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COMMITTEE ON SUSTAINABLE ENERGY

Ad Hoc Group of Experts on Coal in Sustainable Development

Eighth session

Geneva, 2-3 February 2006

REPORT

I. ATTENDANCE

1. The eighth session of the Ad Hoc Group of Experts on Coal in Sustainable Development was held on 2-3 February 2006 and attended by representatives from the following UNECE member countries: Bulgaria, Czech Republic, France, Germany, Netherlands, Poland, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Spain, Switzerland, Turkey, Ukraine, United Kingdom, and United States of America.
2. A representative of Brazil participated under Article XI of the Commission's Terms of Reference.
3. The session was attended by representatives of the European Commission.
4. The following intergovernmental organizations were in attendance: European Association for Coal and Lignite (EURACOAL), International Energy Agency, the International Energy Agency Clean Coal Centre (IEACCC), International Energy Agency Greenhouse Gas R&D Programme (IEAGHG), the World Coal Institute (WCI) and the World Energy Council (WEC).

Note: all documentation and presentations delivered at the meeting are available on the UNECE website at: <http://www.unece.org/ie/se/coal>

II. ADOPTION OF THE AGENDA (Agenda Item 1)

5. The provisional agenda as contained in document ECE/ENERGY/GE.1/2006/1 was adopted without amendment.

III. ACTIVITIES AND PRIORITIES OF THE UNECE PROGRAMME ON SUSTAINABLE ENERGY AND MATTERS FOR CONSIDERATION BY THE AD HOC GROUP OF EXPERTS (Agenda Item 2)

Documentation:

- (i) ECE/ENERGY/2005/6: Report of the meeting of the Extended Bureau of the Committee on Sustainable Energy, 14 December 2005;
- (ii) ECE/ENERGY/65: Report of the fourteenth session of the Committee on Sustainable Energy.

6. Mr. George Kowalski, Director of the UNECE Industrial Restructuring, Energy and Enterprise Development Division (IREEDD), briefed the Ad Hoc Group of Experts on issues relating to the UNECE generally and, more specifically, to the Sustainable Energy Section of the IREEDD. Mr Kowalski discussed the ongoing reforms within the UNECE. The Commission officially adopted the new reform on 2 December 2005, to become effective on 1 April 2006. Under the reform, the Sustainable Energy programmes already in place will continue to function as before the reforms; however, the Committee on Sustainable Energy is called upon to also strengthen activities in the fields of energy efficiency, cleaner energy production, energy security and diversification of energy sources. In addition, the Committee will streamline its activities and improve cooperation with other relevant institutions, in particular the IEA and the Energy Charter.

7. The meeting noted the information provided.

IV. DEMAND, SUPPLY AND PROSPECTS FOR COAL IN THE UNECE REGION AND GLOBALLY (Agenda Item 3)

Documentation:

ENERGY/GE.1/2005/1: "Forecast for the Supply of and Demand for Solid Fuels-2005".

- (a) Part I: Coal Supply & Demand (Global)

8. Ms. Christine Copley (World Coal Institute, United Kingdom) presented an overview of global coal supply and demand. Many of the statistics presented by Ms. Copley were also highlighted by other speakers during the two-day session. Ms. Copley noted that energy demand is expected to continue increasing through 2030, and fossil fuels, including coal, will continue to be the principle sources to meet primary energy demand. Demand for hard coal is expected to increase by 50% in 2030, and it will supply over 20% of primary energy demand through 2030. Among producing nations, China and the United States of America remain the two largest coal-

producing countries with China's production nearing two billion tonnes per year. India is the third largest producer followed by Australia, South Africa, the Russian Federation, Indonesia and Poland. Coal's primary market will remain power generation.

9. The growing demand in developed and developing countries has meant that many new coal plants are under consideration in Europe, the United States, and China among other countries. In China alone, over 500 new coal-based power plants are planned and in Europe about 12,000 MW of coal-based power is being planned.

(b) Part II: Update on the German Coal Industry

10. Mr. Bernd Bogalla, (Gesamtverband Steinkohle, Germany) provided the Group of Experts with an update on the German coal industry. Primary energy consumption in 2005 reached some 486 mtce (million tonnes of coal equivalent) in Germany according to first preliminary calculations. Coal's share of primary energy consumption was 13%, but coal consumption decreased by 2.3 mtce in 2005 to 63.5 mtce.

11. The mining industry continues its restructuring process. At the beginning of 2006 the total number of collieries had dropped to eight. The number of employees in the German coal mining industry (excluding employees on structural short-time working and in retraining programmes) fell by 4,800 in 2005 to 34,700. In 2006 a further reduction of 1,900 in the workforce is expected, which will therefore drop to 32,800. The future for coal utilization in Germany, however, is strong. Hard coal and lignite provide about half the fuel required for Germany's power generators. At the beginning of 2006, 24 larger power plants with a capacity of some 18,000 MW were under construction or in the planning phase. The investment programme includes 10 large coal-fired plants with capacities between 600 and 1,500 MW and two lignite-fired plants.

