

RESTRICTED

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COMMITTEE ON ENERGY

Working Party on electric power
Third session, 11-13 May 1993

REPORT

ATTENDANCE

1. The session was attended by representatives of Albania; Belgium; France; Germany; Hungary; Italy; Netherlands; Norway; Poland; Portugal; Romania; Russian Federation; Spain; Sweden; Switzerland; Turkey and United Kingdom of Great Britain and Northern Ireland.

2. The following specialized agencies, intergovernmental and non-governmental organizations were in attendance: International Atomic Energy Agency (IAEA); Association for Nordic Co-operation in the Electricity Field (NORDEL); International Federation of Industrial Energy Consumers (IFIEC); International Union of Producers and Distributors of Electric Energy (UNIPED); World Energy Council (WEC).

Item 1: Adoption of the agenda

3. The provisional agenda (ENERGY/WP.2/4) was adopted, with the addition of subitem 6(f) - Training Workshop on Electricity Supplier-User Relations (Bucharest, Romania, 26 October-6 November 1992).

Item 2: Election of officers

4. Chairman: Mr. A. Pilatowicz (Poland); Vice-Chairman: Mr. J. Thiry (Belgium).

Item 3: Decisions of the Committee on Energy of concern to the work of the Working Party

5. The secretariat reported on the second session of the Committee on Energy, held from 10 to 12 November 1992 (ECE/ENERGY/21), particularly on the discussions concerning energy trade and cooperation, the role of ECE in the European Energy Charter in the fields of energy efficiency, gas and electric power interconnections, techniques for clean combustion technologies, and on the activities of the Working Party and its related workshops. The Committee had approved the activities of the Working Party which had become part of a consolidated energy programme featuring six priorities. The Working Party took note of the information.

Item 4: General energy problems in the ECE region

Documentation: ENERGY/R.75 and R.76

6. The secretariat reported on the energy situation and prospects, and macroeconomic developments in the ECE region in 1991. The economic survey of Europe reported no growth in GDP for western Europe and North America in 1991 against the previous year. For central and eastern Europe, and the former USSR, 1991 had been a year of severe economic downturn. As a consequence, in western Europe gross energy consumption had risen by 13.6 mtoe with increases in oil, gas, nuclear and hydro, but with a cut in coal, while in central and eastern Europe all forms of energy had fallen with a resulting rise in energy intensity by 3.6%. The situation in the former USSR had been even more dramatic with a rise in energy intensity of 17.7% and primary energy demand falling less rapidly than GDP. In 1991, the energy trade had been characterized by no change for western Europe, a sharp rise of net imports for North America and a fall of net imports in central and eastern Europe. The Working Party took note of the information provided.

Item 5: Current developments and medium-term and long-term prospects

Documentation: ENERGY/WP.2/R.1 and addenda, ENERGY/WP.2/R.8 and addenda, ENERGY/WP.2/R.15

7. A member of the Statistical Division briefed the Working Party on the publication of the Annual Bulletin of Electric Energy Statistics for Europe 1992 and the recommendations on improvements of the format, substance and arrangements for its distribution.

8. The secretariat presented a short summary of the electric power situation in 1991 in the ECE region, underlining that the rate of growth of electricity net production had declined to 0.5% in 1991, as a consequence of the general economic situation.

9. The delegations of Albania, Belgium, France, Germany, Hungary, Italy, the Netherlands, Norway, Poland, Portugal, Romania, the Russian Federation, Spain, Sweden, Switzerland, Turkey and the United Kingdom made statements on the electric power situation in 1992 in their respective countries.

