



**Economic and Social  
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ECONOMIC COMMISSION FOR EUROPE

COMMITTEE ON ENERGY  
WORKING PARTY ON COAL

Meeting of Experts on Productivity  
and Management Problems in the  
Coal Industry

Twenty-first session, 6-8 May 1991

REPORT

ATTENDANCE

1. The session was attended by representatives of: Czech and Slovak Federal Republic; France; Germany; Hungary; Union of Soviet Socialist Republics and Yugoslavia.
2. The International Labour Organisation (ILO) and the European Economic Community (EEC) were also represented.

AGENDA ADOPTED (Item 1 of the agenda)

3. COAL/GE.1/35.

ELECTED OFFICERS (Item 2 of the agenda)

4. Chairman: Mr. V. Ilyin (USSR); Vice-Chairman: Mr. E. Hamm (Germany).

DECISIONS OF THE RESUMED COMMISSION SESSION AND OF THE COAL COMMITTEE  
CONCERNING THE WORK OF THE MEETING OF EXPERTS (Item 3 of the agenda)

5. The Deputy Director of the Energy Division introduced decisions D(45) and O(45) adopted by the forty-fifth session of the Economic Commission for Europe, in particular the paragraphs of decision O(45) regarding the methods

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\* This new symbol continues the series of documents issued under the symbol COAL/GE.1/...

of work, structure and priority of the Commission's Principal Subsidiary Bodies (E/1990/41 and Add.1). The secretariat reported on the activities of the Coal Committee, drawing particularly the attention of the Meeting of Experts to the passages concerning its activities (ECE/COAL/121, paras. 37-39).

6. The Meeting of Experts took note of the above information and decided to deal with the matters deriving therefrom under the relevant agenda items.

**MARKET ADAPTATION OF COAL INDUSTRY STRUCTURES AND MANAGEMENT IN CENTRAL AND EASTERN EUROPE (Item 4 of the agenda)**

Documentation: COAL/R.160 and Adds. 1 and 2.

7. The secretariat reported on the discussion and conclusions of the First Consultation held on this topic in the Czech and Slovak Federal Republic and France in June 1990. It was noted that restructuring was of particular importance to countries of Central and Eastern Europe moving from centrally-planned towards free-market conditions. In all these countries, the performance of State-owned industries was no longer considered satisfactory, which meant that the current objectives and operation of the coal industry were inconsistent with the new national goals. However, the radical restructuring of the coal industry in this region should be carefully prepared, due account being taken of national policy factors (e.g., energy, economies, environment) and regulatory issues with a view to securing a gradual and socially acceptable adaptation of the coal industry structures. It was further noted that the adaptation of the coal industry in eastern Europe, which was heavily dependant on Government subsidies, implied, at its initial stage, a sizeable reduction of coal production and a significant increase of unemployment.

8. Presenting the programme of the Workshop to be held in Esztergom from 20 to 24 May 1991 the representative of Hungary said that the programme focused mainly on the following aspects: privatization of coal enterprises and prerequisites for "easier" transition; financial monitoring of coal mining enterprises; subsidies and investments; interrelationship between the State and coal enterprises; coal price formation; environmental cost assessment and social policy with regard to manpower in downgraded mining regions.

9. The representatives of Germany, Hungary, the USSR and the European Economic Community took part in the discussion, highlighting the importance of the subject and the interest of their countries in further cooperation in this issue.

10. The representative of the USSR underlined that the transition of the coal industry to market conditions in his country would take time and be difficult due to the particular features of that industry. He explained that approximately two thirds of the investments in the coal industry were allocated to maintenance of mining equipment. Current Government subsidies to the coal industry exceeded 25 billion roubles. Regarding training courses for managers and accountants, the representative of the European Economic Community mentioned that financial support could be envisaged within the programme of the Commission for financial assistance to economies in transition.

11. The secretariat reported on the discussion and decisions of the last session of the Coal Committee, held in September 1990, underlining that the Committee had suggested that the topic of the transition of the coal mining industries should become a priority area in the short-term work programme. In this respect, the Committee had asked the Meeting of Experts to include in its work programme a few subjects to be considered in connection with this issue.

12. The Meeting of Experts was also informed that, following the decision of the Committee, the secretariat had organized a study tour for experts from Central and eastern Europe to fluidized-bed power stations in France and Spain.

13. Decisions:

- (i) to welcome the decision of the Coal Committee to consider the activities under this subject as a priority area;
- (ii) to include in its programme of work the following new subjects to be considered in connection with the transition of the coal industry to market conditions in Central and east-European countries:
  - (a) Re-assessment of coal deposits under market economy conditions;
  - (b) Re-industrialization of mining areas;
  - (c) Analysis of factors affecting the dynamics of production costs;
- (iii) to welcome the holding of the second Workshop on this subject in Hungary;
- (iv) to request the secretariat to prepare in close cooperation with the Governments concerned the programme for the third Workshop on the subject, to be held in 1991 in the USSR;
- (v) to request the secretariat to continue its efforts, in cooperation with other organizations, with a view to organizing and financing training courses.