(c) Part III: Update on the Romanian Coal Industry

12. Mr. Ion Stanciu (Ministry of Economy and Trade, Romania) delivered a presentation on the current status of the Romanian coal industry. Romania has deposits of approximately 2,800 million tonnes of lignite and 900 million tonnes of hard coal. While the government's involvement in the lignite sector has declined, it has remained very involved with the hard coal sector through mining subsidies, social allocations, and capital allocations. Within the coal industry of Romania, there are currently 28 operating underground mines, of which 11 are hard coal mines and 17 are lignite, and 27 open cast mines, mostly lignite. With industry restructuring since the early 1990s, coal output has declined slightly from 37.6 million tonnes of production in 1990 to 31.4 million tonnes in 2005, although 2006 production is expected to increase to 33.5 million tonnes. This steady level of production in Romania is due to a rise in productivity. Although coal output has remained at virtually the same levels, the total number of mining personnel in Romania has fallen from 132,668 to 32,130 in 2005. The trend is expected to continue in 2006 with a further decrease of approximately 3,500 mine staff.

13. The Romanian Government has adopted a restructuring plan to address the past problems of the coal sector including environmental and land use impacts and unprofitability while ensuring that coal remains a part of the present and future energy mix. The plan calls for

continued closure of unprofitable mines, eventual removal of subsidies, privatization of profitable mines, and environmental rehabilitation in former mining areas. The financial resources necessary to successfully complete these activities are estimated to be US\$83 million.

(d) Part IV: Forecast of Coal Supply and Demand for 2005 (ENERGY/GE.1/2005/1)

14. On an annual basis, the secretariat sends a questionnaire to all member countries on coal supply and demand. These statistics were the basis for the annual report on supply and demand. In recent years, however, the response rate has been low. Therefore the secretariat raised the issue of whether to continue producing the questionnaire on coal supply and demand.

15. The meeting:

- (i) Took note of the presentations on supply and demand;
- (ii) Took note of the comments of the secretariat on the questionnaire; and
- (iii) Agreed to consider whether to continue the questionnaire on coal supply and demand in light of the low response rate, although it recognized that there could be value in continuing the questionnaire if it provides the foundation for cooperation with the International Energy Agency and other organizations.

V. CARBON CAPTURE AND STORAGE
(Agenda Item 4)

16. With the recognition that fossil fuels will continue their pre-eminence as primary energy sources, the Ad Hoc Group of Experts considered the current state of technology development and deployment of carbon capture and storage (CCS) and the benefits and challenges facing governments and industry as CCS becomes an increasingly likely climate change mitigation option.

17. Mr. Jacek Podkanski (International Energy Agency) discussed the IEA's programme on CCS, the current status of technology development, and the critical policy issues that must be addressed for commercial deployment of the technologies. Mr. John Topper (IEA Greenhouse Gas R&D Programme) provided a technology update on the various CCS technologies, followed by the perspective of the World Energy Council delivered by Mr. Klaus Brendow (World Energy Council). Mr. Jacek Skiba (Central Mining Institute, Poland) spoke on the RECOPOL Project, an actual demonstration site in a transition economy, and Mr. Jelmer Hoogzaad (Climate Focus, Netherlands) discussed the potential for CCS projects in the carbon markets.

18. It was generally agreed by all speakers that coal will have no future or a very limited future in a carbon-constrained world without CCS due to the rapid increase in emissions of carbon dioxide (CO₂), especially in developing countries after 2020. Mr. Brendow, however, noted that CCS is not the only solution, just part of the solution, especially for smaller and medium-sized plants. It should be part of a broader mitigation portfolio including demand-side management, fuel substitution and efficiency improvements. For example, he noted, raising world average plant efficiency from 32% to 43%, could reduce CO₂ emissions by more than three billion tonnes.

19. It is believed that CO₂ could be stored in a range of geologic formations including saline aquifers, depleted oil and gas reservoirs, and unminable coal seams. In addition, ocean storage is also possible, but is very controversial due to the potential impacts on the ocean ecosystems. Although much research and development remains to be done on large-scale storage, storage on a small scale is known to be feasible. CO₂ injection has long been used in the oil industry for enhanced oil recovery. The speakers noted that deep saline aquifers present the largest storage potential. Mr. Topper provided statistics on the current estimates of storage capacity. Saline aquifers are believed to have a holding capacity of 400 to 10,000 gigatonnes (Gt) which could be 20 to 530 years of emissions (at 2030). Depleted oil and gas field are believed to be able to hold approximately 930 Gt or 50 years of emissions, and the capacity of unminable coal seams is currently estimated at 30 Gt or less than two years of emissions.

