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UN/ECE REGIONAL ADVISORY SERVICES PROGRAMME
IN THE FIELD OF ENERGY

Report by the secretariat

1. This report covers activities of the regional advisory services programme in the field of energy for the period from August 1997 to August 1999. Assistance was provided on the economic and technical analysis of the energy situation in economies in transition, on the elaboration of their energy policies and strategies, and on the technical, institutional and economic requirements for restructuring, rehabilitating and modernizing the energy industries of economies in transition. In addition, advisory services were provided on the interconnection of electricity and natural gas networks and on the utilization of new devices and technologies in the energy field, with particular emphasis on environmentally-clean technologies. For the most part, these activities were supported by extra budgetary resources or by member States themselves.

2. Information related to projects, programmes initiated and activities carried out under the programme are provided below.

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I. ENERGY EFFICIENCY AND ENERGY SUPPLY

3. The joint UNDP/ILO/ECE/Belarus Government International Project of Conversion of Military Bases into Zones of Employment, Entrepreneurship and Energy Conservation in Belarus was completed in January 1998. Two studies: "General approach to reconstruction of energy infrastructure of former military bases in the Republic of Belarus" and "General approaches to conversion of energy infrastructure of former military bases in CIS Countries using new organizational and financial mechanisms", were prepared in the framework of this project. A programme on the development of Energy Efficiency Demonstration Zones in the Republic of Belarus was worked out and approved by the State Committee on Energy Efficiency and Control. The development of such zones was supported by the Belarus Government in its decision "Complex of urgent measures on energy efficiency for 1997-1998" where managers for the Energy Efficiency Zones project were identified and sources of financing determined.

4. Project proposals for a joint Belarus/Russian Project on obtaining additional electricity for large industrial gas consuming enterprises, gas-processing enterprises, and thermal power plants for the production of cryogenic products (nitrogen, oxygen, argon) was formulated and approved by the Belarus authorities. A programme on energy saving measures, which include: installation of heat, gas and water meters, heating system improvements, and replacement of inefficient individual boilers, has been elaborated for the Energy Efficiency Demonstration Zone "Minsk".

5. The project on "Sustainable forestry management and reduction of adverse environment impacts by using wood and wood residue resources for production of heat power in the Republic of Belarus" is currently being implemented with financial resources provided by the United Nations Development Programme (UNDP). Assistance was provided to implement the first phase of the project "Improvement of energy efficiency in the public sector (schools and hospitals) of the Republic of Belarus". The project is being financed by the World Bank.

6. Phase 1 of the project "Development of financing mechanisms for Norwegian involvement in energy efficiency projects in the Russian Federation" was implemented together with experts from the Norwegian Institute for Energy Technology. A report on this initiative and plans for Phase 2 were submitted to the Royal Norwegian Ministry of Foreign Affairs and approved by it. The Ministry provided the financial resources for implementation of Phase 1.

7. Proposals for project preparation funding through the Project Preparation and Development Facility were worked out together with Ukrainian experts for the project "Removing organizational, institutional and legislative barriers for the realization of energy efficiency projects within the framework of the

Energy Efficiency Demonstration Zone "Uzhnaya" (Ukraine) for the reduction of CO₂ emissions". A concept for the Energy Efficiency Demonstration Zone in the city of Pervomaysk was elaborated, approved by the Mayor of the city and presented to the State Committee of Ukraine for Energy Conservation. The first phase of the project "Energy Efficiency Demonstration Zone in the City of Nikolaev (Ukraine)" was completed. A report on this project was prepared together with experts from the company "PLASMOTEXNICA" and was submitted to the Ukrainian authorities.

8. The second phase of the project "State of the Art of Cooling Household Appliances Standards" (SACHA II) has been started in Belarus and Ukraine.

9. At its ninth session in May 1998, the Steering Committee of the Energy Efficiency 2000 Project requested the ECE Executive Secretary to address a proposal to the United Nations Fund for International Partnerships (UNFIP) for capacity building, energy efficiency investment project development and related policy reforms in east European ECE member States to support the Project's participation in implementation of the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol (ENERGY/WP.4/1998/2).

