

# Energy Statistics Newsletter

United Nations Statistics Division (UNSD)

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## **Adoption of the International Recommendations for Energy Statistics by the United Nations Statistical Commission**

A major development took place in energy statistics that will forge the way data are collected and compiled: *the International Recommendations for Energy Statistics* (IRES) have been adopted by the United Nations Statistical Commission (UNSC) during its 42<sup>nd</sup> session in February 2011. This marks the end of a process that started at the UNSC in 2005 with a “programme review” of energy statistics prepared by Statistics Norway. This review provided a critical assessment of the situation of energy statistics, identifying issues and suggesting ways to improve the quality, timeliness and availability of these statistics at national and international level. This programme review was the very first step in a long process of consultations and decision making with experts, countries and organizations culminating in the preparation and adoption of IRES.

Key players that have cooperated with the United Nations Statistics Division (UNSD) in this process were the Oslo Group on Energy Statistics and the Inter-Secretariat Working Group on Energy Statistics (InterEnerstat). Technical discussions took place during several Oslo Group meetings and InterEnerStat meetings, as well as in a number of other groups of experts, such as the London Group on Environmental Accounting, the UN Committee of Experts on Environmental-Economic Accounting (to coordinate with the preparation and development of the System of Environmental and Economic Accounting for Energy) and the Expert Group on International Economic and Social Classifications (to ensure that the principles and criteria of international standard classifications were followed). To ensure that countries and international/regional organizations had an opportunity to participate in the review of the document, worldwide consultations took place at the beginning of the preparation process to determine the scope and content of the future recommendations and towards the end of the process to review the provisional draft of IRES. In both stages, very useful comments were received and the responses were overwhelmingly positive. The UNSC

positively noted the efficient cooperation among different agencies, expert groups and countries in this project.

IRES consists of a set of internationally agreed recommendations covering all aspects of the statistical production process, from the institutional and legal framework, basic concepts, definitions and classifications to data sources, data compilation strategies, energy balances, data quality issues and statistical dissemination. To ensure international comparability of the compiled statistics, the recommendations provide, for example, guidance on the statistical units for use in data collection from both energy and non-energy industries, as well as a reference list of data items for collection (together with their definitions) to reflect the specificity of each energy product. It presents general principles underpinning the compilation of energy balances, as well as templates for energy balances in detailed and aggregated format. IRES also provide an overview of data sources (e.g. administrative sources, surveys etc.) and data collection and compilation methods that are generally used in energy statistics. In addition, IRES makes reference to applications of energy statistics, using the revised concepts, in environmental-economic accounting, the estimation of greenhouse gas emissions and the compilation of energy indicators.

A key element of IRES is the Standard International Energy Product Classification (SIEC), which is the first standard classification for energy products. It has been built on a set of internationally harmonized definitions of energy products developed by InterEnerStat. The adoption of SIEC as an international standard classification for energy products represents a significant step forward for energy statistics at the international level. Although, historically, there has been some common use of product categories and general understanding of terminology within the domain, no precise and internationally harmonized definitions have been put forward in the past, much less a complete and comprehensive classification with mutually exclusive categories covering all energy products. This led to several shortcomings, including poor comparability of statistics across countries and agencies and high burden on respondents providing data to multiple

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statistical agencies using different methodologies. SIEC will play an important role in improving the current situation.

SIEC not only provides a unified set of product definitions, but also uses a standard coding scheme, a common hierarchy of categories, and provides links to other internationally agreed product classifications, such as the Central Product Classification (CPC) and the Harmonized Commodity Description and Coding System (HS). In addition to the use within traditional forms of energy statistics, such as energy balances, SIEC may also serve in frameworks that aim to combine energy statistics with other statistical domains, such as for energy accounts used within the field of environmental-economic accounting.

The new international recommendations are expected to be published in print form in early 2012. For more information please visit: <http://unstats.un.org/unsd/energy/>

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## **Implementation of the new International Recommendations for Energy Statistics**

With the adoption of IRES by the international statistical community, the United Nations Statistics Division (UNSD), in coordination with other stakeholders in the area of energy statistics, will undertake initiatives to support countries in their efforts to produce comprehensive and comparable energy statistics and to promote consistent concepts in energy statistics worldwide. Several activities are planned as first steps in the implementation of the new international recommendations: (a) the preparation of the Energy Statistics Compilers Manual (ESCM); (b) provision of technical assistance to countries; and (c) the revision of data collection procedures by the United Nations Statistics Division.

