

Efforts on European level to improve information on wood energy and renewable energy statistics

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Structure of the presentation

- Overview of the statistical development in renewable energy**
- New challenges for renewable energy statistics**
- The way forward**



Objectives of the Eurostat Energy Statistics Unit

- Provide the Commission with statistics needed for an effective energy policy
- Provide high quality statistical services and products to other users
- Implement actions improving national statistical systems
- Assist candidate and neighboring Countries in adapting their national systems to EU standards



The energy statistics system

- The energy statistics system is currently based essentially on voluntary agreements with the Member States
- Annual and monthly statistics are collected via questionnaires sent to Eurostat by the competent National Statistical Authorities (NSI, Ministries, Energy Agencies)
- A Regulation on energy statistics (part of the EU energy package) is at the final stage of adoption. It will be the future reference for data collection of all energy flows including renewable energy statistics.



Eurostat actions in the field of renewable energy statistics

- 1989-1998: Set-up of methodology and data reporting supported financially by the Commission
- 1998: Member States agree to provide RE statistics to Eurostat without Community support
- 1999: Creation of the Joint Eurostat/IEA/UNECE Renewables and Wastes questionnaire
- 2000-2004 to date: Enlargement of the questionnaire to improve coverage of municipal waste, and liquid biofuels
- 2007 Extension of the Combined Nomenclature to allow identification of liquid biofuels in external trade statistics



The renewable energy questionnaire

- Separate questionnaire introduced in 1999
 - Increased importance of renewable energy sources
 - Harmonisation of methods IEA/Eurostat - Member States following over 10 years of statistical development
 - Need of better integration of Renewables in energy balances and increased comparability with conventional sources
- Benefits observed
 - More detailed and coherent information was provided
 - Improved the quality of the overall energy balances
 - Reporting of revised information was made more simple



Methodological notes and definitions

→ Definitions for electricity and heat

- Type of producer (Main - Autoproducers)
- Type of plant (Electricity, CHP, Heat only)
- Geographical coverage

→ Definition of renewable sources/technologies

- Definition of each source



Table 1

Electricity Generation

Hydro all plants, of which: (1)
Hydro, < 1 MW (2)
Hydro 1 to < 10 MW (2)
Hydro 10 MW and over (2)
Production from pumped storage
Geothermal
Solar Photovoltaics
Solar Thermal Electric
Tide, Wave, Ocean
Wind
Industrial Waste (non-renewable)
Municipal Waste (renewable)
Municipal Waste (non-renewable)
Wood/Wood Waste/Other Solid Waste
Landfill Gas
Sewage Sludge Gas
Other Biogas
Liquid Biofuels

**Main Producers
Autoproducers
Total**

Heat Production

Geothermal
Solar Thermal
Industrial Waste (non-renewable)
Municipal Waste (renewable)
Municipal Waste (non-renewable)
Wood/Wood Waste/Other Solid Waste
Landfill Gas
Sewage Sludge Gas
Other Biogas
Liquid Biofuels

Electricity only and CHP plants

CHP and Heat only plants



Table 2
Supply - Transformation - Energy sector

Production
Imports (+)
Exports (-)
Stock changes (+/-)
Gross consumption

Transformation Sector, of which:
Main Electricity Plants*
Main CHP Plants*
Main Heat Plants*
Autoproducer Electricity Plants*
Autoproducer CHP Plants*
Autoproducer Heat Plants*
Patent Fuel Plants
BKB / PB Plants
Gas Works
For Blended Natural Gas
For Blending to Motor Gasoline / Diesel
Charcoal Production Plants
Non-specified (Transformation)

Total Energy Sector, of which:
Gasification Plants for Biogas
Own Use in Electricity, CHP and Heat Plants
Coal Mines
Patent Fuel Plants
Coke Ovens
Petroleum Refineries
BKB / PB Plants
Gas Works
Blast Furnaces
Charcoal Production Plants
Non-specified (Energy)