20. Cost was also a source of discussion among meeting participants as this remains one of the major barriers to implementation. Existing technologies can capture CO₂ for US\$ 5-50 per tonne and injection costs range from US\$ 2-50 per tonne. Thus CCS can add US\$/kWh 0.02-0.03 to the cost of electricity, although this is expected to decrease to US\$/kWh 0.01-0.02 over the long term. Generally, these costs are competitive with other carbon abatement options, but Mr. Podkanski acknowledged that further improvements in the energy efficiency of the process and cost reductions are necessary to bring the technologies to commercial use.

21. The carbon markets could also help mitigate the cost of CCS. There are currently no approved CCS methodologies, so projects can only sell emission reduction credits in voluntary markets, not the regulated markets such as the European Trading Scheme or the Joint Implementation (JI) or Clean Development Mechanism (CDM) under the Kyoto Protocol. The issue is on the agenda of the UNFCCC, and member countries support the development of CCS methodologies according to Mr. Hoogzaad. He suggested that CCS could be possible under CDM in early 2007, but warned that CCS carbon contracts would likely generate a lower price compared with other “higher quality” emissions. CCS is not yet a proven technology on a large scale so there is a technical risk of non-performance. There is also a registration risk because there is no precedent of successfully registered projects.

22. Mr. Skiba presented the results of an actual field study, the RECOPOL project in Poland that is a CCS and enhanced coalbed methane production demonstration project. Although located in Poland, project sponsors include many organizations outside Poland such as Delft University of Technology in the Netherlands (co-coordinator), the IEA GHG R&D Programme, CSIRO in Australia, JCOAL in Japan, Shell International, and GAZONOR in France. Mr. Skiba gave a very detailed technical presentation which is available on the UNECE website at <http://www.unece.org/ie/se/pp/csd8sess.html> The preliminary conclusions of the project show that enhanced CBM production does work in the Upper Silesian coal deposits in Poland and this success can possibly be transferred to other coal basins in Europe.

23. The following suggestions were made to accelerate the acceptance and deployment of CCS:

- (i) Identification and mapping of suitable geologic formations for carbon storage and linking them with CO₂ sources;

- (ii) Continuation of research, demonstration, and deployment projects to demonstrate safe and secure storage of large-scale CO₂ capture. To date, successful storage of 1 million tonnes per year has been demonstrated at three sites: Sleipner (Norway, North Sea), Weyburn (Canada), and In Salah (Libya);
- (iii) Further investments in the power sector are necessary including the renewal of the fossil-fuel park;
- (iv) Transfer of technology to developing countries and economies in transition; and
- (v) Creation of an enabling legal and policy framework including predictable climate protection and non-discriminatory energy policies to create a level-playing field for CCS alongside other climate change mitigation options. This should include acceptance of CCS in market-oriented trading schemes.

24. Following the presentations, the Ad Hoc Group Experts engaged in a thorough discussion with the following comments from participants:

- (i) The coal community must avoid its history of only focusing on competition through price and supply security. Although these are advantages for the industry it cannot simply rest on these advantages. In the past, the industry ignored the movement toward a more stringent environmental framework and paid for it. To prosper, the industry must acknowledge and accept a carbon-constrained world;
- (ii) Several members supported the comments of Mr. Brendow by suggesting that more effort should be put toward improving plant efficiency, especially in the transition economies and developing countries, as this is the most cost-effective option in the near-term for reducing CO₂ emissions;
- (iii) Social acceptance is critical for the success of CCS and studies and surveys show that the industry, governments, and international organizations have not been successful in educating the public. In addition, industry and governments must be more effective at reaching out to and encouraging input by environmental and public interest groups;
- (iv) Although many technical issues remain, one of the more challenging is addressing the reduced efficiency in power plants caused by the capture process;
- (v) Continued efforts must be made at reducing the costs of CCS, whether it be through continued research and development, favourable government policies, price signals or some combination of these;
- (vi) There was scepticism from some participants that this is only an issue for the wealthy economies. It was suggested that most developing countries and transition economies are not in a position economically to support development of CCS technologies and projects. Therefore, technology transfer and financing will be critical if transition economies and developing countries are to successfully deploy these technologies; and
- (vii) Although most countries focusing on CCS are developed economies, it is not too early to begin delivering the message in developing countries and transition economies. The most appropriate path for the Ad Hoc Group of Experts on Coal in Sustainable Development is preparation of a paper seeking input from member countries. The paper could be presented at the 2007 session of the Group of Experts for discussion and next steps, one of which could be a workshop in early 2008. In addition, it was suggested that the secretariat and the Group of Experts should continue working with other organizations such as the WEC and IEA to promote CCS in member countries.