### **Preparation of the Energy Statistics Compilers Manual (ESCM)**

The ESCM is intended to contain further and more detailed explanations of the recommendations in IRES and to provide practical guidance for compilers of energy statistics. This will be complemented by examples of country practices established under different circumstances, reflecting different organizations of production and different levels of

availability of data. Additional country practices will be collected and made available initially through the Oslo Group and a later stage through the UNSD energy statistics website. The Oslo Group on Energy Statistics, which is expected to be the main content provider for the ESCM, has already started the work on the ESCM during its sixth meeting in May 2011. Other groups of experts, however, will be consulted as well in the preparation of this manual.

The Energy Statistics Compilers Manual is planned to be finalized by 2013. It is envisaged that in the future the Manual will be periodically reviewed and updated to reflect new methodological developments and keep data compilers abreast of new country practices.

### **Technical assistance**

To assist countries in the implementation of IRES, UNSD plans to provide technical assistance to countries in cooperation and coordination with the regional commissions and international and regional organizations.

The primary components of this technical assistance will be regional workshops will be organized that focus on the content of the new recommendations and practical issues of their implementation. The technical assistance programme will cover all stages of the statistical production process, from institutional arrangements, data collection and data processing to data dissemination. Guidance on the compilation of energy balances and energy accounts is expected to be an integral part of the technical assistance programme.

These global and regional efforts will be supplemented by additional direct country assistance, involving international, regional and supranational agencies active in energy statistics. In addition, the preparation of standard training modules and online materials is planned to assist countries in the collection of energy statistics and the compilation of energy balances and energy accounts.

As part of these efforts, an International Workshop on Energy Statistics is being organized by UNSD on 27-30 September 2011 in Baku, Azerbaijan, in cooperation with the State Statistical Committee of the Republic of Azerbaijan. This will be the first training workshop promoting and discussing the international recommendations.

## Data collection by the United Nations Statistics Division

Following the adoption of IRES by the UNSC, the UN Annual Questionnaire on Energy Statistics will be reviewed and aligned to IRES. As part of this review process, UNSD is working towards the development of a harmonized questionnaire with the International Energy Agency (IEA) and other organizations in order to reduce response burden to countries and to facilitate data exchange.

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## Energy Statistics in the Economic and Social Commission for Western Asia (ESCWA)

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The energy sector has a vital role in the economic and social development in the 14 UN-ESCWA member countries. The region is the world's richest in energy resources, representing about 50% of world oil resources and 26% of world natural gas resources in 2008. It accounts for some 28% of the world total of oil production and approximately 11% of the world total of natural gas production. However, the availability and quality of overall data on energy face several problems in the region. ESCWA member countries still need capacity building to meet the appropriate statistical requirements for formulating national development plans and international reporting. Therefore ESCWA emphasized in its work programme the capacity building in energy statistics to national statistical offices and ministries of energy and related departments. The Statistics Division of ESCWA acknowledges the support provided by UNSD in its operational and substantive work in energy statistics. The activities of the Statistics Division of ESCWA are presented below.

### Cooperation with regional and international partners

The Statistics Division of ESCWA collaborates with the Sustainable Energy Team of ESCWA and with regional and international partners, including UNSD, UNECE, the International Energy Agency (IEA), the Organization of Petroleum Exporting Countries (OPEC), the Organization of Arab Petroleum Exporting Countries (OAPEC), the International Energy Forum Secretariat (IEFS) and the Regional Statistical Co-operation programme between the European Union and

Mediterranean countries (MEDSTAT)<sup>1</sup>. The cooperation is essential to share experiences and to join efforts in organizing meetings, conducting missions and study visits and exchanging data. The cooperation improves harmonization of energy statistics and allows for more efficient capacity building in statistics in the region. ESCWA brings to member countries the latest international developments in energy statistics and represents the countries' views in related meetings and methodological documents.

