

Research agenda for the Oslo Group: List of issues for 2007

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Based on the mandate for the Oslo Group on Energy Statistics, and the draft disposition for the revised UN manual on Energy Statistics, the Oslo Group at its second meeting in Delhi, India decided on a list of issues as a work program for 2007. The list of issues and the draft disposition for the revised manual are both based on the mandate for the Oslo Group, and this document gives a presentation of them as the work program for the Oslo Group in 2007.

The main objective for the Oslo Group on Energy Statistics is to build a multipurpose and coherent system for official energy statistics to monitor the yearly supply and use of energy in a country, and to address all user needs. The aim is to do this through the revision of the UN manuals on energy statistics. More information on the work of the Oslo Group can be read in the document "Work of the Oslo Group" for the second UNCEEA-meeting in July 2007.

The list of issues for 2007 consists of 28 issues, and the results will be presented at the third meeting of the Oslo Group in Vienna in February 2008. A new list of issues for 2008 will be set up at the same meeting.

List of issues for 2007 (*The italic text is the original text in the list of issues*)

The manual – history, framework etc.

This is not part of the manual, but will give the framework for the manual, covering the questions on how it will be built up and made available to the users?

- a. *Create a detailed disposition for the new manual – based on the proposal presented at the second meeting*
- b. *Propose how an electronic, searchable solution for the manual can be built.*

0. Background, settings, borderlines and conceptual framework

This part will cover the history, basic principles and definitions, and the framework for the contents of the manual.

- a. *Introduction to the manual. Specifying the aim for the manual: The main objective is to build a multipurpose and coherent system for official energy statistics to monitor the yearly supply and use of energy in a country, and to address all user needs.*
- b. *History. What was the process behind the first version of the UN manuals on energy statistics? What has happened since the first version of the manual?*

- c. *Principles/definitions. Create a proposal for definitions and explanations of central terms related to the work with the manual: What is energy statistics, what are basic energy statistics, what are primary energy and secondary energy and should the list of primary energy be revised in the light of new technology? What are stocks, energy accounts, energy balances and energy supply and use? What systems are in physical terms, what are in value terms and what are in both? Today both the terms energy accounts and energy balances are used. The Oslo Group wants to identify the differences between these systems. If possible the aim is to develop one common system of supply and use tabulations that will cover both the contents of energy balances and accounts.*
- d. *Stocks vs. subsoil assets. Give a clear argument why stocks is included in the manual, as an important part of the flow of energy, while reserves/physical revenue, subsoil assets etc. is outside of the contents of the manual.*
- e. *Basic presentation of the Laws of thermodynamics. The aim is to increase the knowledge among energy statisticians on what physical laws apply for energy, in order to better understand the dynamics as basis for statistics on energy.*

1. Official statistics

The element of official statistics is essential in a new manual. It is important that energy statistics is further developed as Official Statistics in accordance with its quality claims. It is important that the manual grasps all the quality aspects related to Official Statistics, in order to secure national and international production of Official Energy Statistics.

An important tool for the work on part 1 of the manual will be a questionnaire on official energy statistics. The questionnaire, developed by UNSD and Statistics Norway, was distributed to all UN member countries in June 2007. The deadline for the survey is 4 July 2007. In the questionnaire we seek to reveal the status for Official Statistics and to identify the problems and challenges for Official Energy Statistics. The result from the survey will be important in forming the new manual.

The chapter on official statistics will be based on the UN principles for official statistics, and will contain links/proposals to how energy statistics can be produced in order to fulfil these requirements.

- a. *Analyze the UN survey on official energy statistics.*
- b. *Are there specific requirements for official energy statistics?*
- c. *Data collection strategies (from production and use (for instance household consumption, energy in business surveys etc))*
- d. *Quality and assessment*
- e. *Dissemination. Principles, equal access, free (public good)*
- f. *Evaluation and monitoring methods and techniques.*

2. User needs

“The main objective of the Oslo Group on Energy Statistics is to build a multipurpose and coherent system for official energy statistics to monitor the yearly supply and use of energy in a country, and to address all user needs”.

As stated in the main objective, it is important to develop a system that, in the best respect possible, addresses the needs of the user. However, we cannot have tailor made statistics for all user needs. The coordination challenge is to combine user needs and optimize a multipurpose system of energy statistics.

In order to face these challenges we have to consider who our main users are, and what requirements they have. Some of our important users are National accounts, Emission statistics (computations), other environment statistics, National wealth, Sustainable development indicators and Governmental use (energy planning).

An example of different user needs may be the different needs for data from National Accounts and Environment statistics. To some extent there will be overlap between their claims. While National Accounts in principle is in value terms (monetary), it is important to notify that emissions to air calculations focus on physical units. The characteristics (chemical composition, for example the sulphur content) of the fuel can be important for the estimation of the emissions. Prices are important for National Accounts but will not be used directly in emission calculations. In the National Accounts it will perhaps not be relevant to include flaring (burning of natural gas) at drilling platforms - while this will be relevant for emission statistics. These differences are important to identify. Both concerns should be covered, with the lowest response burden.

