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DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION

Ad-hoc Energy Group Meeting
New York, 23-25 May 2005

Report of the Ad-hoc Energy Group Meeting

United Nations, New York

2005

Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Introduction.....	1-5	3
II. Conclusions and recommendations	6-10	3
III. Terms of reference		4

Annexes

I. OECD Statistical Quality Framework.....		6
II. Synoptic table of issues discussed.....		9
III. List of documents.....		14
IV. Agenda.....		15
V. List of participants.....		18

I. Introduction

1. The Statistical Commission at its 36th Session recommended that, given the wide range of technical and other issues covered by the programme review, the United Nations Statistics Division convene an ad-hoc expert working group to:
 - i. Outline priorities for tackling these issues;
 - ii. Identify the most appropriate forums within which to address these issues (for example, city group, group of Friends of the Chair, intersecretariat working group), including relationships with existing bodies;
 - iii. Report back to the Bureau of the Commission with an outline of a specific mandate and recommendations with a timetable;
2. The Commission authorized the Bureau to take forward the recommendations of the ad hoc expert working group and to ensure that the implementation of concrete measures began before the next session of the Commission.
3. The Ad-hoc Energy Group Meeting was held on 23-25 May 2005 in New York.
4. Seven countries (Canada, China, Denmark, Norway, South Africa, USA and Republic of Yemen) and five organizations (International Atomic Energy Agency, Eurostat, International Energy Agency, Oak Ridge National Laboratory and United Nations/DESA) participated. The Meeting was opened by Mr. Paul Cheung, Director, United Nations Statistics Division/ DESA. Mr. Olav Ljones, Statistics Norway, chaired the Meeting.
5. The agenda of the Meeting (Annex I), a synoptic table of the issues discussed (Annex II), the list of documents (Annex III) and the list of participants (Annex IV) are attached to this report.

II. Conclusions and recommendations

6. The Ad-hoc Energy Group Meeting aims at improving the quality of energy statistics at the national and international level to better meet the needs of the users.
7. The main conclusions of the Meeting were as follows:
 - i. The significance of energy in the society, the economy and the environment creates special requirements towards energy statistics, therefore;
 - ii. There is a need to strengthen official energy statistics and link/bridge it better to economic, social and environment statistics both at national and international level.
8. To this end, the Meeting concluded that the following tools shall be employed:
 - i. Developing global international standards (concepts, methods and definitions) for official energy statistics, on the basis of existing guidelines and best practices;

- ii. Strengthening official energy statistics as part of the system of national statistics, by increasing training and capacity building, especially in developing countries;
 - iii. Adopting performance measures for countries;
 - iv. Formalizing international collaboration and coordination to reduce response burden and make most efficient use of existing resources;
 - v. Creating an international community of energy statisticians.
9. The Meeting recommended to establish two complementary working groups:
- i. A City Group on energy statistics to contribute to the development of improved methods and international standards for national official energy statistics;
 - ii. An Inter-secretariat Working Group on energy statistics to enhance international collaboration and coordination.
10. The Meeting stressed the need for adequate resources for energy statistics both at the national and international level. It emphasized this need in particular in the case of United Nations Statistics Division.

III. Terms of reference

1. CITY GROUP ON ENERGY STATISTICS - TERMS OF REFERENCE

Objective: To address issues related to energy statistics and contribute to improved international standards and improved methods for official energy statistics by pooling expertise in the energy community.

Actions:

- To identify users' needs;
- To define scope of official energy statistics;
- To identify and collect national and international best practices;
- To review and contribute to the updating of UNSD handbooks and manuals on energy statistics;
- To identify gaps in coverage (e.g. fuel types, flows) and to develop methodology to cover gaps;
- To adopt link or develop bridges to international standard concepts and classifications in economic/ environment statistics to facilitate the integration and interface of energy statistics with other statistical systems;
- To recommend a core set of tables as minimum requirement at national and international level to satisfy major users' needs.

Participants:

- Experts from national statistical offices and/or energy ministries/authorities
- Experts from international organizations engaged in energy statistics
- Experts from academia: energy sciences, energy economics, statistics
- Energy experts from the private sector to be invited to participate as advisers.

