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Energy statistics

Report of the Secretary-General

Summary

The present report, which was prepared in accordance with Economic and Social Council decision 2021/224 and past practices, provides updated information on work carried out to implement the decisions of the Statistical Commission on energy statistics, including work related to the development and implementation of international methodological documents on energy statistics, as well as new developments and challenges. The activities involving increased cooperation and coordination among agencies and countries working on energy statistics are also described.

The Commission is invited to take note of the report.

* E/CN.3/2022/1.

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I. Work carried out since the forty-ninth session of the Statistical Commission

1. The Statistical Commission most recently considered issues in the field of energy statistics at its forty-ninth session, held in 2018 (see E/CN.3/2018/24), its forty-fifth session, held in 2014 (see E/CN.3/2014/23), its forty-third session, held in 2012 (see E/CN.3/2012/10), and its forty-second session, held in 2011 (see E/CN.3/2011/8 and E/CN.3/2011/9).

2. Section II of the present report contains a description of activities undertaken in response to the decisions of the Commission since its forty-ninth session.

II. Activities carried out in response to the decisions of the Commission

A. Methodology

3. After the Commission had adopted the International Recommendations for Energy Statistics at its forty-second session, they were published in their final version on the website of the Energy Statistics Section of the Statistics Division of the Department of Economic and Social Affairs of the Secretariat,[1] and are now available in printed format.

4. The International Recommendations have been translated into the other five official languages of the United Nations, and all those versions are available on the same website as the original English publication. The Arabic version was provided by the Economic and Social Commission for Western Asia (ESCWA) and underwent copy preparation and editing by the Secretariat. The Spanish version was presented to the Oslo Group on Energy Statistics by the National Institute of Statistics and Geography of Mexico (INEGI), which reviewed a draft prepared by the Secretariat of Energy of Mexico. The Chinese, French and Russian versions were translated by independent translators hired by the International Energy Agency. The Statistics Division is grateful to the contributions of the institutions mentioned above.

5. The Energy Statistics Compilers Manual has been edited by the Secretariat and is available in white cover format on the website of the Energy Statistics Section,[2] along with examples of country practices[3] submitted by national administrations. At the time of writing, there were no plans for the translation of the Manual into the other five official languages.

6. In addition to providing written guidance on these methodological publications, the Energy Statistics Section developed and finalized an online training course on the International Recommendations and the Manual, available on the United Nations Global Platform Learning Management System.[4]

B. Oslo Group on Energy Statistics

7. In decision 37/108, adopted at its thirty-seventh session (see E/2006/24), the Commission supported the establishment and mandate of the Oslo Group on Energy Statistics (https://unstats.un.org/oslogroup) as a city group that would address

[1] See https://unstats.un.org/unsd/energystats/methodology/ires/.
[2] See https://unstats.un.org/unsd/energystats/methodology/escm/.
[3] See https://unstats.un.org/unsd/energystats/country-practice/.
[4] See https://learning.officialstatistics.org/.

methodological issues related to energy statistics and contribute to improved international standards and improved methods for official energy statistics.

8. The Group assisted in developing the International Recommendations for Energy Statistics and the Energy Statistics Compilers Manual, among its main outcomes. The Group has met once since the forty-ninth session to discuss components of the new workplan under the guidance of Statistics Finland as Chair of the Group.

9. The 12th meeting of the Oslo Group was held in The Hague, the Netherlands, from 12 to 14 June 2018. At the meeting, the Group focused on the use of administrative data and energy data collection, energy data processing, energy data analysis, energy data dissemination and energy data quality. Participants were updated on the review of the city group mechanism in the Commission and invited to think about the future of the Group. Participants agreed that the Group should continue, as there were methodological gaps that had not yet been addressed, and also in recognition of the unique forum for discussion provided by the Group.

10. All previous working groups were closed, and the Oslo Group decided to focus its activities on the following areas: administrative data, big data, and new and innovative data sources; best practices and the updating of manuals; and estimation methods for off-grid energy and biomass. The areas fall largely into the following Oslo Group mandates: identify and collect national and international best practices; review and contribute to the updating of United Nations handbooks and manuals on energy statistics; and identify gaps in the coverage of existing methodologies and develop methodologies to cover gaps.

11. Since that meeting, Statistics Finland has resigned as Chair of the Oslo Group, and the Group has been searching for a new Chair.

C. Intersecretariat Working Group on Energy Statistics

12. In its decision 37/108, the Commission supported the establishment of the Intersecretariat Working Group on Energy Statistics (http://www.interenerstat.org/) to enhance international collaboration and coordination in the field of energy statistics and to harmonize definitions among organizations (see E/2006/24).

