated at **US$ 30 /year**
5	Improved indoor air quality resulting in a reduced infant mortality and reduction in respiratory diseases	Nearly **75%** of biogas users have reported lower incidence of diseases.
6	Reduction in deforestation, resulting in better quality of environment, particularly the prevention of increase in soil erosion.	Biogas plant saves nearly **1.6t firewood/year**.

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Thank You!!!

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