reeep

renewable energy & energy efficiency partnership

REEEP: Accelerating clean energy markets through finance and policy

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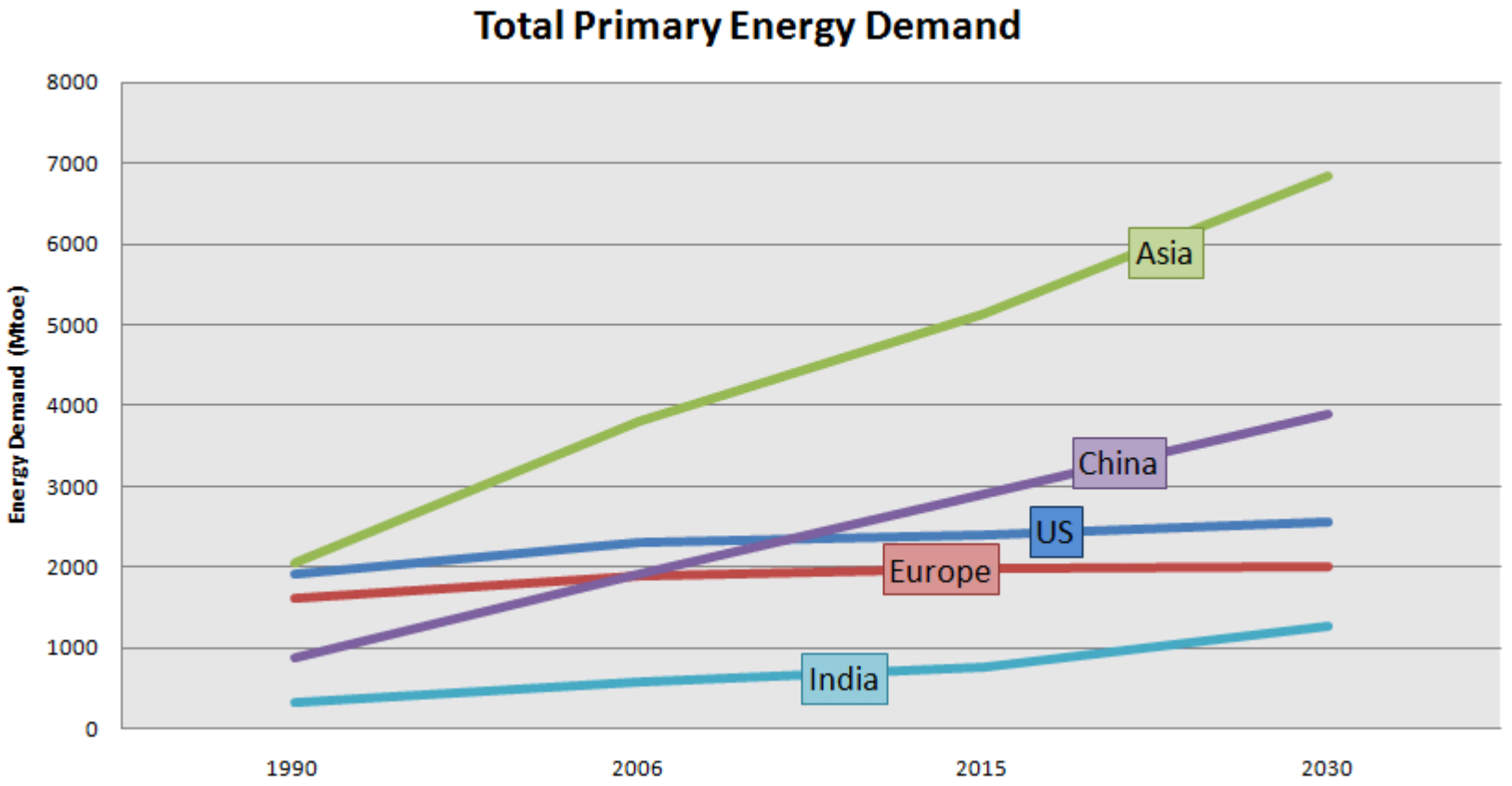
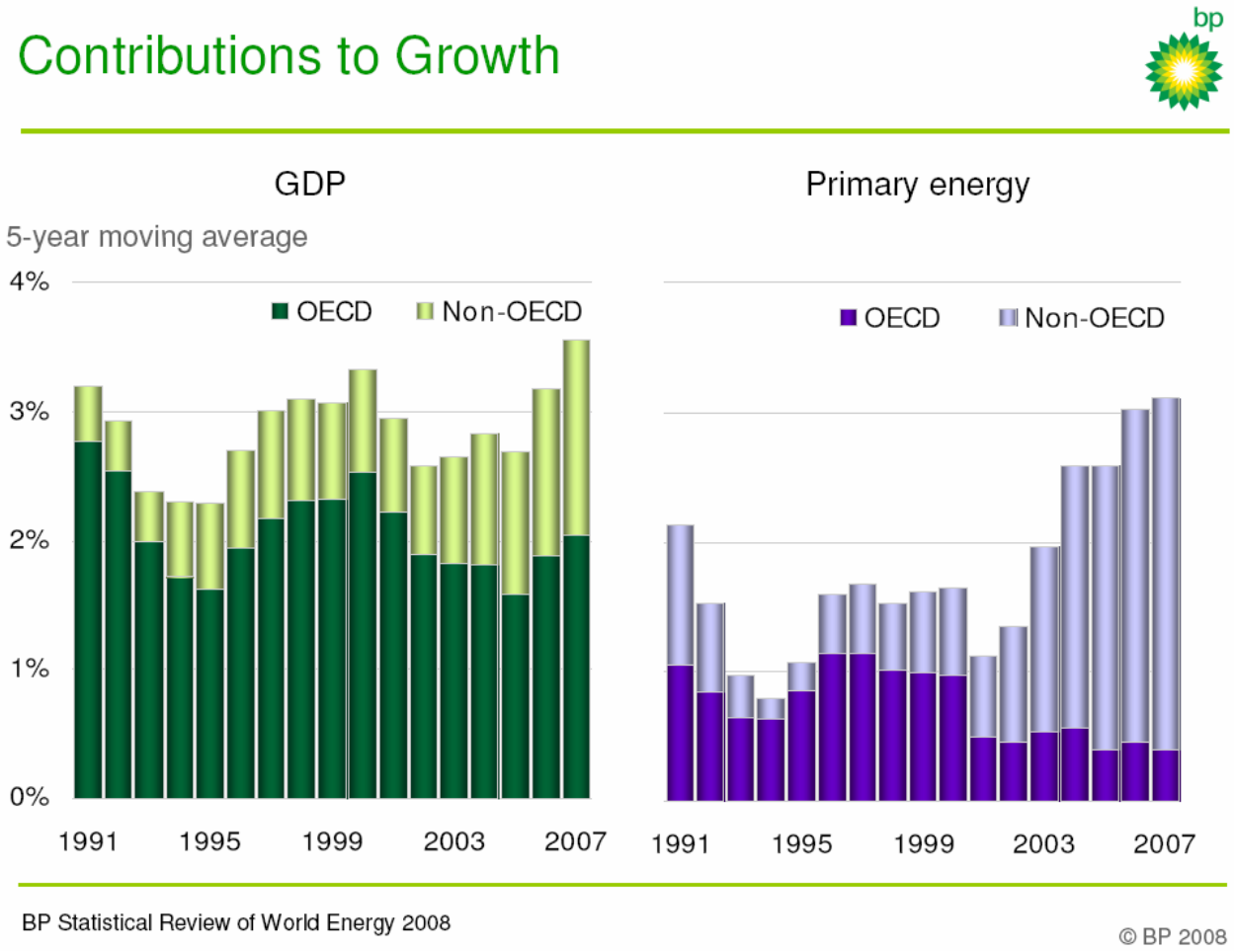
In future, emerging markets and developing countries will account for the strongest growth in energy demand