25. The meeting:
- (i) Took note of the material provided;
 - (ii) Recommended that the Ad Hoc Group of Experts continue to follow progress on Carbon Capture and Storage;
 - (iii) Recommended that it is more appropriate at this stage to begin the education process in the transition economies;
 - (iv) Agreed that the secretariat will first prepare a paper on CCS and will seek input from member countries on their specific interests and needed;
 - (v) Agreed that the secretariat will deliver the paper at the ninth session of the Ad Hoc Group of Experts in the first quarter of 2007 to encourage further dialogue, and then consider a workshop later in 2007 or in early 2008 based on feedback; and
 - (vi) Agreed that improving plant efficiency is often the most economical short time option to reducing CO₂ emissions; therefore, the Hoc Group of Experts will continue to work on this issue.

VI. ENVIRONMENTAL SUSTAINABILITY OF THE COAL INDUSTRY (Agenda Item 5)

26. The Ad Hoc Group of Experts also considered other environmental issues relative to the coal industry's sustainability in the UNECE region including clean coal technologies (CCTs) and activities of other international organizations in this area. The session on the environmental sustainability of the coal industry also examined financing for clean coal technologies and carbon capture and storage including the potential in the greenhouse gas markets for these types of projects.

(a) Part I: G8 Action Plan for Climate Change: Coal Related Activities by the IEA

27. Mr. John Topper, Managing Director of the IEA Clean Coal Centre (United Kingdom), discussed the G8 Action Plan for Climate Change inaugurated at the G8 Summit at Gleneagles, United Kingdom in Summer 2005 and the role for coal and clean coal technologies in the Action Plan. In promoting an agenda for a reliable yet cleaner energy future, the G8 has identified greater efficiency and cleaner electricity generation from fossil fuels, including coal, as a priority. The IEA has been charged with the task of leading this effort, and the IEA CCC is supporting the IEA in its coal-related efforts.

28. Mr. Topper identified two areas of focus where IEA CCC will provide direct support. The first is reviewing, assessing, and disseminating information on energy efficiency of coal-fired power plants and recommending options to make best practice more accessible. The second is to carry out a global study of recently constructed power plants to assess which plants are the most cost-effective and have the highest efficiencies and lowest emissions. This task builds on the existing information systems already maintained by the IEA CCC.

29. For the first activity, the IEA CCC will upgrade its existing global power plant database to add efficiency and will seek to fill in gaps where they currently exist, notably the CIS countries. Mr. Topper made a special request in his presentation for cooperation among all UNECE countries and the secretariat, but especially the CIS countries. For the second activity, IEA CCC will undertake a series of nine case studies on costs, efficiencies, and emissions

performance of the most recently constructed fossil-fired power plants that will cover the principal geographic regions and range of fuels including coal.

(b) Part II: Activities of the International Energy Agency Coal Industry Advisory Board

30. Mr. Brian Ricketts (International Energy Agency, France) reported on the recent workshop of the IEA's Coal Industry Advisory Board (CIAB) held in November 2005 in Paris. The CIAB, consisting of 40 members each of whom hold a senior position in a coal-related enterprise, supports the IEA on all coal-related matters. The purpose of the workshop in November was to explore issues related to the growing political pressure to move more swiftly to alleviate energy security concerns and to tackle climate change.

31. The question of timescales was a recurring theme throughout the IEA workshop. There was a concern at the sheer volume of new coal-fired power plant construction and the apparent delay before IGCC with CO₂ capture and storage could be used to deal with the almost exponential rise in CO₂ emissions. The term "carbon lock-in" was used to describe the future emissions from coal-fired plant built today without the option for carbon capture in the future.

32. The CIAB will focus on four areas in 2006. CIAB will continue its work on Zero Emissions Technologies including development of an atlas of CO₂ storage potential. It will assess the gap between common practice and best practice, including a dialogue with non-member countries, and it will review membership of the CIAB to consider bringing in new members from China, India, Russian Federation and other key coal-producing and coal-consuming countries that are currently not represented. Thirdly, the CIAB will join with the IEA Working Party on Fossil Fuels and the WCI on coal's role in the energy security debate. Finally, the CIAB will continue its work on investment, extending this to look at market mechanisms and, in particular, the CDM markets.