13. The Intersecretariat Working Group has met once since the forty-ninth session of the Commission to discuss a range of issues that require coordination among international and regional agencies involved in the production of energy statistics. The most recent meeting of the Intersecretariat Working Group was held in Paris on 2 and 3 October 2018.

14. Participants at the meeting discussed the priorities held by all the organizations, which may be summarized as follows: (a) timeliness of inputs and outputs; (b) data quality (accuracy, completeness, consistency); (c) country capability and resources; (d) specific topics such as energy efficiency, district cooling, energy prices and off-grid energy; and (e) adaptability and modernization. The specific topics set out in (d) were discussed separately in a dedicated session during the meeting in order to address the priorities of the various organizations.

15. The potential disaggregation of the Standard International Energy Product Classification was also discussed, as well as its relation to other existing classifications, such as the Central Product Classification and the International Standard Industrial Classification of All Economic Activities, with a view to identifying possible improvements that would have to be made in the near term or midterm to make the Standard International Energy Product Classification more responsive to developing data needs and other data sources. Participants agreed to focus on the issue at a future meeting of the Intersecretariat Working Group on Energy

Statistics. It is desirable for any further detailing of the Standard International Energy Product Classification to be undertaken concomitantly, and in a coordinated manner, with the current reviews of the International Standard Industrial Classification of All Economic Activities and the Central Product Classification.

16. The Intersecretariat Working Group also discussed cooperation and coordination in respect to joint training and capacity-building activities, burden reduction through data sharing agreements and harmonization of international energy questionnaires.

17. The next meeting of the Intersecretariat Working Group is expected to be held in the fall of 2022.

D. Ongoing activities in the energy statistics work programme of the International Energy Agency

18. The International Energy Agency has remained at the centre of global energy statistics through its own work and through extensive collaboration with partner organizations on both data collection and capacity-building. As part of the Agency's modernization strategy, the Energy Data Centre has over the past three years strengthened relationships with several key emerging economies to improve the quality of their energy data.

19. Notable examples include bilateral work with Brazil, India and Indonesia, as well as dedicated regional programmes with sub-Saharan Africa and Eastern Europe/Central Asia. Countries have continued to express a keen interest in seeking assistance from the Agency. This, in turn, has consolidated links with partners such as the Statistics Division, the African Energy Commission, Eurostat, the Latin American Energy Organization and the Asia-Pacific Economic Cooperation with regard to enhancing cooperation in data collection, training and continuing to invest in new products and tools such as online workshops, webinars and translation of manuals.

20. Driven by changes in the global energy situation, the Agency has adapted its outputs by expanding the data on energy efficiency and end-use energy prices; continuing work on the Sustainable Development Goals, specifically targets 7.2 and 7.3; and making new information for energy analysis available to users through, for example, a global database with indicators derived from weather variables.

21. The Agency has continued to lead the energy end-use data and energy efficiency metrics initiative of the Group of 20, holding several thematic workshops. It has also continued to support the Joint Organisations Data Initiative by working with member organizations and at the global level, including at the conference of the Initiative held in 2019, and through training events and participation in various online seminars.

E. Ongoing activities in the energy statistics work programme of the Statistics Division

22. The annual collection of data on energy statistics continued to be an important element of the work of the Division (https://unstats.un.org/unsd/energystats/). While data for most countries are collected directly by the Division, data for some groups of countries are obtained through data-sharing agreements with other organizations.

23. The agreements with Eurostat and the International Energy Agency enable their member countries to submit only their joint questionnaires to international organizations, and the Division is developing procedures to obtain data directly from the questionnaires in an automated manner with the aim of bringing forward the database release date, which is currently dependent on the counterpart databases' publication schedule.

24. Similarly, the Division is discussing the possibility of agreements with the Latin American Energy Organization and the African Energy Commission, which would obviously benefit their member countries by reducing the response burden related to international questionnaires.

25. Such data collection feeds the Energy Statistics Database, which provides content to four annual publications: the *Energy Statistics Yearbook*, the *Energy Balances* series, the *Electricity Profiles* series, and the newest addition, the *Energy Statistics Pocketbook* series. These data volumes are published in both electronic and printed format, which is expected to continue for at least the short term. The *Pocketbook* summarizes information on energy in a condensed, user-friendly format through visualizations, maps, graphs and indicators.

26. Since the forty-ninth session of the Commission, a list of the data sources[5] used to update the Energy Statistics Database began to be published on the Division's website in order to improve transparency. In addition, other data products derived from the database have been developed by the Division, such as a data visualization portal for energy balances,[6] energy statistics dashboards,[7] and an application programming interface for automatic download of the database and of energy balances.[8]

27. External partners also benefit from the Energy Statistics Database. For example, the United Nations Conference on Trade and Development uses the database as an important input to the United Nations Global Policy Model that it maintains;[9] the Food and Agriculture Organization of the United Nations (FAO) uses the database as an input to estimate agricultural greenhouse gas emissions;[10] Appalachian State University uses the database as the main input to produce carbon dioxide emission estimates for the entire world;[11] and the Economic Commission for Africa uses it to derive energy indicators for African countries.

