



The e8: A Voice of the International Electricity Sector

By:

Mr. Giuseppe Montesano, e8 Sous-Sherpa-ENEL (Italy)

Mr. Jim Burpee, e8 Sherpa-OPG (Canada)

Mr. Jean-Paul Bouttes, e8 Sherpa-EDF (France)

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The Electricity Sector: Key Actor in a Solution to Climate Change



- **The electricity sector:**
 - A key actor in the global economy;
 - Current challenge & opportunity:
 - 23% of world CO2 emissions*
 - 55% increase in world energy demand till 2030*
 - \$11.6 trillion of required capital investment till 2030*
 - More than 5000GW (doubling current capacity) to be built over the next decades
- **Ensuring security of supply, at an affordable price, while mitigating CO2 emissions;**
- **Seizing the opportunity to invest in clean, low-carbon, mitigating technologies**

**(IEA Outlook 2007 & 2008)*



Electricity Sector Solutions



- **Recognising that all forms of electricity generation** (including clean coal, nuclear, renewables and large hydro) and **energy efficiency have a role** in addressing the challenge of meeting electricity demand while mitigating CO2 emissions;
- Reducing the carbon intensity of electricity production, increasing efficiency of existing plants, developing high efficiency new generation, and promoting alternative primary energy resources;
- **Enhancing cooperation with emerging and developing country counterparts** to i) contribute to economic development, increase energy access and support global deployment of mitigating technologies.

The e8: 10 world leading electricity companies from G8 countries, committed to these solutions and to the effective and concrete promotion of sustainable energy development and climate change mitigation worldwide.



2009 e8 Summit Theme

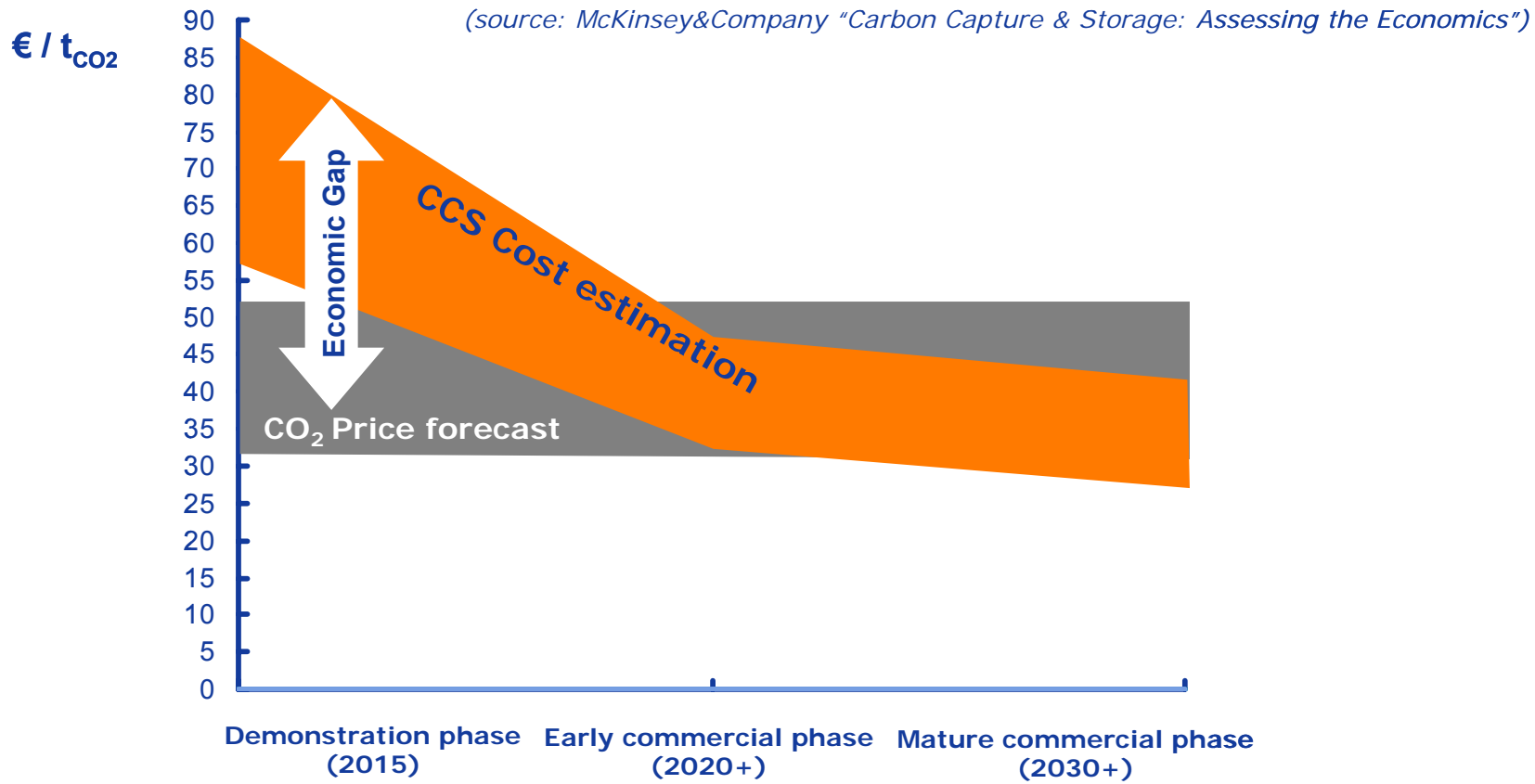
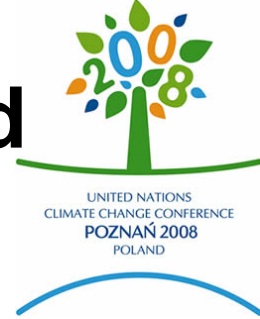


Policy discussion among international electricity sector leaders:

- 2009 Chairman Summit theme: '*The Electricity Sector: A solution to Climate Change*':
 - Focus on e8 members' experience, environmental performance and future commitment for sustainable energy development and climate change mitigation.
 - Development, enhancement and deployment of existing and new mitigating technologies.