33. Mr. Ricketts and Mr. Topper proposed several areas of possible cooperation for the Group of Experts to consider and to be discussed further with the IEA and the IEA Clean Coal Centre:

- (i) Members of the Ad Hoc Group of Experts have been invited to cooperate with the IEA and the IEA Clean Coal Centre in their work to develop a global database of power plants including their emissions profiles and efficiency ratings. Specifically, they are lacking data from many CIS countries. The secretariat is prepared to assist this effort when and if the IEA and IEA CCC request such assistance;
- (ii) Inclusion of UNECE statistics in IEA publications;
- (iii) Cooperation on aggregating and analyzing market data collected by many different sources;
- (iv) Cooperation on specific projects of mutual interest and benefit; and
- (v) A possible workshop to educate and clarify the purpose and applicability of the many conventions, protocols and other international agreements that have an impact on the coal industry. The aim would be to raise awareness within the coal-related industries on how these agreements interact and on how the industry should respond to achieve the objectives sought within a business framework.

(c) Part III: Project Finance for Clean Coal Technologies

34. Mr. Ricketts continued his review of the CIAB workshop by describing the discussion at the workshop on carbon finance potential for clean coal technologies, specifically highlighting the recognition by the World Bank, and other multilateral agencies, that their focus on renewable energy solutions over the last decade was no longer sustainable. Solving the greenhouse challenge demanded that coal become part of the solution, not simply the problem, and carbon financing through carbon trading is the only source of financing of a sufficient size to support clean coal technology deployment and CO₂ capture and storage.

35. The CIAB workshop also addressed the issue of how carbon finance could fund major improvements to the efficiency of power generation plants in transition economies. These economies are well below their Kyoto commitments and have surplus Assigned Amount Units to sell – up to 7 billion tonnes. Emissions from OECD countries are, in general, above their commitments by around 3 billion tonnes of CO₂. Yet OECD countries are reluctant to trade, unless the purchase is linked to climate-friendly investments. By investment in improved power plant efficiency, the transition economies can significantly lower their carbon intensities using the capital receipts from selling AAUs, and thus release even more AAUs to trade. This “greening” of AAUs could, in principal, provide the funding to upgrade the coal-fired fleet in Eastern Europe, with new investment of about \$30 billion over the next 4-5 years. There is some concern about the capacity of Eastern Europe and the CIS to absorb this investment, however.

36. The (UNECE IREEDD) provided an update on the Global Environment Facility Project, “Energy Efficiency and Renewable Energy Investments for Climate Change Mitigation” (Report of the Seventh Session of the Ad Hoc Group of Experts on Energy Efficiency Investments for Climate Change Mitigation ENERGY/WP.4/2005/9). The project includes approximately US\$7 million from several donors including the GEF, and has three primary objectives: to create a Public/Private Partnership Fund, to develop skills allowing for project sponsors to prepare bankable documents, and to promote institutional and policy reforms to promote energy efficiency and renewable energy projects. The project, provisionally approved by the GEF Board in November 2005, is of interest and relevance to the Ad Hoc Group of Experts on Coal in Sustainable Development because clean coal projects are included in the broader definition of renewables in the GEF project document. Final steps are being taken in the first half of this year to make the Fund operational.

37. In the discussion that followed, the meeting participants commented that the GEF project should have great value for smaller energy efficiency and renewable energy projects that have traditionally found it difficult to secure investment. However, they questioned whether this would be of value for large-scale projects typical of the electric power and coal industries where there is a high level of expertise in securing external capital.

38. The meeting:

- (i) Took note of the information provided;
- (ii) Expressed appreciation at the proposals for cooperation by the IEA, IEA Clean Coal Centre, and the Global Environment Facility Project; and

- (iii) Agreed that the secretariat will continue the dialogue with the IEA to further explore areas of potential cooperation and possibly others, and will report to the Group of Experts on a regular basis.

VII. UNITED NATIONS DEVELOPMENT ACCOUNT "CAPACT" PROJECT (Agenda Item 6)

Documentation:

- (i) ENERGY/GE.1/2003/9: Capacity Building for Air Quality Management and the Application of Clean Coal Technologies in Central Asia; and
- (ii) ENERGY/GE.1/2004/4: The CAPACT Project "Capacity Building for Air Quality Management and the Application of Clean Coal Technologies in Central Asia".

39. The secretariat updated the meeting on the status of the CAPACT Project, a three-year project that had been approved for funding by the UN General Assembly in December 2003 by its Resolution A/C.5/58/L48 and that had commenced its activities in the second half of 2004. The secretariat put particular emphasis on the work packages focusing on the clean coal technology aspects of the project. The secretariat also drew attention to the dedicated project website to which all documentation and other relevant information was posted on a regular basis: <http://www.unece.org/ie/capact>.

40. The meeting:

- (i) Noted with appreciation the information provided and the efforts made in implementing the CAPACT Project.

VIII. REPORT ON THE ACTIVITIES OF THE AD HOC GROUP OF EXPERTS ON COAL MINE METHANE (Agenda Item 7)

Documentation:

- (i) ENERGY/GE.4/2004/2: Project on "Development of CMM Projects in Central and Eastern Europe and the CIS"; and
- (ii) ECE/ENERGY/GE.4/2006/1: Provisional Agenda for the Second Session of the Ad Hoc Group of Experts on Coal Mine Methane.

