COUNTRY PRACTICE IN ENERGY STATISTICS

Topic/Statistics: Deliveries of petroleum products

Institution/Organization: Statistics Norway

Country: Norway

Date: 12 April 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.

Key elements	
Name of the statistics	Deliveries of petroleum products
Background and purpose of the statistics	Until 1973, the Ministry of Trade collected figures on deliveries of petroleum products from the oil companies. As from 1973, monthly tables were produced in Statistics Norway. The purpose of the statistics is to show deliveries of petroleum products by purchaser group, county and at national level, measured as delivered litres. Information from the statistics is also used in the national accounts, in the energy balances and in international reports. As from 2010 the statistics also contain inform on price of selected petroleum products.
Population, sample and data sources	The statistics include all the sales of petroleum products to buyers in Norway. The population consists of large international companies that sell petroleum products in addition, direct imports by other dealers and any consumers are collected from the statistics on external trade. Prices on petroleum products are collected form the consumer price index
Main users	Oil companies, the Norwegian Petroleum Institute and other private and public institutions that work with different energy questions and analysis.
Important contribution or issue addressed	An important energy statistics on petroleum products that also give valuable information on marked shares back to the reporting companies.

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.

Deliveries of petroleum products

1.2. History and purpose

State when the statistics were first published.

Until 1973, the Ministry of Trade collected figures on deliveries of petroleum products from the oil companies. The figures were distributed by county and some purchaser/consumer groups, and were presented in statistical tables once a year. As of 1973, monthly tables were produced in Statistics Norway. This was a result of cooperation between Statistics Norway, the Ministry of Trade, the Norwegian Petroleum Institute and the oil companies. Based on experience and changing conditions, the production and content of the statistics have changed several times since 1973.

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

The purpose of the statistics is to show deliveries of petroleum products by purchaser group, county and at national level, measured as delivered litres. Furthermore, data from the statistics gives information on marked shares back to the reporting oil companies In addition prices on some selected petroleum products are published from February 2010.

State the time period the data are collected for.

Data is collected on a monthly basis and the statistics is published approximately two weeks after the end of the reference month.

1.3. 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.

Monthly publishing

1.4. 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 statistics are published as a Today's statistics on http://www.ssb.no/petroleumsalg_en/ around the 15th of every month. The figures are available in Statbank Norway. The statistics are also published in the Statistical Yearbook. In addition the oil companies receive excel spread sheets with a summery of their own marked shares.

1.5. Regional level

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

County and national level

1.6. 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.

The figures are used by oil companies and the Norwegian Petroleum Institute. In addition, the figures form part of the data used in the production of energy balances in Statistics Norway and in Monthly report to the International Eurostat and Energy Agency (IEA).

1.7. 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).

Statistics Norway, Division for energy and environmental statistics

1.8. 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 Norwegian Statistics Act of 16 June 1989 no. 54, §§ 2-2 and 2-3

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

Not relevant

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

Regulation EC NO 1099/2008. Information from the statistics is, together with other data, used in legally binding international reports.

1.9. 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

Financed over the ordinary budget of Statistics Norway

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).

4 to 5 labour days each month for one person

1.10. 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.).

Parts of the statistics are used of the in Monthly reports to Eurostat and the International Energy Agency (MOS and JODI reports) and in our Energy balances and thereby in the annual reports to Eurostat, International Energy Agency and UN.

2. Statistical concepts, methodology, variables and classifications

2.1. Scope/omfang

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 include all sales of petroleum products in Norway distributed on county, products and purchaser groups corresponding to EUs NACE Rev. 2

2.2. Definitions of main concepts and variables

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

The number of litres sold is registered in the country of delivery. The purchaser's main area of business (measured by turnover) determines which purchaser group (industry) the sale is registered in. The statistics include deliveries in Norway (incl. Svalbard, Bjørnøya and Jan Mayen) and on the Norwegian continental shelf. Deliveries to Norwegian ships and airplanes abroad are not included.

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?).

The statistics covers all sales of petroleum products in Norway grouped by 22 products, 34 purchaser groups and 21 counties.

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.

All sales are reported in litres from the oil companies. Figures from the foreign statistics is converted from tonnes to litres to be comparable.

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).

The classification of purchaser group are based NACE Rev 2. New updated user manuals are send out to the reporting oil companies at the beginning of every new year.

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.

