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INDUSTRIAL, ENERGY, TRANSPORT AND INTERNATIONAL TRADE STATISTICS: ENERGY STATISTICS

Progress report on energy statistics

Report of the Secretary-General

SUMMARY

The Statistical Commission, at its twentieth session, approved a work programme of energy statistics, noting that it remained an important field that continued to require urgent consideration. The present document outlines the achievements made in relation to the tasks recommended by the Commission. It discusses the development of a publication on energy balances, in the light of the quantity/quality response to the energy questionnaire; co-operation and co-ordination in the exchange of energy statistics and the preparation of the Yearbook of World Energy Statistics. It emphasizes the importance of a technical co-operation programme in energy statistics for the developing countries. Points for discussion by the Commission are included (para. 45).

* E/CN.3/535.

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INTRODUCTION

1. At the twentieth session, the Statistical Commission welcomed the progress report on the development of international energy statistics (E/CN.3/504) and noted that "Energy statistics remained an important field that continued to require further urgent consideration, co-operation and harmonization by all central statistical offices and relevant agencies". 1/

2. The present progress report on the development of international energy statistics is in response to a request of the Statistical Commission made at the same session. The report focuses on the status of the four tasks recommended by the Commission for implementation, 2/ as well as on steps taken recently by the Statistical Office to enhance its publications containing energy data. It also elaborates on co-ordination and co-operation between the Office and other agencies in the exchange of energy statistics.

I. DEVELOPMENT OF TASKS RECOMMENDED BY THE COMMISSION FOR IMPLEMENTATION

A. Energy balances

3. At a workshop organized by the International Energy Agency, it was pointed out that "The gain to any country from a satisfactory build-up of energy information and a data base is so great and the potential damage from faulty or incomplete information is equally so great that it is worthwhile devoting resources to collecting such data in a systematic manner thus helping clarify the issues on which energy policies must be based". 3/

4. In the light of four years of experience in developing data for publication in the form of energy balances, it has become apparent that the publication plan outlined in the previous progress report E/CN.3/504 will have to be amended. 4/ The publication schedule has been revised because of the paucity of data for the development of overall energy balances, in particular for many of the developing countries (in addition, there has been a tendency recently for some countries to

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1/ Official Records of the Economic and Social Council, 1979, Supplement No. 3 (E/1979/23), chap. II, para. 17.

2/ Ibid., para. 23 (b).

3/ Manas K. Chatterjee, "Procedures for collecting energy data and their effect on data availability and quality", in Workshop on Energy Data of Developing Countries, vol. I, Proceedings (Paris, Organisation for Economic Co-operation and Development and International Energy Agency, 1979), p. 48.

4/ Major facets of the plan involve the development of energy balances across four levels, namely, (1) data in basic units; (2) data in common units; (3) individual commodity balances; and (4) overall energy balances and a publication schedule involving all countries over a three-year period.

restrict certain detailed data). Where data are available across all sectors and commodities, that is to say, where there is potential for an integrated national energy balance - level (4) - preliminary levels (1) and (2) are to be published. 5/ From a review of all end-use energy data collected over the last four years, it has become apparent that the preponderance of sectoral energy information is in the electricity sector (comprehensive data are available for over 90 countries for a period of 6-7 years). The decision has therefore been made to include as many electricity profiles as possible in the initial publication of energy balances (for a detailed list of countries, see annexes I and II below).

5. The initial publication on energy balances will involve the presentation of cohesive and integrated data (that is to say, complete end-use data covering a period of at least four years, where a minimal amount of estimation is needed to fill in gaps in a series). This does not imply, however, that the energy data bank will be exhausted. 6/ A great deal of disaggregated and disjunctive information will remain in the energy data file. Thus, the development of energy balances (level (1)) continues to be an important but time-consuming task because of the intensive research needed to fill in accurately the numerous missing segments.

6. It is apparent now that, as far as the content of the second energy balance publication is concerned, another approach to the development of energy data must be taken in order to fill in the gaps. Although the energy statistics questionnaire remains an important vehicle for collecting information, most of the data now coming in simply bring the series up to date. Data extracted from primary national energy sources and from the questionnaire are currently being supplemented from sources marginally related to the energy economy and from which energy consumption may be estimated by deduction, by vigorous research into important secondary publications of private and/or semi-official institutions and by the development of simple automated estimation routines.

