

SEMINAR ON ENVIRONMENTAL ASPECTS OF THE COOLING SYSTEM OF THERMAL POWER STATIONS, HELD AT THE BROWN BOVERI INTERNATIONAL RESEARCH CENTRE, DÄTTWIL, ZÜRICH, SWITZERLAND, 13–16 MAY 1974

New environmental problems will arise from the operation of bigger power stations which concentrate a high generating capacity in a limited geographical area. In this comment on the consequences of continuing growth in electricity consumption, the participants in a seminar organized by the United Nations Economic Commission for Europe (ECE) in Switzerland recommended that ECE member countries cooperate more closely than heretofore in research on the effects of heat discharge into the environment.

The expert participants from 22 countries met at the Brown Boveri International Research Centre, Dättwil, from 13 to 16 May, invited by the Swiss Government, to discuss the environmental aspects of cooling systems for thermal power stations—particularly where air-cooling systems are concerned. A number of international organizations with a technical interest in the subject were also represented.

The following reports were submitted to the Seminar: The world atmospheric balance and the growth of energy consumption (R. E. Müller, Switzerland); Experience gained and constraints affecting the cooling systems used (Mrs Florica Ardeleanu, Romania); Prospects for the development of cooling systems (H. Zünd, Switzerland); Air cooling systems: technical and economic data (L. Capronnier, France); Environmental consequences of wet-air coolers (physical and economic aspects)—problems relating to the effects of heat and moisture discharges on atmospheric phenomena—noise problems (G. Rau, Federal Republic of Germany); Environmental consequences of wet-air coolers: physical and economic aspects—amenity and aesthetic problems (D. B. Leason, United Kingdom); Effect of wet-air coolers on the environment: physical and economic aspects—problems presented by liquid effluents (P. de Bruyne & J. Balthazar, Belgium); Environmental consequences of dry-air cooling (László Forgó, Hungary); Environmental consequences of spray cooling systems (Frank H. Rainwater, United States of America); Economic comparisons of different cooling systems according to environmental constraints (J. Remeysen & J. van Dievert, Belgium; G. Oplatka, Switzerland); and Effects of scale in discharges of heat into the atmosphere; incidence on choice of sites for power stations (Joseph Jacquet, France).

Participants spoke of the need to increase knowledge of ways to protect the environment from the effects of heat discharges. They also said that there was a need to define and implement practical action to limit these effects. Special attention should be given, they considered, to the consequences for the atmosphere of electricity-generating-station cooling systems. A periodical exchange of information might be organized by the ECE Committee on Electric Power on the experience acquired with, and the future development of, technologies of cooling systems for electric power stations. These exchanges would also take into account action taken to protect the atmosphere against side-effects of cooling systems.

While the main air-cooling systems now used are based on wet towers, other means are being employed in some countries. Dry towers and sprinkler systems in particular were discussed at the seminar, and the participants saw merit in continuing to study the problems which arise from these forms of cooling.

Environmental constraints can have a profound effect on the initial and operating costs of electricity generating stations. The seminar underlined the importance of economic comparisons between cooling systems in the context of environmental requirements. They suggested that the advantages and drawbacks of establishing restrictive criteria should be studied carefully, and proposed that natural water resources should be used to the best advantage for cooling systems.

Wider study by the ECE Committee on Electric Power of the possibilities of harnessing the residual heat of electricity generating stations was also recommended by the participants. In looking at this problem, the present and likely future use of different sources of energy for electricity production should be taken into account.

Participants felt that the Committee should also give high priority to cooperation with the World Meteorological Organization and the World Health Organization in studying the effect on atmospheric conditions and on climate of cooling plants in power stations, as well as their impact on the health of people living in the surrounding areas.

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INTERNATIONAL YOUNG PIONEERS, SEMINAR-CAMP ON NATURE CONSERVATION, HELD AT DRUZHBA NEAR VARNA, BULGARIA, 21 MAY–1 JUNE 1974

In the Bulgarian People's Republic, environmental conservation has shown remarkable development during the last few years. In 1971, when a new Constitution of the State was issued, including a special item on environmental conservation, the Ministry of Forests was reorganized into the Ministry of Forests and Conservation of Natural Environment. At approximately the same time the pertinent scientific body in the Bulgarian Academy of Sciences—the Commission on Nature Conservation—was developed into the Institute for Landscape Biology. Finally, in the fields of publicity, general education, and broad public participation, the top socio-political organization—the Patriotic Front of the Bulgarian People's Republic—established its own Nature Conservation Committee with an elaborate structure reaching from the central highest level to every small community.

The last-mentioned body, in cooperation with two national ministries (Forests and Conservation of Natural Environment, and Education) and two national organizations (those of Communist Youth, and Tourists), convened, in the spring of 1974, under the sponsorship of the East Europe Committee of IUCN's Commission on Education, an international meeting of Young Pioneers—to consider their education and activities in the fields of environmental conservation.

This took place at Druzhba, a famous Black Sea spa near Varna, from 21 May to 1 June 1974. Almost 150 youngsters between 12 and 15 years of age, and more than 50 adults—youth leaders, educators, conservation experts, and lecturers—were guests of the chief convenor-organization. Among them, besides the most numerous Bulgarians, there were 34 participants from Czechoslovakia, German Democratic Republic, Hungary, Poland, USSR (both Russia and Ukraine), and Yugoslavia.