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SURVEYS ON FINAL ENERGY CONSUMPTION IN HOUSEHOLDS

Study tour on Energy statistics and Energy balances
under INOGATE programme
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Overview

- Past activities – survey carried out in 1997
- WG Final Energy Consumption in Households
- FECH – survey carried out in 2010
- Experience gained - similarities and differences between the households surveys
- Follow-up activities



Past activities – what has happened so far?

The Commission funded a programme of surveys on households energy consumption in the C&EE countries.

The Objectives of the survey were:

- a) To obtain good estimates of consumption of fuels, electricity and heat for household use in rural and urban households according to the household size and building type.
- b) To obtain information on the energy consuming appliances used in households and their ages.



Past activities – survey carried out in 1997

- In 1997 NSI carried out a survey “Energy Consumption in households” as the reference year was 1996. It was conducted under the pilot project “Harmonization of energy statistics” at the second phase of the Multibeneficiary Phare Programme.
- The objective of the survey was to collect reliable statistical information on the consumption of energy resources in the households and to improve quality of the Final Energy Consumption data in the Overall Energy Balance of Bulgaria. The survey was carried out by interview based on representative sample of households. For this purpose NSI used a sample of 5758 households, based on data from the census (2.96 million households for the country).
The response rate was 93.9%.

Results:

The survey provided missing information for the energy consumption in households. A number of additional information useful for the analysis of the energy balances’ data was collected.

On this basis an evaluation of the Overall Energy Balance data was also made.



WG Final Energy Consumption in Households

What the Regulation says:

“[...] With a view to improving the quality of renewable energy and final energy consumption statistics, the Commission (Eurostat), in collaboration with the Member States, shall make sure that these statistics are comparable, transparent, detailed and flexible by: [...] :

(a) [...]

(b) reviewing and determining the methodology used at national and Community level to generate final energy consumption statistics (sources, variables, quality, costs) based on the current state of play, existing studies and feasibility pilot-studies, as well as cost-benefit analysis yet to be conducted; and evaluating the findings of the pilot studies and cost benefit analysis with the view to establishing breakdown keys for final energies by sector and main energy uses and gradually integrating the resulting elements in the statistics from 2012 (reference year) onwards.”

WG Final Energy Consumption in Households

Eurostat set up a Task Force and a Working Group.

Task Force:

- Objectives:
 1. Elaborate elements to be included into country methodology review reports
 2. Elaborate recommendations for a data collection (coverage)
- Members:

A few volunteering MS which have experience in this field - AT, FR, DE, DK, UK

WG Final Energy Consumption in Households

Working Group:

- Structure of a country review report and proposed coverage of a survey (December 2008)

Eurostat:

- Review these reports, compile a synthesized evaluation (May-June 2009)



WG Final Energy Consumption in Households

Member States:

- To review:
 - National practices related to energy consumption in households
 - User requirements
- To discuss/endorse proposals:
 - Recommended coverage for a data collection on households
 - Questionnaire on reviewing existing national practices



Country review report - review current activities

The questionnaire examined the availability of statistics on energy consumption in households in the Member States.

Part A reviewed surveys and administrative sources used at national level. It examined the availability of typical information normally made available by such sources, their quality and associated costs.

Part B reviewed modelling activities, which may eventually be used to make these statistics available.



FECH – survey carried out in 2010

Objectives of the project

- ✓ Obtaining data on the structure of the energy consumption in households
- ✓ Providing information on Energy Efficiency Technologies
- ✓ Estimation of dwelling characteristics related with energy consumption
- ✓ Comparing the results with the data from the previous survey conducted in 1996

FECH – survey carried out in 2010

Method used:

Detailed Questionnaire + devices for measuring the electricity consumption (power meters) for the main types of household equipment was used.

The sample of the household budgets survey (3000 households) was studied with questionnaires.

A sub-sample of 100 households (100 of 3000) was studied with power meters.

FECH – survey carried out in 2010

Energy – Meter Peak tech 9024

Allows measuring the energy consumption of electrical appliance, and by entering the electricity rate, to calculate the total cost of appliances power consumption. It also detects the overload condition and usage information.

Using the power meter we made a test of some main electrical appliances in few households.

The test results showed deviation between the technical description and the real measured power in all types of appliances. This shows the impossibility to estimate the electricity consumption based only on the paper technical characteristics given by the manufacturer.





FECH – survey carried out in 2010

Why did we choose to use this approach among the other possibilities?

- ✓ The examination by external sub-contractor requires a huge budget.
- ✓ The external sub-contractors require some changes in the electrical network of the households. We considered that the households will be reserved to any changes and will not allow carrying out the survey.
- ✓ The other methods /for example the telephone interview/ are not reliable because of the uncertainty that the households will be able to give an exact answer and estimation of their energy consumption.



