COUNTRY PRACTICE IN ENERGY STATISTICS

Topic/Statistics: Electricity Production & Supply

Institution/Organization: Sustainable Energy Authority of Ireland (SEAI)

Country: Ireland

Date: October 2012

CONTENTS

Abstract

Write a short abstract of the statistics, and try to limit it to one page. The purpose of the abstract is to give the reader a general overview of the statistics/topic. It should therefore include a brief overview of the background and the purpose of the statistics, the population, the sample (if relevant), the main data sources, and the main users of the statistics. The abstract should also mention what is the most important contribution or issue addressed in the country practice (e.g. the practice deals with challenges of using administrative data, using of estimation, quality control, etc.). If there are other elements that are considered important, please feel free to include them in the abstract.

Keep in mind that all relevant aspects of the statistical production will be covered in more detail under the different chapters in the template. Therefore, the abstract should be short and focused on the key elements. What the most important elements are can vary from statistics to statistics, but as a help to write an abstract you can use the table below. The table can either replace a text or can be filled out in addition to writing a short text.

This data collection is a survey of all Electricity Generators and the Transmission System Operator (TSO) in order to obtain electricity data for the Monthly Energy Statistics as required under the European Energy Statistics Regulation of 2008, no.1099. These monthly data are then combined to populate Ireland's Energy Balance and international questionnaires.

This survey in its current form began in January 2009. In the years prior to this data were obtained from the TSO only, not the individual generators. SEAI took over this data collection in 2002 from the Department of Communication, Energy and Natural Resources.

Key elements	
Name of the statistics	Electricity Production & Supply
Background and purpose of the statistics	These surveys in their current form began in January 2009. In the years prior to this data were obtained from the TSO (Eirgrid) only, not the individual generators. SEAI took over this data collection in 2002 from the Department of Communications, Energy and Natural Resources. The data are used to populate Ireland Energy Balance and to fulfil international reporting obligations
Population, sample and data sources	The electricity generator survey is a business survey of all of the main activity electricity producers in Ireland. The Transmission System Operator survey is an administrative survey as this is data collected or generated by the TSO. The list of companies used to define the population frame for the electricity generator survey are identified by the Commission for Energy Regulation which is the independent body responsible for overseeing the liberalisation of Ireland's energy sector. Size of target population: 10 electricity generators and EirGrid. As Transmission System Operator (TSO) since July 2006, EirGrid is responsible for operating Ireland's national electricity transmission system - otherwise known as the national grid

Main users	Irish Government bodies including Department of Communications, Energy & Natural Resources, Department of the Environment & Local Government, Department of Transport and the Environmental Protection Agency EUROSTAT International Energy Agency Researchers Media
Important contribution or issue addressed	
Other remarks	

1. General information

1.1. Name of the statistics/topic

The statistics/topic could either be a specific energy statistics (e.g. electricity production) or a topic within energy statistics (e.g. energy balances). For more information, please see Section III of the Instructions.

Electricity Production & Supply

1.2. History and purpose

State when the statistics were first published.

Energy Balances are available at least as far back as 1972

Describe briefly the main purpose of producing the statistics and why it is relevant.

These data populate Ireland's Energy Balance and any international questionnaires. It is a vital input to meeting reporting obligations, for advising policy makers and informing investment decisions. The data are also used for the greenhouse gas emissions inventory calculation

1.3. Reference period

State the time period the data are collected for.

Reference period for the electricity generator survey is month -3, frequency is monthly. Reference period for the TSO survey is month -1, frequency is monthly.

1.4. Frequency

Specify how often the statistics are disseminated (e.g. annually, monthly, quarterly, etc.). If the statistics are not produced at regular intervals, state at what times they have been produced in the past and the main reasons behind the irregularities.

The statistics are disseminated annually in Ireland's Energy Balance and international questionnaires. They are also available monthly through EUROSTAT under the Energy Statistics Regulation of 2008, no.1099.

1.5. Dissemination

Describe how the statistics are published (e.g. printed publications, online publications, online databases, etc.). If applicable, include the web address to the main website of the statistics.

The Energy Balance is published online in PDF and Excel format and can also be downloaded via the Energy Statistics databank. It is also contained in a number of publications. http://www.seai.ie/Publications/Statistics_Publications/

1.6. Regional level

State the lowest geographical level (e.g. administrative regions, municipalities, etc.) for which the statistics are made available to the public.

