Energy Efficiency and Climate Protection

It seems that in Germany there are two irreconcilable camps as regards nuclear energy. Since the disaster in Japan, there have been prevailing voices calling for an exit. At the same time, addressing the issues of energy supply and climate protection is becoming more pressing.

Future without Nuclear Power

Recently in Hamburg there has been a three-day conference on energy efficiency and climate protection with the participation of 140 scientists, entrepreneurs and other experts from all Baltic States. Only the German participants called for a rapid withdrawal from nuclear energy till 2022. All other Baltic states voted mostly for the continued use of nuclear energy, partly also for the construction of new reactors.

Meanwhile, the German Federal Government, pursuant to the recommendations of the Ethics Committee, decided to phase out nuclear power till 2022 at the latest. This makes Germany the only major industrialised country that gives up nuclear power. It certainly brings significant risks but also great opportunities. Germany has so far been the world leader in nuclear power technologies. Germany can now reach a worldwide market leadership in all areas of renewable energy and energy saving, and conquer growth markets of today and tomorrow.

Plus-Energy Houses

Particularly in the energy sector the Baltic Sea Region has large innovation potentials at its disposal, and the Scandinavian countries, Poland, as well as the Baltic States embark on solutions which are also very interesting for Germany. All participants of the Hamburg conference agreed that the use of renewable energy and energy saving must have the highest priority. Large reserves are located in residential construction. In the case of new buildings, zero-energy houses are readily available nowadays. Feasible are also plus-energy houses which produce more energy that they consume. The largest savings concern, however, the existing buildings. Through insulation, application of solar systems, controlled ventilation systems, cogeneration plants, etc. it is possible to save 40 - 70% of the current energy consumption, depending on the age and condition.

In Germany about 30% of energy consumption is for industrial production. The development of innovative approaches to increase energy efficiency both in relation to the apparatus and the process level is of great importance. For example, the Hamburg-Harburg Technical University, with the cooperation of enterprises, has developed new solutions which reduce energy consumption by up to 75%. Thus, the efficiency and competitiveness of enterprises have increased and, at the same time, important contributions are made to energy saving and climate protection. Other examples were presented at the Conference by the Hamburg Chamber of Commerce. Therefore, for example, one Hamburg-based company could save 880 mega-watt-hours of energy and 95.000 € annually, solely by the optimisation of the lighting system.

Reduced Energy Consumption and More Jobs

In Germany power is currently produced with approximately 22.000 wind turbines. If they are replaced with more efficient plants, the electricity generation may be increased dramatically.

The conference provided an innovative idea for the construction of additional facilities: in Germany there are about 250,000 masts for high-voltage power lines. Out of these, 90,000 masts can be used simultaneously as wind turbines without any additional damage to the landscape. Another proposal involves the construction of wind farms along motorways.

Additional jobs will be created in the area of energy saving and renewable energy to a large extent. In particular, there are also excellent market fields for crafts and small and medium-sized enterprises. A comprehensive training program for professionals in the SME sector of the entire Baltic Sea Region was developed at the Conference as a crucial prerequisite for the use of these opportunities. Günther Oettinger, EU Energy Commissioner, who participated in the conference promised to promote the implementation of this programme.

EU Energy Commissioner, Günther Oettinger with the Chairman of the Hanseatic Parliament Jürgen Hogeforster, PhD, at the Hanseatic Conference

Future Paths

Obviously, such an energy transition requires enormous investments. The future energy price will determine whether it is worthwhile, and whether increased private capital is invested. A future path developed at the conference in relation to this issue foresees clear increase in energy prices through higher taxation. It will be necessary to use the total tax revenue to finance social security and thus also to reduce labour costs. Expensive energy makes this area a highly profitable investment and saves the state huge subsidies for energy conservation and renewable energies. Reduced labour costs lead to the creation of additional jobs, reduce government spending and relieve labour-intensive businesses and workers in order to gain the financial flexibility to pay higher energy prices.

Another way forward at the conference calls for a return to a social market economy: the total energy and environmental costs of economic processes needs to be fully involved in the

production costs of individual companies. In 2008, 3,000 companies produced 2.2 billion dollar environmental costs imposed on the community. If these costs need to be borne, the profits would fall by one third and at the same time nature is to be handled in a better way.

The "Cradle to Cradle" concept presented at the conference shows other possible forms of economy. There are well over 1,000 products on the market, which are produced according to this principle. Their production consumes less energy and produces no waste which needs to be disposed of. All materials are 100% recyclable. Innovations which can be generated only through the right market signals are increasingly on demand. Increasing prices of energy and environmental goods, reduction of labour costs, return to a market economy or phasing out the nuclear energy are those signals which can take innovations to much-needed directions.

Jürgen Hogeforster, PhD, Chairman of the Hanseatic Parliament