World Petroleum Congress
Sustainability Luncheon
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Address by Yvo de Boer, Executive Secretary
United Nations Framework Convention on Climate Change

Distinguishes guests,

I am very pleased to address you on climate change action in the context of energy and the environment.

We meet here at a very complex moment in history

1. Climate change is unequivocal and impacts are already being felt. As climate change worsens, impacts will increasingly harm economic growth in all sectors, keep the poorest locked in the poverty trap and threaten livelihoods and lives.

2. At the same time, increased access to energy and its use are key to economic growth and poverty eradication. Energy demand is steadily increasing and will continue to do so, not least due to economic growth and poverty eradication measures in developing countries.

3. But energy generation and use are of course heavily fossil fuel based and are the largest contributors to CO2 concentrations in the atmosphere. This further drives climate change.

Currently CO2 concentrations in the atmosphere are around 384 ppm compared to pre-industrial levels of 278ppm. The latest Shell scenarios on energy supply and demand project that we are headed for a long-term CO2 level well above 550ppm. According to the 2007 reports of the Intergovernmental Panel on Climate Change (IPCC), such a level corresponds to a temperature rise of between 3C and 4C with projected devastating consequences including global sea-level rise and water shortages for many millions of people.

The IPCC's most stringent scenario would stabilize concentration levels at around 400ppm. This would correspond to temperature increases of around 2-2.4C above pre-industrial levels. This scenario would need to see emissions peak in the next **10-15 years and then decline by 25-40% over 1990** levels by 2020. By 2050, there needs to be an overall reduction of 50% over 2000 levels.

Climate change science has rung the alarm bells

Never before has humanity been so profoundly aware of climate change, of its causes and of the fact that emissions must urgently be reduced to secure our survival. The world is very aware of the "what" and the "why". What is needed now is a concerted focus on the "how".

- How do we reduce emissions without stifling economic growth?
  and
- How do we provide large-scale assistance to help people cope with the consequences of climate change, in other words to help them adapt to climate change?

Last year saw a remarkable build-up of political awareness for climate change, which culminated in the adoption of the Bali Road Map at the UN Climate Change Conference held in December last year. The Bali Road Map refers to a two-year negotiating process, which includes strengthening on-going work under the UN Framework Convention on Climate Change and its Kyoto Protocol.

Most importantly, the negotiations also include enhanced action on four key building blocks for a strengthened future response to climate change: mitigation, - reducing emissions in both industrialised and developing countries, but under different sets of conditions -, adaptation, technology and finance.

The negotiating process is set to conclude in an agreed outcome on an enhanced global response to climate change in Copenhagen in 2009. The aim of the negotiations up to 2009 needs to be nothing less than **an agreed outcome in Copenhagen that matches up to the IPCC's most stringent scenario.**

Negotiations are taking place in regular and additional sessions due to the tight deadline. Currently, governments are in the process of getting a much clearer understanding of how they want to deal with each of the building blocks and how the language of a Copenhagen agreement could reflect this.

Although all governments are committed to an agreed outcome in Copenhagen, negotiations are complex and difficult, because ultimately, they revolve around crucial economic interests. The major economies are deeply engaged, but so are vulnerable countries with much to lose from climate change impacts.

Business has been calling for long-term policy certainty, which would guide their investments over the coming years. At the UN Climate Change Talks in Bangkok in March this year, Parties agreed that the Kyoto Protocol's market mechanisms, including emissions trading and the Clean Development Mechanism, would continue beyond 2012. This gives a first indication as to longer-term policy.

I cannot say too much more about long-term certainty at this stage. But you can be certain that there will be a long-term international agreement. And you can be certain that it will constrain carbon. It will not be an agreement that fights oil, but it will fight emissions.

What does this mean for the petroleum industry?

Addressing you on climate change is important because fossil fuel combustion, especially petroleum, is by far the largest contributor to total greenhouse gas emissions. **The**

world cannot solve climate change without the petroleum sector. Your leadership is required!