National level

1.7. Main users

Identify the key users of the data and the main applications. Include both internal and external users, and if possible try to distinguish between end users and others.

Irish Government bodies including Department of Communications, Energy & Natural Resources, Department of the Environment & Local Government, Department of Transport and the Environmental Protection Agency EUROSTAT International Energy Agency Researchers Media

1.8. Responsible authority

Write the name of the institution and department/office with the main responsibility for disseminating the statistics (e.g.: Statistics Norway, Department of Economics, Energy and the Environment).

Sustainable Energy Authority of Ireland

1.9. Legal basis and legally binding commitments

State the national legal basis for the data collection. Include a complete reference to the constitutional basis, and web address to an electronic version (e.g.: The Statistics Act of 16 June 1989 No. 54, §§2-2 and 2-3, http://www.ssb.no/english/about_ssb/statlaw/forskrift_en.html).

The data are provided to SEAI on a voluntary basis by the data providers.

If the data collection is not based on a legal basis, give a short description of other agreements or volunteer arrangements.

The data are provided to SEAI on a voluntary basis by the data providers.

If applicable, give reference to national and international commitments that are legally binding (e.g. EU statistical legal acts).

Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics

1.10. Resource requirements

Specify how the production of the statistics is financed (e.g. over the ordinary budget, project based support, financial support from other institutions or organization). If applicable, state the contracting entity (e.g.: Ministry, EU Commission, OECD). A contracting entity is any entity which is ordering a survey or the compilation of a statistics, and paying for it

Ordinary budget, Department of Communications, Energy & Natural Resources

Specify the resource requirements for producing the statistics (e.g. man-labour days, number of workers involved in the statistical production process of the statistics/topic in question).

3 persons in the Energy Policy Statistical Support Unit

1.11. International reporting

List any international organizations and names of reporting schemes that the statistics are reported to. If available, also include the website where the reported data are published (e.g. International Energy Agency, Monthly Oil Statistics, UNSD, etc.).

EUROSTAT http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/introduction International Energy Agency http://www.iea.org/stats/index.asp UN Statistics Division http://unstats.un.org/unsd/energy/default.htm

2. Statistical concepts, methodology, variables and classifications

2.1. Scope

Describe the scope of the statistics (e.g. the statistics cover supply and use of all energy products in Norway, classified according to International Standard Industrial Classification of All Economic Activities – ISIC).

The statistics cover the production and supply of electricity in Ireland and use the following classification: European Energy Statistics Regulation of 2008, no.1099 classification for monthly and annual questionnaires

2.2. Definitions of main concepts and variables

Describe the main concepts (e.g.: territory principle, resident principle, net calorific value, gross calorific value).

National territory. For the electricity generator survey, data are collected in physical units and energy units. Gross & net calorific values are also provided. The TSO survey data are collected in energy units only and are net values

Describe the main variables (e.g. how are the different energy products defined in the statistics? How are production, intermediate consumption, final consumption, transformation, feed stock, the energy sector, etc. defined?).

Electricity Generator Survey: - Fuel Input - Gross Energy Input - Net Energy Input - Gross Calorific Value - Net Calorific Value - Stock Levels - Deliveries - Electricity Generated - Own Use - Electricity Exported to the Grid TSO Survey - Electricity Production by Energy - Imports - Exports

2.3. Measurement units

Describe in what unit the data is collected (e.g. physical unit (m3, metric tons), monetary unit (basic prices, market prices)). Describe in what unit the data is presented. Describe if the calorific values are collected (e.g. on a net vs. gross basis) and how they are used.

If applicable, describe the density of the energy product(s) and the estimated *thermal efficiency coefficients* of different energy products and consumer groups or by appliance. Thermal efficiency coefficient indicates the share of the energy products which is actually usable for end consumption. Descriptions of density and thermal efficiency coefficient could alternatively be put in an annex.

Data are collected from the electricity generators in both physical units (cubic metres & tonnes) and energy units (gross & net terajoules). Gross and net calorific values are also supplied.
The TSO provides net figures in megawatt hours.
The data are presented in net energy units (kilo-tonne of Oil Equivalent) in the Energy Balance

2.4. Classification scheme

Include references to relevant international and national standard classifications. If national, give a brief description of the standards. If available, include web addresses to the electronic version of the standards).

