

Panel Speech

(885 words = 8 minutes)

Technology clearly has a key role to play in our fight against climate change.

What is more, new climate-friendly technologies bring many other advantages: higher energy efficiency, greater energy security, better air quality.

While no single technology alone can solve the climate problem, a wide range of technological options is already available. They encompass renewable energy sources; new insulation techniques and materials that can reduce the energy intensity of buildings by 90%; carbon capture and storage techniques. These technologies are at different stages of development and use.

I see three things that we policymakers should now do.

Firstly, we should reward the application of climate-friendly technologies. By establishing a consistent system of incentives, we will create demand for them.

Secondly, we have to invest more in R&D to bring down the costs of these technologies and to develop new ones for the future.

Thirdly, we need to ensure their worldwide dissemination through mechanisms such as CDM, international cooperation in R&D and demonstration projects, but also through investment frameworks that allow the private sector to come into play.

With regard to the system of incentives, in recent years the EU and its Member States have developed a number of measures to get new technologies to the market - measures that utilise market forces and provide for flexibility.

One prime example is the EU Emissions Trading Scheme, which will be up and running in 15 days. EU governments have set limits on emissions from some 12,000 energy intensive installations across the EU by allocating emission allowances to them – one allowance per ton of CO₂.

Putting a price on CO₂ means that there is an incentive for companies to reduce emissions by investing in new technologies. For each ton of CO₂ below the limit, a company gains an allowance that it can sell on the

market, to companies that have difficulties to stay within the allocated allowances.

Another example: In recent years, EU Member States have established support schemes for renewable energies, such as feed-in tariffs, renewable portfolio standards and green certificates. Today, European companies enjoy a 90% market share for wind power equipment, which is worth 8 billion € per year and growing at 30% each year. Wind energy becomes cheaper by the day.

A last example: The European Commission negotiated voluntary agreements with the car industry to limit CO₂ emissions from passenger cars. The car manufacturers committed themselves to reducing per-kilometre CO₂ emissions from new passenger cars by some 25% between the base year 1995 and 2009. Today, they have

achieved a reduction of 13%. The challenge is to see whether the industry will deliver on the remaining half of its commitment. If not – legislative measures remain a possibility.

In the energy field, the International Energy Agency points out that huge energy investment decisions need to be taken up to 2030. The right incentives would ensure that the decisions favour climate-friendly technologies.

And while putting in place such incentives, we simultaneously have to get rid of distorting subsidies that favour carbon-heavy technologies.

However, measures increasing the demand for climate-friendly technologies alone are not enough. In parallel, a strong policy for R&D, including pilot schemes and demonstration projects, is needed to improve the efficiency of low-carbon technologies and to reduce their costs.

Indeed, the two complementary policy approaches of technology push through R&D and market pull through incentives, if implemented side by side, promise to deliver the most cost-effective solutions.

R&D is a field that lends itself to international cooperation to ensure the wide dissemination of new technologies.

Kyoto's Clean Development Mechanism will lead to the transfer of advanced technologies to developing countries, and Joint Implementation will do the same for the industrialised countries. EU Member States have already made plans to procure more than ⁵600 million tonnes of CO₂ during the first commitment period. CDM ~~of private and public nature~~ and JI are instruments worth several billion euros. The EU's Emissions Trading Scheme allows for both mechanisms and this will give them an additional boost.

I believe that we must do more here. There must be more cooperation, such as under the EU's Energy Efficiency Project with China, including cooperation between business communities. International Financial Institutions must consider climate issues in their day-to-day funding decisions. And developing countries must offer an environment that is conducive to climate-

friendly investments to attract the private sector – after all, it is the private sector that owns technologies.

Adaptation to climate change too will require technological innovations. In order to create an adequate framework promoting adaptation technologies, we must know the effects climate change will have in the different regions of this world. We also need to know to which extent we will be able to mitigate climate change.

To conclude: Our task should be to establish consistent systems of incentives that promote the actual use of climate-friendly technologies. We should also strengthen R&D to optimise existing technologies and to develop future ones, and we should ensure their worldwide diffusion. I look forward to hearing your views.

Thank you for your attention.

Defensive Points

Panel Discussion: Technology and Climate Change
Buenos Aires, 16 December 2004, 15.00 – 18.00

Technology transfer

(Representatives from developing countries might complain that they do not benefit from new technologies developed in the industrialised world)

- The EU takes technology transfer and support to developing countries very seriously.
- Designing the EU Emissions Trading Scheme, which will start in 15 days, we have made sure that it is linked to the Clean Development Mechanism, so that developing countries benefit from advanced technologies.
 - The European Investment Bank (EIB) has set aside €500 million to assist European companies in reducing the emissions from their plants and investing in CDM as well as Joint Implementation.
 - The 25 Member States have indicated that they intend to procure 500-600 million tonnes of CO₂ credits through CDM and JI for the period 2008-2012.
- Following up on the 2001 Bonn Declaration, EU Member States will, from next year onward, assist developing

countries with annually \$369 million in addressing climate change and its effects.

