



## How to interpret Swedish energy policy - facts and analysis

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### Introduction

The Swedish parliament decided on June 10, 1997 that one of the two reactors at the Barsebäck nuclear power plant shall be closed before mid 1998 and the other unit three years later. Some weeks before the 1998 PIME Conference (on December 18) the same parliament is planning to accept a new act, which will make it possible for the government to close any reactor in the future without any reference to the level of safety.

Sweden is known internationally to have a successful nuclear power programme and to be in the front line to develop safe nuclear waste methods. The decision in the Swedish parliament therefore came as a surprise not only in Sweden but to a large part of the nuclear power industry, all over the world. We, who are working in the Swedish nuclear power industry, have analysed the historical development and the acute situation to be able to understand why a majority of the members of the Swedish parliament voted for a premature closure of at least two nuclear power units. The reaction by the general public to the accidents at TMI and Chernobyl is only part of the explanation. Today opinion polls show that 80 % of the population do not agree with the Government's nuclear energy policy. The concern for the environment seems only to play a minor role, and there are certainly no competitive alternative energy resources available in the near future.

Instead, the main part of the explanation can be found in the skilful political strategy of one or two political parties which have been advocating the premature phase-out of the nuclear power programme since the mid 70s. *A long time ago (in 1976), when the Centre Party .....*

.... we plan to present a detailed document at the 1998 PIME Conference containing the historical background as well as facts and analyses about the Swedish energy policy. In the oral presentation we shall give our personal interpretation and the latest news. In the text below a condensed factual presentation of the Swedish energy policy is given.

### The Swedish nuclear programme

Nuclear power accounts for half the power generated in Sweden. There are twelve nuclear power units with a net output of 10 000 MW and an annual energy generation capacity of more than 70 TWh . The other half is hydro and only a few percent is generated by fossil fuel and biofuel.

Nuclear production in Sweden has proved to be technically, economically and environmentally highly successful. The capacity factors have normally been high, the production costs are low and so are the releases of radioactivity and doses to the personnel. All twelve nuclear units are still highly competitive generators on the deregulated Nordic electricity market and a life time of at least 40 years is expected for all the nuclear units, as they are being modernised continuously.

The estimated safety standard of all twelve units is among the highest in the world.

A dynamic nuclear waste programme has been launched. Swedish waste management techniques have achieved world leadership in several important areas.

Manufacturers, power utilities and reactor safety authorities have thus taken all reasonable steps to establish high credibility of nuclear power technology. But in spite of this, several political parties, including the Social Democratic Party, are opposing nuclear power.

### **An anti nuclear prime minister in 1976**

The anti- nuclear policy was introduced in the Swedish parliament already in the 1976 general election, when the Centre Party with a strong antinuclear policy on its programme got the Prime Minister chair. Four years later, in 1980, the Swedish parliament decided, after a national referendum, that nuclear power under certain conditions would be phased out by the year 2010.

In 1994, just before the general election, the government decided to establish an ad hoc energy commission. The commission consisted only of politicians but several expert groups served the commission with facts and analyses. The report was published in the end of 1995 and after one year of public debate, its recommendations were transformed into political decisions.

In February 1997 the Social-Democratic Party in the minority government and two other political parties, the Centre and Left Parties, made an agreement about a new energy policy. The parliament decided according to the agreement on 10<sup>th</sup> of June.

### **The nuclear phase-out**

The decision in parliament means that the phase-out of nuclear power shall start within half a year and the reasons given are purely political. One 600 MW unit at the Barsebäck nuclear power plant shall be closed by 1<sup>st</sup> July 1998, a few months before the next general election, and the second twin unit at Barsebäck three years later. A precondition for the closing down the second unit is that the resulting loss of electricity production can be compensated by new power sources and more efficient use of electricity. There are no dates fixed for the closure of the remaining ten Swedish reactors. Thus the old decision from 1980 to phase-out the whole nuclear programme by 2010 has now been abandoned.

According to the government it is possible to replace the power production at Barsebäck by wind, bioenergy and more effective use of energy. A more probable development, according to industrial specialists, is that the import of electricity produced in Danish and Finnish coal power plants will increase at least for the next five years.

### **New expropriation act**

The existing law on nuclear activities provides that only safety reasons are legally valid to close a nuclear power plant. The government has, however, proposed in a bill to the parliament a change in the act on nuclear activities as well as a new act on the expropriation on nuclear power plants. The new act includes rules for compensation to the plant owners. The act, which will give the government power to close any nuclear power plant, is expected to be effective by January 1998.

In the meantime negotiations have started between the State and Sydkraft, the owner of the Barsebäck plant, about the conditions for closing the plant. If an agreement could be reached the plant would be closed without the use of the new expropriation act. It now, however, seems more probable that there will be no agreement and therefore the Government would have to decide to close the plant with reference to the new act. It is obvious that Sydkraft in such a case would appeal to higher courts, first in Sweden and finally with reference to the EU constitution.

### **The trade union and the public oppose early phase-out**

The closing of nuclear power plants would mean higher electricity prices. This would be a threat to the Swedish electricity intensive industry (paper and steel mills), because of the sharp international competition. The Swedish industry and the trade union (closely connected to the social-democratic party) have therefore for a long time been opposing the new energy policy. The result is that the public is well aware of the need for the continued use of nuclear power and a great majority would prefer the continued use of all the twelve nuclear reactors.

### **Phase-out scenarios**

The content of the decision by parliament on 10<sup>th</sup> June is rather vague and it invites to different interpretations about the future programme for phasing-out nuclear. It is obvious that there is a strong political ambition to close one reactor as soon as possible. But what will follow after that is hidden in a political uncertainty.

The non-socialistic opposition, now consisting of the conservatives, liberals and christ-democrats, has already decided to make the energy policy one of the main items in the 1998 election campaign. If a non-socialistic government, not depending on the Centre Party, could be established after the election – an improbable outcome of the election – it would be possible to reopen the reactor, which might have been closed at Barsebäck. It is in fact rather difficult, or impossible to make an informed guess about the long-term energy policy after the general election in mid September 1998. One optimistic scenario is that only one unit will be closed and that all remaining nuclear units would be allowed to operate as long as it is safe and economical to do so. The most pessimistic scenario – and for the moment not very probable - is that the second Barsebäck unit will be closed by the year 2001 and that the remaining ten reactors will be closed with a frequency of one about every fourth year.

There is only one thing we know for sure: We shall be able to report some interesting news about the Swedish energy policy at many PIME conferences in the future.

# **Industry's Opponents Workshop**

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