European Energy Statistics Regulation of 2008, no.1099 classification for monthly and annual questionnaires http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008R1099:EN:HTML

2.5. Data sources

Give an overview of the different data sources used in the collection and compilation of the statistics/topic (e.g. household survey, enterprise/establishment survey, administrative data/registers, foreign trade statistics, production statistics and other primary/secondary data sources).

Examples of administrative sources/registers are: business register for enterprises and establishments, population register, land register, housing and building registers, tax registers, international trade registers, etc.

Monthly business survey of electricity generators
Monthly administrative survey of the transmission system operator (TSO)

2.6. Population

Describe the entire group of units which is the focus of the statistics (the population).

The electricity generator survey is a business survey of all of the main activity electricity producers in Ireland. The TSO survey is an administrative survey as they provide data already collected or generated by them.

The list of companies used to define the population frame for the electricity generator survey are identified by the Commission for Energy Regulation which is the independent body responsible for overseeing the liberalisation of Ireland's energy sector.

Size of target population: 10 electricity generators and EirGrid. As Transmission System Operator (TSO) since July 2006, EirGrid is responsible for operating Ireland's national electricity transmission system - otherwise known as the national grid

Specify the following statistical units:

- Reporting unit
- Observational unit
- Analytical unit

Examples of different kind of statistical units include: enterprise, enterprise group, kind-of-activity unit (KAU), local unit, establishment, homogeneous unit of production.

In most cases the reporting unit, observational unit and analytical unit are identical, but there are examples where this is not the case. In electricity statistics, you may find that energy companies (the reporting unit) provide data about different consumers like the individual household or manufacturing company (the observational unit). The analytical unit may be a group of energy consumers, defined by the ISIC.

Reporting units

2.7. Sampling frame and sample characteristics

Describe the type of *sampling frame* used in the collection and compilation of the statistics (e.g. list, area or multiple frames). A sampling frame is the source material or device from which a sample is drawn. Note that the sampling frame might differ from the population.

Not relevant as all electricity generators are surveyed

For each survey(s) used for the compilation of the statistics, specify the *sampling design* (e.g. random, stratified, etc.). Describe the routines employed for updating the sample. Include information about the sample size, and discuss to what extent the sample covers the population (e.g. energy consumption in the sample compared to total energy use by the population).

Note that chapter *2.7: Sample frame and sample characteristics* may overlap with chapter *3.4: Grossing up procedures.*

The list of companies used to define the population frame for the electricity generator survey are identified by the Commission for Energy Regulation (CER) which is the independent body responsible for overseeing the liberalisation of Ireland's energy sector. CER are to inform SEAI of any new entrants. The sample covers all electricity generators in Ireland and the transmission system operator (TSO)

2.8. Collection method

For each survey used for the compilation of the statistics/topic, describe how the data are collected (e.g. face-to-face, telephone, self-administered, paper and internet-based questionnaires, or administrative data and registers).

Data are collected by questionnaires which are sent monthly via email.

2.9. Survey participation/response rate

For each survey used for the compilation of the statistics/topic, specify the average response rate, or refer to response rates for specific surveys conducted.

There is currently a 100% response rate for the electricity generator and the TSO surveys

3. The statistical production process

3.1. Data capture and storage

Describe how the data is captured and stored (e.g. if the respondent replies using Internet-based questionnaire, the received data are electronically transferred to the production database. Paper questionnaire responses are keyed manually to the production database).

Completed questionnaires are normally received via email and manually transferred to the production database which is in the form of an Excel spreadsheet

3.2. Data editing

Describe the regular routines employed for detecting and correcting errors. This may include:

- Manual routines for detecting and correcting errors
- Automatic error-detection (and correction)
- Micro- and macro editing procedures
- Data validation procedures
- Outlier identification
- Processes and sources used for quality controls

Any significant changes between months are noted and the respondent is asked to clarify why there is a difference. The explanation is then added as a comment to the database.

A check is also run to check that the opening stock of the current month is equal to the closing stock of the previous month. Again, if this does not match the respondent is asked to clarify

The gross and net calorific values are calculated using the fuel input and energy inputs in the electricity generator survey. If these do not match the calorific values which are provided in the survey, the respondent is asked to clarify.

The annual data are made up of the twelve monthly electricity generator surveys. These data are validated against the Emissions Trading Scheme data on fuel inputs once it becomes available. If there is a discrepancy between the ETS figure and the survey figure, the ETS figure is used as this has been audited by the Environmental Protection Agency.

