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Task Force

Future of Energy Statistics

Conclusions

eurostat 

The growing demand for more energy data and data available earlier with simultaneous decreasing resources at national and international level has created an ever larger challenge for statisticians. New needs have to be well justified in order to have them included in the scope of data collected. Often conflicting priorities have to be taken into account. On the one hand, there are the monitoring needs of European policies and calls for more data on important issues, such as energy prices, energy savings, greenhouse gas emissions, renewable energies and energy import dependency. On the other hand, there are resource limitations on the side of the data providers, where the situation requires coordinated efforts and participation of all key stakeholders.

If the resources were infinite it would be easy to respond to all user needs. However, the capacities in Eurostat and Member States are very limited and shrinking. Eurostat and Member States cannot meet all incoming data needs and data requests in the energy domain. Prioritization of the user needs – being one of the leading ideas behind the task force – is therefore necessary.

In Regulation (EC) No 223/2009 on European statistics the cost effectiveness of the development, production and dissemination of statistics is highlighted as one of the governing principles. This means that the statistics must be in proportion to the importance of the results and the benefits sought, and that the resources must be optimally used and the response burden adequate to that.

Keeping this in mind Eurostat proposed to launch a Task Force to be able to focus the limited resources to satisfying the key user needs on energy data. Since the mandate was provided from the participants of the Energy Statistics Working Group (ESWG), it was decided to establish this Task Force with the following objectives:

- To have user needs properly prioritised;
- To search together both at national and international level to optimise the existing resources to the maximum benefit of the users;
- To modify the energy data collection to better optimise the use of the decreasing resources. In other words, the resources are used to maximise the benefit of the statistics for the users.

The mandate of this Task Force covers:

- Annual and monthly statistics on energy quantities;
- Statistics on gas and electricity prices.

In this document, TF denotes “*The Members of the Task Force on the Future of Energy Statistics*”.

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1. Task Force working methods

The subsequent chapters present recommendations and conclusions of the Task Force based on discussions during the meetings. These recommendations and conclusions are organized into some logical areas to allow for an easy identification of the area to which they relate. These recommendations and conclusions are not presented in order of priority.

This document presents the generalized collective view of TF on various subjects. However, it does not mean that all individual members of the TF endorsed all individual elements mentioned below. A list of individual Task Force members is included in Annex I.

Eurostat prepared a background document addressing various issues and its simplified version is included in Annex II. TF discussed these issues in the light of the Task Force objectives and its mandate. The order of presented chapters does not reflect on their priority nor does it reflect on the order in which they have been discussed. Annex II also does not present summary of discussions, just the background information to spur discussions on the topic.

As the issue of user needs was a key element in various discussions, Annex III includes results of the main Eurostat user satisfaction survey for energy statistics and Annex IV present results of dedicated, more detailed user survey on energy statistics.

Annex V presents results of the Short ESWG survey. This survey was designed for all countries participating in data collections and transmitting energy data to Eurostat. Answers provided by reporting countries helped TF in its discussions.

The work of this Task Force lasted 2 years and during its lifetime certain elements of conclusions were already implemented by Eurostat (for example the dedicated user survey of energy statistics domain).

Task Force meetings were organised in Luxembourg on the following days:

- 10 April 2013
- 07 November 2013
- 12 February 2014
- 16 May 2014
- 18 September 2014
- 10 December 2014

2. Recommendations, conclusions & observations

Electricity and natural gas prices

TF discussed issues related to the reporting to Eurostat of electricity and natural gas prices and taxes, in light of the upcoming legislative proposal of the European Commission. See section 4.12 in Annex II for more information.