Time frame: 5 years, 2006 – 2010

Working method: Electronic discussions and annual meetings

First meeting: January 2006
Host: Statistics Norway (to be confirmed)

2. INTER-SECRETARIAT WORKING GROUP ON ENERGY STATISTICS- TERMS OF REFERENCE

Objective: To enhance coordination of international energy statistics and collaboration of international (global, regional and sectoral) organizations with a view to improve the availability and quality of energy statistics without increasing the response burden of countries and by making best use of resources.

Actions:

- To make inventory of the current data collection-processing-dissemination system of the major organizations working on energy statistics;
- To reduce reporting burden by harmonizing (when possible) data collection, data processing and dissemination by limiting duplication and/or by building links/bridges between the existing energy statistics questionnaires, concepts and methods and timetables;
- To improve distribution of the collecting/processing work between organizations and enhance data sharing and transmission once data validation procedures have been agreed and implemented;
- To improve coordination of energy statistics with social, economic and environmental statistics on the international level;
- To promote training and capacity building and coordinate the related efforts;
- To create joint forums to promote the dialogue of statisticians and the user community;
- To raise the profile of energy statistics and energy statisticians at all levels.

Participants: International organizations/agencies involved in collecting energy statistics at the global/regional/subregional/sectoral level or user of energy statistics.

Secretariat: Biennial rotation

Time frame: Permanent

First meeting: November 2005

Host: IEA, Paris

ANNEX I

OECD Statistical Quality Framework

Background

The OECD Statistical Quality Framework follows the definition put forward by Statistics Canada¹ and defines quality as ‘fitness for use’, in recognition of the fact that quality is a multi-faceted concept that stretches well beyond the narrow dimension of accuracy. This general definition is, in the main, common to most of the quality frameworks developed over the last few years and, from this overall definition, more detailed criteria follow.

The OECD framework identifies nine dimensions of quality, these are summarily described below.

Dimensions of Quality

Relevance

Relevance is a qualitative assessment of the value contributed by data to users; in particular, whether it meets user needs. It depends upon both the coverage of the required topics and the use of appropriate concepts; and can be measured by identifying user groups and user needs.

Accuracy

Accuracy of data products refers to the degree with which data correctly estimate the values that they are designed to measure. This can be difficult to measure since in theory it can be defined as the difference between estimated values and the (unknown) true values. However revisions analysis can provide a reasonable assessment of accuracy, since it provides a mechanism for determining how estimates change over time as they approach their ‘final’ value. Moreover for sample survey-based estimates one can determine the contributions made by coverage, sampling, non-response, response, processing and dissemination problems. And for other components one can assess the accuracy of seasonal adjustment techniques; and the separation of values into price and quantity components, for volume estimates.

Timeliness

Timeliness refers to the length of time between the availability of statistics and the event they describe

Punctuality

Punctuality refers to the existence of a publication schedule and reflects the degree to which data are released in accordance with it.

Accessibility

Accessibility refers to the physical media in which data can be obtained, the suitability of the media form, the support services and information that allows users to readily identify these sources; as well as other practical information such as pricing and delivery.

¹ Statistics Canada (2002); *Statistics Canada’s Quality Assurance Framework*; Catalogue no 12-586-XIE.

Interpretability/Clarity

Interpretability refers to the data information environment; in particular the metadata (documentation, explanations, sources, accuracy) that supplements the data; allowing users to fully understand, use and analyse the data.

Consistency/Coherence

Statistics should be consistent within datasets, across datasets, over time and across regions and countries.

Credibility Transparency/Integrity

The credibility of data refers to the confidence that users place in those products based on their image of the data producer and based on the confidence they have in the objectivity of the collection, processing, and dissemination of statistics. This implies that the data are perceived to be produced professionally in accordance with appropriate statistical and ethical standards, and that policies and practices are transparent, (where transparency is defined as meaning that data revisions follow a regular and publicised procedure). For example, users must be confident that data are not manipulated, nor their release timed in response to political pressure,

Credibility is determined in part by the integrity of the production process. Principle 2 of the UN Principles of Official Statistics (1994) states: “to retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data”.

