

## **Total impact of energy sources on the environment**

P.P. POVINEC

Faculty of Mathematics, Physics and Informatics, Comenius University, 84247, Bratislava, Slovakia,  
(povinec@fmph.uniba.sk)

### **New Assesment Method**

Various energy sources, such as coal, oil, nuclear, solar, wind, hydro-energy, oceanic, biofuels, etc. have different impacts on the environment. However, usually only their operational impacts have been taken into account which did not include the total impact of the source on the environment from the beginning of its development to its deployment and long-term operation in the field. For example, in the case of solar energy it is generally believed that photovoltaic panels have minimum negative impacts on the environment, what is of course not true because their production consumes a lot of energy and requires utilization of environmentally non-friendly chemical procedures, as well as their operation requires large field surfaces.

### **Results**

A comparison of total impacts of various energy sources on the environment will be presented, and environmental characteristics of coal powered stations with nuclear power plants operating in Slovakia will be discussed in detail. It will be documented that the environmental impacts of the coal powered stations are higher than the impacts from the nuclear power plants.