

Conference on
Clean Coal Technologies

Cottbus, FRG, April, 1-5, 1991

Initiated by the
Venice Group
for Cooperative Studies in Science and Culture *

organized by the
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Environmental Policy, Bonn)

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* **the Venice Group** is currently composed of the representatives of the following international foundations and grant giving organizations: ECF (European Cultural Foundation), **Calouste Gulbenkian Foundation**, **International Foundation for the Survival and Development of Humanity**, **St. Cyril and St. Methodius International Foundation**, **UNESCO-ROSTE**, **Commission of the European Communities** (äs an observer), **USSR-ACADEMY OF SCIENCES** (äs an observer).

FOREWORD

Coal is a major source for energy production in most European countries and particularly in those belonging to the Central and Eastern parts of the Region. In spite of its enormous potential, the coal utilization in Europe cannot be expanded because of its negative environmental consequences, not only in the countries producing and utilizing coal, but in the Region as a whole.

Although the measures, which are being undertaken in the European Region in order to improve the environmental Situation are becoming more and more coordinated, the level of pollution in some countries is constantly growing and coal is responsible to a great degree for this negative phenomenon. The environmental impact of coal combustion is enormous: Central and Northern parts of Europe are seriously affected by acid rains, and coal combustion is one of the major «contributors» to the growing global green-house effect.

The Chernobyl accident of 1986 in the USSR has led to a re-evaluation of the role of different energy sources in the world energy scenario in which coal could play a dominant role if all disadvantages of its utilization and first of all its negative environmental impact, could be eliminated or at least diminished. This task could be reached if the efforts of national and international organizations, individual research centres and scientists are united to elaborate a range of new technologies of coal utilization which could be appropriate for different local environmental and economic conditions.

However we should realize that it will be extremely difficult to perform this task because tremendous capital investments are needed for elaborating and developing new coal combus-

tion technologies and introducing them into practice. Some of these technologies are well known and developed and moreover parts of them are operational at coal facilities in Western European countries. Unfortunately, these technologies are not available in Central and Eastern European countries and, due to an unfavorable economic Situation, it is unlikely that these countries could arrange the transfer of such technologies to their power generating facilities in the near future. At the same time, improvement of quality in the environment is badly needed in Europe and the necessity for urgent actions at international, national and regional levels is widely recognized in practically all European countries.

Each action undertaken in this particular field is of great value and will contribute to the improvement of the environmental Situation and consequently to the quality of life in Europe.

The tremendous socio-economic and political changes in Europe have created very favourable conditions for intra-European cooperation in all areas of human activities including environmental protection. Research institutions and individual scientists from East and West, and from South and North, should be involved in this cooperation and they should unite their efforts in resolving vitally important problems facing our Region.

The Conference on Clean Coal Technologies, initiated by the Venice Group for Cooperative Studies in Science and Culture and organized by the Institute for European Environmental Policy in Cottbus, FRG on April 1-5, 1991 was called to contribute to the better understanding of the prospects for coal utilization in the European Region.

The «Venice Group», which is currently composed of the representatives of the following foundations and grant giving organizations: European Cultural Foundation, Calouste Gulbenkian Foundation, International Foundation for the

Survival and Development of Humanity, St. Cyril and St. Methodius International Foundation, UNESCO-ROSTE and the Commission of the European Communities (as an observer), has selected the environment as a priority area for its activities. Last year the Venice Group launched a project on economic and legal aspects of pollution abatement strategies in Europe and the first seminar within this project was held in September 1990 in Moscow, USSR.

The Cottbus Conference was supported by a number of organizations, among them the Academy for East-West Economic Cooperation, an Institution established in the fall of 1990 in Berlin, whose major objective is to contribute to resolving common European problems as well as to help to reduce the economic gap between Eastern and Western European countries.

In other words, this Conference should be considered as a result of joint and well coordinated efforts of regional, national and international organizations which finally led to this very interesting scientific meeting.

The experts from Bulgaria, CSFR, FRG, Hungary, Sweden, UK, UKrSSR, USSR, OECD, UNESCO and the Council of Europe were invited and took part in the discussions of different coal combustion and cleaning technologies.

The papers presented by the invited experts give a certain evaluation of the perspectives for coal utilization in Europe taking into account the current and future potential of the above mentioned technologies. All these contributors are presented in this book.

It was agreed at the Conference that immediate measures should be undertaken in order to introduce into practice in all coal fired facilities non-expensive precombustion cleaning technologies which do not need significant capital Investments and moreover do not require the reconstruction of existing facilities. Along these non-expensive and well developed tech-

nologies could reduce the emission of SO_x and NO_x by 30%. Therefore, all nations could contribute to the implementation of the recommendations on SO_x and NO_x reductions suggested by the Vienna Meeting of representatives of the participating states of the Conference on security and cooperation in Europa, held on the basis of the provisions of the Final Act related to the Follow-up to the Conference, Vienna, 1989.

Currently, the group of experts-participants in the Cottbus Conference is summarizing the discussions and preparing the contribution to the International Conference Series on Policy Issues and Options for Environmental Sound Coal Technologies with meetings in Beijing - China, Madras - India, Moscow - USSR and Berlin - FRG which will be arranged in 1992 by the Centre for Science and Technology for Development of the United Nations. This action is sponsored by the UNESCO Regional Office for Science and Technology for Europe (UNESCO-ROSTE) and could be considered as another sample of fruitful cooperation between different international organizations working in the field of environmental protection.

The preparation of this volume was undertaken by Mr. Rolf Huchthausen from IEEP and his cooperation is greatly appreciated.

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