More than $40 trillion investment is needed to meet this future energy demand – and it should be invested in clean technology.

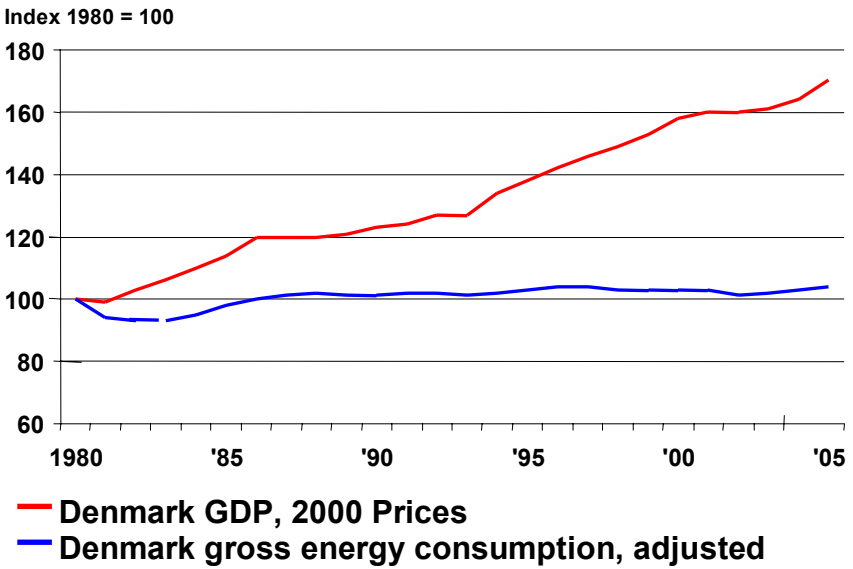
Source: World Energy Outlook 2008, IEA

In non-OECD countries, GDP growth and energy intensity are strongly linked

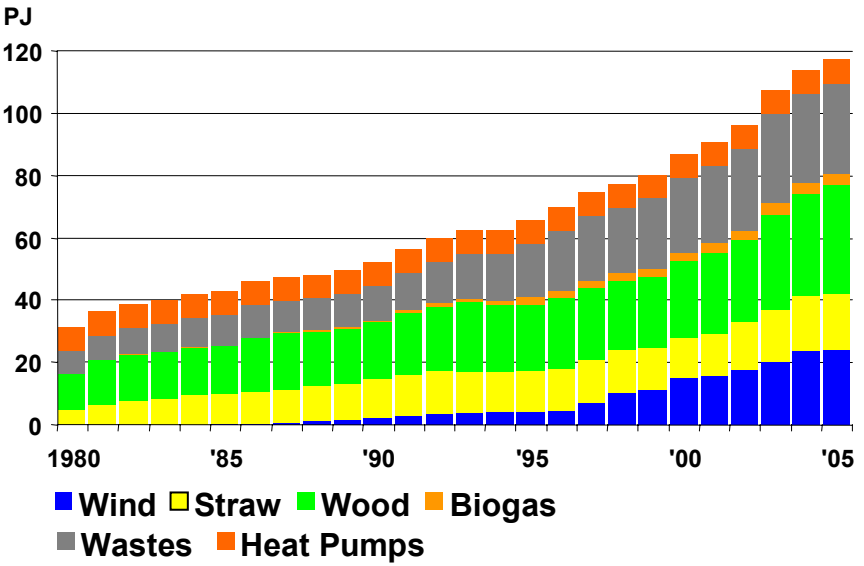


Source: BP, 2008

Economic growth <u>can</u> be decoupled from energy demand, assisted by renewable energy and energy efficiency



Between 1980 and 2005 increased energy efficiency in the Danish industry and buildings sectors lead to a decoupling of energy consumption and GDP growth...