Cost-efficiency

Cost-efficiency in the production of statistics is a measure of the costs borne by statistical offices and borne by respondents and the providers of primary data. Although it is debateable whether cost-efficiency is a quality criterion for statistics, it is certainly a dimension that needs to be taken into account, including in the implementation of quality assurance and quality assessment frameworks themselves.

Principles of quality management

As with the dimensions of statistical quality, there is no single definitive list of the principles of quality management across institutions, however all adopt common criteria. These can be summarised into six specific areas:

Achieving Credibility

Credibility is fundamental to the effective use of official statistics. One key pre-requisite that establishes credibility is the legislative framework that exists to demonstrate the integrity of official statistics; in particular the amount of independence afforded to statistical institutions and their freedom from political interference. On top of this essential requirement, statistical offices can further achieve credibility by ensuring that information regarding methodology, sampling, survey-error, revision history, publication dates, and revisions’ processes are made available. In addition data should be timely, accurate, and punctual.

Maintaining the Relevance of Outputs

The relevance of outputs is ideally determined by putting in place formal mechanisms that allow users to provide regular feedback. Users should include government, central banks, business and the community. The development of new outputs or improvement to current outputs needs to take into account the relationship between quality (in particular, accuracy) and cost. Some statistical agencies resolve this dichotomy in the short-term by producing new statistics on an experimental basis.

Entertaining Effective Relationships with Respondents

Survey information is the main source of statistical data. The importance of well designed surveys that are readily understood by respondents is paramount therefore to achieving good quality statistical data. In this context frameworks (that provide electronic and human support for respondents) are essential. Respondents should also be fully briefed on the purposes and importance of the data being collected. The burden of respondents should be minimised subject to the quality required from the surveys. In this context survey design techniques should be as efficient as possible and, wherever possible, duplication of questions in surveys should be avoided. It is desirable to construct surveys that are based on common, or comparable, classification systems.

Putting in Place Processes that Produce High Quality Output

Methodologies

A number of processes, or factors, contribute to producing high quality output. The use of sound methodology in the construction of statistics is high amongst these. Methodologies should be quality assured (for example processes should be reviewed regularly) and compared with international best practice. Survey design methods should also be subject to continuous review to ensure that costs are minimised for a given level of accuracy. Statistics should also be internally consistent, for example national accounts estimates should be balanced through supply-use frameworks.

Information Systems (Software)

More generally all data should be stored in a central ‘information warehouse’ where data on similar items but from different sources can be scrutinised for consistency/coherence. This requires the development of efficient IT systems that can support such a warehouse; including any additional analytical tools that can test for the plausibility (and thus consistency) of non-observable identities such as productivity, and the production of statistics on a timely basis; in accordance with preset publication dates.

Reviewing and Evaluating Statistical Activities

Each statistic should be subject to some process of quality review and improvement; which, in theory, should be measured by a quantitative or qualitative assessment indicator. These indicators will usually be expected to follow one or more of the quality dimensions outlined above.

Hiring and Keeping Skilled and Motivated Staff

Skilled staff are, arguably, the most important factor in delivering quality statistics. In this context the development of staff skills forms an important element of the quality framework. Identifying skill gaps and development areas should therefore be an integral part of performance management systems. The development and use of project and process management systems is also an important factor in this context, and institutions should ensure that the tools and resources necessary to support these systems are in place.