Companies who submit a complete data set submit the data electronically on files. Other companies submit their data in a form. In addition, import and export data from the statistics on external trade are used. Prices on petroleum products are collected form the consumer price index

2.6. Population

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

The reporting units are the large companies that sell petroleum products in Norway. Information about smaller companies is collected through the foreign trade statistics. The analytic units are the petroleum products.

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.

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.

The sample consists of large oil companies that submit complete reports and some smaller companies that submit a less detailed report (jet fuel, bitumen and lubricant oils). In addition, the sample includes direct imports by a number of small companies.

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.*

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).

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.

100 per cent

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).

The data are stored in Excel files and DAT files.

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

Total sales for each company are compared with additional information from the company. In addition, the companies check that the complete statistics correspond with their own figures. The companies receive tables containing their sales figures, total sales and market shares.

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*

Imputation methods are not used. Companies are asked to give new information when we suspect incomplete reporting of data.

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.

Given the assumption of complete reports, grossing up is made by simple aggregation of the figures.

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.

Analytical methods are not used to adjust data. Sale of petroleum products last month is compared with sales for the same month the pervious year.

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 statistics are published as a Today's statistics on http://www.ssb.no/petroleumsalg_en/ around the 15th of every month. The statistics are also published in the Statistical Yearbook of Norway.

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

The figures are available in Statbank Norway, http://statbank.ssb.no//statistikkbanken/default_fr.asp?PLanguage=1

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

The large oil companies that participate are charged for their marked shares that they receive monthly

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.)?

The statistics is published as preliminary figures; data is revised when we receive information on new figures from the oil companies (either on our request or on initiative from the oil companies).

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

Not relevant

4.3. Microdata

Describe how microdata are stored.

Microdata are stored at Unix servers annually according to Statistics Norway standards (Datadok).

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

Data are available to the public if they address Statistics Norway and the request do not interfere with the confidentiality principle. Confidential data can be made available to scientists and to governmental institutions if they fulfil the requirement and the right authorizations according to The Norwegian Statistics Act are in place.

4.4. Confidentiality

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

Sales figures for petroleum products are confidential when one participants marked share exceeds 90 per cent or two participants share exceeds 95 per cent in one segment.

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

If figures in one segment are in conflict with the confidential principle we merge purchaser groups or do not publish figures on county level; only at a national level.

Describe how confidential data are handled.

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

5. Quality

5.1. Relevance

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

The figures are official statistics. The published figures on the webpages are public and used by organizations, students and private persons. The excel spreadsheets to the oil companies are an important feedback in their analysis of the marked.

5.2. Accuracy

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

Errors in the data reported to Statistics Norway can occur. Control routines are established, but they do not necessarily reveal all errors. The statistics gives information on sales unit not on actual use in the reference period. The difference between these values are uncertain.

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.

We have no non-response errors or non-response.

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.

All units are included in the statistics

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

All the actors on the marked is represented in the statistics by either submitting data to Statistics Norway or through the foreign statistics

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

In the statistics there is a problem with the purchaser groups that are called resellers/distributors. When the oil companies place products that are sold into these groups, it prevents us from getting the total overview over end-user in the marked.

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).

Figures are published Approximately two weeks after the end of the reference month. The publication is announced in the release calendar not less than three months before.

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.

The statistics have in principal been published according to the release calendar. If there has been a delay in data submission from one of the oil companies there have been a 1 to 3 day delay in the publication.

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)?

Figures and tables are available at Statistics Norway's web pages, in addition to Statbank Norway

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.

Time series are available back to 1952. Time series with the same variables as is presented today is available from 1994.

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.

The figures give a complete overview over sales of petroleum products in Norway. The figures can also be broken down to county level.

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.

The sales are classified on purchaser groups; these purchaser groups are based on international NACE standards.

5.6. Coherence and consistency

Discuss the coherence/consistency between preliminary and final figures.

There are usually not considerable differences in the volume for litres, or within the product classifications. When we receive revised figures from the oil companies they usually contain changes in the purchaser groups or county classifications.

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?

We only collect monthly data. We are however working on a pilot project where we ask the oil companies for annual data for sale to every costumer where they include the Business Register Number on all transactions. The purpose is to connect the number up to a national register of companies to determine a more accurate purchaser group (more detailed industrial and local classification) and reduce the problem we are facing in the reseller/distributor groups.

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

Some of the external users have pointed out the problem with the reseller/distributor purchaser groups. In the energy balances and emissions estimates one product is reclassified and some adjustments are done between two purchaser groups.

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.?

See 5.6

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.