10. In fulfilling this request, the Regional Adviser assisted in the preparatory phase for the "Energy Efficiency Investment Project Development for Climate Change Mitigation" initiative approved by the UNFIP Advisory Board in December 1998 and awarded up to \$2 million by the Board of Directors of the United Nations Foundation Inc. in January 1999. During the preparatory phase, the Regional Adviser held consultations with national delegations on the identification, documentation and development of energy efficiency demonstration zones in four of the five countries participating in the project, Belarus, Russian Federation, Kazakhstan and Ukraine and provided advisory services on project implementation modalities to experts from these economies in transition.

II. COOPERATION WITH SUBREGIONAL ORGANIZATIONS

Central Europe Initiative (CEI)

11. Two project proposals for CEI/ECE cooperation in sustainable energy development have been prepared and sent to the CEI secretariat for its consideration: Energy efficiency and environmental security in Central European Countries; and Analysis of the energy situation in central European countries and energy security of the region.

Commonwealth of Independent States (CIS)

12. A project "Energy efficiency and security in CIS countries" was formulated and prepared. Two meetings of the group of CIS experts, appointed by Governments and responsible for implementation of this project, were organised with the secretariat of the CIS Interstate Economic Committee of the Economic Union (Moscow, September 1998 and April 1999). Two meetings of the Ad Hoc Project Group, responsible for the contents, drafting and editing of the study, were held in Moscow (March 1999 and June 1999). A first version of the study will be presented to the ninth session of the Committee on Sustainable Energy.

Black Sea Economic Cooperation (BSEC)

13. A review of the development of Energy Efficiency Demonstration Zones in BSEC countries and financial mechanisms to be elaborated for carrying them out was prepared and proposed to the BSEC secretariat as basic information material for a proposed workshop to be organized jointly by the ECE and BSEC secretariats.

III. SUBREGIONAL PROGRAMMES

Southeast European Cooperative Initiative (SECI)

14. This initiative is designed to encourage economic and environmental cooperation and trade among the ECE member States of Southeast Europe through nine operational projects, including three in the energy sector. The Regional Adviser on Energy is coordinator for two of them: "Interconnection of natural gas networks, diversification of gas supply and improvement of security of supply in Southeast Europe" and "Energy efficiency demonstration zones network in southeast Europe".

15. The third Project Group meeting for the project on Interconnection of natural gas networks was held in Sarajevo (Bosnia and Herzegovina) in May 1998. Recommendations for the implementation of the second phase of the project, prepared and adopted by the Ad Hoc Project Group, were reported to the SECI Agenda Committee held in June 1998. The third Project Group meeting on the energy efficiency project (Maribor (Slovenia), June 1998) reached agreement on setting up a task force to consider a number of different barriers to financing energy efficiency projects in Southeast Europe.

16. The results of the work done in different Energy Efficiency Demonstration Zones of the SECI countries were discussed at the fourth Group meeting on energy efficiency (Thessalonika (Greece), February 1999). The Project Coordinator provided a summary of the ECE publication "Barriers to Financing

Energy Efficiency Projects in Central and Eastern Europe" prepared by KPMG Peat Marwick and the secretariat of the Energy Efficiency 2000 Project, with the financial support of the United States Government. The Project Group decided to prepare a review of institutional barriers to implementing energy efficiency projects in SECI countries and to discuss the matter at the next Project Group meeting to be held in Budapest (Hungary) in autumn 1999.

Special Programme for Economies of Central Asia (SPECA)

17. The aim of the Programme is to contribute to national institution strengthening, to discuss Central Asian development issues, to foster cooperation between the countries of the subregion and, in particular, to further integrate them into the economies of Europe and Asia. The Regional Adviser on Energy is the coordinator for the project "Rational and Efficient Use of Energy and Water Resources of Central Asia" for which Kyrgyzstan is the lead country.

18. At its first meeting (Bishkek (Kyrgyzstan), November 1998) the Project Working Group (PWG-Energo) decided that it should initially limit its work to three or four priority areas. Two major areas were considered fundamental: (1) the compilation, assessment and optimization of the current and forecast balances of fuel and energy resources for the region; and (2) the evaluation and equitable use of transboundary water resources. It was agreed that the programme of work should include the following priority issues: basic principles of interstate water sharing; draft concept of cooperation in the area of the development of fuel and energy resources; and a regional programme for cooperation in the development and rational utilization of energy and water resources.