ANNEX II

Synoptic table of the issues discussed at the Energy Ad-hoc Group Meeting, 23-25 May 2005,
UNSD/DESA, New York

Theme	Issues at national level (including the international perspective)	Scope/coverage/data requirements	Issues in relation to methodology
"Official statistics"	<ul style="list-style-type: none"> ▪ Mandates ▪ Legal framework ▪ Responsibilities: statistical office vs. energy authority ▪ What is official statistics? ▪ Different sets of data: quantify or explain differences or attempt to reconcile. 	User needs: need to prioritize and should not attempt to satisfying all users' needs	<p>Issues:</p> <p>A. General</p> <ul style="list-style-type: none"> ▪ Criteria of official statistics includes: <ol style="list-style-type: none"> i. Integrity ii. Relevance and Credibility iii. Confidence iv. Accessibility (ensuring equal access) v. Quality assurance ▪ Standardization of reporting formats ▪ Identify requirements for metadata for energy statistics ▪ Confidentiality ▪ Methods of data capture ▪ Energy statistics of the non-energy sector ▪ Compendium of national surveys/best practices ▪ Minimum requirement: focus on the compilation of national energy balance. Measure compliance implementation ▪ Confidentiality can be viewed as a strength and/or limitation of official statistics ▪ Unofficial statistics to be used as a result of time constraints and issues regarding timeliness <p>B. <i>Definition, units and classifications</i></p> <ul style="list-style-type: none"> ▪ Need to revise existing manuals; ▪ Revision as the umbrella for tackling the methodological and harmonization issues.

Theme	Issues at national level (including the international perspective)	Scope/coverage/data requirements	Issues in relation to methodology
			<ul style="list-style-type: none"> ▪ Conversion between units is a major problem ▪ Units to be applied in balances ▪ Inventory of “current practices”: units of measure, conversion factors, calorific values, carbon content of fuels, basic concepts etc used by countries ▪ Links to product and activity classifications and the economic, social and environmental statistical subsystems <p><i>C. Compilation of energy statistics</i></p> <ul style="list-style-type: none"> ▪ Inventory of “what is published” ▪ Accounting for transformation between energy forms ▪ “Systems approach”: energy statistics is an integral part of the overall statistical system ▪ Better use of mathematical statistical methods and modeling/estimation techniques ▪ Concepts used in System of National Accounts (SNA) versus energy statistics, e.g. production boundary ▪ Input-output tables ▪ Development of training materials and other new training techniques ▪ Ensure better participation of developing countries ▪ Energy accounts - Satellite accounts ▪ Allocation of “mobile” energy use ▪ Full documentation of data treatment and changes in methods ▪ Ensure consistency when revising time series ▪ Decomposition analysis of factors behind changes ▪ Valuation of reserves ▪ Prices to be used in valuation and monetary accounts ▪ Measurement of shadow market

Theme	Issues at national level (including the international perspective)	Scope/coverage/data requirements	Issues in relation to methodology
<p>1) The energy market: better coverage, more detailed information, improved timeliness and reliability</p> <p>2) Sustainable development agenda</p>	<p>Significance of developing countries in both production and consumption of energy is increasing</p> <p>Increasing shadow market</p> <p>Build on the sustainable development agenda to mobilize resources and support</p>	<p>Need to improve geographical coverage and data availability</p> <p>Increase data requirement from developing countries for:</p> <ul style="list-style-type: none"> ▪ Crude grades ▪ Capacity/infrastructure data ▪ More detailed supply data on marketed and non-marketed energy ▪ Trade data: country of origin & country of destination ▪ Stock levels and changes ▪ Data on Reserves <p>Access to energy/electricity</p> <p>Energy efficiency</p> <p>Renewables</p> <p>Advanced fossil fuel technologies</p> <p>Nuclear energy</p> <p>Rural energy</p> <p>Energy and transport</p> <p>Energy diversification</p> <p>Taxes and subsidies</p> <p>Market transparency</p> <p>Linkages to Atmosphere/Climate Change, Health</p>	