7. An additional programme is in progress that should significantly contribute to and enhance a final energy balance. A specialist in fuelwood statistics has been engaged by the Statistical Office to evaluate the statistics in this area and to analyse the results of selected country studies. In addition, the Government of Japan has offered to finance a six-month project to: (a) identify and evaluate the statistics available on non-commercial energy production and consumption; (b) compare and evaluate the various methods used for the compilation of these statistics and appraise the possible extension of the most efficient methods to the developing countries; and (c) recommend concepts, definitions and methods that

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5/ Only 18 developing countries had complete detailed information. A select number of developed countries was added to this group. See annex I below for details.

6/ In March 1980, the energy balance data bank (covering the period 1970-1978) contained approximately 196,500 records. Roughly 30 per cent of this information will be published in the initial energy balance publication.

will make it possible to establish reliable statistical series in this field. This work is expected to culminate in the development of a more meaningful energy balance, particularly with regard to developing countries. 7/

B. Special report on energy

8. A special report on energy statistics, 8/ which was prepared for the meeting of the Expert Group on Classification and Measurement in the Field of Energy Statistics, held at United Nations Headquarters in 1978, was distributed for comment and amendment in 1979. The final report is expected to be issued in 1980. The report reviews the nature of national and international practices in energy statistics, the key role played by quantitative overall energy balances and the desirable features of such balances. It also provides guidelines and examines many important methodological and conceptual issues and conventions to be followed, as well as delineating the principles to be pursued in preparing and developing energy statistics. The report will be circulated to national and international statistical offices and other agencies concerned with energy statistics, policy and planning.

C. International handbook of conversion factors in energy statistics

9. An international handbook of conversion factors and units of measurement for use in energy statistics is being prepared for inclusion in the special report on energy (see para. 8 above). The handbook provides essential facts about the nature, measurement, comparison and utilization of energy commodities, as well as the factors for moving from one system of measurement to another.

D. Technical co-operation in energy statistics

10. To a certain extent, the disappointing response to the energy questionnaire by the developing countries reflects the lack of basic data and emphasizes the importance of the technical co-operation programme. Often, the national statistical office is not in charge of energy statistics and, in some cases, may not even be aware of the agencies where energy data are collected.

11. There are strong indications, therefore, that technical co-operation may be needed in this field. In fact, the following comments were made in a recent World Bank study: "Assistance is needed in many cases to create, or reorganize and strengthen, an energy planning authority and to train the necessary administrative

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7/ Non-commercial fuels (particularly fuelwood, charcoal, bagasse and dried animal manure) - so called because in the markets of some developing countries they do not often enter commercial trade - represent a large part of the total energy consumption in many of these countries.

8/ "Energy statistics: current practices and future needs" (ESA/STAT/AC.8/1), drafted by a consultant to the Statistical Office.

and technical staff." "Some 60 OIDCs /oil importing developing countries/ need help in devising national plans and policies for the /energy/ sector, and in creating or strengthening a national energy authority." 9/ The irony of the situation is that the Statistical Office has not received any specific request for technical co-operation in energy statistics. There appears to be an anomaly in the case of some developing countries. Obviously, developing countries have to determine their own statistical priorities, and if assistance in energy statistics is important they should ask the United Nations system for guidance or include the specific needs in their overall request. The Statistical Office views the initiation of a programme of technical co-operation and the promotion of basic guidelines as being vital to future work on energy statistics.

II. DEVELOPMENT OF CURRENT ENERGY PUBLICATIONS

A. Yearbook of World Energy Statistics

12. In the overview of the world energy situation, submitted to the Committee on Natural Resources at its sixth session, in June 1979, it was noted that, for a better appreciation of the key issues in this field, "it is necessary to have adequate information on energy resources, reserves, production capacity and availability of supplies, as well as on energy demand trends" (E/C.7/108, para. 97). Since 1952, the Statistical Office has published annually the sole global statistical study on energy, covering the major aspects of production, international trade and gross consumption. The next issue of the Yearbook of World Energy Statistics (Statistical Papers, Series J, No. 23), formerly called World Energy Supplies, will cover the decennium 1970-1979 and is expected to be published at the end of 1980.

