Electricity, Development and Impact Assessment

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Social inequity

- 1.6 billion people live on less than $1/day
- 2.6 billion people live on less than $2/day
- 2 billion people worldwide lack access to electricity
- A further 2+ billion depend on traditional fuels for cooking and heating

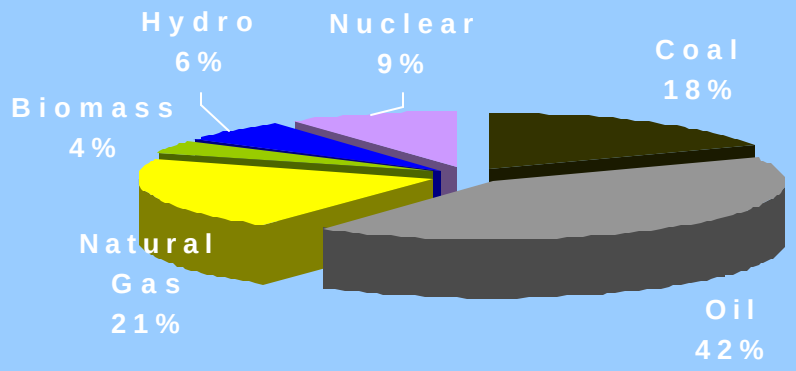
Access to affordable, reliable energy services is a prerequisite for sustainable development

Traditional fuels

Present Energy Consumption

Primary Energy Consumption

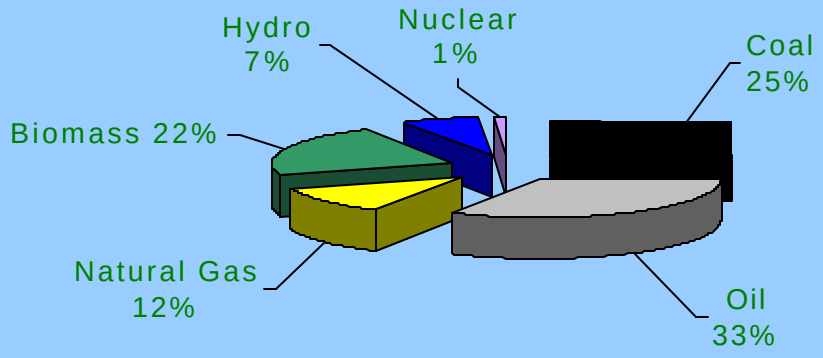
Industrialized Countries



Population: 1.34 billion
% of fossil fuels: 81%
Energy = 6,701 x 10^6 toe

5.0 toe/capita

Developing Countries



Population: 4.56 billion
% of fossil fuels: 70%
Energy = 3,861 x 10^6 toe

0.85 toe/capita

Environment and energy issues

- Climate change and impact on vulnerable groups
- Land degradation
- Erosion, drylands expansion
- Loss of biodiversity
- Deforestation
- Ambient and indoor air pollution
- Water availability and quality

Health Impacts of indoor air pollution

Respiratory disease from cooking on traditional fuels kills over 2 million people annually in India alone