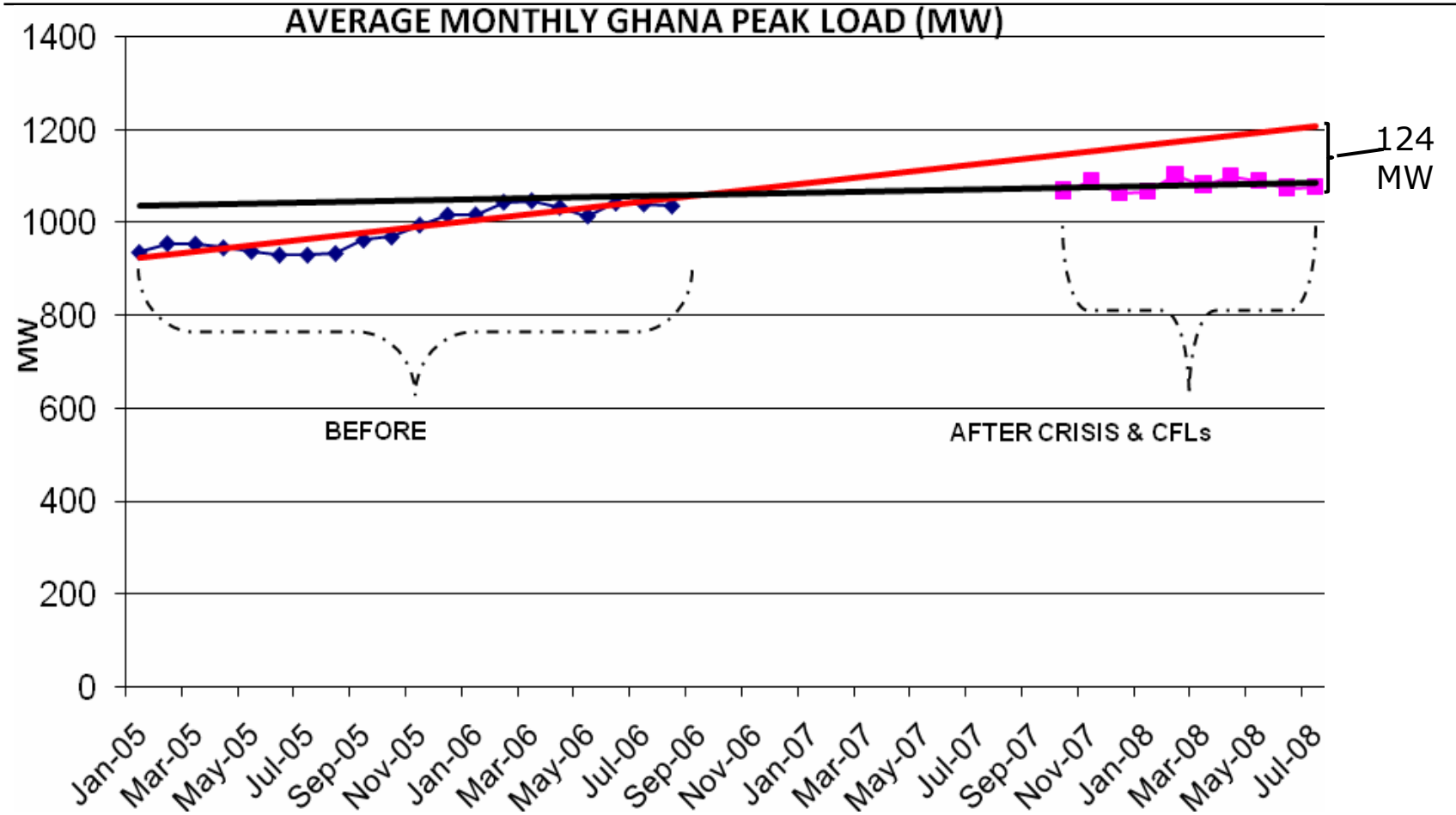


..while at the same time the production of energy from renewable energy sources in Denmark increased tremendously

As the Danish example shows, the most impact can be achieved by combining RES and EE measures

Source: Danish Energy Authority

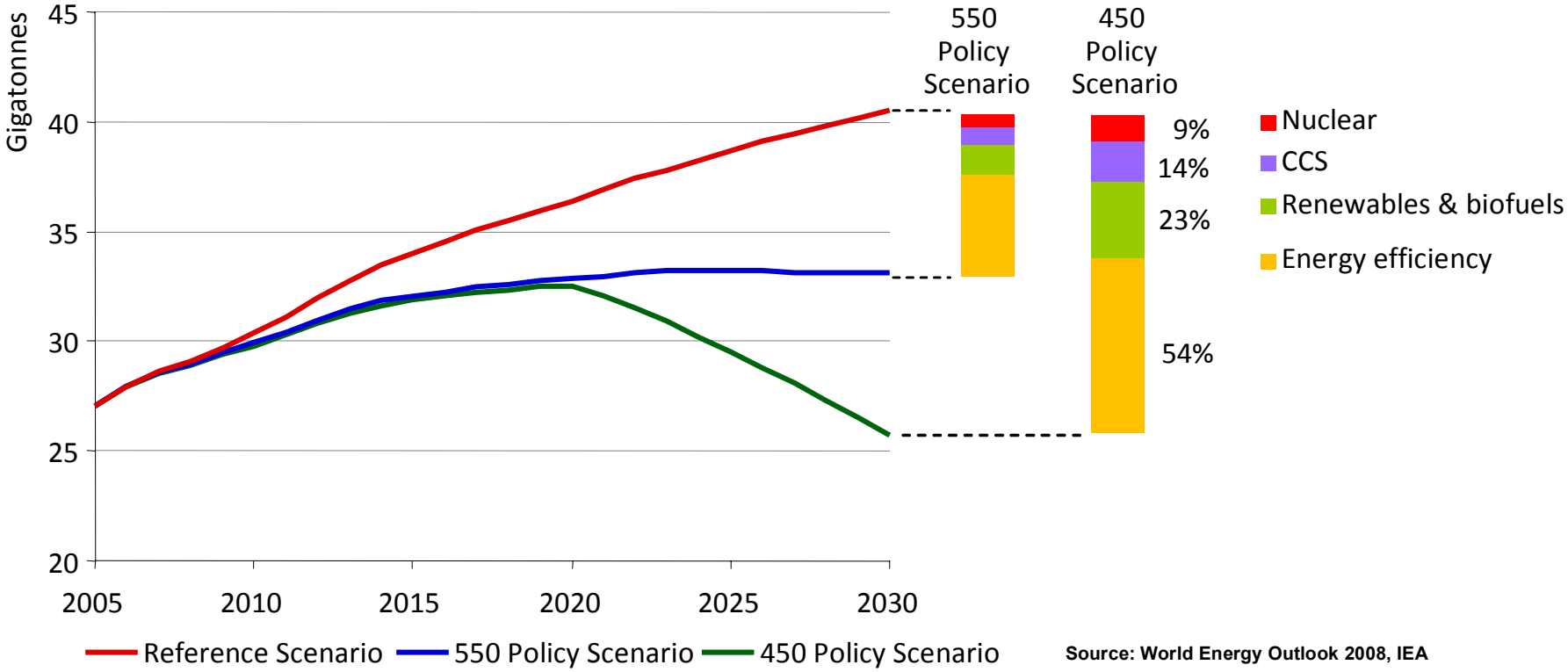
Case Study of Energy Efficiency in Ghana: Effect of 6million CFLs on Electricity Demand