10. Decisions:

- (i) to take note of the information provided by the secretariat on the publication of the Annual Bulletin of Electric Energy Statistics for Europe, 1992;

- (ii) to invite countries to send their comments on the suggested modifications to improve the bulletin of electric energy statistics (ENERGY/WP.2/R.15) to the secretariat by 15 September 1993;
- (iii) to request the secretariat to implement the modifications in the 1994 version of the bulletin;
- (iv) to invite delegations to transmit to the secretariat before 15 June 1993 the final version of their statements, as well as remarks or corrections to document ENERGY/WP.2/R.8/Add. 1 and 2);
- (v) to request the secretariat to publish immediately after 15 June 1993 those texts which will be included in the section "National equipment plans and policies" of the annual report for 1992;
- (vi) to request the secretariat to prepare at its earliest convenience the final version of document ENERGY/WP.2/R.8 and addenda and the provisional version of the annual report for 1992;
- (vii) to invite countries, in addition to information supplied so far, to make available to the secretariat relevant documents on energy and electric power policies (national plans, debates in governmental organs, statements by the electric power industry, adaptation of the electric power systems to demand, interconnections with neighbouring countries, etc.)
- (viii) to invite countries to report particularly on major events that may have affected their electric power economy during the year under review (important achievements, decisive governmental measures, disasters, etc.)

Item 6: Workshops organized in the context of the implication of economic reforms in central and eastern Europe on electric power demand, supply and cooperation

(a) Workshop on "Electric Power Tariffs in Economies in Transition; Status, Reforms, Issues for Cooperation" (Curtea de Arges, Romania, 19-21 May 1992) (ENERGY/WP.2/R.5);

(b) Workshop on "Distortions in Tariffs. Special Case in Economies in Transition" (organized jointly with UNIPED in Lausanne (Switzerland), on 10 September 1992);

(c) Workshop on "Possibilities of Refurbishing Fossil-fired Power Stations Taking into Account Environmental Requirements" (Ankara, Turkey, 29 March - 2 April 1993) (ENERGY/WP.2/R.14);

(d) Workshop on "Power to Communicate. Public Opinion and Decision-makers. Special Case in Economies in Transition" (to be held jointly with UNIPED in Monaco on 4 June 1993 (ENERGY/WP.2/AC.7/INF.1);

(e) Workshop on "Achievement and Future Development of Cogeneration and District Heating" (Poiana Brasov, Romania, 22-24 June 1993) (ENERGY/WP.2.AC.5/INF.1 and INF.2);

(f) Training Workshop on Electricity Supplier-User Relations (Bucharest, Romania, 26 October - 6 November 1992) (ENERGY/R.79/Add.1).

11. Decisions:

- (i) to take note of the conclusions and recommendations of the Workshops under sub-items (a), (b), (c) and (f) and to express its thanks to Romania, Turkey and UNIPED for the excellent organization of these meetings;
- (ii) to invite Turkey and the secretariat to consider the possibility of publishing the report of the Ankara Workshop together with selected papers;
- (iii) to take note of the present status of preparations for the workshops under sub-items (d) and (e);
- (iv) to request the secretariat to convene a preparatory meeting to finalize the report on "Public Opinion and Decision Makers. Special Case in Economies in Transition" to be submitted to the Monaco Workshop.

Item 7: Interconnection of electric power transmission systems and problems of improving efficiency

- (a) European Interconnection. Studies and exercises

Documentation: ENERGY/WP.2/R.12, ENERGY/WP.2/R.17

12. Mr. J. Thiry (Belgium), Vice-Chairman of the Working Party reported on the present status of the joint study ECE/UNIPED on Central-European interconnection and other ongoing related studies on the basis of a survey prepared by him, and on the work underway by the Joint Group of Experts UNIPED/UCPTE on East-West Interconnections. The paper on "Interconnections and Electric power exchanges in Europe. Options and prospects", which he had prepared, had been submitted to the UNIPED Conference in Tunis (2-4 May 1993) following the request of the Working Party at its second session (ENERGY/WP.2/3, para. 15 (i)).

13. Decisions:

a) to take note of the information provided by Mr. Thiry, to thank him for his paper prepared on behalf of the Working Party for the UNIPED conference in Tunis, and to invite him to provide further information to the Working Party at its next session;

(b) to take note of the situation and prospects of interconnection networks in Europe on the basis of statements made by Poland, Romania and the Russian Federation, as well as of the present situation and interruption of the activities related to the interconnection of the electric power transmission systems of the Balkan countries under the regional problems;

(c) to express its interest in being kept informed of the activities dealing with policy aspects of interconnections;

