



OVERVIEW

OF THE 5 ANNUAL QUESTIONNAIRES: COMPLETION AND SUBMISSION; ISSUES AND CHALLENGES

*Study tour on Energy statistics and Energy balances
under INOGATE programme
Sofia, 5-7 November 2013*

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PRESENTATION OVERVIEW

- ✓ Importance of energy and energy statistics
- ✓ Main points of the reporting of Bulgaria
 - Background
 - Legal EU framework
 - Classifications used
 - Release policy and dissemination format
- ✓ Organization of data collection for compiling the Annual questionnaires at NSI of Bulgaria (BNSI)
 - ✓ Data collection at BNSI – key points
 - ✓ Surveys providing data on completing the AQ's
 - ✓ Relations with other surveys according to NSP
 - ✓ Administrative sources used
- ✓ Annual questionnaires 2012 – changes and challenges
- ✓ What we propose



IMPORTANCE OF ENERGY AND ENERGY STATISTICS



- ✓ Energy is fundamental for socio-economic development.
- ✓ Increasing demand for energy and growing concerns at the same time.
- ✓ Reliable and timely monitoring of the supply and use of energy.
- ✓ High quality energy statistics.

MAIN POINTS (1)

✓ **Background**

- Annual energy data collection – based on 5 joint questionnaires of Eurostat/European Commission – IEA/OECD – UNECE/UN, covering the major energy sources:
 - Coal - Mrs. Kalinka Petrova
 - Oil – Mrs. Maria Georgieva
 - Natural gas - Mrs. Iveta Minkova
 - Electricity and Heat - Mrs. Ivanka Tzvetkova
 - Renewables and Wastes – Mrs. Ivanka Tzvetkova
- Bulgaria have been submitting data since 1990 onwards and up to 2008 data were reported on gentlemen’s agreement.

✓ **Legal EU framework**

- Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics.
- Commission Regulation (EU) No 147/2013 of 13 February 2013 amending Regulation (EC) No 1099/2008, as regards the implementation of updates for the monthly and annual energy statistics.

MAIN POINTS (2)

✓ **Classifications used**

- Statistical classification of economic activities in the European Community – NACE, Rev.2 (since 2008);
- PRODENERGY – national classification based on Annex B of Regulation (EC) №1099/2008 of the European Parliament and of the Council;
- Combined nomenclature 2012 for the classification of goods (Commission Regulation).

✓ **Release policy and dissemination format**

- 11 months after the reference year (30 November) via E-Damis to Eurostat, by e-mail to IEA and UNSD.
- National institutions – Executive Environment Agency – for verification of energy data concerning annual inventory reports of enterprises for greenhouse gas emissions.
- Annual data from the questionnaires are basis for the aggregation of country Energy Balance. The Overall Energy Balance (OEB) of Bulgaria is distributed by various channels for dissemination of information and this topic is presented in detail in a separate presentation.

ORGANIZATION OF DATA COLLECTION (1)

- ✓ **Data collection at BNSI – key points**
 - **Law on statistics and National Statistical Program (NSP)** – national legal basis regulating conducting the statistical surveys.
 - **Respondents** - Producers, Traders, Transmission and/or storage operators, Consumers.
 - **Different ways for submitting reports:**
 - Paper version – still supported.
 - Excel format – download from the site is provided.
 - Online submitting via the Information System Business Statistics (ISBS).
 - **Deadlines for submitting reports:**
 - via ISBS – till 31st of March after the reporting year.
 - other forms – till 31st of March after the reporting year.

ORGANIZATION OF DATA COLLECTION (2)

- ✓ Surveys providing data for compiling the AQ's
 - **Consumption of Fuels and Energy (yearly)** – data on Use of Energy products.
 - **Production and Sales of Energy products (yearly)** – data on Production of Energy products and Sales and respective values.
 - **Resources and Deliveries (yearly)** – data on Production, Import/Export and Stocks and Deliveries of the Households, Service and Transport sector.
 - **Electricity & Heat Production (yearly)** – data on Energy products Transformation Input/Output, Capacity and Production of installations, according to:
 - **type of the plant** – Electricity only, Heat only or CHP;
 - **type of the producer** – Main activity producer or Autoproducer.
 - **Energy Transformation Processes (yearly)** – data on Transformation Input/Output and Own uses of enterprises, producing secondary energy products.
 - **Deliveries of Energy products (Electricity/Heat/Gas) to end-consumers (yearly)** – data on quantities delivered to consumers for their own use, not for trading.