1. TF support the inclusion of natural gas and electricity household prices data in the legal framework of data collections of Eurostat.
2. TF support the data collection for disaggregated natural gas prices at the same level of details as for electricity prices (this means disaggregation into the following three elements: "energy and supply", "network costs" and "taxes and levies").
3. TF identified difficulties in the data collection of disaggregated prices and considers the data collection of disaggregated prices on an annual basis as appropriate.
4. TF do not support to integrate the competition indicators survey for natural gas and electricity under a legal scheme. TF propose to evaluate another option, which is to move this specific data collection closer to the framework where these data are collected – these data are collected by national regulators and ACER (Agency for the Cooperation of Energy Regulators) might be a suitable place for this data collection.
5. TF views on quarterly data collection diverge – in some countries these data are already collected on a quarterly basis thus mandatory reporting means no additional burden, however, for those countries that do not collect these data on a quarterly basis it will be a significant additional burden.
6. TF do not support the data collection of natural gas and electricity prices on a monthly basis (industry and households).
7. TF recommend using already existing monthly indicators to produce estimates of the monthly price evolution.
8. TF support the 2 months deadline for reporting data to Eurostat and recognise that this deadline is very ambitious.
9. Due to confidentiality issues TF do not recommend mandatory data collections for the currently highest industrial bands.
10. TF do not recommend splitting the lowest gas consumption band for households (D1: 0-20 GJ) into additional subcategories; the opinions on band D2 are diverging.
11. TF do not recommend collecting data on wholesale prices in the framework of energy statistics, given their availability elsewhere.
12. TF do not support to include under a new legal umbrella a collection of price information for additional energy commodities other than electricity and natural gas.
13. TF do not support to include collection of information on financing renewable energy sources in the legal text as this information is outside the scope of energy end-user price statistics.
14. TF support closer cooperation on the international level in the prices data collection, especially with respect to possible synergies between reporting prices data to the IEA and to Eurostat.
15. TF do not support introduction of provisions for reporting exemptions in countries that use natural gas only at small scale (industry and households).

Reduction of reporting burden

TF discussed issues related to the reporting burden. See sections 4.11, 4.13, 4.14, 4.15 and 4.16 in Annex II for more information.

16. TF did not identify any significant element in existing data collections that can be removed from mandatory data collections, which at the same time would result in a significant reduction of the reporting burden.
17. TF do not recommend removing fuels with very small quantities reported by countries, as in the current structure of the annual data collections it would not reduce the reporting burden.
18. TF discussed the possibility to reduce frequency of reporting for fuels that are consumed in the EU only at the very small scale. TF recommends abolishing the reporting of monthly data for Patent fuels and BKB; reporting of these fuels is deemed to be sufficient only on an annual basis.
19. TF suggest exploring possibilities for higher levels of definition/methodology consistency with trade statistics for reporting detailed trade data (imports by origin, exports by destination).

User needs

TF extensively discussed issues related to the need of energy data users. A survey among TF was organized and evaluated to provide additional insights into user needs. See section 4.17 and 4.20 in Annex II for more information.

Eurostat conducts an annual user satisfaction survey. Results of this survey are available in Annex III. During the lifetime of the Task Force on the Future of Energy Statistics, Eurostat also conducted a dedicated user survey on energy statistics. Its results are presented in Annex IV.

The user survey of Eurostat's energy statistics was an important step forward in understanding wider user needs for energy data. Overall nearly 60 users responded to the survey showing the diverse ways in which energy statistics are used. The breadth of use of the statistics means that it is hard to draw specific conclusions and that is why the full responses are included at Annex IV. However, at a headline level some key messages do stand out. Overall users are keener to see developments on annual data rather than monthly or prices data, with the general request to see greater breakdowns of data be it renewables by type of use data. In general the data meet users' needs in terms of quality, with 53% of users agreeing that Eurostat energy statistics are better now than 5 years ago, with only 2% disagreeing. In general electronic release of data is welcomed by users, but they do want to see improved data access and announced release dates."

20. While individual user needs are known, TF concluded that outside of the limited amount of key users of data in energy domain, only limited information is available on the actual use of energy data.
21. TF recommend to survey users of energy statistics in more detail and to gather much more detailed views on user needs.
22. TF encourage Eurostat to obtain more information on who and for what purpose is using energy data published by Eurostat and to promote the existing use made of energy data to demonstrate the value of good quality statistics.
23. TF suggest making better use of the existing data by presenting energy data differently, in a more user friendly format.
24. TF recommend improving the dissemination tools for energy statistics. The generic data dissemination tool of Eurostat (Eurobase system) is not always the most suitable dissemination format for energy data; it should be optimally complemented by the traditional MS Excel format.