(d) to invite Turkey and the United Kingdom to transmit to the secretariat the updated maps of their high-voltage electric power networks for the exchange of updated sets of maps of high-voltage electric power networks of the Central Dispatching Office of the United Power Systems (Prague), UCPTE, Dispatching Office of the Unified Power Systems (Prague), UCPTE, NORDEL, the Russian Federation, Turkey and the United Kingdom;

(e) to consider the reformulation of the former project "Technical means of load management" under the title of "Policy to support demand-side management" in the light of the report of the secretariat of the outcome of the ECE Seminar on Energy Standards and Labelling Systems (12 May 1993) and of the UNIPED Conference on "Power to Communicate";

(f) to take note of document ENERGY/WP.2/R.13 on "Electric power projects of European significance" and:

- (i) to request the Meeting of Experts on Electric Power Generation and the Environment to elaborate further the principles and modalities for an international review of electric power projects of European significance from the point of view of their sustainability;
- (ii) to invite the Commission of the European Community to report on the status and principles (criteria, geographical scope, kind of infrastructure projects, etc.) of the proposed Declaration of European Interest for Trans-European Networks in the Electricity and Natural Gas Domains;
- (iii) to revert to the issue at its fourth session.

Item 8: Environmental problems

- (a) Second session of the Meeting of Experts on Electric Power Generation and the Environment (ENERGY/WP.2/GE.1/4)

14. Ms. S. Tüzüner (Turkey), Vice-Chairman of the Meeting of Experts, reported on the last session.

15. Decisions:

- (i) to adopt the report of the Meeting of Experts on its second session;
- (ii) to endorse the decision of the Meeting of Experts to consider programme element 0.7.3.5.3 "Programmes for the development of environmentally-friendly coal-fired power stations" in the light of the development of clean coal technologies and of the increasing role of natural gas and to give this programme element a "continuing" status;
- (iii) to make the necessary contact with UNIPED on topics of common interest to the ECE and UNIPED to ensure that there is no unnecessary duplication of effort;

- (iv) to request the secretariat to convene the third session of the Meeting of Experts from 14 to 15 October 1993 with services provided for three half-days and one half-day for informal activities.
- (b) Prospects of natural gas demand for electric power generation and their impact on the development of natural gas and electric power industries (ENERGY/WP.2/R.7, ENERGY/WP.2/R.16)

16. Mr. S. La Bella (UNIPED), member of the Informal Working Group, and the secretariat introduced the subject. They reported on the outcome of the Consultative Meeting (27 April 1992), of the ad hoc Meeting (23-24 June 1992) to adopt the work method and to finalize the questionnaire to collect data for the study, and of the first session of the Informal Working Group of the General Rapporteurs.

17. Decisions:

- (i) to take note with great satisfaction of the information on the present status of the study;
- (ii) to thank the Russian Federation for nominating a general rapporteur from the gas industry for the preparation of the chapter on eastern and central Europe, considering the importance of the gas industry in that country;
- (iii) to invite Austria, Bulgaria, Canada, Denmark, France, Italy, the Netherlands, Norway, the Russian Federation, the Slovak Republic, Spain, Sweden and Ukraine, as key countries whose data will affect the study, to reply to the above-mentioned questionnaire at their earliest convenience;
- (iv) to express its appreciation to UNIPED for cooperation on this project; more particularly, to thank Mr. La Bella who made the preliminary analysis of the replies as a basis for the study of general rapporteurs.

Item 9: Activities of various international organizations of relevance to the Working Party

18. The Working Party took note of the information provided by the secretariat on the Convention on Transboundary Air Pollution and Energy Efficiency 2000 Projects, and by representatives of IAEA, NORDEL, UNIPED and WEC on the activities of their organizations in the field of electric power.

Item 10: Programme of work for 1993-1997 (ENERGY/WP.2/R.10, ENERGY/WP.2/R.11)

19. Decisions:

- (i) to accept with gratitude the invitation of the Turkish Government to hold a Symposium on Coal Power Generation, the Environment and the Public Acceptance, to be held in November 1994 in Turkey, in cooperation with the Working Party on Electric Power;

- (ii) to consider programme element 07.1.3.1. "Possibilities of refurbishing fossil-fired power stations, taking into account environmental requirements" as a "continuing" project which reviews annually the situation and prospects of the ECE countries with possible consideration of case studies;
- (iii) to give a continuing status to the project 07.3.5.3. "Programmes for the development of environmentally friendly coal-fired power stations" in view of the recent research and progress in advanced clean coal technologies and national programmes in this respect;
- (iv) to invite UNIPED to consider the possibility of organizing a joint workshop with the ECE on "restructuring of electric power industries and special case of countries in transition" in the spring of 1994;
- (v) to approve its programme of work for 1993-1997 as reproduced in Annex I;
- (vi) to adopt the calendar of meetings as set out in Annex II.