3.3. Imputation

Describe the principles for imputation and the assumptions that these principles are based on.
Note that this chapter may overlap with chapter *3.2: Data editing* and chapter *5.2: Accuracy*

Not relevant

3.4. Grossing up procedures

Describe how the population is divided into strata and what statistical models the estimations in the strata are based on. Describe how sub-indices are combined into aggregate indices and how uncertainty is estimated.

Net electricity data are received from the TSO and an estimated factor is used to convert to gross electricity. This is based on data received in 2005 when both gross and net figures were provided by the TSO.

3.5. Analytical methods

Give a description of any analytical methods used to adjust the data (e.g.: seasonal adjustment and temperature adjustment). A more detailed description of the analytical method can also be included as an annex.

Not relevant

4. Dissemination

4.1. Publications and additional documentation

Describe the form of dissemination of the statistics/topics in question (e.g. printed publications, website, etc.). Please provide relevant website link(s) if available.

The Energy Balance is published online in PDF and Excel format and can also be downloaded via the Energy Statistics databank. It is also contained in a number of publications. http://www.seai.ie/Publications/Statistics_Publications/

Give a complete reference to publicly available statistics databases where data from the statistics can be extracted. Include web addresses if available online.

Energy Statistics Databank http://www.cso.ie/px/sei/database/sei/sei.asp

Indicate whether you charge users for access to the statistics at any level of aggregation.

There is no charge

4.2. Revisions

Describe the current revision policies. E.g.: Is historical data revised when new methodology, new definitions, new classifications etc. are taken into use? Is the data continuously revised, or is the data revised at certain points in times (e.g. every third year, annually, etc.)?

There is no formal revision policy drafted. If the data are revised the update is submitted to the relevant reporting organisation, and the online Energy Balance is updated. A revision may be due to the result of a non-response or late response. The data may also be revised due to new methodology or if an error has been identified.

If applicable, describe any major conceptual or methodological revisions that have been carried out for this statistic/topic in the past.

There have been no major conceptual or methodological revisions in recent years

4.3. Microdata

Describe how microdata are stored.

Microdata are stored in an Excel database

Specify if microdata are available for scientific and/or public use. If so, describe under what conditions these are made available.

These microdata are not currently available for scientific and/or public uses

4.4. Confidentiality

Describe the legal authority that regulates confidentiality, and what restrictions are applied to the publication of the statistics.

Confidentiality rules as provided by Ireland's national statistics body, the Central Statistics Office (CSO):

Describe the criteria used to suppress sensitive data in statistical tables (cell suppression).

Primary confidentiality A category is confidential if any one of the following conditions applies: (i) there are less than three units (ii) one unit accounts for more than 80% of the total (dominance rule 1) (iii) two units account for more than 90% of the total (dominance rule 2)

Describe how confidential data are handled.

Confidential data are not published. Confidential data are marked as 'c' in the monthly submission to EUROSTAT under the Energy Statistics Regulation.

Describe any confidentiality standards that go beyond what is legally required.

Confidential data may be published if written approval is received from the affected unit/s. Confidential data may be published if it is already in the public domain

5. Quality

5.1. Relevance

State to which degree the statistical information meet the real needs of clients/users.

Although no formal user surveys have been carried out, the statistical information mostly meets the real needs of clients/users

5.2. Accuracy

State the closeness of computations or estimates to the exact or true values that the statistics were intended to measure.

As all electricity generators are surveyed, along with the transmission system operation, the methodology and validation used provide very accurate figures.

Measurement and processing errors

Discuss the measurement and processing errors that are relevant for the statistics. Try as far as possible to give an estimation of the size and scope of the errors.

Data are manually copied from each response into an Excel spreadsheet. Some conversion factors are also entered. There may be a possibility of errors but the data are checked afterwards. There is a timeseries of all the completed questionnaires so any significant changes can be monitored. The survey is usually completed by the same person each month. When a new person completes the survey, there may be some teething errors if they are unfamiliar with the process. The data are

checked to handle this. This is easily done as the data are contained in a timeseries so previous months and years can be compared quickly

Any significant changes are noted and the respondent is asked to clarify why there is a difference. The explanation is then added as a comment to the spreadsheet.

A check is also run to check that the opening stock of the current month is equal to the closing stock of the previous month. Again, if this does not match the respondent is asked to clarify

The gross and net calorific values are calculated using the fuel input and energy inputs in the electricity generator survey. If these do not match the calorific values which are provided in the survey, the respondent is asked to clarify.