Effect of CFL on National Economy at US$105.4/bbl

- Peak Load Reduction of 124 MW
- 496,000kWh per day
- 178,560,000kWh or 178.56GWh per annum
- US$107,107 per day
- US$3.2million per month or US$38,558million per annum
- 1.2million tons CO2 per annum

Renewables and energy efficiency are also essential to achieving the large-scale emission reductions needed



Source: World Energy Outlook 2008, IEA

Practical implementation of RE and EE on the ground is still difficult. Hence the need for approaches such as REEEP.

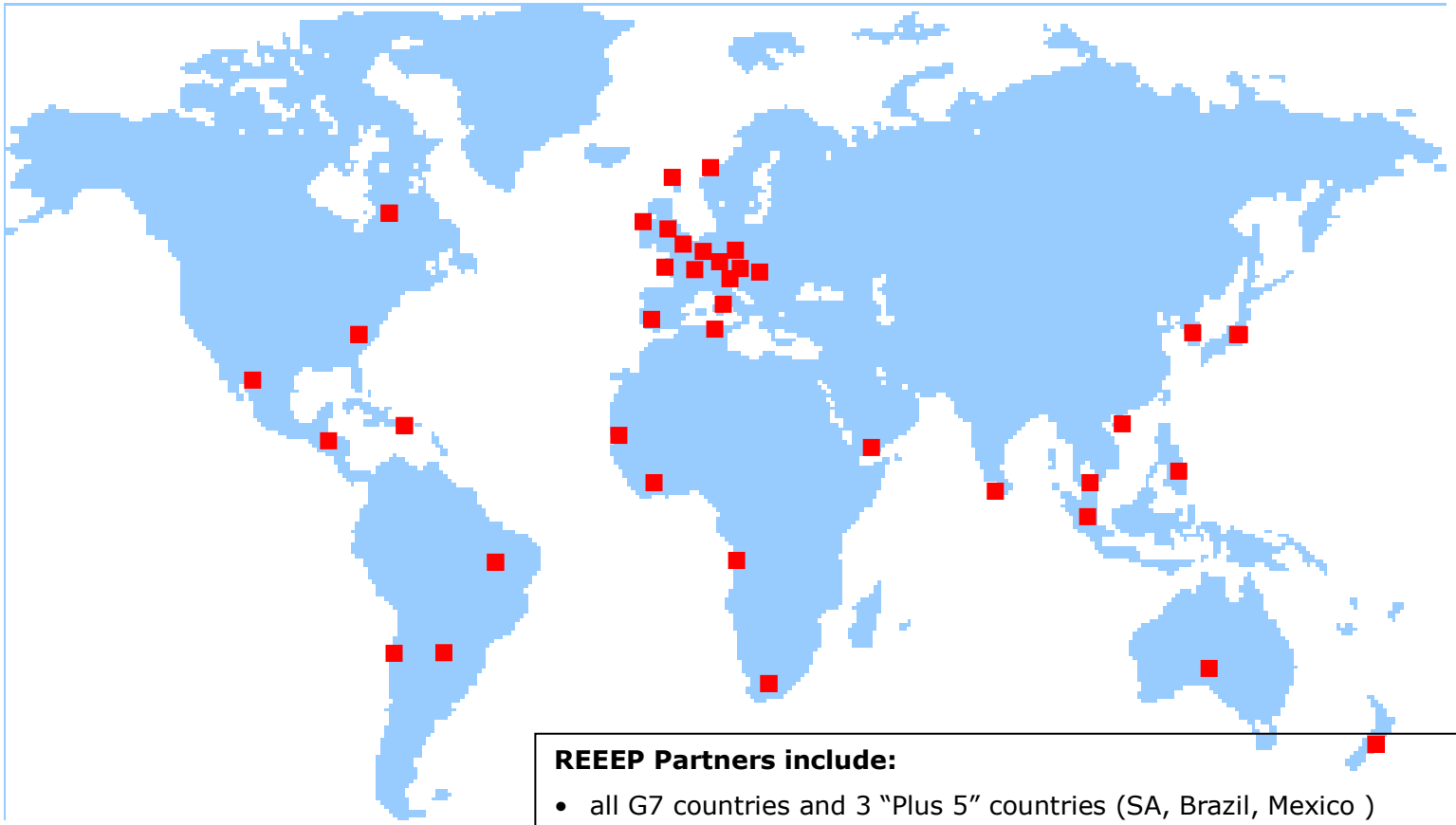
REEEP was established to accelerate RE/EE, focusing on underdeveloped and emerging economies

