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ELECTRICITY IN THE CMEA: A WORRYING OUTLOOK

by Vladimir Sobell

Summary: Czechoslovakia appears to be heading for major shortages of electricity this winter. The power situation in Bulgaria and Romania is likely to become critical again this winter, since the causes of the earlier shortages still have not been removed. To date no alarm has been sounded in Poland or Hungary. The outlook for supplies of electricity for the CMEA as a whole has become more worrisome because of the Chernobyl accident.

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Anxiety in Czechoslovakia. Recent reports from Czechoslovakia suggest that the authorities are worried about the possibility of electricity shortages in the coming winter. The cause for alarm lies mainly in the snags in the summertime maintenance of power plants.

Perhaps the most comprehensive account of the problems involved appeared on August 18 in the party daily *Rude Pravo*.¹ In 1985 the routine power plant maintenance over the summer went unusually well--the work was in fact completed earlier than planned. According to *Rude Pravo*, the organizations involved had good reasons to congratulate themselves on this achievement, which, the daily added pointedly, they were very quick to do.

This year, however, the situation is entirely different. The main problem is snags in the maintenance of the Northern Bohemian power plants of Tusimice (near Chomutov) and Prunerov. Together the two plants make up the single largest electric power enterprise in Czechoslovakia. The delays in repairing generators are considerable; at Tusimice the work will not be completed until early 1987. Of the nine generators in Northern Bohemia scheduled for overhaul this summer, only two were completed on time. According to Czechoslovak television, this

is a situation maintenance workers have not encountered for several years.² In July the economic weekly *Hospodarske Noviny* stated that if the maintenance schedules are not adhered to, the country could expect "serious deficits in the energy balance in the coming winter, with serious repercussions for [industrial] production."³

Why is it that the maintenance work has suddenly become bogged down when it was completed without a hitch in 1985? *Rude Pravo* offered part of the answer: the repairs carried out this year were far more complex and thorough than those done previously. This summer's work was, in fact, to be an undertaking "without precedent in the history of Czechoslovakia's energy industry."⁴ At the same time, however, the media have made it clear that the lion's share of delays are a result of familiar problems that have nothing to do with the scope of the task at hand: the poor organization of work and delays in the supplies of spare parts and materials.

Shadows over Bulgaria and Romania. These two countries experienced severe electricity shortages in the past few winters, which resulted in widespread economic losses and extreme hardship for the public.⁵ The authorities in both countries were quick to put the blame on the unusually unfavourable weather conditions: a hot, dry summer (resulting in low levels of water at hydroelectric plants) followed by severe frosts.

Such "objective" causes, however, could not explain the entire scale of the crisis (hydroelectricity, for example, accounts only for a small share of total output in both countries). Other factors were equally important. These included delays in the maintenance work at existing power plants and in the opening of new units, the lack of spare parts, disruptions in the supply of coal, accidents at the power plants, poor management, and sheer incompetence.⁶ The governments responded with rationing, energy conservation campaigns, and even more drastic measures such as the militarization of the energy sector in Romania. Such measures, however, did nothing to get at the roots of the energy crisis and did not provide a way out, even in the short term; and it was rumored that the "militarization" of the power plants in Romania had not been done for strictly economic reasons.⁷ In any case, there are no signs that a significant turnaround has materialized in either country. The midyear report on the Bulgarian economy suggested that less electricity had been produced this year than in the corresponding period in 1985.⁸ In August the Romanian party daily *Scinteia* reported disturbing shortfalls in the amount of coal stockpiled at the power plants in preparation for the next winter.⁹

Apart from the mismanagement within the individual enterprises noted above, the shortages of electricity in Bulgaria and Romania (and indeed to a lesser extent in the CMEA as a whole) are also attributable to mismanagement on a much

grander scale. The misconceived strategies of industrial development that give priority to energy-intensive branches without ensuring that adequate supplies of energy are in fact available (or taking into account the increased demand due to new housing construction), as well as the energy waste in a centrally planned system, are the more fundamental problems involved and go much further in explaining the chronic power shortages plaguing Romania and Bulgaria. Unfortunately, there are no signs that the prevailing strategies are about to be abandoned. This suggests that Romania and Bulgaria can only hope that the winter of 1987 will not be as severe as the preceding one.

Poland and Hungary. Czeslaw Piotrowski, Poland's Minister for Mining and Energy, claimed at a recent press conference that his country's state of readiness for the coming winter was satisfactory. Summertime repairs had proceeded faster than planned. Nevertheless, Piotrowski did not exclude the possibility of eventual power shortages during the forthcoming winter should the weather be unusually bad.¹⁰ No alarm has been sounded in Hungary either, so far, although it would, of course, also be affected by a CMEA-wide breakdown in energy supplies.

This relatively optimistic outlook, however, must be considered against a wider context of the prevailing industrial practice in Eastern Europe: even when the situation is apparently satisfactory, the risk of power shortages at peak hours is, as confirmed by Piotrowski, always present because there are generally relatively very small reserves in the power system to accommodate a sudden, large drain on electricity. The existing plants and electricity grids tend to work at full speed with relatively little maintenance or modernization work done on them.¹¹ This not only increases the risk of power shortages at a time of breakdown, it also increases the probability of a breakdown. The inability of the CMEA electricity grid to serve as a reservoir of power to be pooled in times of need (which, after all, is supposed to be one of its main purposes) was clearly documented in the winter of 1985-1986. In January it was reported that the Soviet Union was well placed to supply Romania with extra electricity but could not do so because the existing power grids were unable to carry the additional load.¹²

The Chernobyl Factor. The disaster at the nuclear power plant in Chernobyl in the Ukraine in April 1986 sent an additional tremor through the CMEA's already shaky electricity sector. Most of the East European countries' long-term electricity plans revolve around growing shares of nuclear power, but most have already experienced delays in completion of nuclear power plants. Although none of the plants begun or planned outside the USSR is of the same design as the one at Chernobyl, the accident must have dealt a heavy blow to the East European nuclear power establishment. No significant changes in construction plans have been announced so far, but all CMEA

governments have indicated that additional safety measures would be necessary. This cannot but slow down construction further; it will also make it more costly.