CONSIDERATION OF FACTORS INFLUENCING LABOUR PRODUCTIVITY BY TAKING HIGH PRODUCTIVITY MINES AND FACES AS EXAMPLES, IN CONDITIONS OF THIN AND STEEP SEAM INCLINATIONS, BOTH IN HARD AND BROWN COAL UNDERGROUND MINING (Item 5 of the agenda)

Documentation: ENERGY/WP.1/GE.1/R.3

14. The representative of the USSR summarized the consolidated report. Amongst the major factors influencing productivity, in particular in deep underground mines of the USSR and Germany, he quoted the concentration of production activities, mechanization and technological equipment of mining processes, management and efficient use of human resources, and deterioration of mining and geological conditions with the increasing depth.

15. Decisions:

- (a) to request the secretariat to publish the consolidated report and give it general distribution;
- (b) to continue the activities under the subject "Consideration of factors influencing labour productivity by taking high-productivity mines as examples";
- (c) to invite all Governments to submit their national reports to the secretariat by June 1992, providing information on horizontal and slow steep seam inclinations only.

CONCENTRATION INDICES IN EUROPEAN COAL INDUSTRIES (Item 6 of the agenda)

Documentation: COAL/GE.1/R.78/Addenda and ENERGY/WP.1/R.2/Addenda.

16. Summarizing a preliminary consolidated report on this subject, the secretariat reported that during the period under consideration (1965-1990), the restructuring of the coal industries in western Europe had led to significant increases in the degree of concentration of mining activities, as this had been fundamental to raising labour productivity and reducing production costs. In east-European countries, the operation of a large number of underground coal mines with difficult geological and mining conditions had restricted a higher level of mechanization, which had had a negative impact on the concentration indices. The secretariat further indicated that its current efforts focused on the preparation of a comparative analysis of the development of major productivity parameters in the European coal mining industries, covering the period 1965-1990.

17. Decisions:

- (i) to request the secretariat to complete the report, including in it figures from all major European coal-producing countries, and in particular the United Kingdom;
- (ii) to submit the consolidated report for consideration at the first session of the Working Party on Coal;
- (iii) to invite Governments to forward to the secretariat their concentration indices for 1991 together with comments thereon by 30 June 1992.

SYMPOSIUM ON ROCK BURSTS AND SUDDEN OUTBURSTS IN UNDERGROUND MINES: THEORY, FORECASTING, PREVENTION AND PROTECTION OF MINERS (Item 7 of the agenda)

Documentation: ENERGY/WP.1/SEM.12/AC/2 and ENERGY/WP.1/SEM.2/INF.1.

18. The secretariat reported on the preparation of the Symposium to be held in Leningrad (USSR) in May/June 1994. Following the decision of the Coal Committee (ECE/COAL/121, para. 39 (III)), the Preparatory Meeting, held in January this year, had established the programme of the Symposium. It was announced that Information Notice No. 1, containing the detailed programme and calendar for the preparation of the Symposium, would be circulated before 30 May 1990 (ENERGY/WP.1/SEM.3/INF.1). The programme of the Symposium would

be split into two groups with three topics each, covering both phenomena - overbursts and outbursts in underground mines. A special plenary session would be devoted to the priorities for international cooperation in the field of forecasting, prevention and protection of miners.

19. Decisions:

- (i) to welcome the programme of the Symposium;
- (ii) to request the secretariat to circulate Information Notice No. 1 as soon as possible;
- (iii) to call ECE and non-ECE Governments to submit papers according to the established calendar for the preparation of the Symposium.

ECE CLASSIFICATION OF ROCK BURSTS AND SUDDEN OUTBURSTS IN UNDERGROUND MINES  
(Item 8 of the agenda)

Documentation: ENERGY/WP.1/AC.6/2

20. The secretariat summarized the decisions of the First ad hoc Meeting, held in January this year. The ad hoc Meeting had set out the title, definition and objective of the classification as follows:

- (a) Title: International Classification of Dynamic Phenomena in Mines;
- (b) Definition: A dynamic phenomenon is defined as an instantaneous destruction of the rock mass (e.g., including coal) by overstressing. This phenomenon takes the form of an outburst of rock into the mine workings, sometimes followed by escaping gases;
- (c) Objective and application: To develop an international classification of dynamic phenomena in mines, including related issues such as terminology, measuring principles and control methods;
- (d) The classification should:
  - describe the different dynamic phenomena;
  - if possible, refer to the mechanisms of those phenomena;
  - determine the criteria by which those phenomena can be identified;
  - be suitable for practical use in the mining industry.

21. All delegations fully supported the necessity of working out the classification and expressed satisfaction with the work plan set up by the Task Force. The representative of Germany underlined that the classification should be useful in practice for operating mines. However, the first steps of the work plan (ENERGY/WP.1/AC.6/2, from (i) to (vi)) should be mainly performed by correspondence and exchange of written information. The other steps beyond April 1991 should be reconsidered later on.