- The EU has recently adopted an action plan on integrating climate change in development cooperation. Its priorities include support for adaptation and mitigation and capacity development.
- The Commission has proposed to fund the EU's Energy Initiative from Johannesburg, which aims to provide poor people in Africa, the Caribbean and the Pacific with access to sustainable energy, with €250 million.
- At the World Summit on Sustainable Development in Johannesburg two years ago, we launched the "Johannesburg Renewable Energy Coalition" – a coalition of 88 like-minded countries, including many developing countries. They share the understanding that ambitious and concrete renewable energy targets, be it at national or regional levels, are essential to guide investments and develop markets. The Secretariat is hosted by the Commission.

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Nuclear energy

(The issue of nuclear energy as a solution to the climate problem)

- The problems surrounding nuclear energy relate to radioactive waste, nuclear safety, and the proliferation of nuclear technology.
- Despite almost 50 years of research, in many cases heavily sponsored by public authorities, we have not found a final solution for the waste problem. It is not because climate change is crucial that we can ignore these issues.
- These issues are the fundamental reason in certain countries why there is little public acceptance for new capacity and why it is not necessarily regarded as being part of a sustainable energy future.
- Some MS strongly believe that other solutions, such as applying energy efficiency across the economy, a shift to low carbon fuels, renewable energy and carbon capture and storage can provide the world with the energy services it needs and enable a carbon compatible pathway.

Defensive Points

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Investments in technology will solve the climate problem

(This is the US view. Annually, the US invests around US\$ 3 billion in R&D and deployment programmes, plus another \$2 billion in science to find out more about climate change, particularly if it's really human-induced. Its "goal" is to reduce energy intensity per GDP - not absolute emissions, which are growing.)

- This is a strategy of waiting. It does not appear to be sound. Climate change is happening, and important policy levers may be missed if we rely on it. Research & development is by definition a risky business whose outcome is uncertain. The global community must take responsibility and take into account the precautionary principle.
- The presumption that R&D will lead to break-through technologies that will conquer the market in a very short time frame is flawed. This happens very rarely. Such a pure technology push approach is an outdated view on how technological innovation materialises in practice and penetrates the market place. Studies from the IEA (Creating markets for energy technologies) and of the Pew Center (Induced technological change and climate policy) show the importance of "learning by doing". It is the gradual introduction of new technologies (involving various stages:

R&D + demonstration + hitting niche markets + cost reduction) through “learning by doing” and investment build-up that are responsible for lowering costs and making new technologies competitive. A good example is the hybrid car.

- That is why the EU is advocating the dual “technology push – market pull” approach.
- In addition, if you want to engage the private sector in R&D, you must make sure that there is a market for new technologies.
- Many low-carbon technologies already exist, and the issue is to ensure dissemination beyond a critical mass, which requires a framework of incentives. As a consequence, economies of scale will be realised, bringing down the production costs.
- For low-carbon technologies to penetrate the market, they need to be rewarded for their climate change benefits. That is why emissions trading and the flexible mechanisms (Joint implementation and the Clean Development Mechanism) are key instruments.

**Speech, defensive points and background for Commissioner Dimas
Panellist at Ministerial Panel Discussion: Technology and Climate
Change**

Buenos Aires, Thursday, 16 December 2004, 15.00 – 18.00

Third revised version, 11 Dec.

Steering Brief: The Commissioner has been invited to be the panellist representing the EU during the panel discussion "Technology and Climate Change." The moderator will be Eduardo Campos, the Brazilian Minister of Science and Technology. The other five panellists are:

- Mr Mass Taal, Gambia
- Mr Dato S'Sothinathan, Deputy Minister Natural Resources and the Environment, Malaysia
- Mr Knut Arild Hareide, Minister of the Environment, Norway
- Ms Rejoice T. Mabudafhasi, Deputy Minister of the Department of Environmental Affairs and Tourism, South Africa
- Mr Moritz Leuenberger, Federal Councillor, Head of the Federal Department of Environment, Transport, Energy and Communications, Switzerland

The moderator and the panellists will be seated at the podium in the front of the plenary room during the discussion, which is scheduled to last three hours. A seat for one person behind each panelist will be available (Jos Delbeke or Artur Runge-Metzger to provide technical advise if needed).

Minister Campos, the moderator, will open the panel and introduce the panel members. He will then initiate the discussion with introductory remarks on the topic. The floor will then be given to the panel members, who will be invited to make brief remarks on the topic (about 5 minutes per panel member). Following this, the moderator will open the discussion for ministers and other heads of delegations to comment on what was said (another 3 minutes per speaker).

The moderator may call on panelists to questions or comments. The moderator will also provide an "impressionistic wrap-up", highlighting some of the main issues raised, at the end of the discussion.

At the plenary meeting on Friday morning, 17 Dec., the moderators of the four Panel Discussions will provide brief reports. The COP President will use the reports to produce a President's summary on the panel discussions for inclusion in the COP report. The summary will not represent agreed text.