ESCWA also cooperates on the development of methodological documents. In particular, ESCWA has revised the Arabic translation and terminologies of the IEA methodological document "Energy Statistics Manual" during the EGM on Energy Statistics in 2009 and provided a second review in 2010. The Arabic version of the Manual is now published on IEA website [http://www.iea.org/publications/free\\_new\\_Desc.asp?PUBS\\_ID=2346](http://www.iea.org/publications/free_new_Desc.asp?PUBS_ID=2346)

ESCWA has been active in the preparation of the International Recommendations for Energy Statistics (IRES), and the System of Integrated Environmental and Economic Accounts for Energy (SEEA-E) by providing inputs and discussing them with its member countries.

### Technical assistance

ESCWA is active in providing technical assistance to its member states. In particular, ESCWA provided assistance to Sudan and the United Arab Emirates (UAE) on energy balance. The Ministry of Petroleum of the UAE organized a symposium "Towards Preparing Balance in the UAE" on 31 October 2010 with the assistance of ESCWA and the participation of about seventy stakeholders from energy producers and consumers and representatives from research centers and universities. ESCWA experts presented the background documents and met with main stakeholders during the three following days to discuss data requirements to build a UAE energy balance.

ESCWA provided technical assistance to the Central Bureau of Statistics in Sudan upon their request, in order to produce and better manage data on energy, and to benefit from sharing of methodologies to collect statistical data and build energy balances at the national level.

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<sup>1</sup> MEDSTAT covers 5 of the ESCWA member countries

ESCWA has been granted 509,000 US Dollars to implement, in cooperation with main partners UNSD and MEDSTAT, the Regional Project for Strengthening Statistical Capacity for the ESCWA Countries in Energy Statistics and Energy Balance from 2011 to 2013. The project will help member countries to conduct periodic assessments of energy statistics and produce and disseminate energy statistics and balances according to international standards.

## Meetings

ESCWA convened an Expert Group meeting on “Compilation and Analysis of Energy Statistics and Indicators” from 3-5 March 2009 in Beirut in cooperation with UNSD, MEDSTAT, IEA, and OPEC. The meeting aimed to improve the capacity of users and producers of energy statistics in compiling, analyzing and disseminating energy statistics and indicators and prepare energy balances and accounts. It also sought to increase the harmonization in producing and disseminating data on energy statistics regionally and internationally. Experts from National Statistical Offices, Ministries of Energy and Electricity, as well as experts from regional and international agencies participated. Recommendations of the meeting focused on conducting assistance missions to assess the needs of the member countries in preparing energy balances, developing national databases, cataloguing of metadata and compilation of energy balances and use of unified concepts and definitions in energy statistics according to international standards. For more information about the meeting, please visit: <http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1097E>

ESCWA has collaborated with IFES, IEA, OPEC and UNSD in the organization of the 5<sup>th</sup> JODI Regional Training Workshop for energy and oil statisticians that took place in Ankara, Turkey, from 18 to 20 November 2009 and was hosted by the Turkish Petroleum Corporation (TPAO). The training gathered 37 officials in charge of energy and oil data collection. Participants were awarded certificates for completing the training on the JODI database. The Joint Oil Data Initiative (JODI) is an initiative of six pioneer organisations (APEC, EUROSTAT, IEA, OLADE, OPEC and UNSD), coordinated by the International Energy Forum Secretariat (IEFS) to provide monthly oil statistics on a timely and regular basis through a harmonized questionnaire sent to countries.

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## UNSD Publications

*The 2008 Energy Statistics Yearbook and the 2008 Energy Balances and Electricity Profiles* have been finalized in March 2011 and are available at the United Nations Publications website (<http://unp.un.org>).

The 2008 edition of the Energy Statistics Database containing data from 1950 to 2008 is also available at <http://unp.un.org>.

Energy Statistics data for the period 1990-2008 are available on-line at the UNdata portal (<http://data.un.org/Explorer.aspx?d=EDATA>).