Another important feature is that we need data for energy as input (intermediate consumption, raw materials etc).

In order for the manual to give the reader an overview of the complexity of energy statistics, it is important to clarify the user needs. The user needs will explain the need for data on production, transport, end use, user group distribution etc.

- a. User needs. Taking into account governmental use in energy planning, international standards for National Accounts and emissions to air, international organizations, SEEA etc. based on the idea of producing a multipurpose system for official energy statistics to address all user needs*

3. Basic energy statistics

When designing a system for Official Energy Statistics it is important to have a full scope. By this we mean building a complete system of energy statistics that covers both production and consumption. In order to build a good system and tables for Energy Supply and Use, one needs good basic energy statistics.

In order to fulfil this principle we need good coverage on data for production, consumption on user groups, transport etc. Data has to be available in both energy terms and physical terms in order to meet all user needs. We cannot have tailor made statistics

for all user needs, and it is not easy to predict user needs in the future. The coordination challenge is therefore to combine user needs and optimize a multipurpose system of energy statistics. Good coverage on basic energy statistics is essential in order to develop such a multipurpose system.

When writing about basic statistics, it's not enough to focus on "full scope". In addition to covering all central energy sources, we also have to think through the elements of response burden, and how technological opportunities and statistical challenges have changed. The energy sector has seen many changes in the last 20-30 years. Some of these changes might influence on the way we produce our statistics. It is important to think through how for instance the liberalization of the energy market has influenced the way we produce primary statistics on electricity. Do we have other, better sources for data now than 20 years ago? Does new technology or new legislation give us the possibility to gather data in a way that will lower response burden? How do we handle the challenge on bio fuel in energy statistics? Do we have new ways of treating/estimating the production and use of bio fuel today? How to we handle new technology?

Part three of the manual is to cover basic energy statistics, both as separate statistics and as input in the Energy Supply and Use system (part 4). This means statistics on production, imports/exports and use of energy. Some energy sources need better methods for data collection, and some have been made available due to new technology. These energy sources are given special attention at this stage. Based on findings from the discussions on how to treat these energy sources, one also has to discuss if the list of primary and secondary energy needs to be updated (see issue 0c). Throughout the work on part 3 it is important to have in mind the objective: a multipurpose and coherent system for official energy statistics to address all user needs. This requires data on a detailed unit level in order to be able to combine them according to the different user needs and definitions.

- a. Geothermal energy. Discussion: How should geothermal energy be included, and where is the cut-off for inclusion/exclusion of geothermal energy? Important to link energy in physics and energy in statistics*
- b. Solar energy. Discussion: How should solar energy be included, and where is the cut-off for inclusion/exclusion of solar energy? Important to link energy in physics and energy in statistics*
- c. Wind energy. Discussion: How should wind energy be included, and where is the cut-off for inclusion/exclusion of wind energy? Important to link energy in physics and energy in statistics*
- d. Biomass. Discussion: How should energy from biomass be included, and where is the cut-off for inclusion/exclusion of biomass? Important to link energy in physics and energy in statistics*
- e. Renewable and non-renewable energy – analyze aggregate of energy forms*
- f. Tracking. Should tracking and counting of chemical/radioactive materials be part of official statistics and the manual?*

