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SUB-COMMITTEE ON SOVIET ECONOMIC POLICY

CONSTRUCTION OF NUCLEAR ENERGY PLANTS IN THE EUROPEAN SATELLITE COUNTRIES

Note by the German Delegation

In all European satellite countries, primary energy (PE) consumption increased faster than PE production since 1950. From 1950 to 1965 the share of coal in PE production was 80 to 95%, in PE consumption 80 to 90%.

2. About 90% of all fuel reserves of the satellite countries consist of coal; however, as early as in 1980, all satellite countries will have reached the limit of their possibilities to extend the coal basis while some countries will even reach it earlier.

3. These precarious prospects have not been overlooked by the energy planners of the varicus countries. They have therefore started already in the mid-fifties to examine the possibilities for power production in the nuclear energy plants. Technical backwardness, lack of capital on the part of the satellite countries and the reluctant assistance given by the USSR are the reasons why construction plans for nuclear energy plants have been carried out only to a very small extent and with great delay. Until the end of 1966 only one nuclear energy plant has started to produce power in the entire satellite area (in the Soviet Zone of Germany); a second one is under construction in Czechoslovakia. All the other countries have not yet exceeded the planning stage. It is to be assumed that the reason why the Soviet Zone and the CSSR were the first to receive atomic energy plants from the USSR is that the latter has exploited the uranium deposits in these countries. The following table shows the situation in detail.

Table 1

Nuclear Energy Capacities (MW) of the European Satellite Countries

	End of 1966 in operation	Under construction	Planned 1970	Total by 1975	Capacity 1980
Bulgaria	-	-	-	800	1,600+
CSSR	-	150	150	1,750	2,500
Soviet Zone of Germany	70	-	140	300+	2,000
Poland	-	10++	10	320	1,100
Rumania	-	-	-	1,000	2,000+
Hungary	-	-	-	400	800
Yugoslavia	-	-	-	300	800
Total	70	160	300	4,870	10,800

\+ Estimated planning
++ Nuclear energy test plant

4. The great gap between the originally planned time of completion and the actual beginning of operation of the first nuclear power stations in the Soviet Zone (4 years) and in the CSSR (7 years) is symptomatic. The reason is to be attributed to slow deliveries from the USSR and the lack of technical know-how of the Czechoslovak industry.

5. The fuel situation is not unsatisfactory since all satellite countries possess uranium ore deposits. However, they are still unable to produce metallic uranium from the uranium ore. Moreover, none of these countries has any facilities for uranium enrichment or the regeneration of irradiated combustion elements. All these countries depend on the assistance of the USSR or of Western countries in this field. Details, as far as they have become known up to now, on existing or planned nuclear energy plants are listed in the attached tabulation.

6. During 1966 the USSR signed agreements with Bulgaria, Poland and Hungary on the construction of the first nuclear energy plants in these countries while the CSSR received an offer from the USSR for the delivery of a second nuclear energy plant. Rumania has asked American and West European firms to submit offers for a nuclear energy plant. It is not known whether Rumania is also negotiating with the USSR.

7. As regards the figures shown in Table 1 giving the planned total capacities for 1970 and 1975 it has to be mentioned that there is hardly a chance that they will be even remotely fulfilled. The

planning figures for 1980 can at the moment be considered wishful thinking, partly because most satellite countries have not even been able up to now to provide the investment funds for their conventional power stations in time. The construction cost of an atomic energy plant is, on average, twice as high as that of a conventional energy plant of the same capacity.

Existing and Planned Nuclear Energy Plants in European Satellite Countries (apart from the USSR)

Country Location	Capacity MW	Beginning of construction planned	Beginning of construction actual	Beginning of operation planned	Beginning of operation actual	Fuel	Moderator	Cooling medium (heat carrier)
Soviet Zone								
Rheinsberg	70	1959	1960	1962	1966	enriched uranium	light water	natural water
CSSR								
Jaslavske Bohunice I	150		1958	1969+		natural uranium	heavy water	carbon dioxide
Jaslavske Bohunice II	300	1968		1974		natural uranium	heavy water	carbon dioxide
unknown	500							
unknown	800			1975				
Bulgaria								
Kozloduj	400	1968		1973		enriched uranium	heavy water	
Yugoslavia								
unknown	300			1975		natural uranium	heavy water	
unknown	500			1980		natural uranium		
Poland								
Swierk (Test-reactor)	10	1967		1971				
unknown	300	1973						

+ originally 1962

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Country Location	Capacity MW	Beginning of construction planned	Beginning of construction actual	Beginning of operation planned	Beginning of operation actual	Fuel	Moderator	Cooling medium (heat carrier)
Rumania								
unknown	600			1970		natural uranium	heavy water	
unknown	1,000			1975		natural uranium		
Hungary								
unknown	800	1966		1975		natural uranium		