13. Series J was the first publication of the Statistical Office to be supplemented by a computerized data file (from 1950 onward). Currently, the data file contains statistics on 67 different energy commodities or subcommodities for the 30-year period 1950-1979, for approximately 195 countries or areas. There are approximately 300,000 data records, standardized to a common record format and coding structure. per E/CN.3/1983/11, ¶13 for new count [different basis]

14. During the last 10 years, selected energy information presented annually in this publication has been gradually augmented to include most countries and nearly all energy commodities. The 1979 edition (Series J, No. 22) 10/ included physical volume data on the production, trade, stockage, bunkering and apparent consumption of solid fuelds, crude petroleum, petroleum products, gaseous fuels, electrical energy, nuclear fuels and fuelwood and charcoal, covering the period 1973-1978. The timeliness of energy information has been significantly improved (and widely approved) by the inclusion of preliminary data, based on partial information, for

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9/ A Program to Accelerate Petroleum Production in the Developing Countries (Washington, D.C., World Bank, 1979), paras. 72 and 89 (i).

10/ United Nations publication, Sales No. E.79.XVII.13).

the most recent full calendar year prior to the year of publication. 11/ The timeliness of the 1979 edition was improved by ten months. The step-by-step process of attaining full coverage of selected energy series (production, trade, stockage, bunkering) has been completed and an annual maintenance and updating work programme ensures consistent uninterrupted series.

15. The Energy Statistics Section of the Statistical Office has developed a unified, flexible data base and is using the new United Nations Statistical Information System (UNSIS) developed by the Computer Systems Development and Programming Section of the Office. The energy statistics that were loaded into UNSIS were the first of the Office's major files to be so entered.

16. The decision to publish new energy information in the Yearbook of World Energy Statistics had of necessity to be linked to such logistical considerations as time, cost, programming and other staff resources. Following a general review of alternative energy information, including prices, reserves, resources, energy-producing capital, energy-use technology and energy-production technology, it was decided to select initially for publication information on resources and reserves of coal, brown coal - lignite, peat, crude petroleum, natural gas, oil shale - tar sands, uranium and thorium, as well as on hydraulic energy resources. In addition, extensive changes in the format of the Yearbook include world, regional and country tables expressed in coal, oil and joule equivalency, the addition of six tables devoted to index numbers and a further six reflecting the percentage distribution and the disaggregation of solid, liquid and gas tables to show details of individual commodity transactions. 12/ The expansion of coverage in the 1980 Yearbook (No. 23) is demonstrated by (a) a threefold increase in the number of pages (over 1,000 pages compared with 350 in No. 22), (b) the addition of 28-32 new tables, (c) the addition of French, making the publication bilingual for the first time and (d) the inclusion of an extensive, current bibliography of data sources to meet user need for information on official statistical materials (for details of the contents of Yearbook Nos. 21, 22 and 23, see annex III below). There are plans to make the publication available on microfiche, thereby offering an opportunity to obtain the information in advance of the printed issue.

17. Largely because of the expertise gained in the development of energy balances, some conceptual and statistical problems relating to information presented in the Yearbook are currently under review. These problems fall into the following main categories:

(a) Gross versus net series. In many cases, national sources fail to identify the differences between gross and net production series; this is particularly noticeable in the gas, liquids and electricity sectors and the

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11/ Preliminary estimates are made on the basis of monthly series, on weighted extrapolation of current trends in individual energy commodities, by individual transactions.

12/ The diffuse and complex data of prices and energy technology will be reviewed for introduction in the Yearbook in a later issue.

inconsistency often accounts for the discrepancies in information published in different national and international sources;

(b) Transfers. These are the quantities of energy products which are mixed with other energy products without physical or chemical transformations. In some international publications, they are hidden or not identified, owing mainly to the assumption that in the overall energy accounts, transfers-out should balance transfers-in. A common but incorrect accounting procedure that appears in some publications is the addition of transferred gases to the amount of gas actually produced, thereby greatly inflating the production series. The problem of transfers in the gas and liquid sectors becomes more acute when complex cross-sectoral transfers occur. To avoid double counting, the transfer of natural gas to produce plant natural gas liquids, with a subsequent cross-product transfer of natural gas liquids for blending in refineries and mixing with products, has to be accurately traced. It is often very difficult to track such flows precisely and the amount of gas used to produce special plant natural gas liquids and the final end-use of these liquids (for blending in refineries or mixing with products) often have to be estimated to show accurate product availability or refinery input.

