

## Von Christoph überarbeitet

### Energy-change – *the chance for the future*

Martin Vosseler

Speech at the Rotary Club Liestal

13.11.2002

This is my second invitation to speak at the Rotary Club. My first invitation came from Christoph Erhardt in Birseck in 1984, to speak on the topic of “Prevention of Nuclear War from the Physicians Point of View”. As a physician, priorities are important to me. The surgeon Willi-Werner Rittmann, who is here with us today, knows exactly what I am talking about. If there is bleeding from an artery, then the highest priority is to stop the bleeding. If there is cardiac or respiratory failure, then these vital functions must be restored before a doctor can continue to operate or treat other, less urgent illnesses. Anything else would be defined as a **malpractice**.

At the beginning of the 1980s, prevention of nuclear war was my highest priority. The cold war was at its height. Both President Reagan and the Soviet Union under Breschnev increased their level of nuclear arms out of all proportion. President Reagan declared that a nuclear war could be carried out, that it could be won and that it could be survived. I was a research fellow at the Harvard Medical School at the time. One of the lecturers who made the biggest impression on me, was Bernard Lown, the inventor of defibrillation as a treatment of life-threatening arrhythmias (heart rhythm disorders). He discovered that local **anaesthetics were** an appropriate medical treatment for arrhythmias and he was the first to build up heart-monitoring stations. At the end of each of his lectures, he reminded us, the young doctors, that we are all nuclear hostages, that at any time mankind could enter into an all-destructive nuclear war and that there is no naturally occurring **remedy, only prevention**. Together with his friend Eugen Chazov, physician to the sickly soviet president, Lown founded the organisation International Physicians for the Prevention of Nuclear War. I simply had to build up a branch of this worldwide movement here in Switzerland.

In the mid 1980s my priorities changed. Gorbachov came into power. Nancy Reagan worked hard to get her husband to be on good terms with Gorbachov, so that the soviet president wouldn't outdo him in terms of world popularity. It came to a “thawing” of the cold war, Perestroika and Glasnost in the USSR, a unilateral moratorium on nuclear testing, steps towards disarmament and to the downfall of the soviet empire. It also came to Tschernobyl. Since then, my highest priority has been the question of energy.

None of the major sources of energy in use today are compatible with the earth. They have all reached their limits and are slowly but surely running out on us. Oil, gas, uranium and even coal supplies; none of them are inexhaustible. We have to reckon with the fact that in a few years, there will be a reduction in peak production and that energy sources will become rarer, giving rise to conflicts over resources, such as those we have already experienced. 24 billion barrels of crude oil are consumed every year. The experts cannot agree on a precise date, but peak production is estimated to occur somewhere between 2010 and 2030.

Even in other respects we are reaching limits. Through the burning of fossil fuels, our atmosphere is heating up. There are ever increasing climatic changes. In the first 10 days of November 2002, there was more rainfall than the monthly average. At the same time, as the result of prolonged drought in Australia, there were bush fires threatening Sydney – a drought more severe than in the previous 104 years, combined with high temperatures and strong winds. Virtually every day we read about an extreme weather situation somewhere in the world.

The greatest chance for business, and thereby also our economy, is still not being recognised. The entire restructuring of the energy-economy cannot be avoided in the long-term and this restructuring has a very high market potential.

An example from my own area of experience. In the year 2000, I moved into a farmhouse near Bern, which until then had been heated electrically. I redeveloped the energy supply the following year, installing a central heating system with a combination of pellets and logs, a 2,500 litre storage and 12m<sup>2</sup> solar panels. I invested around 100,000 **Swiss francs**. This gave work to 17 small businesses: heating installer, boiler supplier, radiator supplier, valve supplier, solar panel supplier, storage supplier, pump supplier, solar panel fitter, plumber, tinsmith, carpenter, roofer, tiler, painter, chimneysweep, pellet deliverer and the neighbour who helped me to chop wood. From April until October, I have 2,500 litres of 70-90°C water available for hot water and heating. Often, after working in the garden, I take a solar bath in the water trough in front of the house.

And the positive financial side effect: Before the reconstruction my quarterly electricity bill was between 400 and 500 Swiss francs. Since the reconstruction it has been reduced to 80-100 Swiss francs. In this way my electricity consumption has been reduced to 1/5th of its previous value.

In Switzerland, 250,000 households are heated directly with electricity. From 1970 to 1985, this form of heating was financially supported by many electricity companies, to increase the overnight electricity consumption. Today, this heating causes electricity consumption to be 4,000-5,000 GW higher in winter than in summer. After 20-30 years usage, many of these heating systems must be replaced. Through the use of solar panels, wood heating, heat pumps and naturally with optimal building insulation, electricity used for heating could be reduced by 50 – 100 %. With 20,000 redevelopments every year, 240 GW electricity could be saved. Politics, which promoted such systems for new and existing buildings, would lead to contracts pouring in for small and medium sized businesses in Switzerland, thereby supporting the local economy.