ORGANIZATION OF DATA COLLECTION (3)

- ✓ **Relations with other surveys according to NSP** - as a part of Annual Set of Questionnaires for non-financial enterprises.
 - **Fuels and Energy Consumption Questionnaire** – must be submitted by enterprises, that have reported expenditures for Energy products in annual “Income and Expenditure Questionnaire”.
 - **Production and Sales of Energy products Questionnaire** – should be submitted by enterprises, reported:
 - percentage of net sales income > 0 in “Enterprise information” – section “Economic activity” – for some activities in the energy field, and
 - Income from sales of production > 20 thousand BGL in annual “Income and Expenditure Questionnaire”.

- ✓ **Use of Administrative sources**
 - Customs data and Intrastat data about Import/Export – for verification.
 - Data from Ministry of Economy and Energy on Production and sales of solid fuels – for verification.

COAL – 2012 (1)

✓ Changes in reporting 2012

- Lignite/Brown coal has been split into two categories – Lignite and Oil shale and oil sands.

Lignite/Brown coal

Non-agglomerating coal with a gross calorific value less than 17 435 kJ/kg (4 165 kcal/kg) and greater than 31% volatile matter on a dry mineral matter free basis. Oil shale and tar sands produced and combusted directly should be reported in this category.

Lignite

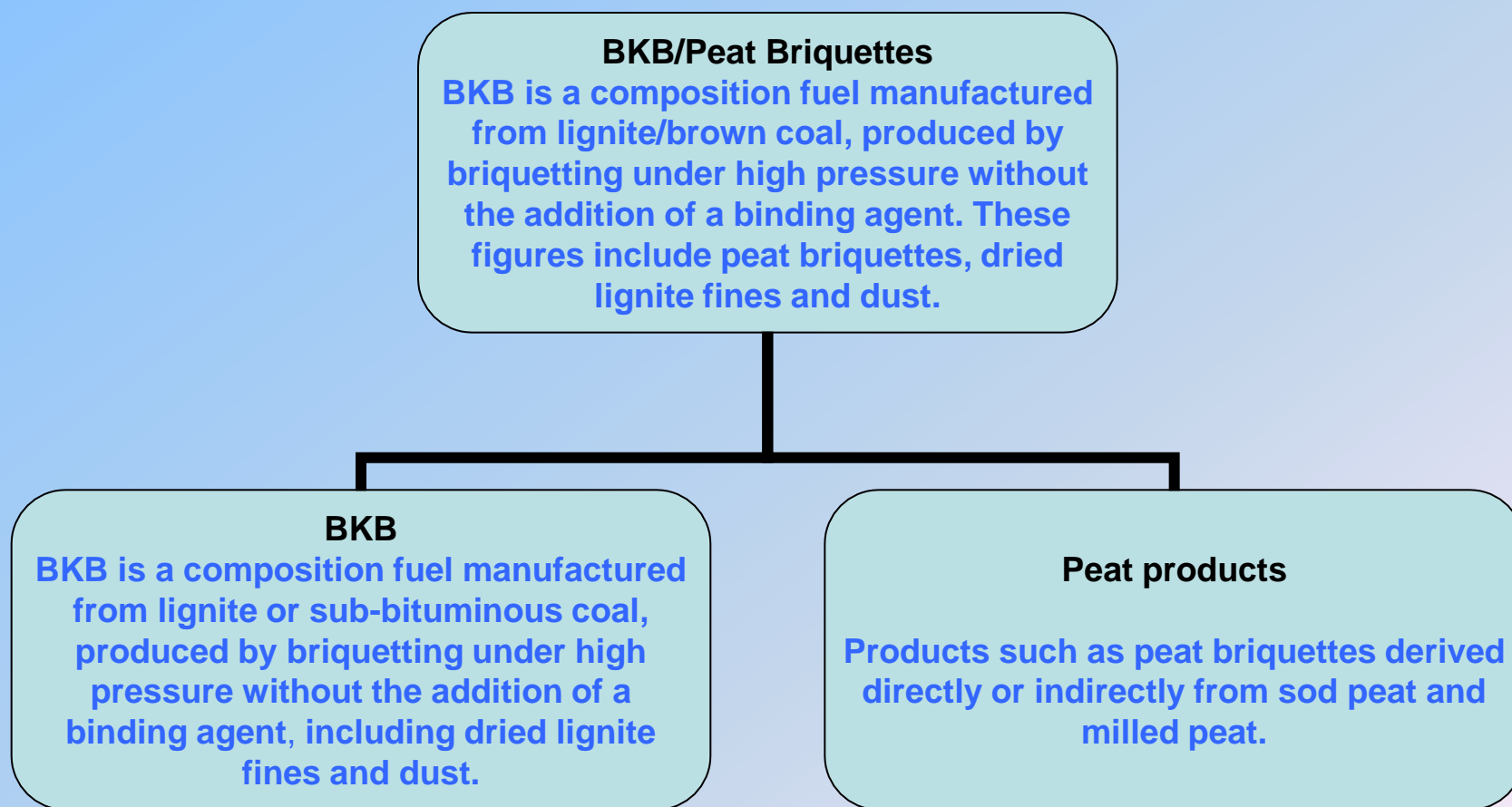
Non-agglomerating coal with a gross calorific value less than 20 000 kJ/kg and greater than 31% volatile matter on a dry mineral matter free basis.

