

Statement of Prof. Joachim LUTHER
on behalf of the
Scientific and Technologic Communities
May 3, afternoon session, room 4

Mr. Chairman,
at the beginning let me underline that we agree perfectly with the comment of the Brazilian delegate: Renewable energies – if correctly applied – are ecologically benign and constitute sustainable energy sources in the strict sense of the word.

In the following, I will concentrate on the cost aspects of renewable energies. In part – but not in all cases – the costs of renewable energies are higher than the costs of energy from non-sustainable sources. However, this is not a law of nature. As markets grow, costs will decrease. For many renewable energy technologies we see market growth rates of 30% per year (or even higher). At the same time, we determine promising learning curves, i.e. considerable price reductions.

Further strong cost reductions will be guaranteed through science and technology:

As regards components of the energy system, this will happen through (i) higher efficiencies in energy conversion, (ii) lower material consumption (especially material sciences will play an important role), (iii) optimised manufacturing technologies and (iv) perfectly new sustainable energy conversion paths.

In the overall energy systems area, the development of intelligent grids will be of crucial importance. Intelligent grids and distributed energy generation will (i) help levelling out statistical fluctuations from solar and wind energy and will (ii) adjust the load pattern – especially by means of load management – to the energy generation characteristics of the supply systems.

Optimising the science and technology system – including the educational sector - in all countries will help to set up local manufacture of components of renewable energy systems. Eventually local production will help to make technology implementation easier in most cases.