Experience gained - similarities and differences between the households surveys

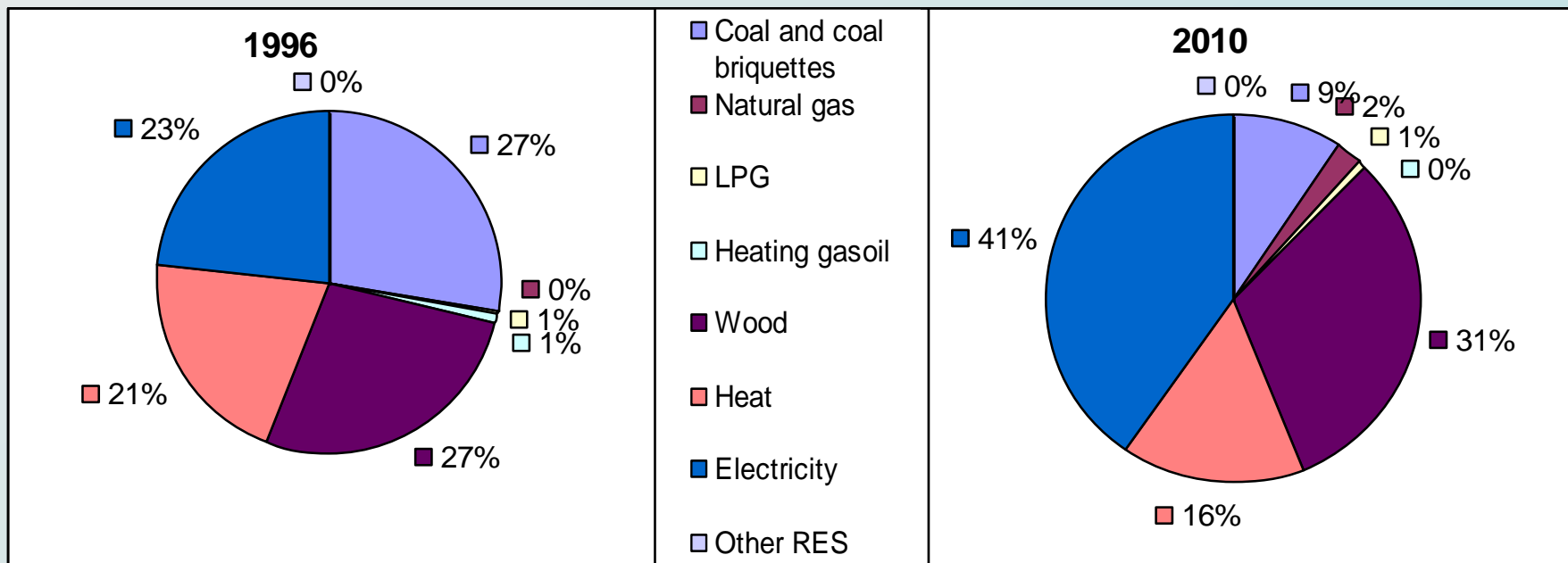
Consumption of energy products in 2010 compared to 1996

Energy products	Quantity - TJ		Share - %	
	2010	1996	2010	1996
Total	94527	128713	100	100
Coal and coal briquettes	8910	35494	9.43	27.57
Natural gas	2065	0	2.18	0
LPG	858	794	0.91	0.62
Heating gasoil	73	819	0.08	0.64
Wood	29658	34596	31.38	26.88
Heat	14839	27112	15.7	21.06
Electricity	38013	29898	40.21	23.23
Other RES	111	0	0.11	0