41. The secretariat provided an update on the activities of the Ad Hoc Group of Experts on Coal Mine Methane (CMM) including the status of the extrabudgetary project, "Development of CMM Projects in Central and Eastern Europe and the CIS," and the work of the Task Force on the Economic Benefits of Improving Mine Safety through Extraction and Use of Coal Mine Methane. The secretariat reported that Ad Hoc Group of Experts held their second session on 31 January and 1 February 2006 and that the Task Force on Mine Safety held an informal session on 30 January 2006.

42. At the second session, the Ad Hoc Group of Experts on Coal Mine Methane developed a programme of work for 2006 that consists of the following activities: (1) to continue the

extrabudgetary project to support financing of coal mine methane projects in CEE/CIS; (2) to hold three workshops over the next one and a half years in the Russian Federation, Ukraine and Poland; (3) to examine utilization of methane in the explosive range, a common barrier in many countries where methane concentrations are very low upon discharge from the mine and to consider a workshop on this issue; and (4) to continue working closely with the international Methane to Markets Partnership to promote the recovery and productive use of coal mine methane to reduce greenhouse gas emissions, improve mine safety and productivity, and provide a reliable source of energy.

43. The Task Force on Mine Safety which reports to the Ad Hoc Group of Experts on Coal Mine Methane has initiated its programme of work for 2006 and expects to develop case studies of successful and unsuccessful methane drainage programmes as a precursor to developing best practices and guidelines in the mining industry.

44. The meeting:

- (i) Noted the information provided; and
- (ii) Agreed upon the importance of cooperating closely with the Ad Hoc Group of Experts on Coal Mine Methane.

IX. COAL SECTOR RESTRUCTURING IN THE ECONOMIES IN TRANSITION (Agenda Item 8)

Documentation :

ENERGY/GE.1/2004/8: Questionnaire on the Major Indicators of Coal Sector Restructuring.

45. The meeting discussed coal industry restructuring in the transition economies following two presentations related to industry restructuring, one providing a review of industry restructuring efforts to date and the other attempting to present a forward-looking view for the industry to strategically position itself for future success. In addition, the Group of Experts considered whether it was appropriate to continue working on this issue considering the significant progress in restructuring made in most countries within the UNECE region but also in view of the difficulty experienced by the secretariat in obtaining responses to the Questionnaire for Major Indicators of Coal Sector Restructuring approved by the meeting at its seventh session in December 2004.

a) Part I: UNECE Industry Restructuring from the late 1980's to the Present

46. Ms. Mucella Ersoy (Turkish Coal Enterprise, Turkey), a Vice-Chair of the Ad Hoc Group of Experts on Coal in Sustainable Development, delivered a very comprehensive review on the history of European/CIS coal industry restructuring since the late 1980s. The UNECE has worked closely with member countries to assist their restructuring efforts with particular emphasis on integrating the CEE and CIS countries into the European and global economies.

47. The CEE/CIS region still remains a significant coal producer. Of proved reserves in 2004, CEE/CIS held 30% of all coal reserves. Bulgaria, Czech Republic, Hungary, Kazakhstan, Poland, Romania, Russian Federation, and Ukraine and Turkey (technically not a part of

CEE/CIS but included for this report) all continue to maintain hard coal and lignite industries and combined account for 15% of global production. However, production in the region today had declined significantly from pre-1990 levels when true restructuring efforts began. As might be expected in moving from a centrally planned to a market basis, restructuring has proven much more challenging in the CEE/CIS countries, although today it is generally considered a successful exercise. The economic and social consequences have been difficult, even devastating in some regions and countries, but in many cases the remaining industry is profitable or moving toward profitability.

48. Ms. Ersoy concluded her presentation suggesting that the Ad Hoc Group of Experts should continue to focus on coal industry restructuring because some countries still require technical assistance. She also encouraged member countries that have not yet completed the Questionnaire on Indicators to do so. A full evaluation of the region and development of an appropriate and effective programme of work on industry restructuring will depend upon the responses. Ms. Ersoy also suggested broadening the restructuring indicators to develop a more comprehensive and accurate assessment.

b) Part II: Strategic Positioning of the Coal Market for Future Success

49. Following Ms. Ersoy's presentation on the history of restructuring in the UNECE region, Mr. Graham Chapman (Energy Edge, United Kingdom) and a Vice Chair of the Ad Hoc Group of Experts took a look forward. Coal brings many advantages including a wide geographic distribution resulting in indigenous energy security as well as ease of transportation. Yet, Mr. Chapman argued that the coal industry as whole should begin taking a more strategic approach to assure itself a place in the energy sector of the future. The current "dash for coal," while not a myth will probably not be sustainable without some fundamental changes in the industry's thinking.

