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Energy and Sustainable Development

Borge Brende
Member of Norwegian Parliament

Contact:
Stortingsrepresentant
Stortinget, Oslo
e-mail: borge.brende@stortinget.no



Dear Members of the Academia Engelberg and Participants in this conference

I would like to compliment you on the choice of topic. Energy and environment are certainly the big issues of this century. Why is this the case? Consider the millennium development goals set by the world leaders in 2000: access to competitive and clean energy is a prerequisite for improving the standard of living in the developing world. Let's face it, almost two billion people are without access to basic electricity. No energy, no development!

This of course creates a further conundrum, because this growth in energy should not come at the expense of the environment. We know that climate change will have an adverse impact on the very same people: the poorest people of the world who have contributed the least to climate change. And this is where the crux of the problem lies: Since climate change increases poverty, its impact could undermine the achievement of the MDGs and efforts to eradicate poverty.

As Professor Weizsäcker underlined in his presentation, climate change needs to be seen in the broader context of sustainable development. Higher temperatures, rising sea levels, extreme weather events, spread of diseases and melting ice caps will affect not only the environment but also social and economic systems. Climate change has to be addressed in a holistic manner – it affects all parts of life; production, food security, fisheries, coastal zone management and public health.

Look at the Kyoto protocol, which only covers the industrialized countries – or which should cover all industrialized countries. Developing countries will account for two-thirds of the increased energy demand in the year 2030. By then, developing countries will equal and begin to exceed the levels of demand seen in the industrialized world. This is why we have to act now to come up with a new Kyoto protocol after 2012. This will have to include all industrialized countries – and let's face it – it will also have to include the middle income countries in one way or the other. By 2030, the middle income countries will account for more than half of all energy consumption. If you seriously want to combat climate change, there is no way of doing so without Australia, US and the middle income countries.



To my mind, the key question is how can we provide a sustainable supply of energy in the future without harming the environment? It's almost like squaring a circle. But it has to be done, because we know the alternative.

As you all know, global energy consumption is growing at an extremely fast pace. In the next 20 years, energy consumption will increase by 60 percent. And the bulk of this will occur in developing countries. This demand for energy requires an estimated investment in the energy sector of USD 16 trillion over the next 25 years. The business-as-usual investment scenario will not only pose a significant financial challenge, it will also lead us to an unsustainable future. Unless current policies are changed, global energy-related CO₂ emissions will grow by more than 50 percent by 2030 compared with 2003 levels. If we do not change this pattern, there will be 50 percent more annual emissions of greenhouse gases in 2030.

Under a business-as-usual scenario, fossil fuels will continue to dominate the energy mix - with far-reaching consequences for the environment, health economics and energy security. Although the share of renewable energy will grow in absolute terms, it will actually remain largely unchanged.

Despite the staggering growth - a 60 percent increase in energy consumption by 2030 - there will still be 1.4 billion people without electricity in 2030. And 2.4 billion will continue to rely on traditional biomass, in an unsustainable way, for cooking and heat purposes.

According to the International Energy Agency figures published this summer before the G8 meeting in St. Petersburg, the additional investment to achieve 100 percent electrification for the 1.4 billion people lacking electricity is estimated at a cost of USD 655 billion. This is an enormous challenge for regions that are already struggling to raise capital.

At the world summit in Johannesburg, world leaders agreed on a substantial increase in the development of renewable energy. Unfortunately, the only substantial increase seen so far has been in the use of fossil fuels. And this is not sustainable. Then the question needs to be asked: how are we set up to cope with the big issue of this century - bridging the energy gap, moving from a fossil fuel society to a renewable energy society. How are we set up in the international multilateral system to deal with this? We have UNEP, the United Nations Environmental Programme based in Nairobi; the annual budget for this programme is much lower than the annual budget which the environment minister has in Norway.



UNEP is not even a specialized agency and does not have the financing structure that is necessary.

There is a lack of public awareness when it comes to energy efficiency. We also lack incentives, technological knowledge and capacity, as well as funding, we are faced with fragmented government decision-making and we see a lack of competition among energy suppliers.

There are 500 multilateral environmental agreements (MEAs) in place, but almost no money to support the implementation of these 500 MEAs. You have probably heard about GEF – i.e. Global Environmental Financing. This was established in 1992. When it was decided in Rio combat climate change, there was a perception that investment was needed and patterns had to be changed. But GEF has almost no money this year and even less next year.

We have to decouple the growth in the use of energy and the growth in CO₂ emissions. This is the main task for the years to come – decoupling, mitigation and adaptation.