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**Will fossil fuels continue to satisfy the energy
needs of the future?**

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Ladies and gentlemen,

I would like to thank the organizers of today's event for giving me the opportunity to talk to such a distinguished gathering.

I have been requested to share my thoughts on the question: Will fossil fuels continue to satisfy the energy needs of the future? I would like to begin by stating some basic, universally acknowledged facts about fossil fuels.

First, there is a general consensus amongst all authorities in energy matters that world energy use is set to rise up to and beyond 2030.

Second, there is also a consensus that fossil fuel will continue to provide most of the world's energy needs for the foreseeable future.

Third, there is an increasing concern about energy security from both energy importing and exporting countries.

Fourth, there is an acknowledgement of the need to address poverty at the global level through sustainable development initiatives

And last but not the least, is the environmental concern which in recent times, has assumed a prominent position in any discussion on energy matters

Ladies and gentlemen, let me now address these issues in some detail.

World Energy use: By all accounts, world energy use is set to rise up to 2030 and perhaps beyond. This development is informed by increasing population and economic growth in developing countries. In OPEC's

reference case, world energy use is set to increase by 42% from 2007 to 2030, with the transportation sector accounting for 60% of the total increase. It is important to note that OPEC's findings are not different from those of other respectable energy institutions.

Fossil fuel will continue to provide most of the world's energy needs for the foreseeable future, accounting for more than 80% of the world's total energy use. Oil, for example, is the most economic fuel for transportation, which accounts for the bulk of energy demand growth.

While acknowledging the concerted efforts across the world, especially in the developed countries, to diversify energy sources, including the encouragement of the development of renewable and other alternative sources of energy, the fact is that there is, at the moment, and for the foreseeable future, no viable alternative to fossil fuels. This is not to refute the obvious fact that the use of renewable energies is also set to grow. But the important thing about the growth in renewable energy is that the base is very low. Similarly, other sources like nuclear and hydro will make their own contribution. With regard to nuclear energy, we should be ever alert to their safety risks and intensive capital requirements.

The third issue is the concern about energy security, which is janus-faced. To oil consumers, anxiety about energy security hinges on fears about possible non-supply or interruption in energy supply. To producers, on the other hand, energy security refers to the uncertainties emanating from consumer governments' policies and pronouncements of key leaders regarding energy independence. The interesting thing about energy security is that neither producers nor consumers doubt the availability of oil

in the quantities required to meet global demand for the foreseeable future. Indeed, estimates of global ultimately recoverable reserves for conventional oil continues to grow, thanks to developments in advanced exploration, drilling and enhanced recovery technologies.

Indeed, US Geological Survey's estimates of ultimately recoverable reserves have practically doubled since the early 1980s, from just 1,700 billion barrels to more than 3,300 billion barrels, while cumulative production during this period has been less than one-third of this increase. Reserves are also expected to expand for years to come, through new discoveries, reserve growth in existing fields and the continued application of new and advanced technologies.

On top of all this, there is a vast resource base of non-conventional oil to explore and develop. Similarly, the expanding supply of NGLs must also be taken into account, since they are expected to play an increasing role in the overall global liquid supply and demand picture.

The real issue is about how to find, produce and bring these vast reserves to the market as and when needed. And this brings us to the question of investment. Investment is one of the key challenges facing the oil industry today. It is critical to meeting future growth in oil demand. Our industry is capital intensive and also has a long gestation period. It takes between ten to fifteen years to find, produce and bring oil to the market. Given the acknowledged fact of fossil fuels continued dominance of the global energy mix for the foreseeable future, it is critical that adequate and timely investments are made to ensure that oil is delivered when it is needed. This is one of the key objectives of OPEC: to ensure efficient and

regular supply of petroleum to consuming countries. This objective we have diligently pursued in our nearly 50 years of existence. Our Member Countries are making huge investments in production capacity expansion, in order to ensure regular supply to consumers at all times. These investments are being made at the expense of other critical needs of our people, including provision of education, health care and basic infrastructure. We are producing to ensure that there is ample capacity to meet future demand increase. Yet, the signals coming from the consuming countries' governments about oil demand in the future give us a lot of concern. Policies are introduced that aim to curtail the use of oil and promote the use of other sources of energy.

