Energy and Poverty
World Energy Outlook - 2002

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World Energy Outlook Series

- World Energy Outlook – 1999 Insights *Looking at Energy Subsidies: Getting the Prices Right*
- World Energy Outlook – 2000
- World Energy Outlook – 2001 Insights *Assessing Today’s Supplies to Fuel Tomorrow’s Growth*
- Russian Academy of Sciences Special Award
- World Energy Outlook – 2002 (to be released at the International Energy Forum in Osaka in September)
World Energy Outlook

- Annual IEA publication, analysing long-term energy and environmental trends and their implications
- Key topics: energy security, energy pricing, investment, climate change, developing countries
- Provides framework for governments, int'l. organisations to develop long-term energy/environmental strategies
Planned Structure of WEO-2002

Part A: Global Trends to 2030

- Context
- World Energy Trends
- Energy Market Outlook
- Global Environment Trends

Part B: Regional Outlooks to 2030

- Including in-depth study of China

Part C: Issues Arising from the Outlook

- OECD Alternative Policy Scenario
- Energy and Poverty
Energy and Poverty

Collaboration with int’l organisations (WB, UN-FAO, UNEP, ADB, TERI, Afrepren, OECD Development Centre, DC governments, etc.)

The issue:

- 2.5 billion people live on less than 2$ a day
- 2.3 billion people rely mainly on biomass to satisfy their energy needs
- *Roughly one-quarter* of the world population do not have electricity
Energy and Poverty

Aim of our analysis

- Analyse current situation of electricity access and biomass use and how this links to poverty in developing countries.

- Project energy demand and rate of electrification in developing countries to 2030.

- Provide a quantitative framework for energy-poverty alleviation strategies.
A Unique Database

- Most updated and comprehensive estimate of electricity access for more than 100 developing countries
- Regional breakdown between rural and urban access
- Factual analysis of crucial importance to develop effective policies

Key results

- One quarter of the world population lack access to electricity
- Most live in rural areas
Energy Consumption and Poverty

Percentage of People Living below 2$ a day

Energy Consumption Per capita (kgoe)

- Oil
- Electricity
- Gas
- Coal
- LPG+Kero
- Biomass
Electricity Access and Poverty

- Percentage of People Living below 2$ a day (%)
- Electrification rate (%)

- South Asia
- Sub Saharan

Electricity Access and Poverty chart showing the relationship between electrification rate and percentage of people living below 2$ a day.
Population without Electricity by Region, 1970-2030

- Africa
- South Asia
- East Asia
- Latin America
- Middle East
Prospects for Electrification

- Projections using large-scale IEA model
- Assumptions re macroeconomy, demography, technology, energy prices
- Reference Scenario (no major new policies)
- Results:
  - 75 million people per year will gain access to electricity over the next twenty years.
  - However, no major change in number of people lacking electricity.
Key Messages

- Priorities for poor countries are:
  - Attract private investment in electricity infrastructure
  - Competition after addressing key institutional, structural and regulatory issues.
  - Affordability: main problem to overcome is households’ capability to assume up-front costs.
- Migration of rural poor to cities will increase number of unelectrified people to urban and peri-urban areas.
- Economics will determine choice of technology