

Survey shows: Swiss nuclear power plants don't not know what they are doing!

How much radioactivity do the Swiss nuclear power plants produce?

SolarPeace.ch media release from 1.9.20011

Following the nuclear disaster in Fukushima/Japan all Swiss nuclear power plants and the ENSI were asked for information about the daily amount of radioactivity produced and the total existent radioactivity levels in each of the respective nuclear power plants. At the same time the nuclear power plants and the ENSI were asked to disclose these levels of radioactivity in comparison with the radioactivity released by the Hiroshima nuclear bomb. The resulting correspondence (see sources) is impressive.

Despite registered letters, the nuclear power plant Leibstadt did not reply to the first request. The response from the nuclear power plants Beznau (AXPO), Mühleberg (BKW) and Gösgen (ALPIQ) were evasive and failed to address the questions. They only referred to internet sites and publications by the Federal Office for Energy (BFE), the Federal Office of Public Health (BAG), the National Emergency Operations Centre (NAZ) and the Swiss Federal Nuclear Safety Inspectorate (ENSI). All nuclear power plants were contacted again.

The **Swiss Federal Nuclear Safety Inspectorate (ENSI)** is the "Federal regulatory authority for nuclear safety of the Swiss nuclear power plants". When asked the same questions about radioactivity in the nuclear power plants, the ENSI replied, that the duties of the ENSI include the «[supervision of the safety of the Swiss nuclear facilities](#)» and the «[potentially releasable radioactivity](#)», but not the «[produced and accumulated radioactivity](#)» as requested. They suggested «[please contact the operators of the nuclear power plants directly](#)». Additionally the ENSI confirmed that the data on radioactivity in nuclear power plants and the comparison with the Hiroshima nuclear bomb on the website SolarPeace.ch are correct and stated: «[In this respect, your questions are answered on your linked website](#)». Thanks - But how can a regulatory body assess the risk and safety of nuclear power plants without knowing the amount of radioactivity produced, thus without knowing the cause of the risk of nuclear power plants? A reply from ENSI to the second letter dated 1.7.2011 is still pending.

The **nuclear power plant Beznau (AXPO)** replied to the second inquiry on radioactivity in the nuclear power plant again with an evasive «[This cannot be answered](#)» and stated that regarding the required comparison with the amount of radioactivity released by the Hiroshima nuclear bomb, «[We wish to inform you that we are not involved in nuclear weapons nor do we have any detailed knowledge about this. We want to emphasise, however, that .. a meaningful quantitative comparison is neither possible nor effective](#)». Why does the AXPO claim that the questions regarding the produced radioactivity cannot be answered and that the comparison with the Hiroshima nuclear bomb is not possible? A reply from the nuclear power plant Beznau (AXPO) to the third letter dated 14.8.2011 is still pending.

The **nuclear power plant Leibstadt** replied to the second registered letter, however with a literal copy of the response from the nuclear power plant Beznau (AXPO). This, despite the fact that Leibstadt produces about three times as much radioactivity due to its gross electrical output of 1220 MW (Beznau 380 MW). A reply from the nuclear power plant Leibstadt to the third letter dated 20.7.2011 is still pending.

The **nuclear power plant Mühleberg (BKW)** responded to the second inquiry with general statements about radioactivity and various units (becquerel, electron-volts, sievert), but failed to communicate details using these units. BKW described the comparison with the Hiroshima nuclear bomb as «[questionable](#)» and stated that production is «[about 1 kg of fissionable products per day](#)» and «[At its core is an average of about 1 ton of radioactive atomic nucleus](#)», which however according to BKW «[says nothing about the energy of the radiation and the potential danger for men and nature](#)». In a third letter BKW was reminded of the missing information (e.g. in becquerel) and asked to answer all questions. Hereupon the BKW replied succinctly, «[We have provided the information available](#)». A reply from BKW to the fourth letter dated 1.6.2011 is still pending.

