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Study shows: Nuclear energy on downward trend worldwide

Minister Gabriel: There is no renaissance of nuclear energy

The share of nuclear energy in worldwide energy consumption is marginal and has been declining for several years. This is revealed in a study by independent experts of the energy and nuclear sector which was published by the Federal Environment Ministry today. As Federal Environment Minister Sigmar Gabriel said: "The renaissance of nuclear energy, much trumpeted by its supporters, is not taking place. The only thing frequently revived is the announcement. The study shows: the number of old nuclear power plants which are decommissioned worldwide is greater than the number of new ones taking up operation. Available resources, engineering performance and funds are not even enough to stop the downward trend, let alone increase the number of reactors. All the facts are in favour of phasing out this technology while at the same time expanding the use of renewable energies and energy efficiency, as this is a promising option for the future."

The authors of the study, headed by Mycle Schneider, Paris, collected crucial quantitative and qualitative facts on nuclear power plants which are in operation, being built or planned today and assess the economic viability of old and new nuclear power plants.

At the time of going to press, 1 August 2009, there were only 435 reactors in operation worldwide, which is nine less than in 2002. Nuclear energy accounts for only about 5.5 % of worldwide commercial primary energy consumption and only around 2 % of worldwide final energy consumption - and consumption has been steadily declining for years.

The authors also found out that the number of nuclear power plants will decrease worldwide over the next decades. Between 2015 and 2025 the capacity of nuclear power plants is expected to sink compared to today's output.

Even with the support of countries seeking to use nuclear energy in future, this downward trend will not be reversed. It is unlikely that these states will be able to set up the necessary technological, political and economic framework conditions for a civil nuclear energy programme in the near future. Most of this states also lack electricity grids which would be capable of holding or distributing the output of a larger reactor.

Furthermore, the authors are concerned that there will be a considerable shortness of qualified experts in almost all countries. Even in France, which probably has the largest pool of nuclear energy experts, the lack is worrying. Currently, there are only 300 graduates of nuclear technology study programmes compared to a demand of 1,200 to 1,500.

In addition to staffing problems, industrial capacities are not sufficient either. For example,

Japan Steel Works is the only company in the world able to manufacture the cast steel parts for the pressure vessels of the European Pressurized Water Reactor (EPR).

Current and planned building projects of the nuclear industry are becoming increasingly expensive. The EPR, for example, the flagship of the world's largest manufacturer of reactors, AREVA NP, which is currently in construction in Olkiluoto in Finland, has so far exceeded planned costs by at least 55 %.