
DOES YUGOSLAVIA NEED NUCLEAR POWER?

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My talk will be divided in two parts. In the first part I shall make a short review of main nuclear related issues from a global point of view. These issues have been discussed extensively in a number of my publications (see references below). In the second part, I shall discuss Yugoslavian needs for nuclear power.

The main conclusion from the first part is that an industrialized world can not exist without massive use of electricity generated by fast breeder reactors - whether we like it or not. Why?

Briefly, nuclear fuel, when used in breeder reactors, is well over 1000 times more abundant than fossil fuels, thus, with breeder power the world will have no shortage of energy for a very very long time.

As far as safety and impact on the environment (greenhouse effect, in particular) are concerned, the nuclear produced electricity is far better than the coal produced electricity.

After reviewing global issues, I shall compare some past statistical information for Yugoslavia and Canada and make some projections into future. These projections indicate that Yugoslavia, when fully industrialized, will need at least a couple of dozen one GW nuclear power reactors (JOVA 88e).

What should Yugoslavia do in the near and more distant future?

- (1) Importing nuclear reactors on “turn key” arrangements is extremely expensive. Yugoslavia must develop its own nuclear power industry. To do that, it is most urgent to make a long term political commitment “to go nuclear”. That means that the existing law on moratorium on building nuclear power stations should be rescinded as soon as possible.

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- (2) Yugoslavia has significant amount of scientifically and technically well trained manpower. This manpower should be given an opportunity to fully master the science and technology of nuclear power. To do that, besides appropriate financial support, it would be necessary to restart Vinca's reactors as soon as possible. At the same time, an expert team should be formed with the task of performing a broad study of nuclear issues and creating a long term strategy for strong development of nuclear science and technology.
- (3) After a certain number of years Yugoslavia should start building, with significant foreign participation, its first electricity producing reactor. After this first reactor, more reactors of the same kind should be built with progressively higher and higher fraction of domestic components.

REFERENCES

(JOVA 83) Three popular articles in *The Winnipeg Free Press*:

December 27, 1983: **Energy choices: nuclear or coal**

December 28, 1983: **Nuclear danger is exaggerated**

December 29, 1983: **Anti-nuclear campaign is misdirected**

(JOVA 86) J. V. Jovanovich, "**Carbon Dioxide Pollution: Benefit or Catastrophe**"

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