On 16 April 1986 Radio Moscow confidently stated that the Soviet Union planned a "considerable increase" in its supplies of electricity (and natural gas) to the CMEA over the next five years and that new grids would be built to that end.¹³ Ten days later the Chernobyl disaster came to light. The accident not only is bound to undermine these plans in the long term but might also complicate the already difficult situation in the short term. Western analysts have speculated that the Chernobyl accident will make power shortages in the Ukraine this autumn and winter more likely. This is because conventional electricity plants in the area were forced to continue operations this summer to compensate for the energy lost by the breakdown; some of these were due for maintenance, which makes breakdowns this fall and winter more likely.¹⁴ To date only Czechoslovakia has reported a reduction in the planned imports of Soviet electricity because of Chernobyl.¹⁵ It seems likely, however, that the other CMEA countries will be affected as well. This is particularly pertinent in the case of Hungary, which in 1985 imported one-quarter (9,400 million kilowatt hours) of its total electricity consumption from the Soviet Union.

Lack of Reserve Capacity as the Critical Factor. For a realistic assessment of the impact of Chernobyl on the overall electricity supply in CMEA, one must look at the situation from a wider perspective. Last year the Soviet Union produced some 1,500,000 million kilowatt hours of electricity; of this, about 5-6% was produced by the RBMK-type (like those at Chernobyl) nuclear plants (nuclear plants altogether accounted for about 10-11% of total Soviet electricity output in 1985). The Chernobyl plant itself (that is, all four reactors with capacity of 1,000 megawatts each) represented about 25% of the total RBMK-type installed capacity, 15% of total nuclear capacity, and about 1.3% of the total capacity for electricity (conventional plus nuclear sources). In 1986 the Chernobyl plant was scheduled to produce only about 1.5% of the total electricity in the Soviet Union (about 13% of total nuclear output).¹⁶ Recent Soviet statements suggested that the consequences of the accident (including the temporary closures of all other RBMK-reactors because of "retrofitting") this year would reduce the output from the RBMK-reactors by about 10%.¹⁷ This would correspond to about 9,000 million kilowatt hours or 0.5-0.6 % of total Soviet output.

Whatever the eventual loss, it is clear that it will be small in relation to the size of the Soviet Union's total electricity output and installed capacity, a dent that could easily be made up through a combination of energy conservation, by staggering industrial plants' operation to reduce pressure at peak hours, and increased operation of plants throughout the USSR.¹⁸ This means that any reports of cutbacks in Soviet

electricity exports because of Chernobyl must be treated with caution. The point is that given the tendency to operate at full speed with a very low reserve capacity (common practice in all CMEA countries), the disruption caused by Chernobyl is bound to be more serious than it would have been, had electricity reserves been readily available. Should the cutbacks indeed materialize, the Chernobyl accident would not be the only cause and perhaps not even the dominant one. If anything, the accident simply highlighted the slim margin that all the CMEA countries work with in trying to come up with enough electricity.

- 1 *Rude Pravo*, 18 August 1986.
- 2 Czechoslovak Television, 26 August 1986, 7:30 P.M.
- 3 *Hospodarske Noviny*, no. 29, 18 July 1986.
- 4 *Rude Pravo*, 18 August 1986.
- 5 See Romania SRs/17 and 3, *Radio Free Europe Research*, 17 December 1985 and 24 February 1986, items 6 and 5, and Bulgarian SRs/5 and 10, 28 March and 2 September 1985, items 2 and 2, respectively.
- 6 *Ibid.*
- 7 See Romanian SR/16, *RFER*, 14 November 1985, item 2.
- 8 The Bulgarian government announced that the situation on the energy front remained grave and that the strict conservation measures would continue (Radio Sofia, 14 July 1986, 7:00 P.M.). The authorities reportedly also admitted that this year's targets would not be fulfilled; the situation should be improved somewhat in 1987 by the new VVER-1000 nuclear reactor at Kozlodui, which begins operations later this year (Tanjug, May 19, 1986, Sofia).
- 9 According to *Scinteia* (7 and 9 August 1986), the authorities aimed at building up total coal supplies at the power plants to 6,000,000 tons before the onset of winter; in the early August the coal stocks were still 2,700,000 tons short of this target.
- 10 PAP (in English), 29 August 1986
- 11 In the optimistic times before the Chernobyl accident, Bulgarian Minister of Energy Nikola Todoriev boasted that the utilization of capacity at the Kozlodui nuclear plant was 80% while the world's average was only 62% (BTA [in English], 10 February 1986).
- 12 Radio Budapest, 22 January 1986, 10:00 P.M.
- 13 Radio Moscow (in Romanian), 16 April 1986, 5:00 P.M.

- 14 Testimony of Western energy experts, RFE correspondent's report (London), 15 August 1986.
- 15 The Soviet Union has, however, offered more natural gas instead of electricity (Radio Hvezda, 23 July 1986, 7:00 P.M.)
- 16 *Planecon Report*, nos. 19-20, 16 May 1986, p. 7.
- 17 Reuter (Vienna), 26 August 1986, citing the Soviet delegate to the IAEA congress on Chernobyl held in August in Vienna.
- 18 This adjustment strategy was announced by Vitalii Sklyarov, a power ministry official in the Ukraine (AP, 26 June 1986, Moscow).

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