

Standard-documentation Meta information

(Definitions, comments, methods, quality)

on

Random Sample Survey Energy Consumption of Households

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Executive Summary

The survey “Energy Consumption of Households” is a biennial survey conducted as a supplementary module to the mandatory Labour Force and Housing Survey (LFS or Microcensus). The goal of the survey is to determine the quantities and costs of energy consumption of households. More specifically, information on energy consumption and purpose of use is gathered by collecting data on

- energy consumption – quantities and consumption expenditures – for each energy carrier used in households and on
- purpose of energy use in households, i.e. data on the purposes of space heating, water heating, cooking and miscellaneous purposes (“other purposes”).

This basic stock of fundamental data is complemented with further information regarding

- the type and age of the heating system used in a given household,
- the type and age of potential additional, secondary heating systems,
- renovation measures and – if available – thermostat settings.

The energy consumption of households consists of energy consumption in dwellings on one hand and of passenger cars on the other hand. Therefore in addition to the aforementioned data information on the energy consumption of passenger cars is collected: e.g. type of fuel, average fuel consumption per 100km, annual mileage and the year the car was built.

The reference period of the survey is the period of the last annual statement (e.g. annual electricity bill), which usually corresponds to the last twelve months prior to the interview.

General information regarding the surveyed households such as number of residents, the size and the age of the dwelling, the legal relationship on the basis of which the apartment or house is used and information regarding the primary heating system used by the household is taken from the LFS.

The survey was conducted in 1975 for the first time. Since 2004, it has been conducted biennially. The survey serves three purposes:

- The initial purpose is to continually record household energy consumption and obtain relevant information for use in the National Accounts.
- Secondly, the survey results help to improve the sectoral structure of energy consumption and energy expenditures which is relevant in the context of energy balances and energy accounts. This second goal has become just as important as the first one by now.
- Thirdly, Austria has been obligated to report detailed energy consumption data to Eurostat since 2016, which is not possible without taking the results of this survey into account.

Overview 1 outlines the characteristics of this survey.

Overview 1: Characteristics of the survey

- The survey focuses on households at their primary residence and on passenger cars used in households.
- The survey consists of a multitude of quantitative characteristics, each burdened with high volatility. Regarding rarely used energy carriers this leads to high sampling errors.
- Complex data validation and modelling of purposes of use of thermal energy are necessary.
- Surveyed periods deviate from calendar years.

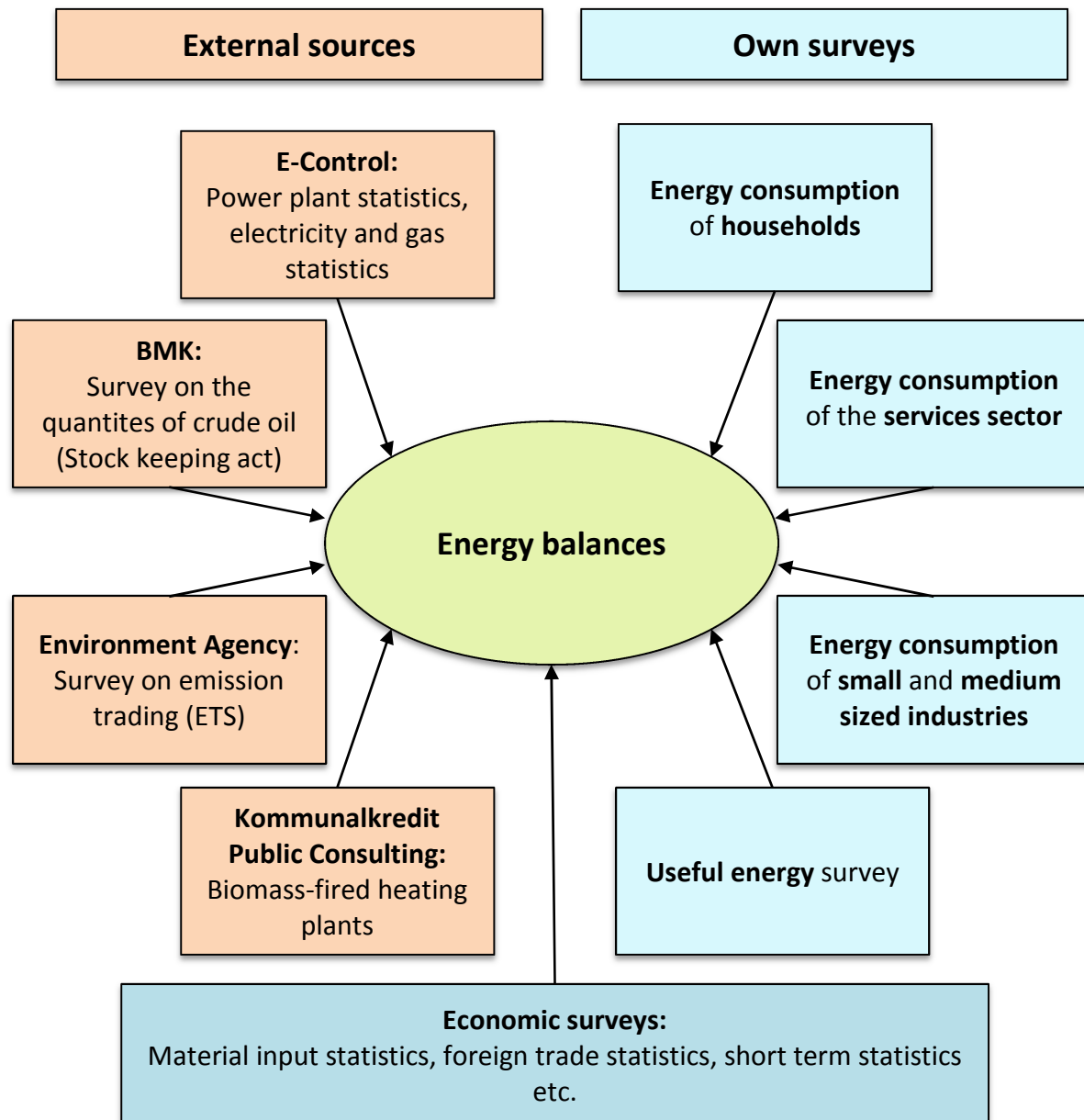
The basic design of the survey program has essentially remained the same over years, but adaptations had to be made from time to time to meet the changing conditions. The fundamental restructuring of the LFS (switch from face-to-face interviews to telephone interviews and simultaneously to paperless surveys) in 2004 triggered the overhaul of the entire process of plausibility checking and data validation of the survey on energy consumption in households.

