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How Can the Natural Gas Industry Support the Quest for a Truly Sustainable Energy System

The global energy outlook is battling between the need to secure the energy supply of a growing market - particularly in the developing countries - and the commitment to mitigate the effects on climate change derived from the intensive use of fossil fuels (Strategic Statement opening paragraph, IGU 2009)

Buenos Aires, 7th October 2009. The Strategic Panel on "Natural Gas and the Sustainability Question: How Many Answers Can We Provide?" opened with the presentation of the report prepared by the IGU during the 2006-2009 triennium under the title "Natural Gas – Unlocking the Low Carbon Future". The presentation made by Ms. Trude Sundset, Vice President of Environment & Climate in StatoilHydro, presented the dilemma posed by the opposing needs of securing an affordable energy supply, and that of mitigating the effects on climate change, knowing that nearly 70 percent of all CO_2-emissions are energy-related.

"Nobody argues that natural gas is the cleanest and most efficient energy source, but we need to define what role the natural gas industry should – and could – play to help develop a sustainable energy system in a realistic way", commented Juan Puertas, Chairman of Programme Committee A (PGCA) which deals with Sustainable Development in IGU. Mr. Puertas also moderated the panel and his statement highlighted the focus of the report and that of the panel.

The purpose of this report is to illustrate how natural gas – though a hydrocarbon fuel itself – is becoming an equally important part of the climate-change solution, by reducing the greenhouse gas emissions by replacing higher CO_2-emitting fuels in the market place, and through the use of very efficient technology (e.g. gas turbines, fuel cells).

Depending on the quality of fuel, the combustion of natural gas results in at least 25-30% less CO_2 than oil and at least 40-50% less than coal.

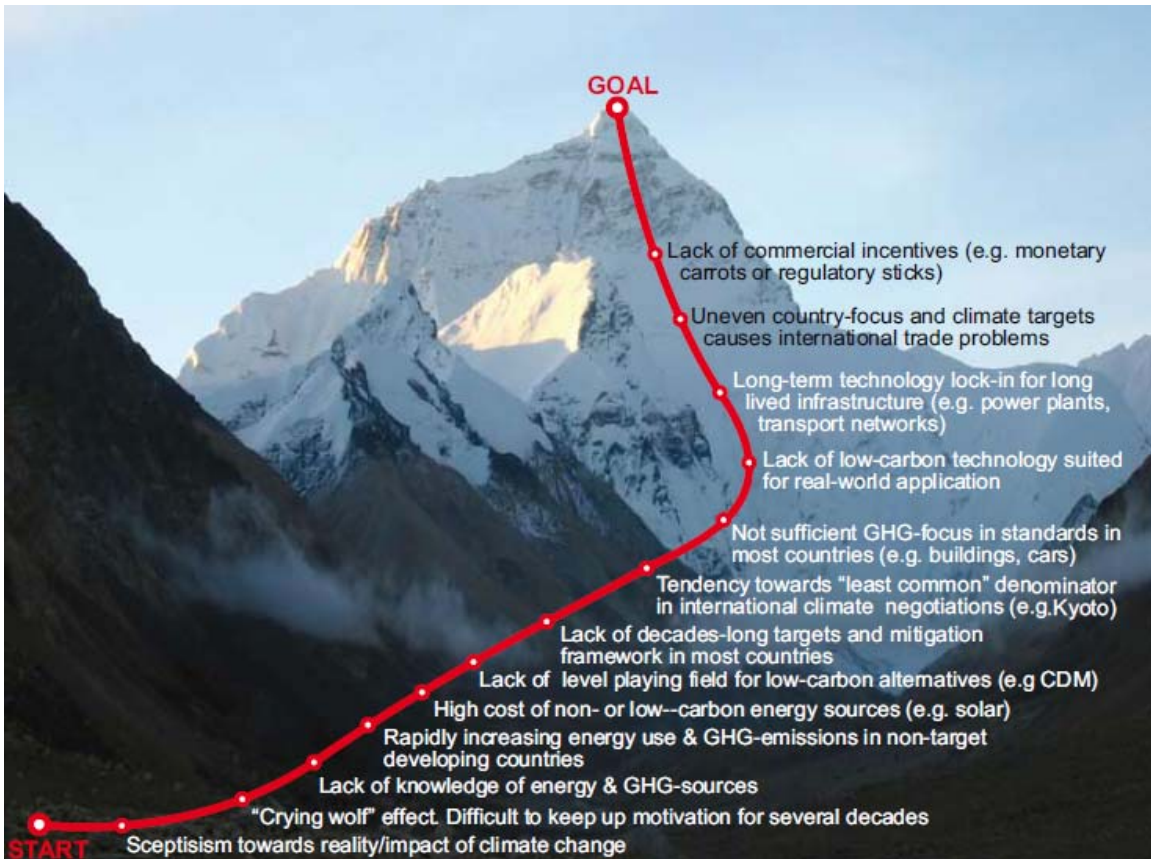
Today 41% of the emissions are related to power generation and if we could switch all the world's

coal fired power plants to modern natural gas fired combined cycle plants, we would experience a reduction of emissions by over 5 $GtCO_2$/yr. This reduction is 1/5of global CO_2-emissions.

Natural gas also shows a huge combination potential with renewables, with the mix of bio-methane in the gas grids, and eventually hydrogen, as the NaturalHy experience in Europe is strongly hinting.

Furthermore, the gas business is also the pioneering industry in the area of CO_2-capture and –storage (CCS) that is expected to be an important technology for mitigating climate change.

However, even with such eloquent arguments, the changes to a more environmentally-friendly energy system is not easy an will not be fast. The following diagram illustrated the main challenges faced by the global society, though these vary from region to region:



But several motivating factors can strongly alter the rate of change. The report has classified them in "carrots" and "sticks" since both are needed and complement each other across sectors and cultures. The effectiveness of these varies, from what is referred to as the "empty declarations" to the higher-impact ones like carbon taxation and frameworks that make emission-reduction and mitigation commercial sense.

But in the long term it is information and – more importantly – education as from the lower grade in schools that will prove to be the most effective motivator of all.

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