Dealing with climate change requires a substantially new manner of thinking and changing course. The world's economic development must shift to a low-emissions path. For this, both governments and business hold the key:

- Governments because they set the policy framework to implement such a significant change. This is currently happening in the two-year negotiating process under the Climate Change Convention;
- and business holds the key since it spurs innovation, implements technology and holds an important part of the investment capital to deal with climate change.

Under the International Energy Agency's reference and mitigation scenarios in the World Energy Outlook 2007, fossil fuels continue to play the dominant role in the world's primary energy supply. Even under the mitigation scenario, demand for all fossil fuels continues to grow. Fossil fuels are projected to make up 76% of primary energy demand in 2030.

The mitigation scenario sees a 4% decline in the demand for oil in 2030, mostly due to increased fuel efficiency and alternative fuels. The recent sharp rise in oil prices may further influence demand in the short term, though the long-term development is in no way clear. According to 2007 projections, demand for oil is expected to grow by a total of 1.3% in 2030.

By 2050, world energy demand is expected to double, with renewable energies constituting only one third of the energy mix. The way in which the remaining two-thirds of the demand are met will determine whether climate change will remain manageable.

It is crucial that the energy industry is greened in a way that is workable for you, but especially for the climate. This involves transitioning the industry onto a low-emissions pathway that continues to supply energy in industrialised nations and meets energy demand in developing nations.

You have an opportunity to make history by being part of a global solution

The IPCC has identified carbon dioxide capture and storage (CCS) as the most promising technology for the rapid reduction of global emissions: up to 55% by 2100. As part of a portfolio of solutions, CCS is an important bridge to a more sustainable energy system, and therefore a key solution for combating climate change. CCS has matured and is now ready for demonstration at scale. We need a major endeavour to accelerate large-scale CCS. It is you, the petroleum industry with its geology experts, who need to further develop and refine this technology and - crucially - to implement it at scale.

Governments are currently discussing the possibility of including CCS in the Kyoto Protocol's Clean Development Mechanism. This would help close the cost gap between energy production with and without CCS. However, the outcome of these discussions is very unsure. In the mean time, the current oil prices may generate the resources for investment possibilities for CCS.

Overall, the petroleum industry has an important role to play in investing in research and development of clean technologies. Such efforts will yield win-win solutions, both for the environment and the global economy.

With appropriate technology development and deployment and non-fuel uses, essential fossil fuels can and will continue to play their role. Non-fuel uses include the production of lubricants, sulphur, plastics or paraffin wax.

Further options that could make the oil and gas industry part of the solution could include:

- Scaled-up research into clean fossil fuel production.
- Further deployment and dissemination of CCS with EOR, including by using existing sources of carbon dioxide such as ammonia plants and natural gas processing facilities;
- Reducing emissions from oil based power plants by transforming them into cogeneration plants (combined heat and power);
- Further disseminating flare reduction technologies;
- Energy efficiency improvements, including enhancing process efficiency and improving efficiency of equipment;

These are constructive options that would allow you to use the efforts to address climate change to drive a global transformation away from carbon-based economic development. I encourage the petroleum industry to contribute to climate change abatement and to play an important role in history to drive forward sound solutions to a global problem.

Progress lies not in enhancing what is, but in advancing toward what will be (Khalil Gibran)

Ultimately, the world will advance towards a low-emissions future and oil companies need to move forward with the times. **Back-tracking now into climate unfriendly options and operations will threaten your economic position and your profits in the future.**

You need to transform yourselves into modern energy companies, providing climate-friendly energy. Future energy systems must be designed and deployed with environmental constraints that were absent from the minds of the inventors of the steam engine and internal combustion engines.

In conclusion…

Climate change is a societal responsibility with the solution to be led by government. All sectors of the economy must contribute to that solution. A suite of climate change policies can support a turn-around in the energy sector. In tandem with that, your corporate responsibility needs to focus on implementing CCS and other climate-friendly technologies, as well as providing climate-friendly, sustainable energy.

You are the industry that powers economic growth. Your insights for a Copenhagen agreement in 2009 that offers economic opportunities for greening the energy sector are

important. Governments need to craft an agreement that also makes sense from a business point of view.

The negotiating process needs your active and enthusiastic engagement!

Thank you.

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