- Geothermal energy
- Solar thermal
- Municipal wastes renewable
- Municipal wastes non-renewable
- Wood/wood wastes
- Charcoal
- Landfill gas
- Sewage gas
- Other biogas
- Biogasoline
- Biodiesel
- Other Liquid biofuels



Table 2
End use

Industry Sector, of which:
Iron and Steel
Chemical and Petrochemical
Non-Ferrous Metals
Non-Metallic Minerals
Transport Equipment
Machinery
Mining and Quarrying
Food and Tobacco
Paper, Pulp and Print
Wood and Wood Products
Construction
Textile and Leather
Non-specified (Industry)

Transport Sector, of which:
Rail
Road
Domestic Navigation
Non-specified (Transport)

Other Sectors, of which:
Commercial and Public Services
Residential
Agriculture/Forestry
Fishing
Non-specified (Other)

- Geothermal energy
- Solar thermal
- Municipal wastes renewable
- Municipal wastes non-renewable
- Wood/wood wastes
- Charcoal
- Landfill gas
- Sewage gas
- Other biogas
- Biogasoline
- Biodiesel
- Other Liquid biofuels



Table 3

Technical characteristics at end of the year

Installed capacities & average calorific values

Hydro all plants, of which*
Hydro <1 MW**
Hydro 1 to <10 MW**
Hydro 10 MW and over**
Pumped storage
Geothermal
Solar Photovoltaic
Solar Thermal Electric
Tide, Wave, Ocean
Wind
Industrial Wastes (non-renewable)
Municipal Wastes
Wood/Wood Wastes/Other Solid Wastes
Landfill Gas
Sewage Sludge Gas
Other Biogas
Liquid Biofuels

Solar Collectors Surface

Biogasoline Plants Capacity
Biodiesel Plants Capacity
Other Liquid Biofuels Plants Capacity

Biogasoline Average Net Calorific Value
Biodiesel Average Net Calorific Value
Other Liquid Biofuels Average Net Calorific Value
Charcoal Average Net Calorific Value



Table 4
Production of wood/wood waste/other solid wastes

Wood/Wood Waste/Other Solid Waste,* of which:
Wood
Other vegetal materials and waste (including straw, sawdust, wood chips)
of which: Wood waste
Black liquor
Other (please specify)

→ All the information contained in these four tables is now part of the Energy Statistics Regulation



New challenges for Renewable energy statistics

→ Respond to the provisions of Article 7b of the Energy Statistics Regulation:

“With a view to improving the quality of energy statistics, the Commission, in collaboration with the Member States, shall review the methodology used to generate renewable energy statistics in order to make available additional, pertinent, detailed statistics on each renewable energy source, annually and in a cost effective manner. The Commission shall present and disseminate the statistics generated from 2010 onwards.”



New challenges for Renewable energy statistics

→ Monitor progress in meeting the targets set for 2020 in the proposed Renewable Energy Directive:

→ 10% share of renewable sources in final consumption of energy in transport¹

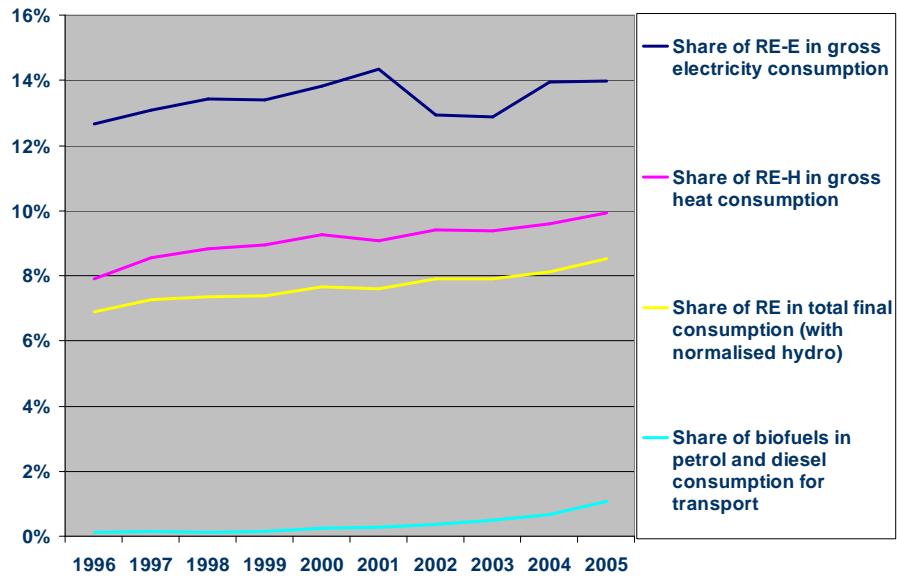
→ 20% share of renewable energy in final energy consumption.

