

## Natural Power – Lifestyle and Necessity



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Lifestyle in the beautiful village Herrliberg at the lake of Zürich: Desired by the population the local council decided that all households are supplied with certified natural power (clean electricity). The Swiss power mix is no longer offered. «No pioneering act was planned and Herrliberg has no missionary aim», says local councillor Felix Besser and explains: «We found out that the conversion is realizable without large extra costs and that natural power is the superior electricity.»

It does not smell. It does not taste. One does not hear it and reconstructions are also not necessary. Natural power flows from the same plug sockets as before nuclear power - however without producing radioactivity. In the canton Zürich the usual power mix contains 79 % nuclear power and produces inconceivable quantities of radioactivity.

«Since a reactor in one day produces as much radioactivity as a 50-kt nuclear explosion, and fuel in a reactor has typically been there for an average of two years, a typical nuclear reactor has in its core the long-lived radioisotopes from 30 megatons of fission.»

(US nuclear physicist Prof. Dr. Richard L. Garwin, Nuclear Control Institute, 9.4.2001)

In order to be able to understand this statement of the nuclear physicist, we need a conceivable comparison value. The Hiroshima nuclear bomb corresponds with a 12,5 kt nuclear explosion (kt = kilotons). Thus each nuclear reactor produces each year a quantity of radioactivity in the order of magnitude of 1460 Hiroshima nuclear bombs, and in a nuclear reactor is radioactivity in the order of magnitude of 2920 Hiroshima nuclear bombs.

Thus the 5 Swiss nuclear power plants contain radioactivity in an order of magnitude of approximately 10'000 Hiroshima nuclear bombs!

The nuclear physicist Professor Dr. C. F. von Weizsäcker said modestly: «The quantity of radioactivity, which is present in a reactor, is larger than the quantity of radioactivity spread by a nuclear bomb - significantly larger.» The US nuclear physicist Richard L Garwin summarizes briefly and concisely: «Reactor accidents... too horrible to think about.»

«What do you prefer: To save energy and use solar power, resulting in fewer cancer patients as well as genetic disorders, or to use nuclear power?» (Professor Dr. h.c. Karl Bechert, nuclear physicist)

Most problems of nuclear energy are a consequence of the artificially produced radioactivity. The «Medical memorandum for the industrial use of nuclear energy» of Dr. med. Max Otto Bruker (emu-Verlag, 5. edition, ISBN 3-89189-015-X, completely published on <a href="www.SolarPeace.ch">www.SolarPeace.ch</a>) explains the scientific difference of the artificially produced and the naturally occurring radioactivity and gives an overview to the effects of nuclear power plants during normal operation. Nuclear energy is the cause for a «climate change of a special kind» and the produced radioactivity destroys live and lifestyle for eternal times. The Federal Office for civil defense calculates in case of a large accident in a nuclear power plant with damage costs of over 4200 billion Swiss Francs. As with such a risk the probability of entrance is completely irrelevant, this risk is not insured worldwide by any insurance. Otherwise nuclear power would cost approximately 3.- to 5.- Swiss Francs per kWh.

Today natural power (clean electricity) belongs to the lifestyle of a generation, which is ready to replace the problems of outdated technologies by modern future-qualified solutions. Natural power is produced with 100% renewable energies (sun, water, wind, biomass, geothermal). Natural power is economically, pollution free and CO<sub>2</sub>-neutral. Alone the suitable roof areas in Switzerland have a realizable solar potential of 30% to 50% of the today's power consumption.

The purchase of natural power is the basis for modern lifestyle and credible sustainability. Natural power is also the basis for our future mobility. The study «Vision for a Swiss power supply with future: Resources and technologies» (CATSE, 2007) explains why electric cars are the best solution: «The electric motor is compact, emission-free, unmatched efficient and supplies a constantly high torque. Compared with hydrogen electricity is the clearly more efficient form of energy. Batteries are more efficient than gas cells. The electric car with solar electricity fuel is 300 times more surface-efficient than a car with bio fuel. The surface of two parking spaces, covered with photovoltaic cells, is sufficient, in order to supply an electric car annually for 15'000 km with energy. In order to supply a car with combustion engine for 15'000 km with biomass fuel, the surface of a football field is needed annually.»

Wolfgang Rehfus, SolarPeace.ch

## Heat pumps with and without – a slight difference...

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In Switzerland increasing numbers of heat pumps are installed. Homeowners and landowners want to become independent of the fossil sources of energy oil and gas, they want to avoid the production of CO<sub>2</sub> (climate change) and they want to use renewable energies.

When in operation, heat pumps require high levels of electricity. Since the usual Swiss power mix contains large quantities of nuclear energy, heat pumps – just like all other electrical devices – cause the production of radioactivity in the nuclear power plants.

Therefore, all heat pumps operated with nuclear energy replace only the CO<sub>2</sub> of the oil/gas heating with the radioactivity of the nuclear power plant.

One nuclear power plant produces a daily amount of radioactivity equaling the radioactivity released by four Hiroshima nuclear bombs – an inconceivable quantity of radioactivity. The five Swiss nuclear power plants contain radioactivity equal in magnitude to approximately 10'000 Hiroshima nuclear bombs (which corresponds with the output of two years worth of production).

This artificially produced radioactivity exists for all eternity and cannot be destroyed. Hence, for quite some time a «Special Kind of Climate Change» has been developing.



All heat pumps which are operated with 100% natural power, use renewable energies. Switzerland can only cover approx. 60% of demand for electricity from water power. Therefore, natural power products used should include not only energy from water, but also the new renewable energies (i.e., solar power, wind power, etc.).

Operated with natural power heat pumps can be described as future-oriented and climate friendly. This also holds true for all other electrical devices, including the most energy efficient refrigerators.

This press release was produced with «EKZ Natural Power Azur», a renewable mix of energy which contains electricity generated from water power, biomass and solar energy.

The rising demand for natural power triggers directly the necessary investments in the build-up of renewable energy supply. With every order for natural power the build-up of the renewable energy sources is supported, and contributes to the vital climate protection for the future.

«All households using natural power provide a significant contribution to build up a future-qualified energy supply and by this means support peace, economy, security, independence and ecology.»

Wolfgang Rehfus, SolarPeace.ch