Item 11: Other business

20. The Working Party acknowledged the valuable contribution to the former Committee and the Working Party on Electric Power of Mr. Willekens (Netherlands) on the occasion of his forthcoming retirement and extended best wishes to him.

21. The Working Party was also informed of the forthcoming retirement of Mr. K. Brendow, Director of the ECE Energy Division. On behalf of the Working Party, the Chairman expressed his appreciation and gratitude for the many years of dedicated service to cooperation in the field of electric power and energy in general, and wished him success in his future endeavours.

Rates of increase of electric power production

22. The Working Party requested the secretariat to circulate at its next session a questionnaire similar to the one circulated among the delegations at the current⁶ session, concerning the rates of increase of electric power production, expressed in gross electric power production, gross national consumption (network losses included) (ECE/EP/74, paras. 80 and 81).

Lecture

23. A lecture was given by Mr. A. Leca, President of the Romanian Electricity Authority (RENEL) on "The Romanian energy and electric power industries in transition towards market economy". The Working Party requested the secretariat to publish his speech.

Film

24. A film was shown on "Programme for Environmental Protection" by the Turkish delegation.

Item 12: Election of officers for the next session

25. Chairman: Mr. J. Thiry (Belgium);
Vice-Chairman: Mr. T. Alptürk (Turkey).

Item 13: Adoption of the report

26. The Working Party adopted the report of its third session on 13 May 1993.

Annex I

PROGRAMME OF WORK FOR 1993-1997

PROGRAMME ACTIVITY 07.1.3 THE IMPLICATION OF ECONOMIC REFORMS IN CENTRAL AND EASTERN EUROPE ON ELECTRIC POWER DEMAND, SUPPLY AND COOPERATION

Programme elements

07.1.3.1 Possibilities of refurbishing fossil-fired power stations taking into account environmental requirements (continuing)

Reports available: ENERGY/WP.2/GE.1/R.20/Add.1 (Poland), Add.2 (Belgium), Add. 3 (Italy)

Work to be undertaken: Annual review of the situation and prospects in ECE countries with possible consideration of case studies.

07.1.3.2 European interconnections - studies and exercises (continuing)

Description: Consideration of the principles and modalities of a programme activity on "Central-European Interconnections" (actively supported by Czechoslovakia, Finland, France, Germany, Hungary, Poland, Romania, Sweden and the USSR).

Reports available: EP/GE.2/R.78/Add.1 (secretariat), Add.2/Rev.1 (ad hoc Meeting), Add.3 and Add.3/Rev.1 (questionnaire by UNIPED), ENERGY/WP.2/R.12, ENERGY/WP.2/R.17.

Work to be undertaken: Consideration of the results of the study by UNIPED.

07.1.3.3 Workshop on Power to Communicate - Public Opinion and Decision-makers. Special Case in Economies in Transition

Document available: ENERGY/WP.2/AC.7/INF.1.

Work accomplished: A paper on this subject, more particularly on special cases in economies in transition, was prepared by the Working Party, to be submitted to the Workshop.

Work to be undertaken: A workshop will be organized jointly with UNIPED in Monaco on 4 June 1993 on the occasion of the UNIPED Conference on Power to Communicate.

07.1.3.5 Workshop on Achievement and Future Development of Cogeneration and District Heating (1992-1993)

Documents available: ENERGY/WP.2/AC.5/INF.1 and 2.

Work to be undertaken: A workshop will be organized in Poiana Brasov (Romania) from 22 to 24 June 1993.

07.1.3.7 Workshop on Possibilities of Refurbishing Fossil-fired Power Stations Taking into Account Environmental Requirements

Report available: ENERGY/WP.2/R.14.