19. At its second session (Bishkek, July 1999) the Group decided, inter alia, to work out and submit for consideration to the Heads of States of Central Asia a draft concept of cooperation for joint utilization of water and fuel and energy resources of the region on the basis of forecasts for water and energy resources, including alternative scenarios, and to promote further cooperation among the national operating energy entities of the states of Central Asia (for example the establishment of a common market for electric power). The next session of PWG-Energo is planned to take place in Bishkek in November 1999.

IV. ACTIVITIES IN GEOGRAPHICAL AREAS

Baltic countries

20. A seminar "Energy Efficiency in the Baltic Sea Region", organized together with the Latvian Institute of Physical Energetics at the

International Trade Fair "Energy - 99" (Riga (Latvia), May 1999) focussed on the transfer of practical knowledge and the exchange of information and experience. A report on the development of energy efficiency projects within the Energy Efficiency 2000 Project was presented to the seminar.

Recommendations to enhance cooperation on energy efficient technologies and energy demand management services between countries in the region were elaborated.

V. AD HOC REQUESTS BY A SINGLE COUNTRY ON SPECIFIC TOPICS

Workshops

21. A Workshop on "Energy saving in the urban economy" was held in Minsk (Belarus) in September 1997 and a report on future activities within the framework of the Energy Efficiency 2000 Project during its third phase of operation was provided.

22. A Workshop on "Conservation of energy and resources" was held in Minsk (Belarus) in November 1998. A report was presented on the implementation of the joint UNDP/ECE project "Sustainable forestry management and reduction of adverse environment impacts by using wood and wood residue resources for production of heat power in the Republic of Belarus".

23. A Seminar on "Legal, regulatory and financing facilities for energy saving" (Moscow, March 1999) was organized together with the Russian Ministry of Fuel and Energy at the International Exhibition "Energy Saving '99". A report on new financial mechanisms, elaborated within the Energy Efficiency 2000 Project for financing energy efficient projects in CIS countries, was delivered at the seminar. A recommendation was approved to enhance efforts to use these mechanisms during implementation of the new ECE project "Energy efficiency investment project development for climate change mitigation and sustainable energy systems".

24. The programme, provisional time-schedule and resource requirements of the ECE/OECD Workshop "Enhancing the environment by reforming energy pricing", to be held in Pruhonice (Czech Republic) in June 2000, were discussed at a preparatory meeting in Prague (Czech Republic) in April 1999.

25. Within the framework of the project "Sustainable forestry management and reduction of adverse environment impacts by using wood and wood residue resources for production of heat power in the Republic of Belarus" a Workshop on "Rational utilization of wood residue resources for heat power production in the Republic of Belarus" was held in Minsk (Belarus) in June 1999. Recommendations on wide utilization of wood residue resources and other renewable energy sources were approved at the Workshop.

Advisory missions

26. At the request of Governments and to implement a number of projects, the Regional Adviser on Energy carried out missions to the following countries: Belarus, Bosnia and Herzegovina, Bulgaria, Czech Republic, Georgia, Greece, Hungary, Italy, Kazakhstan, Kyrgyzstan, Latvia, Russian Federation, Slovenia and Ukraine. Advice was provided in assisting national experts to prepare plans, programmes and projects to facilitate implementation of their energy strategy, capacity and institution building, and training. Special attention was given to energy efficiency and conservation problems of economies in transition: creation of Energy Efficiency Demonstration Zones and development of financial mechanisms to attract foreign investors to carry out energy efficiency projects in these States. Advisory services were also provided on interconnection of electricity and natural gas networks and for technology cooperation in the field of energy, with particular emphasis on environmentally clean technologies.

Project formulation

27. A preparatory assistance document for the project "Sustainable forestry management and reduction of adverse environment impacts by using wood and wood residue resources for production of heat power in the Republic of Belarus" was prepared and adopted. A concept proposal for the Energy Efficiency Demonstration Zone in the city of Pervomaysk was elaborated and adopted by Belarus authorities.