The reasons for ongoing changes in data validation processes are rooted in the ever-increasing requirements for the compilation of the energy balances. Originally, energy balances should depict the energy supply of Austria and the energy flows in the Austrian economy with the accuracy and timeliness necessary for basic political decisions (relevancy based on the National Accounts). By now, the energy balances serve the purpose of fulfilling several of Austria's international obligations: obligations on stock keeping (IEA treaty), impacts of energy production (e.g. solar energy or heat pumps, Cogeneration Directive) and political steering measures (e.g. Green Electricity Act, EU Renewable Directive, Energy Efficiency Act).

The relevance of the current survey for compiling the energy balances makes it essential to crosscheck its results with several other datasets used in the energy balances and to submit the data to an extensive and precise data validation process. Consequently, the final result and the published tables of the current survey do not constitute direct survey results but the outcome of a survey-based modelling process.

Overview 2 shows the most important data sources used in the energy balances.

Overview 2: Data sources of energy balances



It is important to take into account the differences between the survey on energy consumption in households and the data published in energy balances: The data in the energy balances is based on calendar years whereas the survey is based on reference periods that aren't identical to calendar years. Furthermore, an estimation of energy consumption in secondary residences is added. Therefore the results of the present survey and the data in the energy balances are not directly comparable.

The Austrian methodology used in this survey is characterized as a best-practice-approach in the Eurostat manual "[Manual for statistics on energy consumption in households](#)" published in 2013.

Energy Consumption of Households – Main Features	
Subject Matter	Collection of apartment-specific information on quantities and expenses as well of purpose of use (qualitatively) per energy source.; Regarding dwellings: collection of primary and possible secondary heating systems as well as age of the heating system, of cooling systems, renovation measures. Regarding personal cars: fuel quantity used, kilometers travelled per year, avg. fuel consumption per 100 km
Population / Observed unit	Households at their primary residences
Type of statistics	Random sample survey
Data sources/Survey techniques	The survey “Energy Consumption of Households” is a biennial survey conducted as a supplementary, voluntary module to the mandatory Labour Force and Housing Survey.
Reference period or due day	The period of the last annual statement (e.g. annual electricity bill), which usually corresponds to the last twelve months preceding the survey.
Periodicity	Biennial
Survey participation (in case of a survey)	Voluntarily
Main legal acts	Federal Statistics Act in the current version, Regulation (EC) No. 1099/2008 of the European Parliament and of the Council of 22 October 2008 on Energy Statistics
Most detailed regional breakdown	Laender (NUTS 2)
Availability of results	Preliminary results: not applicable Final results: 6 months after the end of the survey
Other	The results of the survey are verified through a complex data validation process and crosschecked with datasets used to compile the energy balances.