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## Energy and climate: what diplomatic challenges?

In line with the spirit of our conference, this presentation is intended to shed light on the new worldwide governance system to respond to the challenges of climate change by providing a business point of view and in particular that of an energy producer and provider. The presentation includes a review of energy and economic parameters that should shape a future international climate agreement.

1)The relationship between the climate and energy

The world's energy needs will increase rapidly in the coming decades—doubling by 2050—especially in large emerging economies. Energy-related carbon dioxide emissions represent a little more than half of the greenhouse gas emissions caused by human activities. They are produced by fossil fuels (coal, oil and gas), which today account for a vast majority of the energy supply, a situation that will take a very long time to change.

Three conclusions can be drawn from these observations:

The climate challenge and the energy challenge must be dealt with concurrently.

There is no silver bullet to respond to these challenges; a broad array of solutions will be needed. As a result, we must not think in terms of substitution (i.e. replacing fossil energy by renewable energy) but rather in terms of complementary solutions and technical advances. This will involve not only determined efforts to develop new energy sources but also a focus on finding ways of using fossil energy that emit fewer greenhouse gases.

§ Lastly, forceful action must be taken to improve energy efficiency, which means providing a long-term solution to limiting greenhouse gas emissions.

2) Issues to be included in a new international climate agreement

Businesses will serve as key facilitators in implementing the action plans that would result from a future international agreement. Because of their skills and expertise, entreprises have a legitimate role to underline issues they feel are essential:

Undertaking an ambitious technology research program

Radically changing the way energy is produced and used today represents a major challenge that requires a fullfledged technological revolution. This transformation must give priority to paths that are already known to offer potential and savings, without abandoning long-term research to find breakthrough solutions. Moreover, it should focus as much on the energy supply as on the ways in which energy is used. Governments and businesses both have a responsibility to support this action and must organize their resources accordingly.

§ Ensuring that market mechanisms can help to resolve the climate challenge

Applying a price to carbon dioxide is justified given the negative externality of greenhouse gas emissions. But for this price signal to be effective, it needs to be relatively stable and follow a predictable trajectory. It must have a consistent impact on all economic and industrial players as well as consumers. Lastly, in a global marketplace, it must be extendable to all economies around the world.

Cap and trade mechanisms can provide a response but they are certainly not the only solution and their terms must be very carefully chosen and balanced to prevent any significant adverse effects.



Avoiding distortions in international competition

This aspect was not covered properly by the Kyoto protocol and is still considerably underestimated in the current plan put forward by the European Commission.

The question of carbon leakage, however, is very important and a solution needs to be found through a future international agreement. It would be highly irregular if any party were to derive competitive advantage by refusing to participate actively in a worldwide climate agreement.

Lastly, all international players must be moving in the same direction.

The climate is a global public good but the temptation to compete and the "free rider" problem must be overcome.

The challenge in Copenhagen is to obtain a joint action agreement from all large greenhouse gas-emitting nations and in particular those that do not apply the Kyoto protocol at present.

India and China have now entered into the energy-intensive phase of their development and this fact must not be ignored. It is entirely normal that developed countries set the example.

At the international level, the Kyoto flexibility mechanisms must be maintained even if they need to be amended in response to criticisms that are being leveled against them. The new path of international sectoral agreements should be explored but tangible results will take a long time.

The idea of an international fund to promote technologies that combat climate change should be more clearly defined and could be included in a new international agreement.

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Climate and energy issues represent major challenges. Awareness is growing of the need for international action but we must act intelligently.

The European Union's plan has some interesting aspects but in its current version it is not adequately balanced among the three challenges—the climate, the energy, and the economic development—and therefore is unlikely to serve as a credible model in international discussions.

The United States and China are studying other approaches and their proposals will have to be taken into account.

Companies for their part want to help find solutions to the problems but national governments must establish frameworks that encourage them to do so.