Non-response errors
State the size of the unit non-response and the item non-response, distributed by important variables in the population (e.g. region, industry). Consider if the non-response errors are systematic, and if so, describe the methods used to correct it. Indicate whether the effects of correcting non-response errors on the results have been analysed, and, if so, describe them.

There have been no non-response errors of these surveys to date.

However, in the case of a non-response, the measures used to reduce this would be:
- Reminder emails sent and phone calls made to encourage completion of the survey.
- Customised versions of the survey to minimise the administrative burden on suppliers.

If there is no response the data are estimated based on an average of the last 12 months data, and stock data are linked to the previous month.

Sampling errors
Discuss the size of the sampling errors. Compare the population and sample with regards to important properties (e.g. coefficient of variance).

There are no sampling errors as all electricity generators are covered along with the TSO.

Other sources of error
Discuss other sources of errors that might be relevant for the statistics. E.g.: Model assumption errors, coverage errors

Not relevant

5.3. Timeliness and punctuality

Specify the time between the end of the reference period and publication.
If the statistics are published both as preliminary and final figures, specify the time between publication of preliminary and final figures. You should also point out whether the publication date is set according to certain rules (e.g. advance release calendar, a specific day or prior to other publications).

The reference period for the monthly electricity generator surveys is month -3, the frequency monthly. The reference period for the TSO survey is month -1, the frequency monthly. This ensures that all twelve months are received in time for a provisional Energy Balance which is normally published in March. The finalised Energy Balance is published in October.

Point out if there have been any major discrepancies between the planned publication date and the actual publication date in recent years. If so, state the length of this discrepancy and its cause.

No major discrepancies between the planned publication date and the actual publication date in recent years

5.4. Accessibility

Describe how easily accessible the statistics are. In particular, is there an advance release calendar to inform the users about when and where the data will be available and how to access them?

Are metadata and other user support services easily available? Are there particular groups that don't have access to the published statistics (e.g.: visually disadvantaged)?

The FAQ which can be found on the SEAI website gives details on where the data can be found and when to expect the provisional and finalised Energy Balance to be published.
Metadata are not publicly available
The website has not yet been adjusted for visually disadvantaged users

5.5. Comparability

Discuss the comparability of the statistics over time, geographical areas and other domains.

Comparability over time
Discuss comparability over time and include information about whether there have been any breaks in the time series of the statistics and why. Also describe any major changes in the statistical methodology that may have had an impact on comparability over time.

Energy Balance data are available from 1972 for Ireland. However, data are only comparable from 1990.

Comparability over region
Discuss comparability over geographical areas, and include information about whether the statistics are comparable to relevant statistics published by other countries and/or international organisations.

Data submitted to international organisations is comparable to other countries

Comparability over other domains
Discuss comparability over domains, and include information about whether the statistics are comparable between different industries, different types of households etc.

Not relevant

5.6. Coherence and consistency

Discuss the coherence/consistency between preliminary and final figures.

There may be a discrepancy between the electricity fuel inputs published in the provisional and final Energy Balance. This is because the validation carried out between the Energy Balance and the ETS data cannot be done until after the provisional balance has been published due to the publication date of the ETS data

Discuss the coherence/consistency between monthly, quarterly or yearly statistics within the same subject area. Can the results of different frequencies for the same reference period be combined in a reliable manner?

The sum of monthly electricity supply figures should equal the annual figure. However, there may be a discrepancy between the electricity fuel inputs. This is because the validation carried out between the annual data and the ETS data cannot be done until after the monthly questionnaires have been submitted to Eurostat. The annual questionnaires will contain this revision so the monthlies will not add up to the annual in this case.

Discuss the coherence/consistency with other related statistics (also those produced by other institutions/organisations on the same subject).

Not relevant for this data collection

6. Future plans

Are there any current or emerging issues that will need to be addressed in the future? These could include gaps in collection, timeliness issues, data quality concerns, funding risks, confidentiality concerns, simplifications to reduce respondents' burden etc.?

As the surveys are currently voluntary, options are being explored for a legal obligation to be placed upon the suppliers to respond.

Annexes

Illustrations and flowcharts

Illustrations and flowcharts are useful to summarize information and to get a better overview of the statistical production process. Illustrations and flowcharts can either be places in annexes or be included under relevant paragraphs in the template.