25. TF noted that several countries collect additional energy data to satisfy national needs – these data are more detailed, with higher frequency or with better timeliness.
26. TF recommends a more detailed survey of all EU Member States for creating a list of additional national data availability.

Revision policy

TF discussed issues related to the observed practice of data revisions in the energy statistics domain.

27. TF recommend that Eurostat establishes a general data revision policy for energy statistics. This revision policy should follow a formalized approach, including a proper communication on reasons and the magnitude of the revision. This formalised approach should not be too complicated that the countries are demotivated to transmit data revisions.
28. TF suggest publishing of a release calendar and revision calendar for energy statistics prepared by Eurostat.
29. TF suggest that all time periods in monthly and annual data should be open for revisions.

Future developments of energy statistics

TF discussed issues related to the future developments of energy statistics in general and wider context of statistics in future and developments in other statistical domains. See sections 4.18, 4.19, 4.21, 4.22, 4.23, 4.24 and 4.25 in Annex II for more information.

Generic aspects of future developments of energy statistics

30. In the view of TF, implementing Article 9 of Regulation (EC) No 1099/2008 should continue with the services or the transport sectors. TF recommend taking into account as a starting point the information already collected and available in other statistical domains (such as Eurostat's transport statistics) and also available elsewhere (energy efficiency indicators projects of IEA and ODYSSEE).
31. TF recommend establishing individual reporting schemes for the reporting obligation arising from various legal acts related to energy statistics (such as Directive 2009/28/EC on the promotion of the use of energy from renewable sources or Directive 2012/27/EU on energy efficiency) without direct changes in the design of the joint annual energy questionnaires.
32. TF highly support the idea of creating in future one harmonized methodology for energy balances at international level (Eurostat, IEA, UNSD).
33. TF noted the issues of the ESS.VIP programme and especially its validation component, the cross-domain harmonisation of processes in Eurostat (e.g. the use of the Single Entry Point and automated validation tools) as well as the future need for change (the 21st century statistics). TF concluded that there are not many energy specific concerns on these topics – general concerns already raised during discussion on these topics in other domains apply also to the energy domain, but no new challenges or obstacles for the energy domain were identified.
34. TF emphasise the importance of European trade data for energy statistics. TF recommend that future work on improving trade data should satisfy also the needs of energy statistics. TF advise caution towards any approach that would result in degradation of trade data quality.

Specific recommendations for future developments of energy statistics

35. TF recommend including ambient heat captured by heat pumps to be integrated in the framework of energy statistics.
36. TF recommend developing and discussing at international level the proper approach for including respective energy flows of heat pumps into energy balances and highly encourage development of international agreement on methodologies for reporting energy flows related to heat pumps.
37. TF recommend monitoring of heat produced by heat pumps in various end-use sectors. For inclusion into energy statistics, TF suggests very cautious approach on the level of requested disaggregation and recommends only high level aggregates (households/residential, commercial/services, agriculture, industry and similar) to be included in energy statistics in future.
38. TF suggest discussing inclusion of coldness and cooling energy into energy statistics, as energy is needed to produce coldness and also with respect to the development of district cooling networks. However, as TF did not manage to reach consensus on coldness energy definition and framework related to energy elements of coldness and cooling, TF suggest careful approach in development of methodologies with respect to coldness energy and heat pumps for cooling.
39. TF suggest considering all bioliquids (liquid biofuels) as primary energy source and consequently no change to existing methodological approach is suggested.
40. TF consider that problems related to reporting the use of derived heat not sold, especially from CHP installations, are very important and highly recommend additional work in this area.
41. TF suggest developing methodologies for including hydrogen in the energy statistics in future. However, at this stage, TF consider that it is premature to include hydrogen in energy statistics.
42. TF recognize the growing importance of solar thermal energy in future energy mix, however TF do not suggest changing methodologies and definitions related to solar energy as of yet.
43. TF recognize the increasing difficulty in collecting trade data on origin of imports and destination of exports.
44. TF encourage Eurostat to continue further work on international trade data in fuel commodities that started in recent years with "trade mirroring" exercise for annual data.
45. TF encourage Eurostat to work on the blending and co-firing reporting issues with respect to reporting energy flows as well as capacity.
46. TF recognize the increasing volume of electricity and heat from micro generation and encourages Eurostat to work on collecting information on current ways of reporting to provide good practice examples for the countries

