

No electricity in the house

by Eva-Rut Lindberg, Ph.D (translated from Swedish)

A case story of how a Swedish family lives in a house without electricity, but still has many modern conveniences.

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Stefan (not his real name) has been affected by electricity since he was a child. Travels by car and electric trains were painful to him and he could not sleep the following two nights. The troubles became worse over time.

Stefan associated his muscle cramps and tingling sensations to his amalgam fillings and by the age of thirty he had all metals removed from his mouth. The dentist did not use protection against the mercury vapors, even though that was already common practice among specialists in those days. Around that time, a new AXE telephone system was installed in the area, and the electrical system in Stefan's house was expanded, which resulted in a poorer electrical environment. Stefan believes these factors worked together, as his health declined around that time. He could not continue his job as a manager for a construction firm and went on sick leave. Eventually he was put on disability.

When Stefan figured out his problem was the electricity, he disconnected much of the wiring in his house, installed shielded cables and moved as many appliances as possible out into the detached garage. The more Stefan was away from the electrical system the better he felt, but it never became really good.

In 1997 Stefan and his family now had a much-wanted baby, and they decided to move. They were eventually able to find a remotely located log house within commuting distance of Stockholm. It was a 60 m² (580 sq. ft.) house built in 1909, with a wood-fired kitchen stove and woodstoves for heating. The house needed no electricity at all.

The house was modernized to suit the needs of the family. The old kitchen stove was replaced with a modern woodstove, which also can be used for heating. The new stove is made of brick and stone, so it has a large heat mass. It has built-in channels to efficiently distribute the warm air to the room. There is also a propane stove for cooking, with the gas cylinder placed outside the house for safety.

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A shower and flushing toilet was installed with hot and cold water, which comes from a small utility building via an underground tunnel. Stefan built the 17 m² (160 sq. ft.) utility building 35 meters (110 ft.) from the house.

The water lines are made of steel, as is customary in Sweden, but short sections of plastic pipe are inserted to prevent any stray currents.

A vacuum line was later added to the underground tunnel. The vacuum line is used for a central vacuum cleaner which is located in the utility building. They use a shop-vac, which was much cheaper to buy than a real central vac.

A shielded electrical cable has also been added to the tunnel. It allows the family to temporarily use household appliances in the house, such as a toaster, coffee maker and dishwasher, while Stefan goes for a walk or runs errands.

Most of the appliances needed for a modern home are placed in the utility building. The washing machine is essential for a family with now three children. The family first had a propane refrigerator in the house, but it was expensive to run and was replaced with an electrical model in the utility building. The family also uses a traditional Swedish underground storage room for cold storage. In the winter, they also use an enclosed porch to keep things cold.

The utility building stores all the tools Stefan needs to work on their house and cars. Many of the tools are powered by compressed air instead of electricity. The compressor is electric and located in the utility building. It is only on when nobody is inside.

The hot water heater, washing machine, clothes dryer, refrigerator, freezer, television, stereo and well pump are also placed in the utility building.

Stefan drives an older diesel powered car, since he has problems with the electronics in cars from the 1990s and newer. He disconnected the alternator and modified the electrical system so only the windshield wipers and signals work. Swedish law requires all cars to have lights on during the daytime, but he has a legal exemption. Other drivers often flash their lights at him, thinking his lights are off by accident. Stefan happily waves back at them.

Stefan can listen to CDs and old LP records during the time of the year where it is pleasant outside. He then listens to music through the open windows in the utility building. The nearest neighbor is beyond hearing range, so it does not disturb anybody. For music inside the house, Stefan uses a small, portable cassette player. It is placed in a shielded box, with two small speakers outside the box. This also

works for the little battery-powered CD player, which Stefan found after trying several models that were problematic.

When the children got a little older, there was a need for a television, which is located in the utility building. Stefan can watch along for short periods while standing well away from the TV. The TV has a large screen, which is magnified with a raster screen that has a shielded copper coating to reduce the radiation.

Contact with the rest of the world is difficult. He can only make brief visits to family and friends. Going to the theater and the movies is impossible, and visiting stores is difficult, also. Stefan listens to audio books, since he gets headaches from reading a lot. The audio book CDs have become a welcome source of entertainment and relaxation.

The social services in Sweden sometimes help with the cost of modifying homes for people with electrical hypersensitivity. Stefan did not receive any such help, and his experience with conventional doctors has pushed him to use alternative medicine as much as possible. An example was one time he went to a clinic for help with headaches and diarrhea, which had troubled him for three months. When the doctor heard that Stefan was disabled by electrical hypersensitivity, she told him she didn't believe it existed and anyone could have stomach problems and headaches now and then.

Stefan is affected by cell phones and cell tower base stations. He worries about the continuing build-out of the wireless services. A new transmission tower is planned to be erected near his home, which he worries may drive him away from the house that he has spent a decade modifying for his needs. He would then lose the connection with his children, family and friends, as well as access to established services, such as chiropractor and dentist. Stefan might be able to shield his home, but he wouldn't be able to be outside much any longer, turning his house into a prison.

This story is a part of the doctoral dissertation *Byggprojektering för personer med funktionsnedsättningen elöverkänslighet* (Building design for people with the functional impairment electrohypersensitivity), by Eva-Rut Lindberg, 2011. The dissertation is in Swedish, but includes an English-language summary chapter.

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This story is translated from Swedish, with added explanations for an international audience. The translation is made with the consent of Eva-Rut Lindberg.