E.g.:

- A conceptual flowchart which illustrates the flow of data in the production of the statistics.
- A flowchart which illustrates the main tasks in the production process and the dependency between them.

Time schedule

Include a time schedule for the different phases of the statistical production process. The statistical production process *may* be divided into the following phases. Phase 1-3 may only be relevant for when a new statistics/survey is set up.

1. **Clarify needs** (e.g. map users needs, identify data sources)
2. **Plan and design** (e.g. plan and design population, sample size, how to analyze and edit data)
3. **Build** (e.g. build and maintain production system, test production system)
4. **Collect** (e.g. Establish a frame, draw the sample, collect data)
5. **Edit** (e.g. identify and code micro data, edit data, imputation)
6. **Analyse** (e.g. quality evaluation, interpret, analyse)
7. **Disseminate** (e.g. publish data, user contact)

Questionnaires

Include the complete questionnaire(s)/survey form(s) used

Example of publication tables

Include an example of a typical table published for the statistics. Include web addresses if available online.

Detailed description on analytical methods

If relevant, a detailed description of analytical methods used in the statistical production (like seasonal adjustment, temperature adjustment etc.) may be described in an annex. A short description can also be included in chapter 3.5: Analytical methods or under other suitable chapters.

SEAI Monthly Electricity Generator Survey

for the EU Energy Statistics Regulation of 2008 - No.1099/2008

Company:
Completed by:
Year:
Month:
Pages: **1**

SUSTAINABLE ENERGY AUTHORITY OF IRELAND
Energy Policy Statistical Support Unit

	Gas Fuels		
	Measure	**Natural Gas**	**Propane**
Fuel	Fuel Input (millions m^3)[1]		
	Gross Energy Input (TJ)[2]		
	Net Energy Input (TJ)[3]		
	Gross Calorific Value (kJ/m^3)		
	Net Calorific Value (kJ/m^3)		
Stocks	Opening Stock (tonnes)[4]		
	Deliveries (tonnes)[5]		
	Closing Stock (tonnes)[6]		
Generation	Electricity Generated (MWh)[7]		
	Own use in elec gen plant (MWh)		
	Exported Electricity (MWh)[8]		

	Liquid Fuels			
	Measure	**Heavy Fuel Oil**	**Medium Fuel Oil**	**Gasoil / Diesel**
Fuel	Fuel Input (tonnes)[1]			
	Gross Energy Input (TJ)[2]			
	Net Energy Input (TJ)[3]			
	Gross Calorific Value (MJ/tonne)			
	Net Calorific Value (MJ/tonne)			
Stocks	Opening Stock (tonnes)[4]			
	Deliveries (tonnes)[5]			
	Closing Stock (tonnes)[6]			
Generation	Electricity Generated (MWh)[7]			
	Own use in elec gen plant (MWh)			
	Exported Electricity (MWh)[8]			

	Solid Fuels			
	Measure	**Peat**	**Coal**	**Biomass**
Fuel	Fuel Input (tonnes)[1]			
	Gross Energy Input (TJ)[2]			
	Net Energy Input (TJ)[3]			
	Gross Calorific Value (kJ/l)			
	Net Calorific Value (kJ/l)			
Stocks	Opening Stock (tonnes)[4]			
	Deliveries (tonnes)[5]			
	Closing Stock (tonnes)[6]			
Generation	Electricity Generated (MWh)[7]			
	Own use in elec gen plant (MWh)			
	Exported Electricity (MWh)[8]			

Notes
1 Fuel Input is the fuel consumed for the purpose of producing electricity and also for the production of heat to be sold to third parties exclusively.
2 The gross energy input value includes all of the heat released from the fuel, including any carried away in the water formed during combustion.
3 The net energy input value excludes the latent heat of the water formed during combustion.
As a guide the difference between net and gross are typically about 5-6% of the gross value for solid & liquid fuels and about 10% for natural gas.
4 Opening stock is the fuel stocks at the beginning of the month in question. Held exclusively for the purpose of combustion in the electricity production process.
5 Deliveries are the physical deliveries of fuel during the month in question. Delivered exclusively for the purpose of combustion in the electricity production process.
6 Closing stock is the fuel stocks at the end of the month in question. Held exclusively for the purpose of combustion in the electricity production process.
7 Electricity generated is the electricity physically produced at the generator terminals.
8 Exported electricity is the electricity delivered at the "station gate" or the grid connection point.