(c) Feedstocks. 13/ The accounting convention sometimes followed for feedstock trade is to combine amounts of partially refined, contaminated or salvaged liquids destined for cleaning or blending in the refinery with the trade of crude petroleum. In actual practice, the imprecise classification/definition of a feedstock creates confusion in the accounting of the various profiles, as well as in the accounting of the petroleum refinery intake and output. Some reporting countries combine feedstock imports with the import of crude petroleum and either omit reporting their own feedstock exports or account for the export within the individual secondary petroleum product trade. While the practice of recording imports and exports of secondary petroleum products in the form in which they occur is practical, the inability to identify feedstocks, or trace their movement as a potential refinery output, often creates a large discrepancy between the liquids apparently available for refining and the actual amount of liquid refined. This problem is further highlighted when crude petroleum actually reported as going through the refinery is exceeded by the output of refined products.

B. Other publications containing energy statistics

18. Energy-related data are collected, revised and updated on a continuing basis for use in several other Statistical Office publications, Data are transferred by tape from the energy data file for publication in 27 tables in volume II of the Yearbook of Industrial Statistics. In addition, data for 16 regional and global tables, as well as for selected energy commodities for more than 150 countries,

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13/ Feedstocks are sometimes defined as a product or a combination of products (often including naphtha) derived from crude oil destined for further processing and/or blending, to be transformed into one or more components and/or finished products in the refining industry.

were supplied for the fourth edition of World Statistics in Brief (United Nations Statistical Pocketbook). Data continued to be provided on energy production and reserves for 14 tables in the Statistical Yearbook. The data on reserves and resources have been loaded into the energy data bank and are now readily available, via UNSIS, for retrieval and publication. Selected series on the production of the main primary and secondary energy fuels, supplemented by a limited amount of price information for coal, crude petroleum, natural gas and petroleum products, are published on a monthly and quarterly basis in the Monthly Bulletin of Statistics.

19. National descriptions and definitions in regard to energy statistics were included in the 1977 Supplement to the Statistical Yearbook and the Monthly Bulletin of Statistics. 14/ They reflected the changes that had occurred since the publication of the 1972 Supplement.

C. The energy questionnaire

20. The energy questionnaire has been designed for pre-filling from the computerized energy data file prior to circulation, thus facilitating both revision and the entry of new data. The questionnaire is also designed to provide information for establishing guidelines for the development of international energy statistics, as well as a format for the use of countries in developing their energy statistics. The questionnaire comprises five sections (solid fuels, liquid fuels, gases, electricity and non-commercial fuels), each of which is self-contained so as to facilitate the responses. Individual sections can be detached and forwarded to the specialized national agencies concerned with those aspects of energy statistics.

21. The questionnaire was first circulated to all countries in June 1977 and was then sent to 189 countries in 1978 and 1979 (for the collection of data for the period 1970-1978). Response to the questionnaire has been in the order of 50 per cent. Even this is misleading, because some countries have returned the questionnaire with little or no additional information.

22. The three-year response to the questionnaire has generally been disappointing, both in quantity and in quality, partly because: (a) close to 60 per cent of the developing countries did not answer the questionnaire (more than 85 per cent of the developed countries responded) and, of the developing countries that did reply, only one third, approximately, gave information that was sufficiently informative; (b) 12 per cent of the returns were of a perfunctory or promissory nature; (c) many responses consisted of the addition of new data without verification or revision of the pre-filled data; and (d) in some cases, end-use data responses were only entered on pre-filled pages.

23. However, the questionnaire provides a structured framework for the organization of energy statistics and it is hoped that there will be an increased response to the questionnaire.

14/ United Nations publication, Sales No. E.78.XVII.10.

III. CO-ORDINATION AND CO-OPERATION IN ENERGY STATISTICS

24. In a report on the cross-organizational analysis of the energy programmes of the United Nations system, submitted to the Committee for Programme and Co-ordination at its twentieth session, it was recognized that "close co-operation and co-ordination do exist in the area of energy statistics" (E/AC.51/99/Rev.1, para. 131). In fact, the Statistical Office maintains close collaboration with the statistical divisions of the regional commissions, the specialized agencies and other intergovernmental and non-governmental organizations.

25. In this regard, the Statistical Office has lightened the reporting burden on the European countries by the following arrangement: the Economic Commission for Europe (ECE) provides copies of the responses to its questionnaires on coal, gas and electric energy from its member States to the Statistical Office while the ECE member States receive only the liquid fuels section of the Statistical Office questionnaire.

