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USSR FALTERS IN NUCLEAR POWER DEVELOPMENT

Summary: Soviet and East European nuclear power development seriously lags behind that of the major countries in the world. By 1977 the Soviet-East European power gap will continue to expand at an accelerating rate.

According to the information collected by the International Atomic Energy Agency (IAEA) the Soviet share of the world's installed nuclear electrical power capacity will drop from about 11 per cent as of September 1968 to less than four per cent in 1977. (1) During the same period the United States' share of world capacity will increase from 25 per cent to about 53 per cent. In physical terms the Soviet Union's nuclear capacity is to grow from 1,160 MW to 4,855 MW while that of the United States is to expand from 2,787 MW to an estimated 73,852 to 77,031 MW. Thus the difference in capacity in 1968 was about 1,630 MW in favor of the United States. This difference is to increase to between about 69,000 and 72,000 MW in 1977.

By 1977 the expected installed nuclear power capacity of the Soviet Union will be less than that of the United States, Great Britain, Japan, Canada or France. It will roughly be equal to that of West Germany and Sweden. A single power unit planned for the State of New York will reach about 4,000 MW or just over 80 per cent of the expected total nuclear power capacity of the Soviet Union in 1977.

- (1) For a comparison of "installed, under construction," and "planned" nuclear energy capacities of the various countries of the world with an expected capacity in excess of 1,000 MW in 1977 see the attached Appendix.

The European "socialist" countries will have in 1977 about five per cent of the world's nuclear capacity (7,000 MW) compared with 58 per cent for North America (81,000 MW), 29 per cent for West Europe (40,280 MW), and eight per cent (11,600 MW) for Asia (including New Zealand and China).

The Energy Committee of OECD has reported that atomic energy will represent nine per cent of the total electrical power capacity in North America in 1975. This proportion is to rise to 20 percent in 1980. For West Europe the respective proportion is to be 18 and 29 per cent and for Japan eight and 12 per cent. Thus an accelerated expansion of nuclear power is expected through at least 1980.

Harry Trend

Appendix
World Nuclear Electric Power (a)
 (as of September 1968)

	Installed		Under Construction		Planned		Total	
	No. of units	Total Capacity MW	No. of units	Total Capacity MW	No. of units	Total Capacity MW	No. of units	Total Capacity MW
which:	47	10,942	72	41,687-42,829	109	87,051-89,438	228	139,681-143,210
at Britain	14	2,787	35	25,953-27,095	48	45,112-47,149	97	73,852- 77,031
in	12	4,160	5	5,082	4	7,500	21	16,742
in	1	166	6	2,711	11	6,818	18	9,695
in	2	225,5	2	1,267	3	5,020	7	6,512.5
in	6	1,166	4	2,275	5	2,490-2,590	15	5,931-6,031
in	5	1,160	2	515	4	3,180	11	4,855
in	3	527	5	453	7	3,842	15	4,822
in	-	-	2	575	3 ^(c)	3,569	5	4,144
in	-	-	2	656	4 ^(d)	1,850-1,950	6	2,506-2,606
in	-	-	-	-	2	1,490	2	1,490
in	3	597	1	35	1	600	5	1,232
in	-	-	2	580	2	600	4	1,180

Source: International Atomic Energy Agency, as reported by Rynki Zagraniczne, 20 March 1969, p. 3

- (a) Excluding experimental units, i.e. those with a capacity of less than 20 MW, and those completely used for educational purposes. In 1968 there were 16 experimental power units distributed among nine countries and 378 educational units distributed among 48 countries. Listed in this table are only those countries whose capacity will be at least 1,000 MW.
- (b) Includes unit at Chooz with a capacity of 266 MW and jointly used by France and Belgium.
- (c) The nuclear power unit at Ringhals (760 MW) is to be expanded to 3,000 MW.
- (d) The unit at Leibstadt on Renem with a capacity of 500-600 MW is to be jointly used by Switzerland and West Germany; the Kaiseraugust (700 MW) is to be jointly used by Switzerland and France.

Country	Capacity (MW)	Year	Notes
Belgium	266	1968	Chooz
France	16	1968	Experimental units
Germany	378	1968	Educational units
Switzerland	1,200-1,500	1968	Leibstadt, Kaiseraugust
Sweden	2,000	1968	Ringhals
Denmark	400	1968	Experimental units
Netherlands	400	1968	Experimental units
West Germany	400	1968	Experimental units
Other	4	1968	Experimental units
Total	2,454	1968	