Theme	Issues at national level (including the international perspective)	Scope/coverage/data requirements	Issues in relation to methodology
<p>3) Better communication with policy and other user groups</p> <p>4) Major policy issues at national level:</p> <ul style="list-style-type: none"> • Energy security • Planning and forecasting modeling • Energy efficiency • Market transparency • Investments, employment, sustainable growth • Environment pollution and resource depletion 	<p>Make policy-makers aware of the resources (legal framework, financial etc) needed to produce good quality and relevant energy statistics</p> <p>Lack of collaboration of statistical offices and energy ministries/authorities</p> <p>Lack of regular meetings to facilitate dialogue between statistics, energy experts and policy</p> <p>International comparisons of energy statistics</p> <p>Feedback to respondents</p> <p>Statisticians have to be proactive</p> <p>Increase visibility</p> <p>Seize political momentum to raise the profile of energy statistics</p> <p>Fast statistics vs. estimates</p> <p>Lack of political and general user's awareness of statistics</p> <p>Make statistics politically useful</p> <p>Market your statistics</p>	<p>More policy relevant statistics, e.g.: adjustments to reveal trends, forward looking</p> <p>More details on consumption by industries and end uses</p> <p>Need for detailed data collection on prices</p> <p>Inability to separate factors/activities behind energy consumption</p> <p>Identify key indicators</p> <p>International comparisons</p> <p>Carbon dioxide and other greenhouse gas emissions availability.</p>	

Theme	Issues at national level (including the international perspective)	Scope/coverage/data requirements	Issues in relation to methodology
<p>Training Increase expertise and knowledge</p> <p>International coordination</p>	<p>Lack of users' participation in training</p> <p>Lack of best practice sharing</p> <p>Consistency between national and international definitions, methodologies, units of measure and other statistical practices. Minimization of unnecessary duplication burden through duplication of energy statistical questionnaires.</p>	<p>Hold regular training in energy statistics to ensure continuous expertise</p> <p>Train the trainer</p> <p>Build on existing infrastructure</p> <p>Best practices and successful experiences to be included in training materials for developing countries</p> <p>Energy information to be shared and national and international level</p>	

ANNEX III

List of Documents/Presentations for the Ad-hoc Working Group Meeting on Energy Statistics

Basic documents:

1. Energy Statistics Programme Review (report prepared by Statistics Norway for the 36th session of the Statistical Commission)
2. Comments by Statistics Canada on the Energy Statistics Programme Review
3. Report of the 36th session of the Statistical Commission

Country papers (preliminary submission):

4. Guidelines for country papers (UNSD)
5. China
6. Denmark
7. Norway
8. Russia
9. South Africa
10. US
11. Yemen
12. Summary of issues raised by countries (UNSD)

Issue papers and presentations:

13. Summary presentation of the outcome of the 36th session of the Statistical Commission (Norway)
14. UN working groups (UNSD)
15. Oil market and statistics (IEA)
16. Kyoto Protocol and its statistical implications (DSD)
17. Johannesburg, Sustainable development agenda and indicators (DSD)
18. Energy indicators for sustainable development (IAEA)
19. How could the statistical and the policy making community influence each other better? (Denmark)
20. Renewable energy sources and statistics (IEA)
21. Existing manuals on energy statistics (UNSD)
22. Approaches in energy balances (Eurostat)
23. Integration of energy statistics (Canada)
24. Energy statistics and greenhouse gas emissions (Oakridge Laboratory)
25. Issues at the international level (IEA, UNSD)
26. Issues in training and capacity building (UNSD)

ANNEX IV

Ad-hoc Energy Group Meeting New York 23-25 May 2005

Agenda

HOSTED BY UNITED NATIONS STATISTICS DIVISION/ DESA

Location: DC2 1949, 2 UN Plaza, New York, USA

Day 1: Monday, 23 May 2005

9:00 - 9:30	Registration
9.30 - 9.45	Welcome and Opening by Mr. Paul Cheung, Director, UNSD Introduction of the participants Adoption of the agenda
9.45 - 10:15	Coffee Break
Session 1 10:15 - 11:30	Summary of the Programme Review on Energy Statistics, the discussion and the conclusions reached by the 36th session of the Statistical Commission (Norway) Overview of the different types of UN working groups (UNSD)
Session 2 11:30 - 13:00	Energy statistics and policy requirements <ul style="list-style-type: none">• Current oil market (IEA)• Kyoto protocol, Johannesburg Summit, the work programme of the Commission for Sustainable Development 2006-2007 (UNDESA/DSD)• the project on the energy indicators for sustainable development (IAEA)• How could the statistical and policy maker community influence each other better? (Denmark)
13:00 to 14:15	Lunch
Session 3 14:15 - 15:45	Recommendations Conceptual and methodological issues <ul style="list-style-type: none">• Scope of energy statistics• Concepts, definitions and classifications (Oakridge Laboratory)• Survey and monitoring methods• New and renewable energy sources (IEA)• Approaches applied in energy balances (Eurostat)• Other methodological issues
15:45 - 16:00	Coffee Break