Carbon Capture Storage Cost and CO2 Price Development





e8 Commitment and Recommendations for Sustainable Energy Development



- A collective and global effort are needed to stabilize and reduce CO₂ emissions worldwide. Actions should be taken in all countries to address global warming, taking into consideration each country's economic development concerns.
- The e8 is committed to contributing to the deployment of advanced and clean technologies in emerging and developing countries with the objectives to help fulfilling these countries' socio-economic development goals while reducing their CO₂ emissions and mitigating climate change.
- International collaboration is key to the effective deployment and financing of advanced technologies. The e8 strongly supports such initiatives as the Climate Investment Fund, including the Clean Technology Fund (CTF).



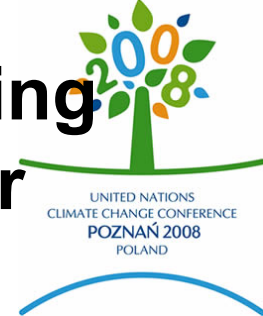
e8 Commitment and Recommendations for Sustainable Energy Development (Cont'd)



- Governments and relevant international institutions have a key role in supporting the establishment of suitable financial mechanisms, regulatory and market frameworks, which will facilitate the effective use of available funds and attract private long-term investment in and transfer of adapted mitigating technologies to emerging and developing countries.
- Institutional, human and technical capacity building need to take place in parallel with and complement any efforts and initiatives put in place to favour technological transfer to developing countries, thus ensuring the sustainability of such a transfer and the effectiveness of all types of investments in new power infrastructure.
- General public awareness and education are essential to guarantee responsible and cost-conscious demand for all types of energy, and necessary for electricity users to understand the reasons behind the rising costs of power generation and transmission.



Deployment of Climate Change Mitigating Technologies in the Electricity Sector



To ensure wide and effective technology implementation, we need:

1. Government commitment to develop consistent and effective policy packages to deploy best available technologies, on both the S and D sides.
2. Enhanced international cooperation to promote technology diffusion in order to encourage emerging and developing countries to mitigate emissions without jeopardizing growth.
3. A streamlined and enlarged Clean Development Mechanism (CDM), which includes such mitigating technologies as nuclear, large hydro and clean coal.
4. A bottom-up electricity sector approach, closely linked to national Policy and Measures (P&Ms), to complement an international framework towards achieving worldwide emissions reduction.



1. National Energy Policies Are Key



Electricity markets are essentially local, with governments playing a significant role. As a result: national energy policies are key to reducing CO₂ emissions at an affordable cost.

- Stable policies based on a shared and clear long-term vision: **in the power sector, the investment process takes 3 to 15 years and plant lifespans are between 30 and 70 years (up to 100 years for buildings).**
 - Policies adapted to technology maturity timeframes:
 - ✓ Now: to enable massive deployment of available and competitive least emitting technologies on both the demand (labels, norms, standards, prices reflecting total costs including a CO₂ value) and the supply sides (enabling control and command regulation, prices reflecting the total costs of investment and CO₂ value)
 - ✓ Over the next 15-20 years: to promote R&D and demonstration (public private partnership) for next generation technologies (CCS, nuclear Generation 4, Photovoltaic, electric vehicles...)
- With a good design, for effectiveness.



2. International Cooperation for Technology Deployment



- To shape a common long-term sectoral vision: for existing technologies (maturity, best practices, most effective regulatory environment...) as well as future ones.
- To foster expertise sharing and transfer of technologies, as existing and competitive mitigating technologies are still not available in all countries,
 - For mature technologies :
 - With economic instruments: CDM for large hydro, clean coal or nuclear projects, energy efficiency programmes...(sectoral or programmatic CDMs in relation to SDPAMs)
 - With regulatory instruments: remove barriers to technology flows, facilitate foreign investment through joint ventures, reduce tariffs on imported and exported goods for mitigating technologies...
 - For future technologies : collaborative research at international level
- With specific approaches for less developed countries: i.e. deployment of existing and competitive low-CO2 technologies backed by international financial support (MDBs)



3. CDM Improvement



Streamlining and enlarging the CDM, through:

- Streamlining of small project registration process;
 - Including all mitigating technologies (large hydro, nuclear power and clean coal technologies such as CCS);
 - Fast-tracking programmatic CDM enabling rules, closely linked to national SDPAMs*.
- Enhance transfer and deployment of mitigating technologies and technological expertise in emerging and developing countries worldwide.

(*Sustainable Development Policy and Measures)



4. Proposals for the Electricity Sector



- A trans-national sectoral agreement would be difficult to achieve:
 - Large spectrum of technologies, no easy « focal » benchmarks;
 - Company activities and the country energy mixes are shaped by national energy policies.
 - The power sector is more fragmented than other sectors.
- A specific sectoral approach could be explored (sectoral or programmatic CDMs/SDPAMs):
 - Knowledge sharing on technologies and on energy policies and sharing of best practices;
 - Developing of economic instruments (sectoral CDMs), and of policy measures that promote the deployment of the best available technologies;
 - For future technologies, promoting international collaborative research among developed countries and with developing countries.

The e8 electricity companies are involved in many initiatives alongside with governments, international organisations and NGOs on the road to Copenhagen 2009.



THANK YOU

For more information please contact:
e8 General Secretariat

Email: e8generalsecretariat@hydro.qc.ca

Tel: +1-514-392-8876

Fax: +1-514-392-8900

www.e8.org