Energy Efficient Communities

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The IEA and the CERT

- The IEA was created in 1974 by the OECD-Countries as response to the “Oil-shock”
- The objective is the exchange of information and mutual support in matters of energy security.
- 1975 the CERT was created to foster and oversee cooperation in new technologies, energy efficiency and renewable energies.
- Today the CERT oversees a technology network of 6000 experts with 2 Expert Groups, 4 Working Parties and over 40 Implementing Agreements (**IA**).

References for this presentation

- Cities, Towns & Renewable Energy (publ. 2009)
- Energy Technology Perspectives ETP 2012 (published June 2012)
- CERT-workshop on Forging International Finance Collaboration, June 2012
- World Energy Outlook WEO 2012 (launch in Nov 2012)

Some facts 1

- Residential and commercial buildings account for 1/3 of global final energy use, and in a similar range are the energy-related CO_2 emissions.
- Energy demand from Buildings will more than double by 2050, mainly due to rising population.
- Transport accounts for 20% of world's primary energy use and 25% of global emissions.
- The energy use in transport will more than double by 2050.

Some facts 2

- To achieve the objectives of the 2° Celsius scenario (**2DS**), each sector must participate and limit its increase of direct CO_2 emissions in 2020 compared with the current level:
  - Power generation by 42%
  - Transport by 21%
  - Industry by 18%
  - Buildings by 12%
  - Other transformation by 7%

Some facts 3

- US$ 19 trillion is needed until 2020 in the 6° Celsius scenario (**6DS**). **This is business as usual!**
- In order to reach the 2DS an additional investment of US$ 5 trillion is needed, but **the resulting fuel savings create financial savings of about the same amount**.
- Alone for China the investment requirements are higher than for all OECD member countries combined.
- 2/3 of the required additional investment to reach the 2DS is in the buildings sector: US$ 2.9 trillion until 2020.

Some facts 4

- Great parts of the world still suffer from energy poverty. Their priorities are different to ours!
- In developing countries, the key issues related to low-carbon energy technologies are energy access, technology transfer and access to finance, as well as project monitoring.
- Such non mature markets are often not equipped to support or foster low-carbon technology deployment, both in term of institutions and enabling regulations

Some facts 5

- Today 50% of the world's population lives in urban environments. In 2030 it will be 60%. They consume 2/3 of total primary energy, of which 60% in buildings.
- In OECD cities the CO_2 emissions remain constant until 2030 but double in Non-OECD cities.
- Only local authorities may have a chance to influence the energy choices of their citizens.

➔ The encouragement and empowerment of local authorities to develop and implement intelligent policies is an urgent need.

Not to forget

- Large investments have to be attracted. However, the main purpose of investments is to make a profit.
- Rules for Green Business are the same as for other business.
- Terms such as “ethical” are applicable for persons and their behaviour, and not for business.
- We have to create “bankable” opportunities where institutional and private Investors see a possible benefit.

Hurdles for investors

- Investors tend not to invest in early stage technologies nor in small projects because of the inherent risks and high transaction costs.
- There is great uncertainty over financial support schemes, notably in Europe. There is a pressing need for more clarity and predictability over support schemes life cycle and mechanisms.
- To impose higher costs for CO_2 emissions in some regions and not in others goes against competitiveness.

Conclusion prior to all other

- In an international context the main challenge is neither the costs nor the technology constraints.
- The biggest challenge to a low-carbon future is **agreement on how to share the uneven costs and benefits of clean technology across generations and countries**.
- Governments must address these distributional issues. An international harmonisation in policy is required.

Some conclusions from the recent CERT workshop on Finance Collaboration

- Build on international collaboration and existing tools.
- Promote short term policy measures, such as higher carbon price and the abolishment of subsidies to fossil fuels.
- Educate on possible technology choices. Energy efficiency measures in the end-use sector are the most cost effective policies to introduce in the short term.
- There is a pressing need for long term policy stability and harmonisation of policy frameworks within neighbouring markets.

Some links for more information

www.iea.org

www.iea.org/aboutus/standinggroupsandcommittees

www.iea.org/techno/index.asp