Work accomplished: A workshop was organized in Ankara (Turkey) from 29 March to 2 April 1993.

Work to be undertaken: Publication of the report with selected papers together by the host country and the secretariat.

07.1.3.8 Workshop on Restructuring of Electric Power Industries and Special Case of Countries in Transition (1993-1995)

Work to be undertaken: Time and place to be determined. The possibility of organizing it jointly with UNIPED will be considered.

PROGRAMME ACTIVITY 07.2.5: SUSTAINABLE DEVELOPMENT AND ENERGY EFFICIENCY

Programme elements

07.2.5.1 Combined production of electric power and heat

07.2.5.1.1 Development of prospects of combined production of electric power and heat following from new technologies (gas turbines, fluidized bed, etc.) (1989-1993)

Reports available: ENERGY/WP.2/GE.1/R.10/Add.1 (Belarus), Add.2 (Portugal) and Add.3 (Belgium).

Works to be undertaken: Reports by Austria, the Czech Republic, Germany, the Netherlands, the Russian Federation, the Slovak Republic and Sweden.

07.2.5.2 Policy to support demand-side management (1990-1995)

Work to be undertaken: Under this title, the former project "Technical means of load management" will be reformulated in the light of the conclusions and recommendations of the UNIPED Conference on "Power to Communicate" and ECE Seminar on Energy Standards and Labelling Systems.

07.2.5.3 Prospects of natural gas demand for electric power generation and their impact on the development of natural gas and electric power industries (1992-1995)

Reports available: ENERGY/WP.2/R.6 (report of the ad hoc meeting); ENERGY/WP.2/R.7 (questionnaire distributed to collect data), ENERGY/WP.2/R.16 (report of the first session of the Informal Working Group).

Description: A study will be developed as a joint project of the Working Parties on Gas and Electric Power.

Work accomplished: An outline and a method of work for the study were adopted at an ad hoc meeting, held in Geneva on 23-24 June 1992. The first session of the Informal Working Group was held on 15 April 1993 for the first analysis.

Work to be undertaken: To complete the preliminary study by November 1993 and final version by April 1994.

PROGRAMME ACTIVITY 07.3.5: ENVIRONMENTAL ASPECTS IN ELECTRIC POWER

Programme elements

07.3.5.1 An environmental appraisal of combined cycle power plants (1989-1993)

Reports available: EP/GE.4/R.80/Add.1 (United Kingdom), ENERGY/WP.2/GE.1/R.1/Add.1 (Turkey), Add.2 (Italy) and Add.3 (Germany).

Work to be undertaken: Report by the Russian Federation.

07.3.5.2 Cost-benefit analysis and strategies of pollutant emissions in thermal power stations. Case studies, policies and criteria (1989-1993)

Reports available: ENERGY/WP.2/GE.1/R.7/Add.1 (Belgium) and Add.2 (Romania).

Work to be undertaken: Reports by Bulgaria, the Czech Republic, the Netherlands, the Russian Federation, the Slovak Republic and Spain.

07.3.5.3 Programmes for the development of environmentally friendly coal-fired power stations (continuing)

Reports available: ENERGY/WP.2/GE.1/R.4/Add.1 (USSR), Add.2 (United Kingdom), Add.3 (Turkey) and Add.4 (Germany).

Work to be undertaken: Reports by Belarus, the Czech. Republic, Italy, Poland, the Slovak Republic, Spain and other interested countries. Review of recent progress and research in the light of advanced clean coal technologies and national programmes.

07.3.5.4 Progress in the application of formal environmental impact analysis (1990-1994)

Reports available: EP/GE.4/R.67/Add.3 (Italy), (EP/GE.4/R.83/Add.1 (United Kingdom), ENERGY/WP.2/GE.1/R.9/Add.1 (Portugal).

Work to be undertaken: Report by the Russian Federation and a consolidated report by Italy.

07.3.5.5 Radioactive elements in ash and environmental implications (1990-1994)

Report available: ENERGY/WP.2/GE.1/R.2/Add.1 (Turkey).

Work to be undertaken: Reports by the Czech. Republic, Germany, the Netherlands, the Russian Federation, the Slovak Republic and the United Kingdom.