28. A business plan for the energy efficiency project "Rehabilitation and modernization of Zelenograd District Heating System" was prepared together with Russian experts. At the request of the Government of the Republic of Chuvashya (Russian Federation), a project proposal for the creation of an Energy Efficiency Demonstration Zone in the Republic was prepared and submitted to the Russian Ministries of Fuel and Energy and Science and Technology which are responsible for the Energy Efficiency Demonstration Zones Network in the Russian Federation.

29. Project proposals for the "Rational and efficient use of energy and water resources in Central Asia" were elaborated and submitted to UN Headquarters for financing from the United Nations Development Account. The project has been included in the short list of projects competing for UN funding, to be discussed at the session of the General Assembly in autumn 1999.

Training programme

30. A training programme on financial engineering for Russian-speaking Energy Efficiency Demonstration Zone Managers was organized in Nizhny Novgorod in

1998 together with the Norwegian Energy Efficiency Group and with the financial support of the Norwegian Government. The aim of the Programme, which involved preparatory work, three training courses and homework, was to train project developers on business planning and presentation skills. It was a mixture of lectures, discussions and workshops for 28 participants (2-3 participants for every energy efficiency project). All training materials were adjusted for local conditions and translated into Russian. During the homework phase, the participants used their new knowledge from the training programme to develop business plans for specific energy efficiency projects within Energy Efficiency Demonstration Zones for presentation to International Financial Institutions. Three training courses were implemented during this period and nine complete business plans were developed. The Training Programme was arranged as part of the ECE Energy Efficiency 2000 Project.

Conferences and forums

31. The Regional Adviser on Energy presented reports/papers at the following international events: "Project Development and Finance Workshop for Economies in Transition" (Budapest (Hungary), September 1997); Energy Ministerial Business Consultative Meeting (Moscow (Russian Federation), March 1998); International Conference "Russia's and other CIS Countries' Energy Potential - Crucial Link between Europe and Asia-Pacific" (Moscow, April 1998); International Forum on "Energy Security in the Third Millennium: Scientific and Technological Issues" (Como (Italy), May 1998); International Experts Workshop on "Opportunities for International Cooperation under the Kyoto Protocol" (Moscow, October 1998); Third Belarusian Energy and Ecology Congress (Minsk (Belarus), October 1998); ECE seminar "Commercial Bank Financing of Energy Efficiency Projects in Central and Eastern Europe" (Prague (Czech Republic), January 1999); International Conference "Cooperation Among the Black Sea Countries - a Major Factor of Ecologically Secure Energy Supply" (Lazarevskaya (Russian Federation), April 1999).

VI. PROBLEMS AND FUTURE WORK ORIENTATION

Problems

32. Energy is an area of prime importance and priority for most of the economies in transition. Unfortunately, it was not possible to satisfy all requests of countries, since because of limited resources it was necessary to concentrate activities on a limited number of countries in transition taking into account priority areas for development, government support as well as the availability of extrabudgetary sources of financing.

Future work orientation

33. The Regional Adviser on Energy will continue to respond to the specific needs and priorities of countries in transition in such strategic areas of sustainable energy development as: rational use of energy, efficiency and conservation; analysis of new developments affecting energy demand and supply in the short and medium-term; pricing policy and security of supply; restructuring of the energy sector; energy infrastructure, including interconnection of electric power and natural gas networks; normative activities in the energy field; and renewable sources of energy. In all these areas, assistance will continue to be provided in identifying needs for the development of the energy sector, and assisting national experts to prepare plans, programmes and projects to facilitate implementation of their energy strategy, capacity and institution building. Special emphasis will be given to energy efficiency demonstration zones, training on project financing and management, small and medium-sized company start-up including energy services companies, networking and information exchange, energy efficiency standards, and developing business contacts.

34. Primary attention will be given to cooperation with subregional organizations such as CIS and BSEC and to the implementation of energy projects in the framework of the subregional SECI and SPECA programmes. The Regional Adviser will continue his cooperation with UN bodies and international organizations, in particular with UNDP, the European Union, World Bank, EBRD, CIS Interstate Economic Committee and other regional and subregional organizations.
