

## **The Delhi Sustainable Development Summit 2010**

**Ministerial session: Creating a New Energy Future, 6 February 2010**

**Presentation by**

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Ladies and Gentlemen,

It is a honor for me to have a short presentation focused on future energy development.

### **Long-term outlook**

Looking in the energy future, **there is no doubt that in the long-term outlook for following 50 or 100 years the energy mix will be moving towards predominantly renewable energy sources.** Let me mention some figures regarding world energy consumption and reserves of fossil fuels. About 2 690 million tons of crude oil is extracted annually, so at current usage we have 50-80 years of oil remaining, as for coal approximately 8 000 million tons is extracted annually, which leaves us with enough to last us for 150 years. Natural Gas we have about 54 years left. This is one of the reasons why we have to shift to renewable-based energy future. It stands to reason that the switch over the renewables has to be combined with the high-energy efficiency. But let me focus on renewables and their advantages.

### **Benefits of Renewable Energy**

The benefits of renewable energy extend to **stimulating the economy** and **creating job opportunities.** The financial resources invested in renewable energy are typically spent on materials and staff that build and maintain equipment instead of importing energy. The money spent on renewable energy stays within the same state or county, where they were invested. **Renewable energy helps to become more independent on supplies from foreign supplies.** The benefits of renewable energy will help to alleviate many issues related to this dependence and thus to energy security aspects.

There are many benefits of renewable energy to the ordinary citizen and business owner. Householders will reap rewards from using renewable energy, energy-efficient building materials and appliances by saving money in the long run and **reducing negative environmental impacts.** It also renders us able to fuel our homes independently in many cases. Using renewable fuels makes us less dependent.

Small business owners will also reap the benefits of renewable energy. They will save money on utilities. Even providers of electricity can benefit from selling clean power.

There are also many job opportunities for professionals who can invent ways of using renewable energy easily and efficiently in our homes and businesses. The more products that are available the cheaper they will become.

And last but not least - one of the most important benefits of renewable energy is the fact that it's **non-polluting or environmentally harmful if sustainable criteria are fully applied** (e.g. sustainable criteria for bio-fuels production). Renewable energy has a much **lower environmental and health impact** than conventional sources of energy.

### **Employment**

**Renewable energy production and use tend to be more labor-intensive than fossil fuels.** Therefore a transition toward renewables promises employment gains. According to the International Energy Agency (IEA) globally, about 2.3 million people work either directly in renewables or indirectly in supplier industries. The wind power industry employs some 300,000 people, the PV sector accounts for an estimated 170,000 jobs, and the solar thermal industry accounts for about 624,000. More than 1 million jobs are located in the biomass and bio-fuels sector so assisting to rural development and to keep traditional functions of rural areas.

### **Economy of renewable energy sources**

Changing over to alternative energy sources will take time and financial resources. For instance the IEA predicts USD 20 trillion will be invested into alternative energy projects until 2020. **The reason why the energy from renewables still didn't become competitive compared to nuclear energy or fossil energy is clear.** There are not all externalities included into the price and research and development in the field of conventional energy is still much more supported than research into alternative energy sources. Between 1974 and 2002 the nuclear energy got seven times higher subsidy from public budgets than the renewables. Counting all externalities connected to energy from fossil fuel, the price of electricity produced by coal power plant e.g. in the Czech Republic would have to be 2.2 times higher than at this moment. But on the other side, **investment cost of renewable technologies decline gradually** and for instance the Ministry of the Industry and Technologies of Japan supposes the same price of electricity produced by photovoltaic and nuclear electricity in 2030.

### **Czech Republic**

Let me give you a short overview regarding today's situation in the field of renewable energy in the Czech Republic. **The share of renewables on the primary energy sources consumption is slightly above 5 %.** The biggest part of renewables electricity is generated from hydro power plants and for heating the most widespread

source is biomass. **According to the independent study in 2008 the share of renewables on electricity might be up to 38 % in 2050 and on heating up to 44 % at the same time.** Due to geographical situation the **greatest potential of all renewables have probably biomass, photovoltaic and geothermal.**

It's obvious that if we want meet these targets we must set appropriate tools for their achieving. Since 2005 there is a feed-in tariff system for electricity produced from renewables. It means that all electricity generated from renewables have to be bought by transmission system or distribution system operators. The producer gets for each megawatt hour such price that guaranteed pay back time of the project of 15 years. The similar system for renewable heating is now under preparation. I have to mention direct investment subsidy, which goes both from EU-funds and from national budget. Ministry of the Environment operates in 2007-2013 program for municipal sector with more than EUR 600 million for renewables support and for improving of energy efficiency. There is a similar program till 2013 for households with the same aim and budget EUR 680 million.

## **Conclusion**

I would like to summarize and emphasize:

1) First of all we need - **to support gradual replacement of conventional energy sources by the sources of renewable energy.** There is a huge potential in the field of renewable energy sources, which could be used – for instance sun-energy in Sahara well known as project Desertec or large off-shore wind parks situated on the sea. And I'm convinced that if we would successfully undertake changing over to alternative energy, we will attract the interest of small and big enterprisers, energy-utilities and entire society in this process.

2) Second we need - **to promote and guarantee long-term strategic holistic approach to energy production and use planning** when integrating in particular energy policy, industrial policy, climate change policy, agriculture policy, rural and urban development policy, transport policy, environment policy, fiscal and social policies **fully in line with the concept of sustainable development and under the condition of good governance** at global, regional, national and local levels.

3) Third we need – **to strengthen, to improve and to coordinate international energy governance that is currently fragmented.** Its diversified and sometimes very autonomous components are competing each with other. Coordination amongst them, transparent and fair communication and collaboration with governments, transnational corporations, producers and users – citizens of the Earth, social affordability of energy

access are vital for energy safety, energy security and for achieving over-arching target to have in future really sustainable energy.