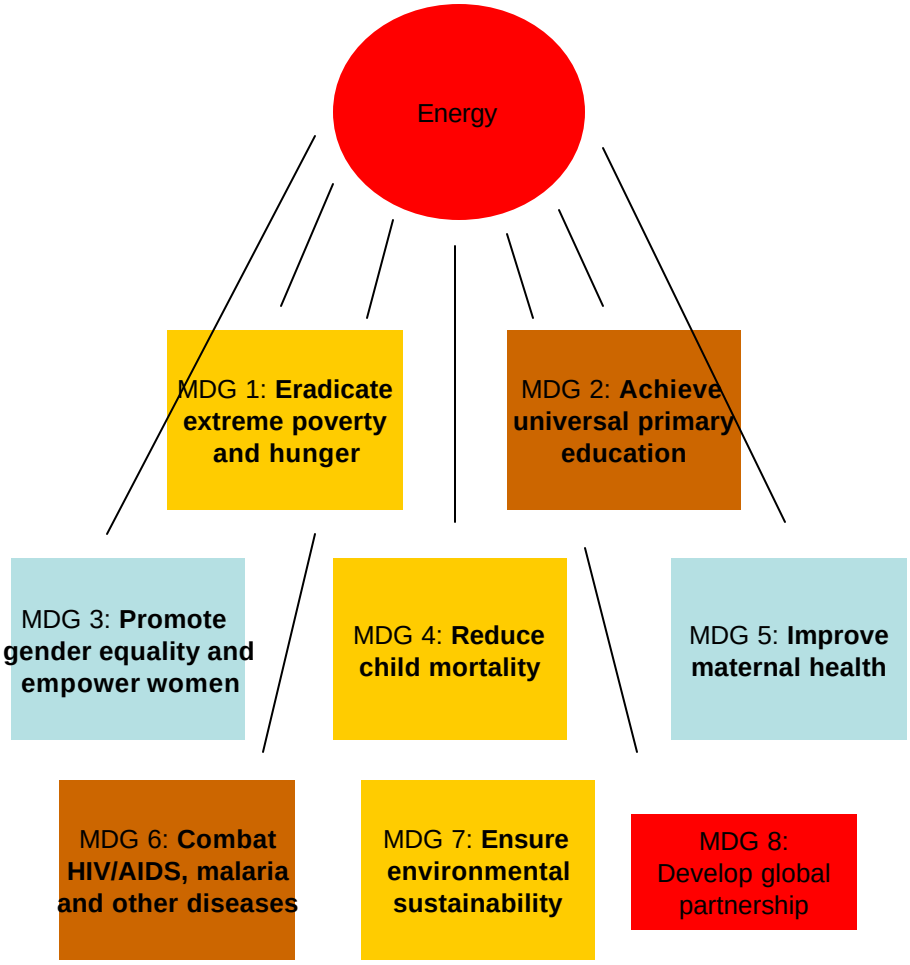
Investment sources and flows

- Energy production investments *(public/private)* = $290-430 billion per year
- Total foreign aid (ODA) worldwide 2000 = $60 billion – all sources all sectors
- Value of all subsidies to energy in South $50 billion 1990
- Investment in energy projected at $300-500 billion per year for the next 20 years
- Most will occur in developing countries

Global Development Agenda

- Millennium Development Declaration
- 8 MD Goals and a series of 18 time bound targets and 48 indicators
- Invitation for country and context specific targets
- Poverty Reduction Strategy P & C
- Development assistance consensus to align around country priorities

Energy and the MDGs



Energy contribution to achieving Millenium Development goals

- Quality
- Reliability
- Affordability of the services

Development Effectiveness

Creating Choices

- Energy pathways address multiple development objectives
- Need is for energy services –light, heat, mechanical power- not only energy supplies
- Open technology and fuel options
- Energy is not just electricity; cleaner fuels are essential
- Solutions fit to country and community specific conditions
- Country determined and rooted in local context
- Community involved in making energy systems work for them
- Policy, technology, and capacity support

Energy Access in Nepal from Rural Micro Hydro

- Expanding access to energy services as component of integrated development -*not in isolation*
- Stakeholder participation: district level community organization role in implementation
- In line with decentralizing efforts of government
- Mobilizing communities and giving women equal importance and benefits
- Skills training and income generation using electricity
- Local Environmental management

Sustainable Development Challenges

- Recognize that energy, electricity and impact assessment are means, not ends
- Effectively balance and manage trade-offs between conflicting development objectives
- Realign economic development paths to goals of social equity and environmental sustainability
- Focus on Development Effectiveness
- Capacity, Ownership and Policy environment

Impact assessment

In design and review of Policy:

- Improving coherence and consistency
- Refining development goals

Of Program:

- Priority setting
- Refine program outcomes
- Facilitate choices in energy services
- Identify energy options which have most positive impacts on livelihoods

Role of Impact assessment

Project level

- Assess affordability, suitability, and sustainability
- Analysis of social implications, environmental impacts, health consequences
- Assess and measure contribution to development effectiveness including poverty reduction and progress towards environmental sustainability

Where we need to take impact assessment

- Making impact assessment a stronger more effective element of the development loop.
- Development outcome – driven approaches
- Learning from monitoring: Creating and using knowledge – based on measured data and information from ex-post evaluations of energy/electricity development projects- eg World Commission on Dam
- Removing barriers to introduction of services and new improved technologies created by overly regulated approvals
- Reinforcing the analytical basis of environment and social impact assessment
- Strengthening meaningful participation of stakeholders, community involvement and improving transparency

Where we need to take IA

- From evaluating impacts of energy programs, plans or projects to assessing their contribution to development effectiveness
- From an emphasis on process to a balance between process and development results
- From building capacity for impact assessment to engaging in impact assessment for capacity development

Capacity Development

The ability of individuals, institutions and societies to identify their development needs, set objectives and solve problems to achieve their goals in a sustainable manner.

UNDP Development Effectiveness Report 2003.