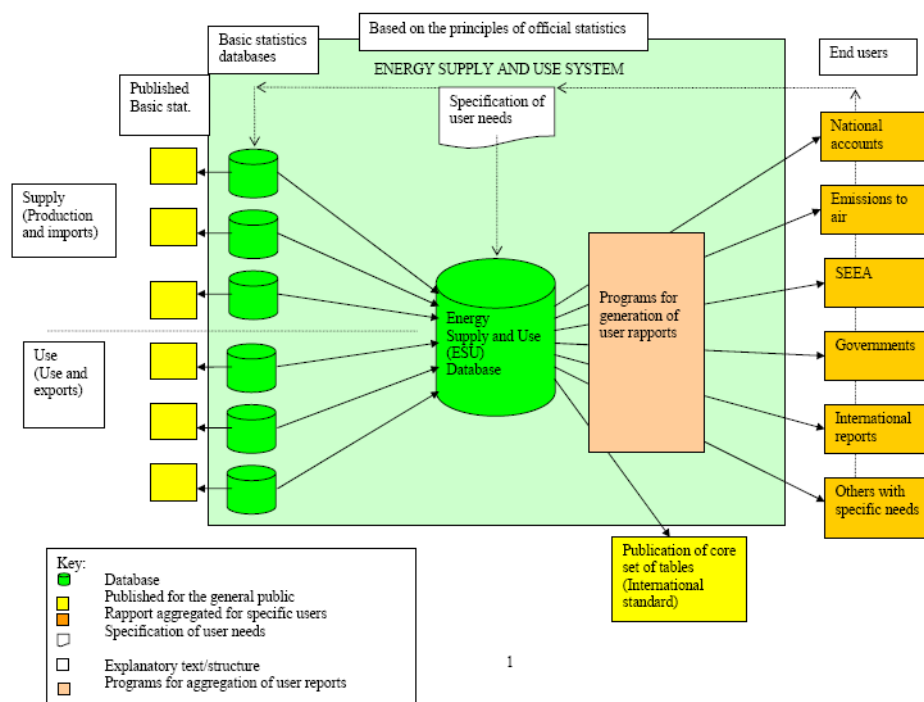
4. Energy supply and use

According to its mandate the Oslo Group is to review the UN manuals on energy statistics (see appendix 2) and to define the scope of official energy statistics, focus on user needs, build bridges between statistical systems and recommend a core set of tables. On this background and with these frames for this work, given by the Statistical Commission, the main objective of the Oslo Group on Energy Statistics is, as stated above, to build a multipurpose and coherent system for official energy statistics to monitor the yearly supply and use of energy in a country, and to address all user needs, through the revision of the UN manuals on energy statistics.

Different users have different needs. Today countries publish different statistics to give an overview of the flow of energy in their country. Some publish energy balances, and some publish energy accounts. These two ways of setting up the supply and use of energy in a country is very similar, but does not use the same definitions on some central elements such as how to handle transport, and where the national border for the statistics is. In order to overcome these differences and the users' confusion of the terms balances and accounts, we propose to establish a multipurpose system of Energy Supply and Use which will enable individual user to generate reports based on their needs, together with a standard core set of tables for all countries.

In order to establish this multipurpose system, we propose to move the focus of the system one step backwards, from the published tables of Energy Balances and Energy Accounts to a database/focus point for Energy Supply and Use (ESU). The aim is that ESU will contain data on a level that enables us to generate different user reports for different user needs (se figure 1).

Figure 1: System of Energy Supply and Use



The Oslo Group aims to identify the differences between energy balances and energy accounts and to explore the possibility/ propose solution to make one energy supply and use system that addresses all user needs.

- a. *Today both the terms energy accounts and energy balances are used. The Oslo Group wants to identify the differences between these systems. If possible the aim is to develop one common system of supply and use tabulations that will cover both the contents of energy balances and accounts. The system should be consistent with the system of National Accounts, with some deviation if and when necessary. Definitions of production, intermediate and final consumption, imports and exports should be based on agreed international standards (1993 SNA and International Merchandise Trade Statistics). The same should hold to energy products classification, with further disaggregation if necessary.*

5. Development of a core set of tables

In part 5 the recommendation from the challenge of developing a core set of tables will be presented.

The development of such a core set of tables is rooted in the mandate for the Oslo Group. In the mandate it says: “to recommend a core set of tables as minimum requirement at national and international level to satisfy major user needs”. The mandate focuses on the user needs and a good total system for energy statistics. The aim is to develop a standard set of tables to secure dissemination of the multipurpose system of Official Energy Statistics.

According to the mandate, the Oslo Group is to recommend a core set of tables as minimum requirement at national and international level to satisfy major user needs. This set of tables must be based on the system for energy supply and use in part 4, and will hence come later.

6. Definitions, Conversion factors etc

On the element of Definitions and Conversion factors the International Energy Agency (IEA) and the InterEnerStat has done a good and thorough job the latest years. It is important internationally to have only one set of Definitions. If the Oslo Group repeated this process, we run the risk of creating unnecessary confusion. If IEA and the InterEnerStat could take responsibility for this part of the manual, we would secure that we do not go against already existing standards for Definitions and Conversion factors.

Definitions have been a topic for discussion for a long time. Here the most important part is to go through existing lists of definitions, conversion factors etc. to identify inconsistencies, and to propose solutions to these inconsistencies.

- a. Go through list of definitions, conversion factors etc. to see where there are inconsistencies, and to propose solutions to these inconsistencies.*
- b. Renewable and non-renewable energy – analyze aggregate of energy forms*
- c. Gross or net calorific values. According to international guidelines, energy consumption should be presented in net calorific value. Still, not all countries follow these guidelines. A chapter should be written to give a recommendation for this, with an argument of why.*

7. Best practices

An important part of the Oslo Group mandate is to identify and collect national and international best practices. Best practices will be integrated in the different parts of the manual.

- a. Develop a “form” for description of best practices.*
- b. Write best practices as chapters in the new manual*
- c. Best practice strategy for dissemination*
- d. Best practice Statistical Bank*

At the meeting in India it was proposed that all papers/presentations at the third meeting of the Oslo Group are to have the form of chapters for the new manual. The third meeting will also be the arena for presentation of the results from the issues on the list of issues for 2007.