07.3.5.6 Implication of climate change for electricity supply (continuing)

07.3.5.6.1 The greenhouse problem. General situation in electric power industry (continuing)

Reports available: EP/GE.4/R.75/Add.1 and Add.2, EP/GE.4/R.77/Add.1 and EP/GE.4/R.81/Add.1 and Add.2, EP/GE.4/R.77/Add.1 and EP/GE.4/R.81/Add.1 (Austria) and Add.2 (Turkey).

Work to be undertaken: Reports by interested countries.

07.3.5.6.2 Practicability of reducing greenhouse gas emissions. Implications for the electricity sector (continuing)

Report available: EP/GE.4/R.82/Add.1 (United Kingdom).

Work to be undertaken: Reports by interested countries.

07.3.5.6.3 Interaction between greenhouse gas emission and other emission control policies (continuing)

Report available: ENERGY/WP.2/GE.1/R.21/Add.1 (United Kingdom).

Work to be undertaken: Information by countries on implications for greenhouse gas emissions of current programmes for abating sulphur and nitrogen emission.

07.3.5.7 Perception of environmental impact by overhead power lines (1990-1994)

Reports available: ENERGY/WP.2/GE.1/R.22/Add.1 (Turkey) and Add.2 (Italy).

Work to be undertaken: Reports by the Netherlands and the Russian Federation.

0.7.3.5.8 Symposium on Coal Fired Power Generation, the Environment and Public Acceptance (Ankara, Turkey), 22-25 November 1994)

Work to be undertaken: A symposium will be organized in Ankara from 22 to 25 November 1994 under the auspices of Turkey, in co-operation with the ECE.

PROGRAMME ACTIVITY 07.5.4: ELECTRIC POWER DEVELOPMENTS, POLICIES AND STATISTICS

Programme elements

07.5.4.1 Electric power situation, prospects and policies in the ECE region (continuing)

Description: The Working Party will examine periodic reports on various aspects of the electric power situation, prepared by the secretariat on the basis of information provided by Governments, according to a common structure.

Work to be undertaken: The annual report on the electric power situation 1992 will be prepared in the course of 1993.

07.5.4.2 Interconnection of networks in Europe (continuing)

Description: Annual review of the situation and prospects in order to compare principles, work methods and priority topics; consideration of the activities of the Co-ordinating Committee (CC) for Balkan Interconnection (Bulgaria, Greece, Romania, Turkey and Yugoslavia).

Reports available: EP/GE.2/R.36 and Adds. 1-3 (CMEA), EP/GE.2/R.73 and ECE/EP/55 (USSR), EP/GE.2/R.79/Add.1 and Add.2

Work to be undertaken: Consideration of a new report on the situation and prospects of international interconnections between ECE countries at the next session and of the report of the next CC session on the interconnection of the electric power transmission systems of Balkan countries.

07.5.4.3 Coordination of exchange of maps of high-voltage electric power networks (continuing)

Description: Coordination, with the support of UNIPED, of the distribution of maps of high-voltage electric power networks of the General Dispatching Office of the Unified Power Systems (Prague), UCPTE, NORDEL, the Russian Federation, Turkey and the United Kingdom.

Document available: Updated set of maps as from June 1993.

Work to be undertaken: Next updating scheduled for November 1994.

ANNEX II

CALENDAR OF MEETINGS OF THE WORKING PARTY
ON ELECTRIC POWER IN 1993-1994

	<u>1993</u>	<u>1994</u>
Meeting of Experts on Electric Power Generation and the Environment	14-15 October (third session)	October (fourth session)
Workshop on Achievement and Future Development of Cogeneration and District Heating (Poiana Brasov, Romania)	22-24 June	
Workshop on Power to Communicate. Public Opinion and Decision Makers. Special Case in Economies in Transition (jointly organized with UNIPEDE in Monte Carlo, Monaco)	4 June	
Informal Working Group on Prospects of Natural Gas Demand for Electric Power Generation and their Impact on the Development of Natural Gas and Electric Power Industries	October	
Symposium on Coal Power Generation, the Environment and Public Acceptance (Ankara, Turkey)		22-25 November
Workshop on Restructuring of Electric Power Industries*		Spring

*Time and place will be determined later.