26. Some examples of the exchange of data and or assistance, which are indicative of the co-ordinated data collection and distribution activities developed within the international statistical community, are given in the following paragraphs.

27. The Energy Statistics Section of the Statistical Office supplies computer printouts and/or computer tapes containing energy statistics to the United Nations Industrial Development Organization (UNIDO), the World Bank, the International Atomic Energy Agency (IAEA), the United Nations Conference on Trade and Development (UNCTAD), the International Monetary Fund (IMF), the General Agreement on Tariffs and Trade (GATT), the Organisation for Economic Co-operation and Development (OECD), the Organization of ~~the~~ Petroleum Exporting Countries (OPEC) and the Organization of American States (OAS).

28. On the other hand, the Food and Agriculture Organization of the United Nations (FAO) provides computer printouts containing data on fuelwood and charcoal to the Statistical Office for inclusion in the Yearbook of World Energy Statistics.

29. The Nuclear Energy Agency of OECD and IAEA both supply energy data to the Statistical Office for inclusion in the Yearbook of World Energy Statistics and the Statistical Yearbook.

30. The Statistical Office provided data and assistance to the Workshop on Energy Data of Developing Countries held by the International Energy Agency (IEA) in Paris. The main objective of the Workshop was to improve understanding regarding the collection, reporting and interpretation of energy data of developing countries, thus providing a better basis for data compilation, forecasts and policy analysis.

31. An arrangement exists with the World Energy Conference, a non-governmental organization, whereby the Statistical Office provides current energy data on the production, import, export and consumption of fuels for the various countries that are not members of the Conference; the latter, in turn, makes available to the Statistical Office information on reserves and resources of the various fossil fuels.

32. In order to ensure that the need for energy statistics is adequately met, as well as to facilitate the harmonization of programmes, the Statistical Office sent special computer printouts from World Energy Supplies 1973-1978 15/ for use by the Natural Resources Division of the Economic and Social Commission for Asia and the Pacific (ESCAP) in a paper entitled "Energy situation in the ESCAP region", which was presented to the UNITAR Conference on Long-Term Energy Resources, held at Montreal from 26 November to 7 December 1979.

33. The Economic Commission for Western Asia (ECWA) used selected energy information from the Statistical Office data files in its preliminary report, "Medium- and long-term projections of the demand for and supply of energy in the ECWA region", presented at the First Arab Energy Conference, held at Abu Dhabi from 4 to 8 March 1979.

34. The Statistics Division of the Economic Commission for Africa (ECA) has received from the Statistical Office copies of tapes containing energy data for countries in the region. Preliminary energy data on the end-use of the various economic sectors used in the development of national energy balances were sent to both the Santiago and the Port-of-Spain offices of the Economic Commission for Latin America (ECLA).

35. The Statistical Office has held consultations with the Statistical Division of ECE on questions concerning the harmonization of the definitions and conventions used in overall energy balances.

36. The Statistical Office has maintained close co-operation with the secretariat of the Committee on Natural Resources. For example, the Office provided energy statistics for use in the document entitled "An overview of the world energy situation", which was submitted to the Committee at its sixth session (E/C.7/108).

37. In 1979, an analysis of the energy programmes of the United Nations system entitled "Cross-organizational analysis of the energy programmes of the United Nations system" was prepared for the Committee for Programme and Co-ordination. The Statistical Office provided information to the Office for Programme Planning and Co-ordination of the Department of International Economic and Social Affairs. Additional co-ordination within the latter Department is maintained with the Office for Development Research and Policy Analysis.

38. The Statistical Office is a member of a joint energy task force, which was established in the Department of Internaticnal Economic and Social Affairs in November 1979.

39. The Statistical Office provided special coal statistics to the Centre for Natural Resources, Energy and Transport for its Symposium on World Coal Prospects, which was held at Katowice, in Poland, on 23 October 1979.

40. Efforts are being made to develop new types of energy statistics for particular uses, for example, for application in conjunction with statistics on the environment.

15/ United Nations publication, Sales No. E.79.XVII.13.

