

## **Fusion Power; a Strategic Choice for the Future Energy Provision Why is so Much Time Wasted for Decision Making?**

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From a general analysis of the world energy issue, driven by a variety of elements such as the enhanced greenhouse effect, the strong fluctuations in energy prices, the world-wide drive towards liberalization of the grid-based energy carriers, and the social-driven tendency to integration of renewable energy sources and decentralized generation, it is argued that an affordable, clean and reliable energy supply will have to consist of a portfolio of primary energy sources, a large fraction of which will be converted to a secondary carrier in large base-load plants. Because of all future uncertainties, it would be irresponsible not to include thermonuclear fusion as one of the future possibilities for electricity generation.

Given this conclusion, the author tries to understand why nuclear-fusion research does not really seem to be considered as being of strategic importance by the major world powers. The fusion programs of the USA and Europe are taken as prime examples to illustrate the 'hesitation' of these economic giants. Recently, Europe has started to advocate a so-called 'fast-track' approach, thereby abandoning the 'classic' route towards fusion that it has projected for many years. The US 'oscillatory' attitude towards ITER in relation to its domestic program is a second case study that is looked at.

However, from the real history of the ITER design and the 'siting' issue, one can try to understand as to how important fusion is considered by these world powers. Not words are important, but deeds. Fast tracks are nice to talk about, but timely decisions need to be taken and sufficient money is to be provided. More fundamental understanding of fusion plasma physics is important, but in the end, real hardware devices must be constructed to move along the path of power plant implementation.

The author tries to make a balance of where fusion power research is at this moment, and where, according to his views, it should be going. Finally, the roles of Japan and Russia, are explored and their perceived approaches are compared to the US and EU fusion 'road maps'.