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## Recent Meetings

*Second Meeting of the United Nations Expert Group on Energy Statistics, 2-5 November 2010, New York*

The meeting gathered experts from 13 countries and 3 international organizations to review the provisional draft of IRES and the detailed comments received during the worldwide consultation and agree on changes to the provisional draft. The comments received helped to improve the quality of the provisional draft, added additional useful information and identified some smaller inconsistencies that were then resolved. As a result of the discussion, the Group endorsed the amended draft of IRES and recommended its submission to the Statistical Commission after incorporation of changes agreed during the meeting. For more information, please visit: <http://unstats.un.org/unsd/energy/meetings/egm-2010.htm>

*6<sup>th</sup> Oslo Group Meeting, 2-5 May 2011, Canberra, Australia*

The meeting was organized by Statistics Norway and hosted by the Australian Bureau of Statistics. The meeting gathered participants from 15 countries and 3 international organizations and focused on the preparation of the Energy Statistics Compilers Manual. In particular, it reviewed a draft annotated outline of the ESCM and overall agreed with the suggested content and format. In addition, countries expressed their interest in continuing their active involvement in its preparation by contributing text to individual chapter based on their own experience. For more information, please visit: <http://og.ssb.no/>

*Meeting of the Expert Group on International Economic and Social Classifications, 18-20 May 2011 New York*

The Expert Group discussed among other things the correspondence between SIEC and CPC and ways to improving the links between CPC and SIEC by exploring alternative aggregations of CPC and SIEC. Potential changes to the classifications to improve their linkage will be explored by a Technical Subgroup working on a scheduled update to the Central Production Classification (CPC). The Expert Group agreed to include SIEC in the International Family of Economic and Social Classifications which comprises reference classifications approved and recommended by the UNSC. For more information, please visit: <http://unstats.un.org/unsd/class/intercop/expertgroup>

*E-training for Energy Balances Compilation using Energy Balance Studio, 11-15 April 2011*

The International Atomic Energy Agency (IAEA) organized an online training on the compilation of energy balances and the use of the Energy Balance Studio, software being developed by IAEA in cooperation with UNSD, to facilitate the compilation of energy balances from commodity balances. UNSD and the International Energy Agency (IEA) assisted by giving online lectures at the training.

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## Upcoming meetings

*International Workshop on Energy Statistics, 27-30 September 2011, Baku, Azerbaijan*

The workshop is organized by the United Nations Statistics Division in cooperation with the State Statistical Committee of the Republic of Azerbaijan. The objectives of this Workshop are to train participants on the implementation of the recommendations contained in IRES; review and discuss issues that countries face in the collection, compilation and dissemination of energy statistics; share national experiences and contribute to the development of the Energy Statistics Compilers Manual (ESCM) by reviewing current country practices. For more information, please visit: <http://unstats.un.org/unsd/energy/meetings/CIS2011.htm>

*8th JODI Oil Conference, Beijing China, 10-11 October 2011*

The conference is a regular forum for interaction between the JODI organisations (APEC, Eurostat, IEA, IEFS, OLADE, OPEC and UNSD) and other stakeholders in the initiative. This conference provides a forum to receive feedback from users and data producers and exchange views – essential elements of continuous improvement and enhancement of the Initiative. In particular, since this year marks the 10<sup>th</sup> anniversary of JODI, the International JODI Conference also provides an opportunity to review and draw lessons from the first 10 years of JODI experience. A 3<sup>rd</sup> JODI Oil Data Quality Assessment is being carried out and will be reviewed at the Conference together with the results of the 3<sup>rd</sup> JODI Oil Data User Survey. The Conference will also discuss the possible release of additional data points collected through the extended JODI Oil questionnaire and a possible new extension of the data collection to include annual capacity. For more information, please visit: <http://www.jodidata.org>

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## Editorial Notes

The Energy Statistics newsletter is a bi-annual publication, prepared by the Industrial and Energy Statistics Section of the United Nations Statistics Division, Department of Economic and Social Affairs. It summarizes recent developments in the field of energy statistics, announces upcoming events and draws attention to the availability of relevant publications and other materials. The Energy Statistics Newsletter, including previous versions, can be found on the United Nations Energy Statistics website at: <http://unstats.un.org/unsd/energy/newsletter>.

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