IV. OTHER RELATED ACTIVITIES

41. The General Assembly, by its resolution 33/148 of 20 December 1978, decided to convene a United Nations Conference on New and Renewable Sources of Energy in 1981. Fourteen new and renewable energy sources 16/ will comprise the scope of the Conference, as defined in paragraph 3 of the resolution. Although the statistics to be published in the Yearbook of World Energy Statistics (Series J, No. 23) are primarily devoted to conventional and non-renewable energy sources, the participants in the Conference will find available in series J various types of information for six of the 14 renewable sources. For example, statistics are published on installed capacity and electric power generation from geothermal and hydropower sources (for nine and 115 countries respectively). Also shown are production data for fuelwood and charcoal as well as information on resources and reserves for oil shale, tar sands, hydraulic and peat resources.

42. The Statistical Office plans to co-operate closely with the appropriate bodies in giving support, wherever possible, to the Conference, which is to be held at Nairobi in August 1981.

43. The dissemination of information in the form of computer tapes and ad hoc computer printout tables has been accelerated, in an effort to offset printing delays. For example, 30 different organizations, including regional commissions, specialized agencies, national agencies, research institutes, corporations and universities, purchased or received complementary copies of series J tapes during the period from April 1978 to April 1980, an increase of 25 per cent over the preceding two-year period.

44. Responding to requests for energy and related data and from within the United Nations, from various governmental agencies and international bodies and from the general public has become a voluminous task in the light of events in the global energy economy in the past six years. In addition, the quantity and complexity of the responsibilities and activities of the Energy Statistics Section have substantially increased. Heavy demands have been placed upon this Section during a period of severe staff shortages. Additional skilled resources will be needed if the completion of the present work programme is to be speeded up or the programme extended into areas not yet tackled.

V. POINTS FOR DISCUSSION

45. The Commission may wish to comment on the work done and recommend that:

(a) Developing countries should take advantage of technical co-operation under the United Nations Development Programme by requesting the services of energy statistics advisers (see paras. 10-11 above);

(b) National statistical offices should make a greater effort to send more timely and accurate responses to the Statistical Office energy questionnaire (see paras. 20-23 above) with a view to improving both the quantity and the quality of international energy statistics.

16/ For details, see "United Nations Conference on New and Renewable Sources of Energy, report of the Secretary-General" (A/34/585), paras. 6-10.

Annexes

I. COUNTRIES WHOSE DATA ARE TO BE PUBLISHED IN ENERGY BALANCE FORMAT (levels (1) and (2)) a/

Argentina
Austria
Barbados
Brazil
Canada
Chile
Cyprus
Hong Kong
Hungary
India
Indonesia
Israel
Kenya
Malawi
Morocco
Norway
Philippines
Portugal
Republic of Korea
Senegal
Singapore
Sri Lanka
Thailand
Turkey
United States of America
Yugoslavia

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a/ In level (1), all data are to be presented in basic units, while in level (2) data are to be presented in common units after the application of conversion factors (namely, tonne coal equivalent, tonne oil equivalent and terajoule) to the data in level (1). See also "Progress report on the development of international energy statistics" (E/CN.3/504), para. 9.

II. ADDITIONAL COUNTRIES WHOSE DATA ARE TO BE PUBLISHED IN ENERGY BALANCE FORMAT (THOSE HAVING END-USE STATISTICS IN THE ELECTRICITY SECTOR)

(level (1)) a/

Australia
Bangladesh
Belgium
Belize
Benin
Bolivia
Brunei
Bulgaria
Cape Verde
Costa Rica
Czechoslovakia
Denmark
Dominica
Djibouti
Ecuador
El Salvador
Ethiopia
Falkland Islands (Malvinas)
Finland
France
French Guiana
French Polynesia
German Democratic Republic
Germany, Federal Republic of
Gibraltar
Guatemala
Guyana
Honduras
Iceland
Ireland
Ivory Coast
Japan
Jamaica
Jordan
Liberia
Libyan Arab Jamahiriya
Luxembourg
Macau
Mexico
Mongolia
Netherlands
New Zealand
Nicaragua
Nigeria
Panama
Paraguay
Poland
Puerto Rico
Romania
St. Kitts-Nevis-Anguilla
Saint Lucia
Saint Vincent and the Grenadines
Sao Tome and Principe
Seychelles
Sierra Leone
Spain
Sudan
Sweden
Switzerland
Syrian Arab Republic
Trinidad and Tobago
Tunisia
Uganda
United Kingdom of Great Britain and Northern Ireland
Union of Soviet Socialist Republics
Venezuela
Zimbabwe

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a/ Data on electricity production and consumption are to be presented in the basic unit (millions of kilowatt hours). In addition, data on plant capacity are to be presented in thousands of kilowatts.

