

Mr. Jorma Olillia

Thank you Mr. Chairman, ladies and gentlemen. I really am honored to address this esteemed audience. I will indeed concentrate on my new association with the energy, oil, and gas industry because I think some of the burning issues are being highlighted within the realm of that industry—the issues that mankind is facing in terms of sustainable development, going forward. Greenhouse gas emissions and climate change have been in the consciousness of professionals like the IIASA community for a long time. In fact, for decades. It was however, in 1999–2000 when some of the major energy companies, including Shell, did establish the view, as a basis for their actions, that climate change and global warming are indeed an issue and that this is a phenomenon caused by human actions. The rest of the corporate world mostly, has followed since after the pioneers 7 or 8 years ago. Since then, the corporate sector has been part of a dialog on how to tackle these issues. This has to be the case, as the corporate sector is indeed part of the solution in going forward. We know that human behavior in how we use energy is crucial in how we tackle the issue of CO₂ emissions in the future. We are indeed today facing an energy challenge that can be expressed in terms of three hard truths: however we look at it, I think this is how I would call it – three hard truths.

The first hard truth is that global demand for primary energy is not just growing but that demand growth is accelerating. The main causes are population growth from 6 to more than 9 billion people worldwide by 2050 and higher levels of prosperity, with China and India in particular entering the energy intensive phase of their development. Energy use in 2050 may be twice as high as it is today or higher still.

The second hard truth is that the growth rate of supplies of easy oil will struggle to keep up with accelerating demand. Just when energy demand is surging, many oil provinces are going into decline and there are other issues affecting the situation; even if we have seen a surge in oil price, we have not seen an increase in demand as a textbook solution would warrant happening.

The third hard truth is that continued fossil fuel dominance in combination with a disproportionately high use of coal will cause higher CO₂ emission, possibly to levels scientists consider irresponsible. It's a pretty grim picture, and if you want to put couple of numbers, I know that these IIASA folks like to have a couple of numbers, so what does it all mean – these three hard truths.

I would dare describe it in the following way –today, out of the energy that is being generated globally, 80% is being produced by fossil fuels, including coal. It is forecast by all the independent scientists as well as the energy companies themselves that it is highly likely that in 2030 about the same amount, 75–80% or so of the energy generated will continue to be generated by fossil fuels, including coal, in fact the portion of coal increases. So how do we then look at what to do, how to tackle this pretty grim picture?

Let me look at some of the solution pathways instead of falling into pessimism. Just to list a few – first of all and most obvious solution is obviously energy efficiency, which

has been touched upon earlier here. Comprising two components - energy conservation and energy performance. That is clearly the first one. Second solution that we have to look at is CO₂ capture and sequestration. It is a necessity; yes, not all of the environmentalists think that this is a real solution but it is something that we all need to look at necessarily in order to get a better outcome than what's in our hands as of today. The third solution is obviously coming from the area of alternative energy sources. Renewable energies: everything, wind, solar, hydrogen, including nuclear, because we have a very complex situation on our hands. In all of these areas we need a true public-private partnership in creating solutions, based on common goal setting, globally. The market-based solutions lead to all players, particularly the private sector, the corporate sector investing into research and development and into implementing practical solutions that will long-term mitigate the CO₂ emissions and solve the problem we all know is a severe one.

So how can we go about it in practice, in getting there? The first step that we need is the creation of a pricing mechanism that will lead to carbon having a price. Through taxation, emissions trading, or some form of regulation, we can design a solution that everybody involved, producers and consumers alike, will face the full social cost of their actions in consuming energy. Secondly, the second element of policy going forward needs to be an implementation of a technology policy that is effective, that will drive the development and deployment at scale of low carbon and high efficiency products. And thirdly, we do need different actions, also monetary incentives to remove barriers to energy efficiency and conservation. We need to inform, educate, and persuade individuals about what they need to do and can do to respond to the prospect of climate change. These actions that are needed are fundamental and difficult to decide up on and implement. That we all know. What is crucial is that this needs to be a global effort. Also, we need both public and private sector involved, as I noted. Even more, it seems clear that what we need – and there's a real paradox here – we need public sector actions, i.e. forms of regulation, in order to make way for market mechanisms to work their way towards the required solutions. This is the only way how we can change human behavior in the scale needed.

The UN negotiations to be held shortly in Bali are crucial in this respect. We look forward to a global state of will to emerge with concrete action plans. The corporate sector, the private sector, is ready on this. We are working on many forums, including the World Business Council of Sustainable Development. We are liaising with governments and international organizations in order to bring solutions and solution alternatives forward, and we are ready to act in the face of this challenge. It's easy to fall into pessimism but I personally am an optimist. I've seen what technology can do. We know the problem, we have technological solutions on their way; even if more needs to be done, sustainable solutions can be designed to avoid the worst to happen. Thank you.