Oil shale and oil sands

Oil shale and oil sands are sedimentary rock which contains organic matter in the form of kerogen. Kerogen is a waxy hydrocarbon-rich material regarded as a precursor of petroleum. Oil shale may be burned directly or processed by heating to extract shale oil.

COAL – 2012 (2)

- **BKB/Peat Briquettes** has been split into two categories – **BKB** and **Peat products**.



COAL – 2012 (3)

Anthracite
Coking coal
Other Bituminous coal



from
greater than 23 865 kJ/kg
to
greater than 24 000 kJ/kg

Sub-bituminous coal



from
between 17435 and 23 865 kJ/kg
to
between 20 000 and 24 000 kJ/kg

Lignite



from
less than 17435 kJ/kg
to
less than 20 000 kJ/kg

COAL – 2012 (4)

✓ Challenges

- Concerning the calorific value, data submitted from the producers are completely reliable. The situation concerning data on calorific value of imported quantities is a little complicated. Companies import coal mainly from Russia and Ukraine. Coal are classified according the Russian classification and importers use the same classification in invoices to the final consumers instead of the CN. The final consumers have a difficulty to report the quantities under the relevant type of coal.

First 1-2 letters in coal's grade name mean one of 10 grades by volatile matter:

D = long-flame coal (from Russian "Dlinnoplamenny")

G = gas coal (from Russian "Gazovy")

GZh = gas fat coal (from Russian "Gazovy Zhirny")

Zh = fat coal (from Russian "Zhirny")

KZh – coking fat coal (from Russian "Koksovy Zhirny")

K = coking coal (from Russian "Koksovy")

K 2 = coking second coal

SS (or **CC** in some sources) = weakly caking coal (from Russian "Slabo spekayuschiysya")

OS = lean caking coal (from Russian "Otoschenny Spekayuschiysya")

T = meager coal (from Russian "Toschy")

PA = semi-anthracite coal (from Russian "Polu- antratsit")

A = anthracite coal

OIL – 2012

✓ Changes in reporting 2012

- “Bio jet kerosene” added in the definitions list.
- “Transport diesel” changed to “Road diesel” (but the definition is unchanged).
- Based on the above, the applicable product lists of following tables are updated:
 - Table 1: Supply of crude oil, NGL, refinery feed-stocks, additives and other hydrocarbons.
 - Table 2: Supply of oil products.
 - Table 3: Gross inland deliveries by sector.
- Some editorial changes improving clarity in the different sub-paragraphs (it does not affect the statistical scope).
- “Refinery fuel used for heat generation” added in “MEMO ITEMS: REFINERY FUELS FOR” of Table 2a.
- Two new tables added – Table 3a: “Gross inland deliveries for energy use” and Table 3b: “Gross inland deliveries for non-energy use” as sub-tables of table 3 “Gross inland deliveries for energy/non-energy use”.