28. In addition, energy statistics have continued to be collected on a monthly basis for oil and gas, as part of the Joint Organisations Data Initiative, and for the production of selected energy products for the *Monthly Bulletin of Statistics*.

29. Since the forty-ninth session of the Commission, the Division has co-organized four training workshops on energy statistics (one in virtual format) with the following partners: African Energy Commission, ESCWA, International Atomic Energy Agency, International Energy Agency, International Energy Forum, Latin American Energy Organization and United Nations Environment Programme. In addition, it has participated in trainings and seminars organized under the Joint Organisations Data Initiative partnership and by the International Energy Agency, the International Renewable Energy Agency, the Group of 20 (under the umbrella of its Energy Sustainability Working Group), and the King Abdullah Petroleum Studies and Research Centre. As mentioned in section A, above, an e-learning course on the International Recommendations for Energy Statistics and the Energy Statistics Compilers Manual has also been developed.

30. In 2019, in a more targeted event, the Division undertook a country mission to Lebanon in partnership with ESCWA to assist with the improvement of national

[5] See https://unstats.un.org/unsd/energystats/pubs/yearbook/2018/metadata.pdf.

[6] See https://unstats.un.org/unsd/energystats/dataPortal/.

[7] See https://unstats.un.org/unsd/energystats/dashboards/2018_Energy_Dashboards.xlsx.

[8] The application programming interface is available at https://data.un.org/WS and the content related to energy data and energy balances can be accessed under the category "energy" in the sidebar at https://data.un.org/SdmxBrowser.

[9] See https://unctad.org/debt-and-finance/gpm.

[10] See www.fao.org/food-agriculture-statistics/data-release/data-release-detail/en/c/1413420/.

[11] See https://energy.appstate.edu/research/work-areas/cdiac-appstate, a continuation of a carbon dioxide emission database formerly maintained by the Carbon Dioxide Information Analysis Center of the Oak Ridge Laboratory.

energy statistics and the construction of complete energy balances. The Division will continue its technical assistance efforts in coming years, depending on the availability of resources.

31. The expertise of the Statistics Division in energy statistics is sought after by many partners, which partly explains the number of training workshops co-organized with partner organizations. In addition to the workshops, the Division currently:

(a) Participates in an expert group on wood fuel modelling led by FAO, while facilitating communication between the expert group and an initiative of the African Energy Commission to improve bioenergy data collection in Africa;

(b) Assists the secretariat of the United Nations Framework Convention on Climate Change in its programme of in-country capacity-building activities to improve its national energy statistics and energy balances in order to meet the reporting requirements with regard to greenhouse gas inventories and mitigation under the enhanced transparency framework of the Paris Agreement.

32. The latter is a direct response to Commission decision 49/113, paragraph (g), on climate change statistics (see E/2018/24), in which the Commission requested cooperation between the Division and the secretariat of the Framework Convention in this area. The former is a focus area of the Oslo Group (see section B, above).

33. Energy statistics is a cross-cutting area and, as such, spurs collaboration with other groups in the Division in areas such as environment statistics, economic statistics and statistical classifications, the Sustainable Development Goals and the System of Environmental-Economic Accounting. More recently, the field of energy statistics has been playing an increasing role in the work of the Division in climate change statistics, because the International Recommendations for Energy Statistics are a key methodological document underpinning the global set of climate change statistics and indicators (see E/CN.3/2022/17). Externally, particular focus is placed on bridging the link with the policy side that, in the Department of Economic and Social Affairs, is represented by the Division for Sustainable Development Goals. In this capacity, the Division has maintained a close link with the Group of Friends of Sustainable Energy[12] and has participated in events such as the ministerial thematic forums for the high-level dialogue on energy.

34. As one of the custodian agencies of Sustainable Development Goal indicators 7.2.1 on renewable energy and 7.3.1 on energy efficiency, the Division contributes directly to the Global SDG Indicators Database and co-authors, with the other custodian agencies[13] of Goal 7, the annual publication entitled *Tracking SDG 7: The Energy Progress Report*.[14] The Division acted as Chair of the meetings on preparations for the 2021 edition, which informed the General Assembly high-level dialogue on energy.

III. Action to be taken by the Statistical Commission

35. The Commission is invited to take note of the present report.

[12] See www.norway.no/en/missions/UN/statements/other-statements/2020/group-of-friends-of-sustainable-energy/.

[13] International Energy Agency, International Renewable Energy Agency, World Bank and World Health Organization.

[14] See https://trackingsdg7.esmap.org/.