- REEEP acts as a **market facilitator** by reducing market barriers for renewables and energy efficiency systems
- REEEP is driven by a **bottom-up** approach
- REEEP works with governments and with the private sector to **improve access to sustainable clean energy**
- REEEP has **implemented more than 80 projects**, and the latest (7th) funding round supports **49 new projects in 25 countries**

REEEP projects focus on **two areas** where **small interventions can have a huge effect** in market development:

- **policy/regulation development** and improvement
- **finance and business models** development

Well established regional and global network
REEEP is comprised of 291 partners + 3000 friends



REEEP Partners include:

- all G7 countries and 3 "Plus 5" countries (SA, Brazil, Mexico)
- States and key agencies from China and India (NDRC, IREDA)
- Development banks and other international organisations

Strong working links with global strategic partners guarantee synergies and increase impact

Sample REEEP project with wide effect: Renewable Energy and Energy Efficiency Policy and Action Plan for Liberia

- Produce a national policy instrument to build and increase RE in Liberia
- New national legislation and an Action Plan
- Establish a National Committee on REES and facilitate local capacity building
- This project supports the rebuilding of the energy supply in a post-conflict region
- Project Partner: CSET

Sample REEEP project with wide effect: Renewable Energy Policy for Climate Change Mitigation in Ghana

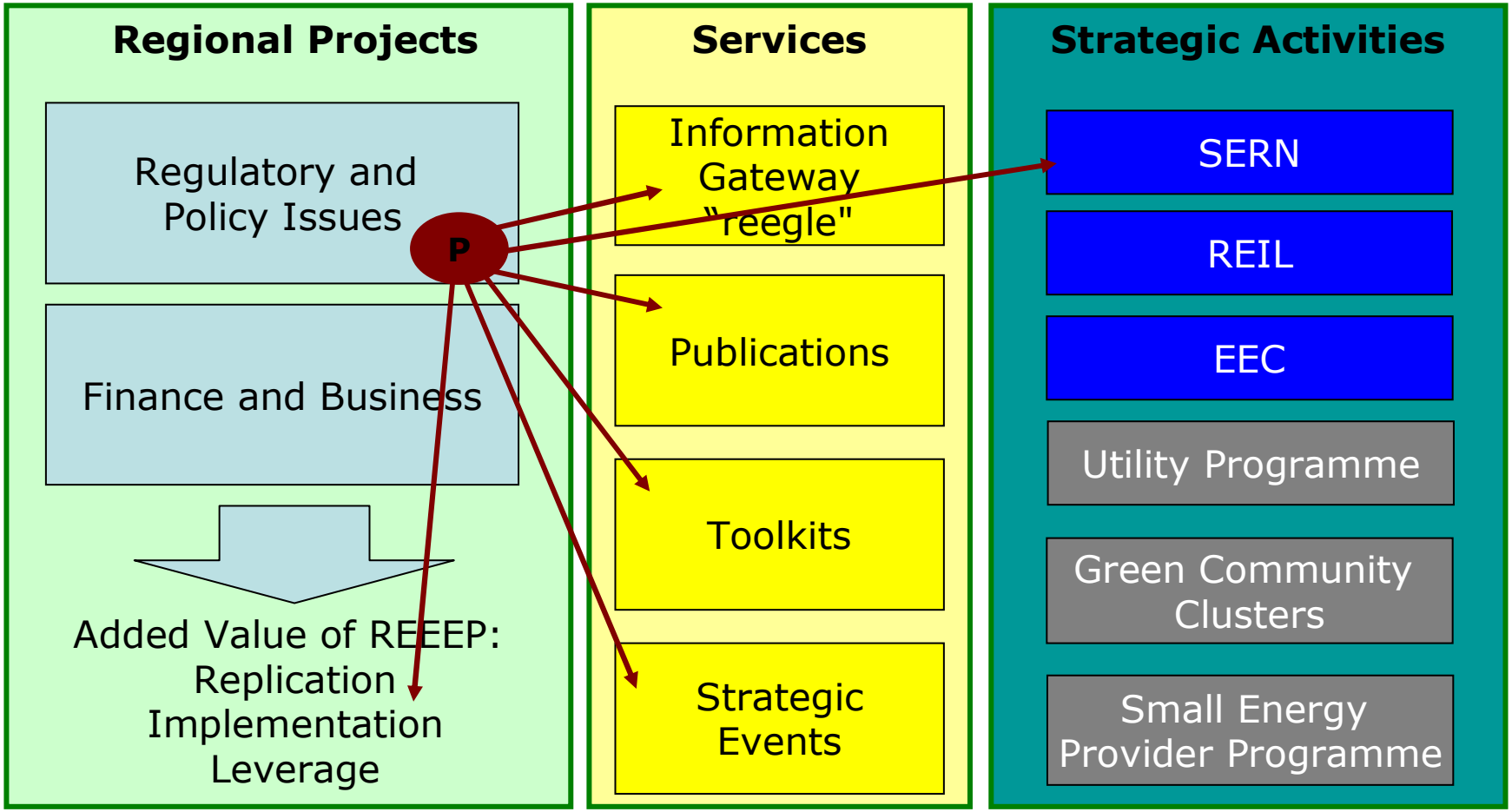
- to develop a RE Policy framework for Climate Change Mitigation in Ghana
- to develop tools for decision making to stimulate policy initiatives designed to attract public and private investment in the RE sector.

