Nuclear power plants & iodine tablets

" The quantity of radioactivity, which is present in a reactor, is more largely than the quantity of radioactivity, which is spread by a nuclear bomb, and actually not insignificant larger. "
(Prof. Dr. C. F. von Weizsäcker, nuclear physicist)

»A reactor in one day produces as much radioactivity as a 50-kt nuclear explosion.« (Prof. Dr. Richard L. Garwin, nuclear physicist)

No protection by iodine tablets

In Switzerland iodine tablets (potassium iodide tablets) are distributed to the population in the periphery of 20 kilometers around the 5 Swiss nuclear power plants. These iodine tablets are to protect the population in the case of a radioactive accident in a nuclear power plant against thyroid cancer, not however against other radiation damages.

But the radioactivity from nuclear power plants does not stop at these 20-kilometer-borders. What is with the remaining population? Also the iodine tablets offer expressly no protection against radioactive radiation, which affects the body from outside. Therefore Iodine tablets certainly cannot protect against a country-wide radioactive contamination!

On the risks and side effects of iodine for the human organism mostly one does not report. Artificially supplied iodine in the nutrition increases the **Nitrosaminbildung** for example by at least the 6-fold, and increases thereby in principle the risk for cancer.

Risks and side effects of nuclear power plants:

Perhaps it is good on the occasion of these ordered iodine tablets, if we recall into our minds the complete problem of nuclear power plants (see www.SolarPeace.ch):

1. **Billions at subsidies and state privileges** are the causes that nuclear energy is sold very favourably, in reality however it is by far the most expensive form of energy and damages our national economy. **Nuclear power costs 3 CHF/kWh or 2 €/kWh** (without subsidies and state privileges). Today solar electricity costs approx. 1 CHF/kWh (without subsidies) and is thereby 66 % more favourably than nuclear power.

2. **Country-wide radioactive contamination**. The federal offices for civil defense and for energy (BfE) calculate for a core melt-through **accident damage costs from 4'200 to 4'300 billion CHF**.

3. The appraisal of the German society for reactor safety (GRS) to the **terror dangers for nuclear power plants** resulted in that "the purposeful crash of an airplane can lead for each German nuclear power plant to a Super-GAU." This applies to all nuclear power plants and surely not only to "purposeful" airplane crashes.

4. **Nuclear power plants make neutrality impossible**, as uranium is 100% imported, as it becomes increasingly difficult to distinguish between "peaceful" and military usages and as the spreading of nuclear weapons becomes possible.

5. Today the nuclear energy has a portion of the primary energy consumption of the world from far under ten per cent. If we would aim at a world-wide portion of forty per cent of primary energy from nuclear power stations, the **uranium supplies would be exhausted within 10 years**. Contrary to the fossil energy raw materials a gap between mining quantities and consumption already exists with uranium for several years.

6. **The radioactive nuclear waste radiates for many 1'000 years**, cannot not be eliminated, is high-grade carcinogenic and poisonous. Nuclear waste is an unsolvable problem and last but not least also an economical and an irresponsible mortgage to coming generations. Since only 0.1 % of the fuel material in the reactor is converted into energy, thus 99.9 % remain as radioactive nuclear waste, nuclear reactors produce inconceivable quantities of nuclear waste each day.

7. **The medical effects of the nuclear power plants** are nearly unknown in the public. That shows also an example in Germany, in which scientists of the federal state government accuse "masking". The majority of the professional commission in Schleswig Holstein to find the cause of the leukaemia illnesses explained its resignation. Children continue to get sick remarkably frequently with leukaemia around the nuclear power plants in Geesthacht. Dr. med. Max-Otto Bruker together with the nuclear physicists Prof. Dr. Dr. h.c. Karl Bechert and Prof. Dr. C. F. von Weizsäcker had provided the "Medical memorandum for the industrial use of nuclear energy". The summary version published below is completely quoted from it.

Safe protection by renewable energies

All these risks and side effects of nuclear power plants (apart from the radioactive waste already existing) can be easily avoided, if the use of nuclear energy is terminated as fast as possible. There are sufficient alternative potentials by safe renewable energies (sun, water, wind, biomass/gas, geothermal) including the necessary technologies and financial means.

The significance of national renewable energies in the full context of peace, economics, security, neutrality and ecology is published with complete source data on www.SolarPeace.ch.

Wolfgang Rehfus, 12.11.2004

Medical memorandum for the industrial use of nuclear energy *

For the evaluation of the health and life threat by the operation of nuclear power plants only physicians, biologists and ecologists are competent and nobody else. Since the nuclear bomb everyone knows that nuclear fission is afflicted with high risks for the health. Already during the normal operation an emission of firm and gaseous radionuclides into the environment can not be prevented despite adherence to strictest safety precautions (therefore tolerances).

In alive organisms the effect of ionizing rays begins with the primary procedure of the energieabsorption within the atomic and molecular range. Secondary reactions follow, which are in the beginning of simple chemical nature, soon however reach into the range of complicated metabolic reactions. Primary event and following radiochemical secondary sequences lead to two types of radiation damage: The change of cell structures and changes of the cellular metabolism.

" Which do you prefer: Save energy and use of solar power, but less cancer patient and hereditarydamaged, or nuclear power?"
(Prof. Dr. Dr. h.c. Karl Bechert, nuclear physicist)

The radiation dose form nuclear power plants is compared by the proponents of nuclear power plants again and again with the natural base radiation, in order to pay down the dangers. This comparison is from the scientific point of view untenable and misleading, because with the cosmic radiation it predominantly concerns radiation, with which no radioactive substances are incorporated. With the natural base radiation also radioactive substances, e.g. C 14, are involved; the substantial difference in relation to the emissions from nuclear reactors consists however of the fact that it concerns with the latter radioactive substances, which are completely new. Their general effect, which exists in the production of somatic and genetic damages, is well-known, however the specific effects of the numerous isotopes will not be sufficiently investigated for a long time. Particularly for the long-term and late effects still no experiences can be present, since the contamination with the substances from the artificial nuclear fission takes place only since relatively short time.

During the irradiation of a human with the maximally permitted dose it would to be expected that one human out of ten would get a cancer of the lungs. There are up to now no safe data, from which a smallest dose of plutonium 239 arises, below which no generation of cancer is possible. **" There is no proof for the fact that there is a safe tolerance limit for the radiation."** (Radiation laboratory in Livermore / California) The damaging effect of even smallest doses is summed up during long periods.

In the medicine one uses irradiation in individual cases purposefully. Nuclear industry causes completely unaimed effects, before which no organism on earth is safe. Only 0.1 % of the fuel material in the reactor is converted into energy, 99.9 % remain as high-radioactive nuclear waste. There is no possibility of destroying radioactivity.

" We do not want to perish in a nuclear disaster, we do not want that our descendants curse us, because we did not offer resistance to the nuclear insanity!" (Prof. Dr. Dr. h.c. Karl Bechert, nuclear physicist)

In summary it must be stated that above all increasing hereditary defects is to be expected as consequence of the radioactive contamination. The medical and ecological view does not permit any other judgement, than to describe the operation of nuclear power plants considering today's conditions of science and technology as irresponsibly. The largest accident (GAU), which can be accepted, which will allegedly never occur, became reality in the nuclear reactor of Tschernobyl. The disaster proved the dangers.

Dr. med. M. 0. Bruker

* The complete original version (emu-Verlag, 5. Auflage, ISBN 3-89189-015-X) with all sources used and the appendix "**Die Verharmlosung der atomaren Niedrigstrahlung**" (Dr. Rosalie Bertell, USA) is published on **www.SolarPeace.ch**.