

## **Psychological Aspects of Energy Consumption and Production - a Theoretic Presentation with Input from Practical Experiences**

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In engineering sciences, the term “sustainable energy” is well known. It means utilizing renewable energy and energy saving technologies. From a psychological point of view, various aspects are important to reach a long lasting and sustainable use of these technologies. Initially, decisions are made by individuals and decision makers on higher societal levels (politicians, environmental planners, architects, etc.) in favour or against the use of renewable energy systems and energy saving technologies. Later on, when systems and technologies come into use, they need maintenance for long term functioning. Particularly in isolated areas, with no electricity grid available, the end-users are immediate problem-solvers and they directly depend on their own knowledge and capability to run the technology properly. Thus the topic is twofold: firstly using and saving clean energy and secondly using the technology in a long lasting way.

The practical experiences to be presented will come from various field studies in different cultures, like Germany, Spain, Nepal, Indonesia, Argentina and Mexico including data collected since 1989. The results will be derived from behavioural and participating observations, structured and semi-structured as well as open interviews. The theory will summarize actual knowledge of social and behavioural science on sustainable development [1].

This knowledge will be applied to the energy consumption and production field. We can observe that this field is more and more depending on consumer decisions: since we have an open market for different energy supply solutions, it is possible e.g. for electricity-customers to choose the source of energy generation. Customers start being aware of the possibility and do not always choose the cheapest solution, what the economic rationality would presume. Psychological factors, like beliefs, emotions and intentions are increasingly important, when most basic energy needs are already covered.

The newest results are derived from a study actually going on in the European Project on Sustainable Communities (NNE5-2002-00054). It supports the new direction of the European Commission to see energy solutions as integrated solutions and not as energy technologies, only.

[1] Schmuck, P. & Schultz, W. P. (Eds.). (2002). Psychology of Sustainable Development. Boston: Kluwer Academic Publishers