

Committee I
The Nuclear Option in the Past,
Present and in the Future

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DISCUSSANT RESPONSE

by

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to Karl P. Cohen's

A PROMISE UNFULFILLED

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Comments on Karl P. Cohen's paper

A Promise Unfulfilled as the suggestive title of dr Karl P. Cohen's excellent and carefully balanced paper reads evokes many different scenarios for the future of nuclear energy. I would like to make a few general comments and then to offer the Swedish case as an example of what conceivably could happen and in my mind is likely to happen in other countries as well. I conclude with a few concluding remarks.

In reading dr Cohen's paper and having followed the U.S. nuclear debate for a long time it appears to me that the Americans are obsessed with the military aspects of nuclear energy. "The peaceful applications were subordinated to military ones. And they have remained subordinated" to quote from dr Cohen's paper.

This, I venture to suggest, is probably the main reason why the U.S. nuclear industry is in serious trouble. The arms race has not only "been ruinous to both parties", it has also created in the minds of the American people a fragile sense of security while being ahead of everybody else in nuclear weapons development and a frightening feeling that this security may somehow be lost through a proliferation of nuclear weapons. This ambivalent feeling of anxiety has spilled over to the civilian nuclear energy program and caused a great deal of damage: the concern about plutonium, the opposition to reprocessing, the "once through" fuel cycle policy and the unsuccessful attempts to keep world wide nuclear energy development under U.S. control.

If the Americans were to consider the nuclear arms race from the point of view of a small country without access to nuclear weapons, such as Sweden, they may perhaps adopt a less neurotic attitude to the haunting specter of nuclear proliferation.

In Sweden an independent nuclear weapons capability has been – and still is – well within the range of our economic and technical means. In the early fifties preparations to develop Swedish nuclear weapons were well underway. However, it soon became evident that a nuclear posture would not add to Sweden's national security. On the contrary Sweden's conventional defence would suffer from our efforts to develop a weapon's system which we would never be able to use against our only credible enemy, the Soviet Union.

Attempts to link the civilian nuclear energy program to nuclear weapons were therefore never very successful in Sweden. That the Swedish nuclear power plants may be used for clandestine productions of nuclear weapons was unbelievable and equally unbelievable was the argument that we Swedes by abstaining from the use of nuclear energy could contribute to the non-proliferations of nuclear weapons elsewhere. I believe that the Americans could have taken a similar attitude.

Having thus effectively decoupled the civilian and military aspects of nuclear energy Sweden embarked on a highly successful development of nuclear generated electricity. Today half of our generating capacity comes from 12 nuclear power reactors of which 11 have been built by the Swedish company ASEA-ATOM (now ABB-ATOM). The remaining half of our generating capacity is hydroelectric and since our large water reservoirs can be utilized to match daily as well as yearly variations in load demand we have an almost unbeatable system for an efficient, cheap and secure delivery of non-polluting power. The energy balance is strong and is likely to remain so for the foreseeable future. There is no need for any major further expansion of our generating capacity. Our nuclear power plants have among the world's best performance records.

However, as you probably know, this fortunate state of affairs has not come about easily and is not expected to last for long. Sweden is by an unanimous decision in Parliament committed to abolish its entire nuclear generating capacity by the year 2010 at the latest.

How did this come about and will it happen? A promise fulfilled and forsaken?

Opposition against nuclear power has been extremely strong and persisting. After TMI the late Olof Palme, then in opposition, gave up his previous resistance to a nuclear referendum which consequently took place in 1980. Almost 2/3 of the people voted in favour of nuclear power. But "in favour" meant: no more nuclear reactors ever, keep those 12 we have got in operation till 2010 at the latest and then close down. This was the most favorable alternative offered.

This silenced the nuclear debate completely. Not even Chernobyl, which hit Sweden rather badly, managed to change that. In fact Chernobyl convinced the Swedish people that even if we were to do away with our (relatively) safe nuclear power plants we would nevertheless have to live with the risk exposure from the (much unsafer) foreign nuclear power plants in neighbouring countries.

No attempts have been made to influence public opinion but over the years there has been a continuous and dramatic shift in the people's attitude. Today, according to the opinion polls, more than half of the people prefer to keep the nuclear power plants after the year 2010 in spite of the parliamentary decision. Moreover, there are literally no plans to prepare for a non-nuclear generating capacity. Those attempts that were initiated by the government after Chernobyl have all been abolished.

I think it is fair to say that nuclear energy is socially accepted in Sweden.

I believe we have arrived at a promise fulfilled by

1) keeping military and peaceful applications of nuclear energy completely apart.

2) keeping vendors and regulatory authorities separate.

3) having had a thorough and open public debate on the pros and cons of nuclear energy.

4) having been absolutely honest about the performance of our nuclear power plants, and, in particular

5) having experienced the impact on economy and on environment of nuclear power in one of the most electrified countries in the world.

I am not suggesting that little Sweden has set an example for the world at large to follow. That would indeed be preposterous. But it is not impossible that Sweden presents a nuclear scenario that the world for a variety of reasons will choose to adopt in order to arrive at the fulfilled promise. In fact this is what I believe will happen.