The main output,

- GIS-based toolkits that will lead to more accurate techno-economic analysis that will result in realistic cost-benefit projections, and
- RE resource data and GIS data sets on electricity grid lines, road network, topography, population density, land use/cover, etc
- GIS maps and alternative business development scenarios in the energy supply

- Project Partner: Energy Commission of Ghana

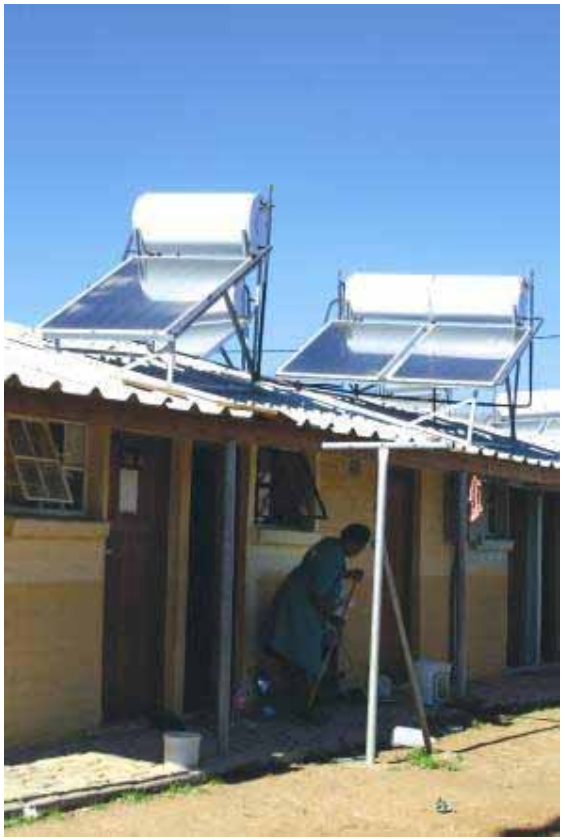
An example of how the lessons of one project are disseminated through REEEP's channels



How REEEP drives clean development

- Project activities **focus on the two areas where small interventions have the largest effect**:
  - **Policy and regulation** development to create a stable market environment
  - **Financing and business models** to attract financial institutions to the sector
- A robust, bottom-up **selection process is defined by local priorities** rather than imposing solutions
- An illustrative **selection of REEEP-supported projects** follows.