III. GROWTH OF THE YEARBOOK OF WORLD ENERGY STATISTICS

(formerly published as World Energy Supplies)

Description of tables	Table number		
	1978 edition	1979 edition	1980 edition
Production, trade and consumption of commercial energy, world and regions - coal equivalent - 25-year series	1	1	1
Production, trade and consumption of commercial energy, world and regions - coal equivalent - 25-year series - index	-	-	2
Production, trade and consumption of commercial energy, world and regions - coal equivalent - 25-year series - percentage share	-	-	3
Production, trade and consumption of commercial energy, world and regions - oil equivalent - 25-year series	-	2	4
Production, trade and consumption of commercial energy, world and regions - terajoule equivalent - 25-year series	-	3	5
Production, trade and consumption of commercial energy, country or area - coal equivalent - 10-year series	2	4	6
Production, trade and consumption of commercial energy, country or area - coal equivalent - 10-year series - index	-	-	7
Production, trade and consumption of commercial energy, country or area - coal equivalent - 10-year series - percentage share	-	-	8
Production, trade and consumption of commercial energy, country or area - oil equivalent - 10-year series	-	5	9
Production, trade and consumption of commercial energy, country or area - terajoule equivalent - 10-year series	-	6	10
Production, trade and consumption of solid fuels - coal equivalent - 10-year series	3	7	11
Production, trade and consumption of solid fuels - coal equivalent - 10-year series - index	-	-	12
Production, trade and consumption of solid fuels - coal equivalent - 10-year series - percentage share	-	-	13

Description of tables	Table number		
	1978 edition	1979 edition	1980 edition
Production, trade and consumption of hard coal - 10-year series	-	-	14
Production, trade and consumption of lignite-brown coal and peat - 10-year series	-	-	15
Production, trade and consumption of coke-oven coke - 10-year series	-	-	16
Production, trade and consumption of gas coke - 10-year series	-	-	17
Production, trade and consumption of hard coal briquettes - 10-year series	-	-	18
Production, trade and consumption of lignite-brown coal and peat briquettes - 10-year series	-	-	19
World movement of hard coal - four-year series	4	8	20
Production, trade and consumption of crude petroleum - 10-year series	6	10	21
Production of crude petroleum off-shore - 10-year series	6	10	22
Production, trade and consumption of crude petroleum - 10-year series - index	-	-	23
Production, trade and consumption of crude petroleum - 10-year series - percentage share	-	-	24
World movement of crude petroleum - four-year series	7	11	25
Petroleum refinery (distillation) capacity - 10-year series	6	10	26
Total petroleum refinery output - all products - 10-year series	8	12	27
Production of energy products from refineries - by type - 10-year series	-	-	28
Production of energy products from plants - by type - 10-year series	-	-	29
Production of non-energy products from refineries - by type - 10-year series	9	13	30
Natural gas liquid plant capacity	-	-	31

Description of tables	Table number		
	1978 edition	1979 edition	1980 edition
Production, trade and consumption of energy products - 10-year series	10	14	32
Production, trade and consumption of liquified petroleum gas - 10-year series	11	15	33
Production, trade and consumption of aviation gasolene - 10-year series	-	-	34
Production, trade and consumption of motor gasolene - 10-year series	-	-	35
Production, trade and consumption of kerosene - 10-year series	-	-	36
Production, trade and consumption of jet fuel - 10-year series	-	-	37
Production, trade and consumption of gas-diesel oils - 10-year series	-	-	38
Production, trade and consumption of residual fuel oil - 10-year series	-	-	39
Production, trade and consumption of natural gas - 10-year series	15	19	40
World movement of natural gas - four-year series	16	20	41
Production, trade and consumption of gases - 10-year series	17	21	42
Production, trade and consumption of gases - 10-year series - index	-	-	43
Production, trade and consumption of gases - 10-year series - percentage share	-	-	44
Production of other gases - by type - 10-year series	17	21	45
Net installed capacity of electric generating plants - by type - 10-year series	18	22	46
Capacity of hydroelectric powersites - installed or installable	-	-	47
Utilization of installed electric generating capacity - 10-year series	19	23	48

Description of tables	Table number		
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