The **nuclear power plant Gösgen (ALPIQ)** replied to the second inquiry on produced radioactivity with «[daily 3.3 kg of radioactive fission products](#)» (see the gross output: Gösgen 1035 MW, Mühleberg 390 MW), «[during operation, the entire inventory amounts to approximately 8E8 TBq, if the reactor is shut down it is in a percentage level thereof](#)» and explained that a comparison with the radioactivity of the Hiroshima nuclear bomb is «[not possible](#)». As this response says little (see the explanation of BKW), is difficult to understand and impossible to compare for lay people, they were asked for a response to all questions and for an explanation of «[inventory .. 8E8 TBq](#)» (see: 8E8 TBq = 800'000'000'000'000'000'000 Bq = 800 trillion becquerel). Hereupon the nuclear power plant Gösgen (ALPIQ) replied only, «[For further clarification of your questions, we recommend .. the consultation of relevant specialist literature](#)». A reply from the nuclear power plant Gösgen to the fourth letter dated 14.8.2011 is still pending.

The **result of the survey** based on the responses received is sobering. **a)** No Swiss nuclear power plant knows how much radioactivity is produced per day. **b)** Only the nuclear power plant Gösgen (ALPIQ) was able to state the total radioactivity present, but refused further explanation. **c)** No nuclear power plant could give understandable and meaningful information regarding the produced radioactivity and the comparison with the Hiroshima nuclear bomb. **Conclusion:** Nuclear power plant operators who do not know «what» and «how much» they produce, cannot assess the risk and therefore cannot take adequate safety precautions. Since even the Federal Nuclear Safety Inspectorate (ENSI) has stated that they do not know the radioactivity in the Swiss nuclear power plants (and thus cannot fulfill their mandate), the Swiss Federal Council (Bundesrat) is responsible for checking, whether these nuclear power plants must immediately be taken off the grid for safety reasons. It is high time that we are fully aware of the core question and the core problem:

What does a nuclear power plant produce?

- 1.) Radioactivity
- 2.) Electricity

Already in April 2001, the U.S. nuclear physicists Richard L. Garwin explained the amount of radioactivity in a nuclear power plant at the Nuclear Control Institute in Washington: «[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.](#)» (Richard L. Garwin, «Can the World Do Without Nuclear Power? Can the World Live With Nuclear Power?», Nuclear Control Institute, 9.4.2001).

The Hiroshima nuclear bomb represented a 12.5 kt nuclear explosion. Thus, an average nuclear power plant produces a daily quantity of radioactivity equivalent to four Hiroshima nuclear bombs, which **each year** adds up to **radioactivity in the order of magnitude of 1460 Hiroshima nuclear bombs**. In a nuclear reactor radioactivity exists even in the order of magnitude of 2920 Hiroshima nuclear bombs (the production of two years). Thus the five Swiss nuclear power plants contain radioactivity in an order of magnitude of approximately 10'000 Hiroshima nuclear bombs and threaten not only the Swiss population, but also the population of neighbouring countries. This is a violation of constitutional principles, human rights and international law.

US nuclear physicist Richard L. Garwin summarises: «[Reactor accidents... too horrible to think about.](#)», by which he is sadly not only right but also appeals to the need for responsible reflection by political decision makers.

After the nuclear disaster in Fukushima the Swiss Federal Council and the National Council have made a policy decision to phase out nuclear power. The Council of States must still confirm this policy decision to enable design and implementation of the energy transition now without further delay. This decision is about the security of the population, but it is also about the issues of electricity price and security of supply. These questions can best be answered by the people of Fukushima and Japan.

As Bloomberg reported, the Japanese billionaire Masayoshi Son together with Japan's government is planning to replace two-thirds of today's nuclear electricity with solar power (incl. [«roof-top solar panels at 10 million homes»](#)). This is possible in Switzerland too.

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Please also read the press releases on [«Climate Change by Radioactivity»](#) and all directly linked sources on: SolarPeace.ch/e/20090807_ClimateChangeByRadioactivity.htm