✓ Challenges

- Correct reporting of the part of bio-fuels in petroleum products: transport diesel, kerosene type jet fuel, motor gasoline.
- Correct reporting of data on the imports and exports of petroleum products.

NATURAL GAS - 2012

✓ Changes in reporting 2012

- Reporting various possibilities of Natural Gas trade – swap deals, spot purchases, regasified LNG.
- Natural Gas Stocks held abroad.
- LNG Storage.

✓ Challenges

- Increasing use of data from administrative sources in order to reduce respondent burden.
- Providing of energy statistical data and organizing of data collection after impending implementation of the requirements of Third Energy Package; running of Gas interconnections with neighbor countries (still on stage project or in construction) and realization of South Stream – because of increasing of the companies participating on the gas market.

ELECTRICITY & HEAT - 2012

✓ Changes in reporting 2012

- Table 3: Road electricity use is included in the transport sector.
- Rows in Table 6A and 6D were modified to align with definitions of combustible fuels in other annual questionnaires.
- In Table 7A, pure pumped storages and mixed plants are a subset of hydro and solar thermal capacity were added to table.
- 2 tables for CHP are removed.

✓ Challenges

In Bulgaria there is no large number of: electric cars that are loading in low-voltage grid; autonomous photovoltaic systems or wind-solar chargers. Penetration of new technologies for use of renewable energy requires the implementation of new sample surveys to assess the captured renewable electricity and heat.

RENEWABLES & WASTES – 2012 (1)

✓ Changes in reporting 2012

- **Table 1: Electricity and Heat Production** - Wood/Wood waste/Other solid waste is now Solid Biofuels; Landfill gas, Sludge gas, and Other biogas have been replaced with one row Biogases
- **Table 2: Supply, transformation, energy sectors and end use**
 - Landfill gas, Sludge gas, and Other biogas have been replaced with one column Biogases
 - Liquid Biofuels (reporting of consumption is allowed in all products in all sectors) - new column for 'Of which bioethanol' after Biogasoline; new column for 'Bio jet kerosenes'
 - Blast furnaces (transformation) line has been added to the transformation sector

RENEWABLES & WASTES – 2012 (2)

✓ Changes in reporting 2012

- Table 3: Technical characteristics of installations at the end of the year
 - Electrical capacity
 - Hydro breakdown now includes Mixed plants and Pure pumped storage
 - Wood/Wood waste/Other solid waste is now Solid Biofuels
 - Landfill gas, Sludge gas, and Other biogas have been replaced with one line Biogases
 - New line for Biodiesels
 - Liquid biofuels plants capacity - New line for Bio jet kerosene
 - Average net calorific value - New line for Bioethanol and New line for Bio jet kerosene

RENEWABLES & WASTES – 2012 (3)

✓ Changes in reporting 2012

➤ Table 4: New Title: Production of solid biofuels and Biogases

This table has changed to incorporate the new products included in solid biofuels excluding charcoal - Fuel wood, wood residues and by-products (of which Wood Pellets), Black liquor, Animal waste, Other vegetal materials and residuals.

It also includes the biogases broken down into Landfill gas, Sewage sludge gas, Other biogases from anaerobic fermentation, and Biogases from thermal processes.

- NEW TABLE: Table 5: Imports by country or origin - imports of liquid biofuels (break down by fuel type) and wood pellets.
- NEW TABLE: Table 6: Exports by country of destination - exports of liquid biofuels (break down by fuel type) and wood pellets.

✓ Challenges

- Penetration of new technologies for use of renewable energy requires the implementation of new sample surveys to assess the captured renewables and wastes.
- Increasing use of administrative data.



WHAT WE PROPOSE

It will be very useful if Eurostat submits a list of all energy products with corresponding codes from the Combined Nomenclature (CN).

Providing such a List to Member states will improve the quality of energy data and results of “trade mirroring checks” exercise.



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THANK YOU FOR YOUR ATTENTION !

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