22. Decision: to approve the work programme of the classification as it appears in document ENERGY/WP.1/AC.6/2, para. 12, with the remarks of the German delegation.

TECHNICAL DEVELOPMENTS TO IMPROVE THE INFRASTRUCTURE OF UNDERGROUND COAL MINES WITH REGARD TO ECONOMIC, ERGONOMIC AND SAFETY ASPECTS (Item 9 of the agenda)

Documentation: ENERGY/WP.1/GE.1/R.5

23. The representative of the USSR introduced the consolidated report.

24. Decisions:

(i) to request the secretariat to give the consolidated report general distribution;

(ii) to conclude activities on this topic.

NEW DEVELOPMENTS TO REDUCE THE AMOUNT OF MINE WASTE WHICH NEEDS TO BE BROUGHT UP TO THE SURFACE (Item 10 of the agenda)

Documentation: ENERGY/WP.1/GE.1/R.4

25. The secretariat summarized the consolidated report which concluded that the amount of waste production during the development of mining works could be reduced by means of several measures, among which the following: avoiding excessive cross-section of roadways; optimization of layout in the development of mining works and location of waste from development faces in sidewall packs.

26. Decisions:

(i) to request the secretariat to give the consolidated report general distribution;

(ii) to conclude activities on this subject.

PROGRAMME OF WORK (Item 11 of the agenda)

27. The Chairman referred to the Commission decision O(45) and to the Coal Committee decision concerning the future role and priorities in the field of coal (ECE/COAL/121, paras. 73-80), which had been brought to the attention of the Meeting of Experts under item 3 of the agenda.

28. Aware of the necessity of continuing cooperation in the field of underground coal mining, delegations underlined the importance which must be given to the problems related to the restructuring of the coal industry in eastern and Central Europe; reduction of production costs with a view to making the European coal industry more competitive; mine safety; and environmental aspects in coal mining areas.

29. In this respect, the delegations emphasized the necessity to continue activities on a regular basis under the status of a Meeting of Experts. However, closer cooperation should be envisaged on a horizontal structural level, even to the extent of merging meetings with similar programme subjects.

30. Decisions:

- (i) to adopt the following rank order of its programme of work:
  - Transition of coal industries of Central and eastern Europe to market economy approaches;
  - Ways and means of reducing production costs in the European coal industry;
  - Enhancing mine safety;
  - Environmental protection of coal mining areas;
- (ii) to give priority in its future work programme to issues related to mining economics and organization, rather than to technical subjects;
- (iii) to include in its short-term programme the following programme elements, determined in accordance with the above programme:
  - (a) Workshop on Market Adaptation of Coal Industry Structures and Management in Central and eastern Europe;
  - (b) Re-assessment of coal deposits under market economy conditions;
  - (c) Re-industrialization of mining areas;
  - (d) Consideration of factors influencing labour productivity by taking high-productivity mines as examples;
  - (e) Concentration indices in the European coal industry;
  - (f) Analysis of factors affecting the dynamics of production costs;
  - (g) Symposium on Rock Bursts and Sudden Outbursts in Underground Mines: Theory, Forecasting, Prevention and Protection of Miners;
  - (h) ECE classification of dynamic phenomena in mines;
  - (i) Economic aspects of ecological issues linked with coal mining;
- (iv) to recommend to the Working Party on Coal to envisage the holding of the next session of the Meeting of Experts in conjunction with the Meeting of Directors of National Mining Institutes (during the same week) with a view to closer cooperation or eventual merging of both activities in the future;
- (v) to invite all Governments to transmit their national reports on topics (c) and (d) to the secretariat by 30 June 1992;
- (vi) to invite the Government of France to prepare a questionnaire on topic (b); the Government of Germany on topic (f); and the Government of Yugoslavia on topic (i) by 31 October 1991;

- (vii) to invite all Governments to transmit their national replies to the questionnaires mentioned under sub-paragraph (vi) to the secretariat by 30 June 1992;
- (viii) to invite the Government of the USSR to prepare a new questionnaire on topic (e), considering the concentration indices by working methods, so that it could better serve as basic statistical data in analysing the productivity parameters, and to transmit it to the secretariat by 30 June 1992.

OTHER BUSINESS (Item 12 of the agenda)

31. The General Manager of DMT (German Mining Technologies) addressed the "Structure, Programme and Objectives of DMT", underlining the necessity of reducing coal production costs and improving mine safety in the German coal industry.

32. The representative of the Czech and Slovak Federal Republic remarked on the problems regarding the transition of the coal industry of his country to market operation. He pointed out the importance of international cooperation in the framework of the Economic Commission for Europe.

33. The Deputy Director of the Energy Division informed the Meeting of Experts that a Workshop on Recovery and Use of Coal Bed Methane will be held in Poland, tentatively in February 1992, under the auspices of the Working Parties on Coal and on Gas.

PROVISIONAL DATE OF NEXT MEETING (Item 13 of the agenda)

34. 16-18 September 1992.

ADOPTION OF THE REPORT (Item 14 of the agenda)

35. 8 May 1991.

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