50. To create a path for future success, Mr Chapman suggested that the industry should consider adopting key strategies that include embracing clean coal technologies, continue striving to improve the public perception of coal, consider branding coal again to link quality with production zones, attempt to move to longer term contracts and develop flexible price indices and contract terms similar to other energy sectors, and better understand the competing energy sectors. In addition, Mr. Chapman suggested that the industry needs to look beyond coal production to other issues such as carbon capture and storage and coal mine methane production, and to consider moving to the operational models existing in the oil and natural gas sector. These include external investment and joint venturing, multiple operational arms, and adoption of short-term, mid-term, long-term and very long-term visions rather than the short-term vision it has practiced in most cases.

51. The meeting:

- (i) Noted the information provided;
- (ii) Agreed to consider the assessment of coal industry restructuring but in a limited number of countries rather than the entire UNECE region; and
- (iii) Agreed that the Group of Experts should consider other issues that are important for coal success in the future including coal liquefaction and gasification in addition to clean coal technologies and carbon capture and storage.

X. ACTIVITIES OF AND COOPERATION WITH VARIOUS INTERGOVERNMENTAL
AND NON-GOVERNMENTAL ORGANIZATIONS
(Agenda Item 9)

Documentation

ENERGY/GE.3/2005/2: Report on the Second Session of the Ad Hoc Group of Experts on Harmonization of Energy Reserves and Resources Terminology.

(a) Part I: Focus and Activities of the World Coal Institute

52. Ms. Christine Copley (World Coal Institute, United Kingdom) provided an overview of the World Coal Institute (WCI) and its activities and current focus areas. Strong corporate governance on environmental issues is a primary issue for the WCI, an international association of coal enterprises and stakeholders, including many national coal associations. Among its objectives, WCI promotes public awareness of the role of coal in sustainable development and encourages the development and use of CCTs and CCS and viable options for reducing the environmental impact of coal use. As it moves forward with this agenda, Ms. Copley noted that the WCI and the coal industry face many challenges including a lack of certainty in the international architecture on climate change. Many other speakers commented on this issue because of its importance in considering investments in future power plants and mining operations. Ms. Copley suggested the possibility of the world's first Coal Congress as a forum for the industry and other stakeholders to discuss how the coal industry can effectively contribute to global efforts of clean development and climate change mitigation and adaptation.

53. Ms. Copley also spoke on the WCI's efforts to diversify its membership to include members and associations from countries not historically associated with the WCI such as the Russian Federation.

(b) Part II: Focus and Activities of EURACOAL

54. Mr. Thorsten Diercks, Secretary-General of the European Coal and Lignite Association EURACOAL (Belgium) and a Vice-Chair of the Ad Hoc Group of Experts on Coal in Sustainable Development, discussed EURACOAL's activities and positions in promoting coal as an integral component to the European energy supply picture. For Europe, important questions are how to keep European energy prices competitive and how to balance the need for environmental protection with economic growth while also developing a sound technological path. Energy security is also an issue of paramount importance not only in Europe but globally. With its large indigenous resources, however, coal could play a critical role in Europe's plan to secure its energy future.

55. In examining each of these issues, Mr. Diercks noted that the increasing price differential between coal and natural gas is once again making coal an attractive and cost-effective option for power generation. However, he noted that current emissions trading policies limit the contribution of cheap coal, and policymakers need to ensure that the carbon transactions do not distort the markets.

56. Mr. Diercks also emphasized the importance of coal in UNECE countries' energy security and suggested that this be an area of further discussion at future meetings of the Group of Experts. This comment was well received by the Group of Experts who strongly supported this view.

(c) Part III: Update on the UN Framework Classification on Energy & Mineral Reserves

57. The secretariat updated the meeting on the work of the Ad Hoc Group of Experts on Harmonization of Energy Reserves and Resources Terminology and the UN Framework Classification on Fossil Energy and Mineral Resources (UNFC). This is an effort to build on the UNECE's prior success at coordinating efforts to develop a single classification code for coal reserves. With increasing globalization and the importance in transparency in reserve reporting for energy security and investment decisions, the concept of a global code is gaining interest. The next steps for the Group of Experts on Harmonization are: to continue developing the harmonized code by the use of framework facility of the UNFC; to facilitate development of the specifications and guidelines to the UNFC by establishing two task forces on "Petroleum (Oil and Gas)" and "Coal, Uranium and Other Solid Minerals (Solid Minerals);" to encourage development of an education on the UNFC and its application; to develop case studies applying the UNFC and to engage with representatives of the capital markets.