→ The final consumption of renewable sources shall be the sum of:

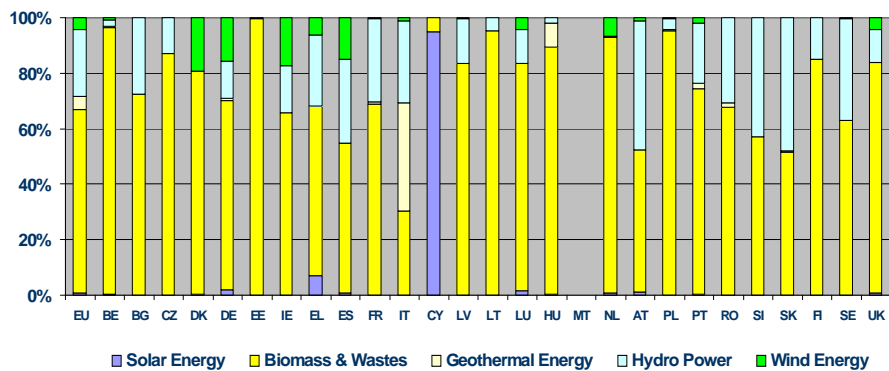
- consumption of electricity from renewables
- consumption of renewables for heating and cooling
- consumption of renewables for transport



The contribution of renewables to final energy consumption



Energy production from renewables – Share by source



→ Biomass accounts for 65% of the energy produced from renewables



The way forward

→ Needs:

- Evaluate renewable energy data quality and define improvement actions at Member State level
- Improve/complement data collection and reporting methodology to cover the full spectrum of renewable energy sources in a cost effective way
- Establish a plan of actions for the next 3 years to improve the quality of the renewable energy statistics and modify accordingly the Energy Statistics Regulation and the Joint Eurostat/IEA/UNECE questionnaire



Working Group on Renewable Energy Statistics

- First meeting on 30 November 2007
- Participation:
 - Relevant Commission services
 - Member States competent authorities (Statistical offices, Ministries, energy agencies)
 - Industry experts
- Agenda
 - Biomass (solid and liquid fuels)
 - Heat pumps
 - Solar energy

→ Working documents can be found on CIRCA

(http://circa.europa.eu/Public/irc/dsis/chpwg/library?!=/statistics_30112007&vm=detailed&sb=Title)



The way forward

→ Main conclusion of the Working Group meeting on Biomass statistics:

- Need information on biomass supply in more detail (products)
- Need to improve the biomass trade data on pellets and also liquid biofuels
- Need biomass consumption surveys in particular in households and services



The way forward

→ First actions agreed in the WG to improve Biomass statistics:

- Eurostat will pursue the creation of CN codes specific to wood pellets in order to improve the collection of import and export data.
- Member States will provide to Eurostat a description of the National data collection system for solid biomass (supply, transformation and consumption).
- Eurostat taking into account existing work in the field (EU, IEA, UN projects and studies), will refine the classification of energy products under the wood/wood wastes category.
- Eurostat will pursue the option of launching final energy consumption surveys.



Thank you for your attention