Experience gained - similarities and differences between the households surveys

Share of energy products used in households - %





Experience gained - similarities and differences between the households surveys

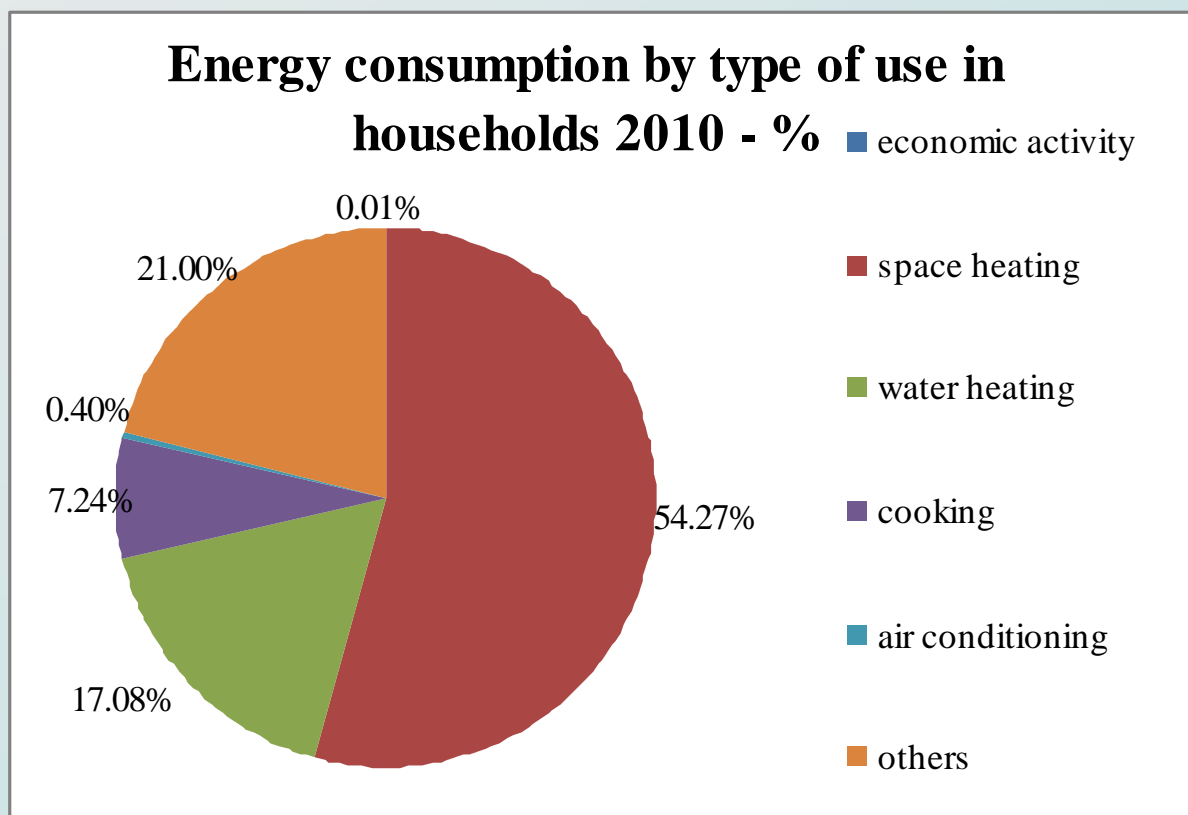
Analysis of data on consumption of energy products by households for the period from 1996 to 2010 shows a decrease of the total energy use and change in the structure of consumed products.

The consumption of fossil fuels and heat is significantly reduced, while the consumption of electricity and firewood is increased.

Natural gas, which before 2000 year is not used by households, has an insignificant share in consumption in recent years.



Experience gained - similarities and differences between the households surveys





Experience gained - similarities and differences between the households surveys

The energy consumption of households in 2010 was **25.9%** of final energy consumption in the country. Improving the quality of data related to household energy use is an important part of our work programme.

During the implementation of the project a reliable and detailed information on indicators for energy consumption in households was collected.

Within the survey the patterns of household fuel use and how it is related to income and housing standards was studied. This information is important for the formulation of social and energy policies at national and EU level.

Due to the relatively high costs for such study, a similar survey can be planned for a period of 5 and more years. This will enable to study the fundamental changes in the type and quantity of energy consumption in the residential sector.



Follow-up activities

MESH project

An ESSNet project called "MESH" ("Methodology on Energy Statistics in Households") was launched in January 2012. Its objective was to create a manual and a training session with a view of supporting all Member States for this new data collection.

The manual contains methodology and definitions, practical case studies and examples, and it also describes and discusses mixed-mode data collection (modelling, surveying, administrative data, etc.) that can be useful in this context.

This manual is now far advanced and is expected to be available in its definitive published form around October. Regarding the training session, this is foreseen to take place on 2 December 2013, with the participation of statisticians from all Member States.

Follow-up activities

- The final outcome of this initiative aims at including energy consumption statistics in households in the statistical scope of the Energy Statistics Regulation (Regulation (EC) No 1099/2008).
- A first proposal of a legal act has been produced earlier this year.
- Written consultation of the members of the ESWG on the first draft Commission Regulation was launched in May 2013 asking for MS comments.
- NSI of Bulgaria expressed its comments by e-mail during the written consultations.
- Bulgaria supports the proposed draft Commission regulation amending Regulation (EC) No 1099/2008 as regards the implementation of annual statistics on energy consumption in households.



Follow-up activities

Past and next milestones

21 March 2013	Written consultation of the ESWG on the definitions to be included in the new Commission Regulation (Comitology)
April 2013	Drafting of a new Commission Regulation
15 May 2013	1st Written consultation of the ESWG on the draft Commission Regulation
26–27 June 2013	All the received comments have been discussed during the annual meeting with the Member States in the ESWG meeting
9 July 2013	2nd Written consultation of the ESWG on the draft Commission Regulation based on the conclusion reached in the ESWG meeting
July-August 2013	Implementation of comments received from the Members of the ESWG in both written consultations and at the ESWG meeting
5 September 2013	Written consultation of the DIMESA on the draft Commission Regulation
25 September 2013	Inter-Services Consultation
17 October 2013	Deadline for sending the Document for the ESSC meeting
14th November 2013	Vote of the ESS Committee
November 2013 – February 2014	European Parliament and Council scrutiny period (3 months)
March 2014	Adoption by the Commission and publication in the OJ



Thank you for your attention

For further questions, please
contact me at:

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