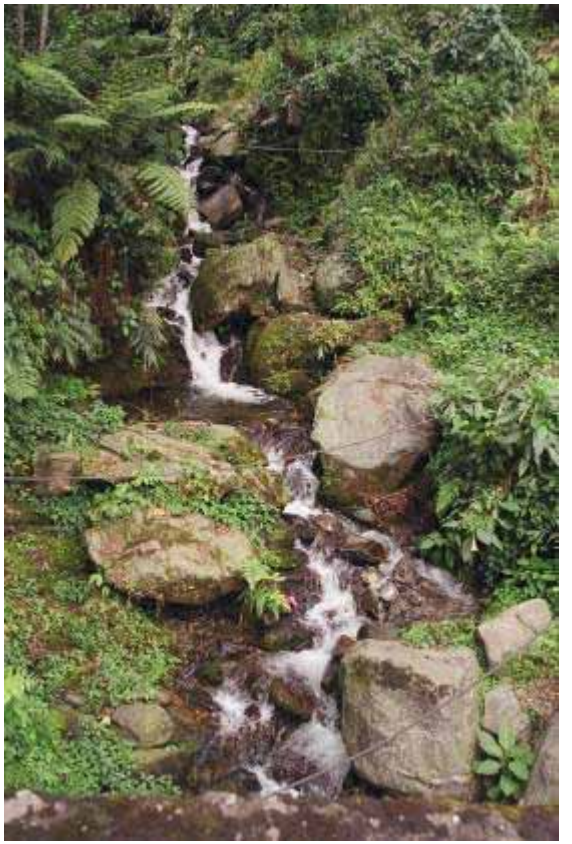
Developing a vehicle for solar water heater (SWH) mass implementation in South Africa



- Reduction of peak power need, leading to enhanced energy security and financial benefit for the urban poor
- Implementation of a fee-for-service business model to roll out SWH in at least three cities in South Africa
- Provide technical, legal and financial assistance to key stakeholders in these cities by using and amending the REEEP manual for RE/EE options
- Project Partner: SEA

Financing for bundled small-scale rural renewable energy enterprises in India

- Establishment of a new credit practice for small-scale renewable enterprises in rural India in cooperation with in Yes Bank Ltd. (YBL)
- Development of pipeline of interested small-scale rural renewable ventures
- Securing conventional and carbon financing for three projects
- Scaling up of this efforts to other Indian banks
- Project Partner: e³V



Developing a national implementation roadmap for wind in China

- Detailed planning framework for wind development that enables China to achieve its policy goals for 2010 and 2020
- Targets installation of wind capacity of 4000 MW GW by 2010 and 20,000 MW by 2020
- Establishes industrial basis for manufacturing large-scale wind turbines
- Several global players have established manufacturing locally and Chinese companies have emerged
- Project Partner: CRED

Technical support for energy efficient appliance standards and labelling (S&L) in India

- Support to BEE-India on labelling for refrigerators, air conditioners and consumer electronics
- Establishment of a recurring process for S&L program impact assessment
- Outreach materials for NGO use in promoting information label with survey feedback on dissemination and perceived consumer relevance
- A voluntary endorsement label design for consumer electronics
- Project Partner: CLASP

Business model for village power in East Asian countries

- Transfer best practices of village power to East Asian countries including Mongolia, North Korea and South Korea
- Establish a replicable business model for PV village power in Mongolia based on Chinese experience
- Promote the project to expand the sustainable development of village power throughout East Asia
- Project partner: Beijing Jike

Rural Biomass Renewable Energy Action Plan in China

- Development of a National Action Plan and its implementation for rural biomass energy in China
- Providing detailed measures to achieve the biomass development target and reduce GHG emissions
- Removal of Barriers to rural biomass development
- Promotion of public awareness and acceptance of the national strategy for rural biomass energy
- Project Partner: EED Consulting working with Ministry of Agriculture

Establishment of PFAN network and activities in Mozambique & Uganda

- PFAN is a financing coaching and investor matchmaking service for renewable energy projects
- Establish PFAN networks in Mozambique and Uganda
- Identify projects for inclusion in PFAN's development pipeline for receipt of free PFAN services
- Achieve financial closure on between 4 - 8 CE / RE projects raising a total of $10 - 60 million
- Project partner: International Center for Environmental Technology Transfer

Emerging lessons from REEEP's work

- RE & EE policy solutions have to be tailor-made to fit national circumstances – there is no best solution
- Activities only deliver sustainable results if they are part of the whole energy value chain
- The public sector role as a major energy consumer and investor must be mobilised
- RE & EE have to be an integrated part of energy planning and legislation – this is also true for low carbon development planning

- The greatest barrier for energy efficiency is lack of information, institutional support and not technology
- Standards and labels are the most effective policy for end-use EE
- SWH are the most effective low carbon energy option in cities and buildings
- Rural energy programmes must address the thermal energy needs and generate income to ensure success
- Local funds are available but are often not utilised due the lack of instruments

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