'Electricity from nuclear power stations' from the Deutsche Zeitung (31 July 1957)

Caption: On 31 July 1957, commenting on the report of the 'Three Wise Men', the German daily newspaper Deutsche Zeitung focuses on the attitude of the European countries to the use of nuclear power as a source of energy.

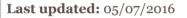
Source: Deutsche Zeitung. mit Wirtschaftszeitung. 31.07.1957, Nr. 61; 18. Jg. Stuttgart: Curt E. Schwab GmbH. "Strom aus Atomkraftwerken", p. 6.

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Electricity from nuclear power stations

Euratom and the OEEC are putting pressure on the Federal Republic

A. F. Paris

There is now a very lively discussion on the nuclear programme of the Nuclear Three Wise Men, who want to achieve a nuclear energy capacity of 15 million kW in the countries covered by the Schuman Plan in the next ten years. The German targets, in particular, are considerably behind what was envisaged by the Wise Men, while, on the German side, it is being said that the French power stations for their part would definitely not be prepared to fall in with the proposals. Both those experts close to Euratom and the OEEC Nuclear Directorate are calling urgently for nuclear energy production to be speeded up. The reaction of these groups to the report by the Three Wise Men was considerably more positive than that of the public. The competent authorities do not deny that there are certain reservations from some senior officials in the French electricity generating industry, but they should not be overestimated.

The French Government has already broadened the nuclear energy programme considerably and has now set a target of 3 million kW for 1965, which is not too far off the figure put forward by the Wise Men. This nuclear enthusiasm is without doubt shared by the public and the Parliament and also by industry and by some of the experts from the state power stations. However, it must be emphasised that France is dependent on importing a large percentage of its energy, while the situation in German industry is almost evenly balanced, even though, in 1956, the proportion of imports exceeded 5 % of total consumption for the first time. Assuming that the requisite number of miners can be found — something that will, however, be very difficult — German coal mining is in a position to meet the demand for electricity from thermal stations until at least 1965. The threat of an electricity shortage is regarded here as more serious in the United Kingdom and France than it is in the Federal Republic of Germany.

In spite of this, the experts regret Germany's cautious approach towards nuclear energy. Even the United States, which currently has the cheapest sources of energy in the world at its disposal, is in the process of giving a higher profile to nuclear power stations. The assumption by the Three Wise Men that, from 1965 onwards, nuclear energy will become cheaper to provide than conventional energy in Europe seems to correspond to the facts. In America, this reversal of the profitability situation is expected to occur by 1975 at the latest.

To wait until other countries have designed the most efficient reactors before building nuclear power stations is regarded as an undesirable approach. From the point of view of purely meeting energy requirements, it would just about be possible to defend this 'wait-and-see' method, although it would be very doubtful whether the nuclear reactors required could then be delivered from factories abroad at the decisive moment. However, it would be somewhat questionable to view the development of nuclear energy only from this restricted angle. It would be much more important for the industry to prepare itself for this new technology so that Europe will be in a position to meet its requirements as regards reactors from its own resources and not have to continue for ever in its role as a customer of the United States. In order to meet this technological challenge, a large-scale nuclear energy programme would have to be implemented, for that is the only way that industry can be satisfactorily mobilised.

On the other hand, there is a close link between the nuclear programmes and the future export capability of European industry for nuclear materials. On their tour of each country concerned, the Three Wise Men found that German industrialists were the most pessimistic about the capability of their factories to supply the material required. They would apparently not be in a position to make the appropriate adjustments in their businesses and workforces by 1965. It is particularly with reference to this fact that regret has been expressed in the relevant international circles about German 'nuclear dynamics', which have been described as poor. The view is that the more modest the German nuclear programme was, the more difficult it would be for German industry to make the necessary link-up with the world economy. On the other hand, belief in revolutionary changes in the field of nuclear reactor construction is an illusion. The general outlines of the



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designs that might be used over the next 10 or 15 years are already known. Nothing more than slight improvements may be expected. On the other hand, it is known that the efficiency of the reactors depends on the size of the plant. Experimental power stations generating less than 100 000 kW are seen as impractical. This fact, too, is a reason for supporting a large-scale nuclear programme. It is also noted in this context that the 15 million kW figure given by the Wise Men is a maximum target, so that discussions are still possible about the details of the programme.

In questions of nuclear energy, Germany is always out in the cold within Europe, according to the views of observers in Paris. The United Kingdom and France are seen as determined to take the nuclear plunge on a large scale, and in fact even smaller countries such as Belgium and Switzerland are also ready and willing. It is only the Federal Republic that shrinks back, and there is a great danger that its nuclear industry will have to pay a rather painful price for this hesitation in the not too distant future. The longer the country waits before making up the gap between it and the more advanced countries by increasing its own efforts, the more difficult it will be to remain in touch. What should be at the forefront of the considerations should not be the possibility of any supply shortages in German energy but the desire of Germany, and therefore of the European nuclear industry as a whole, to export.

A report that has recently been published by the OEEC Nuclear Directorate about joint European nuclear power stations underlines the need for quick decisions to build large-scale units of between 100 000 and 150 000 kW using already proven reactor designs. The construction cost for a power station with an output of 150 000 kW on the British model of the Calder Hall plant, including initially equipping it with natural uranium, is about 70 million dollars. OEEC experts take the view that this sum can be raised in the short term without major problems as part of a Community cross-border programme. The other reactor designs are usually cheaper, but their consumption of nuclear fuel is more expensive. It is not yet known which countries want to take part in this kind of programme. To date, there have been expressions of great interest from Switzerland, Austria, France and the Benelux countries.



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