Issues in relation to methodology (continued)

Session 4
16:00 - 17:15

- The need for revision, update and harmonization of manuals (UNSD)

Recommendations

Day 2: Tuesday, 24 May 2005

Session 1
9:30 - 11:00

Integration of energy statistics with social, economic and environment statistics

- Energy statistics integration with and usage in social, economic and environment statistics: compilation of energy accounts, economic statistics of the energy sector, statistics on energy services, requirements for emission calculations, energy indicators, etc. (Statistics Canada, UNSD, Oakridge Laboratory)

Recommendations

11:00 - 11:30 Coffee Break

Coordination of work on the international level

Session 2
11:30 - 13:00

- The current coordination of the work on energy statistics on the international level (IEA)
- Questionnaires on energy statistics presently used (UNSD)
- Data sources, data validation and estimation practices
- Data sharing practices
- Other emerging issues

13:00 to 14:15 Lunch

Coordination of work on the international level (continued)

Session 3
14:15 - 15:15

Recommendations

15:15 - 15:35 Coffee Break

Training/Capacity building (UNSD)

Session 4
15:35 - 17:15

- Training and capacity building efforts in countries and by international organizations
- Priorities in training and capacity building

Recommendations

Day 3: Wednesday, 25 May 2005

Session 1
9:30 - 10:30

Closing Session: Conclusion and recommendations for the Bureau of the SC

- Prioritization of the issues with deadlines

10:30 - 11:00 Coffee Break

Closing Session: Conclusion and recommendations for the Bureau of the SC

Session 2
11:00 - 13:00

- Recommendation of the proper forum(s), with terms of reference, to deal with these issues;
- Recommendation of a roadmap (work programme and timetable) for the suggested forum(s)

Adjourn of the meeting

ANNEX V

Energy Ad-hoc expert Group Meeting Participants list

Mr. Andrii Gritsevskiy International Atomic Energy Agency Austria	Mr. Robert Pagnutti Statistics Canada
Ms. Zhu Hong National Bureau of Statistics, P. R. China	Mr. Klaus Balslev Pedersen Statistics Denmark
Mr. Peter Dal Danish Energy Authority Denmark	Mr. Pekka Lösönen Eurostat European Commission Luxembourg
Mr. Jean-Yves Garnier International Energy Agency France	Mr. Olav Ljones Statistics Norway Norway
Ms. Ann Christin Boeng Statistics Norway Norway	Mr. Thomas A. Boden Oak Ridge National Laboratory USA
Mr. Gregg Marland Oak Ridge National Laboratory USA	Mr. Johannes Van Wyk Department of Mineral and Energy South Africa
Mr. Louis D. De Mouy, Energy Information Administration US Department of Energy USA	Mr. Mohamed Almutawakel Ministry of Oil and Minerals Republic of Yemen
UN DESA	
Mr. Paul Cheung Director, UN Statistics Division/ DESA	
UNSD – Environment and Energy Branch	
Ms. Eszter Horvath Chief, Environment and Energy Statistics Branch	Mr. Karoly Kovacs Chief, Energy Statistics Section
Mrs. Rosemary Montgomery	Mr. Jeremy W. Webb
Ms. Alexandra Lima	Ms. Liliana Carvajal
Mr. James Rajanayagam	Mr. Man Soni
Ms. Evelyne Michaud	
UN DESA Sustainable Development	
Ms. Kathleen Abdalla Division of Sustainable Development	
UNSD Economic Statistics Branch	
Mr. Ivo Havinga Chief, Economic Statistics Branch	Ms. Alexandra Alfieri
Mr. Keping Yao	