Ladies and gentlemen, let me make it abundantly clear that OPEC is not against the development of other sources of energy in order to diversify global energy sources. It is in everyones' interest to broaden the sources of global energy supply. However, what we disapprove is the discriminatory energy policies being introduced by some consuming countries, especially when it is clear to all that the targets of these policies cannot realistically be met, and even if they are met can only make a modest contribution to overall energy supply. To ensure regular supply at all times, we need two conditions: the first is greater certainty about future demand for our oil. That is what will encourage our Member Countries to make the necessary investments to deliver the oil. Second, is to have oil price at levels that will sustain continuous investment in the industry. With these two conditions met, the industry will attract the required capital investments as well as the needed human capital.

The question of global poverty and sustainable development must be addressed before it gets out of hand. Fortunately this has been recognized at the highest level, leading to the establishment of The United Nations Commission on Sustainable Development. This Commission has described access to energy as crucial for human activity as well as for economic and social development.

The UNSCD estimates that more than a third of the world's population live with no access to modern energy services, an estimated 2.5 billion people in developing countries rely on biomass for their cooking and heating needs, while about 1.6 billion live with no access to electricity. This is one of the greatest impediments to social and economic progress and stalls the quest for the achievement of the United Nations Millennium Development Goals. We cannot be speaking about a commitment to alleviating global poverty, and at the same time failing to provide the enabling environment for the development and provision of the most cost efficient energy for the people. Finally, let me address the environmental question.

There is today increasing concern, and rightly so, about climate change. Many policies are regularly being introduced to address this concern, especially in the developed countries. Incidentally, most of these policies are directed at fossil fuel use. The argument is that fossil fuels contribute to climate change and so any effort to deal with the later problem must aim at eliminating or reducing the use of fossil fuels. The logic is that the two are mutually exclusive. But how correct is this logic? While not denying the effect of fossil fuel use on climate change, although the real extent is yet to be established, we have to look at the issue from a broader

perspective. Should the vast majority of the people of this earth, as noted earlier, be left in abject poverty, by denying them access to affordable energy, because the use of such energy contributes to climate change? Have we reflected about the number of people in many poor countries who die daily from lack of access to affordable energy?

At OPEC we believe that there is a win-win solution. Fortunately, this is gradually gaining wide acceptance. Technology can make all the difference. It can make fossil fuel use more environmentally friendly. In this respect, I am speaking about the technology of Carbon Capture and Storage, CCS.

For oil to continue to support sustainable global economic growth, we must work together to address the challenges that include demands of a more carbon constrained world. Some of our Member Countries are already pushing the boundaries in this respect. Algeria, for example, in tandem with international oil companies, operates one of the largest and most innovative carbon capture and storage schemes (CCS) in the world, and is at the forefront of CCS research and development. This pioneering technology could significantly reduce greenhouse gas emissions from conventional fossil fuels. More must be done on this front, and our Member Countries will strive to make continued progress.

However, developed countries should take the lead in global efforts to mitigate greenhouse gas emissions, given their historical responsibility. They have comparative technological and financial advantages over other nations in this area. More action by developed countries would therefore be both equitable and in accord with the United Nations' principles of common

but differentiated responsibilities and respective capabilities, recognized at the Rio Summit and under the UN Framework Convention on Climate Change.

The future needs to be about enhancing the planet for the whole of humankind.

To conclude, ladies and gentlemen, let me reiterate that global energy demand will rise in the foreseeable future. Secondly, fossil fuels will continue to provide the bulk of the world's energy needs. Thirdly, producers are as concerned about security of demand as consumers are about security of supply. Fourth, we all have a responsibility to work to achieve the UN MDGs as failure could be catastrophic for humankind. And finally, the technology exists for fossil fuels to be made more environmentally friendly. All that is required is for those with the technology and capital to further develop it for the good of mankind.

Thank you for your kind attention.

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