(d) Part IV: Update on the Ukraine Coal Industry

58. The Ukrainian delegation led by Mr. Volodymir Novikov (First Deputy Minister, Ministry of Coal Mining Industry, Ukraine) updated the meeting on the current situation and prospects for the coal industry in Ukraine. Ukraine is continuing to restructure and transform its coal industry to move toward profitability. Due to energy security needs and to mitigate the social consequences of mine closure, the preference of the Ukrainian Government is to increase effectiveness and profitability of operating coal-mining enterprises with limited closing and liquidation of unprofitable mines.

59. The meeting:

- (i) Noted the information provided;
- (ii) Agreed to continue cooperation with the World Coal Institute and EURACOAL where appropriate and where the Group of Experts can bring value-added;
- (iii) Agreed that the UNFC work is very important and the Group of Experts will continue to follow its progress; and
- (iv) Agreed that energy security should be a future area of focus at the next meeting of the Group of Experts.

XI. PROGRAMME OF WORK
(Agenda Item 10)

60. The secretariat noted that the programme of work would be reviewed and considered for approval by the UNECE Committee on Sustainable Energy at its fifteenth session on 28-30 November 2006.

61. The secretariat summarized the discussions on the key activities for the Ad Hoc Group of Experts to focus on in its programme of work.

- (i) Carbon capture and storage: The secretariat will first prepare a paper on CCS and will seek input from member countries on their specific interests and needs. As part of this exercise, the secretariat will seek to identify other ongoing initiatives in which member countries are participating or may wish to participate. For example, the IEA Working Party on Fossil Fuels has suggested a workshop with the UN agencies on Zero Emissions Technologies. The secretariat will deliver the paper at the ninth session of the Ad Hoc Group of Experts in the first quarter of 2007 to encourage further dialogue, and then consider a workshop later in 2007 or in early 2008 based on feedback;
- (ii) Improving plant efficiency: The Ad Hoc Group of Experts will continue to work on this issue with other expert bodies;
- (iii) Cooperation with IEA CCC: Members of the Ad Hoc Group of Experts have been invited to cooperate with the IEA and the IEA Clean Coal Centre in their work to develop a global database of power plants including their emissions profiles and efficiency ratings. Specifically, they are lacking data from many CIS countries. The secretariat is prepared to assist this effort when and if the IEA and IEA CCC request such assistance;
- (iv) Cooperation with IEA: The Ad Hoc Group of Experts and the secretariat will continue discussions with IEA on possible areas of cooperation as noted in the report;
- (v) Forum on Protocols and Conventions affecting the coal industry: The secretariat and Bureau will explore this issue further and brief the Ad Hoc Group of Experts on any further discussion with other organizations that may have an interest in proceeding with something like this;
- (vi) Industry restructuring: Continue support industry restructuring efforts, but the scope of these activities will be narrowed to only include those countries that are still undergoing significant restructuring;
- (vii) Coal's role in energy security: From the discussions at the eighth session, it is clear that the Ad Hoc Group of Experts wishes to increase its focus on coal's role in energy security in the UNECE region. The secretariat will work with the Bureau to give this issue greater visibility at the next meeting of the Ad Hoc Group of Experts;
- (viii) Annual survey of coal supply and demand: The Ad Hoc Group of Experts discussed the possibility of no longer sending out the annual Survey on Supply and Demand due to the difficulty of obtaining responses from member countries. Based on the proposals made by the IEA for possible cooperation, the Bureau may reconsider this if there is an opportunity for inclusion of UNECE statistics in IEA publications;
- (ix) Other issues of interest for the Ad Hoc Group of Experts: Based on discussions at the eighth session, issues of interest include coal gasification and liquefaction, which could be discussed in greater detail at the ninth session; and
- (x) General cooperation with other international organizations: The Ad Hoc Group of Experts will continue to find areas of cooperation and mutual interests with other international organizations including the International Energy Agency and its working bodies and affiliate organizations, the European Commission, the World Coal Institute, EURACOAL, the World Energy Council, the Carbon Sequestration Leadership Forum, and the Energy Charter.

62. The meeting:

- (i) Agreed that its programme of work for the coming year should seek to focus on the key activities highlighted by the secretariat; and
- (ii) Noted that the ninth session of the Ad Hoc Group of Experts on Coal in Sustainable Development has been rescheduled from 16-17 November 2006 to the first quarter of 2007.

XII. OTHER BUSINESS (Agenda Item 11)

63. The secretariat advised the meeting that the documentation for the session had been posted to the website and presentations made during the meeting would become available shortly on the UNECE website at: <http://www.unece.org/ie/se/coal>.

XIII. ADOPTION OF THE REPORT OF THE EIGHTH SESSION (Agenda Item 12)

64. It was agreed that a concise report of the session focusing on the conclusions and recommendations would be prepared by the secretariat and circulated to the Bureau of the Meeting for approval, upon which it would be circulated to member countries.