Specific recommendations for the joint annual energy questionnaires

47. TF recommend adjusting the annual energy questionnaires to allow the possibility of entering values with decimal places in the annual energy questionnaires.
48. TF recommend harmonizing reporting units between various energy questionnaires, especially the Renewables questionnaire with the others (e.g. liquid biofuels in the Renewables questionnaire and the Oil questionnaire tonnes vs 1000 tonnes, electricity in Renewables questionnaire and Electricity questionnaire MWh vs GWh).
49. TF recommend wider international cooperation so that the joint annual energy questionnaires cover the needs for energy data of international community.

50. TF recommend removing the split of "Total Gas/Diesel oil" between "Road diesel" and "Heating and other gas oil".
51. With respect to reporting energy flows related to petrochemical industries (mostly oil refineries), TF suggest to provide more detailed reporting instructions for current reporting form in the annual energy questionnaires; integrating comments and experiences from Member States in the current definitions and reporting structures.
52. TF suggest providing more detailed reporting instructions for existing reporting scheme for solar thermal energies.
53. TF noted new production methods for crude oil and natural gas as well as concerns about their impacts on energy dependency, energy costs and environment. TF recommend including additional production categories for natural gas and crude oil in the annual energy questionnaires. TF strongly suggest that any such approach should have well defined categories (reporting instructions) and should be strictly limited to production (no consumption based on production method).

Other issues

TF discussed other issues related to the energy statistics - see sections 4.26, 4.27, 4.28 in Annex II for more information.

54. TF discussed the issues of using videoconferencing as alternative mode of communication during validation process for data. TF do not believe teleconferencing is the most suitable way of work for data validation.
55. TF discussed the involvement of ESWG in the calculation of the share of energy in renewable sources based on Directive 2009/28/EC. While TF suggest that ESWG is involved in statistical aspects of calculation methodology, TF suggest that ESWG is not involved in aspects relating to legal interpretation of calculation methodology or policy aspects. TF suggest that Eurostat is more involved in the co-decision process so that clarifications on calculations after adoption of legal act are not needed.
56. TF suggest Eurostat to be more involved in all calculation and statistical aspects of methodology development in European legislation. TF emphasise the importance of including evaluation date in European legislation to allow for clear conclusions on policy achievements (for example Directive 2009/28/EC could have an Article added that evaluation of compliance with 2020 targets would be considered on the basis of energy statistics data transmitted to Eurostat by the end of year 2022).
57. TF noted that there are requests for splitting energy data between ETS¹ and non-ETS sectors. TF recognised significant conceptual differences between sectoral approach in the current energy statistics framework and requirements for the ETS split. TF do not recommend inclusion of this split into the existing energy statistics reporting obligations.
58. TF suggest that at national level energy statistics compilers should have access to ETS activity data (fuel consumption data on detailed level: company and fuel data).
59. TF noted the request for public dissemination of completed joint annual energy questionnaires. Opinions of TF diverge on this subject. TF concluded that there is limited value added in such dissemination and there is high probability of additional work.

¹ ETS stands for emission trading system

3. Annex I: Task Force members

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4. Annex II: Background document with discussion topics

4.1. Heat Pumps

Additional ambient heat captured by heat pumps is not included in energy statistics, unless produced in large scale main activity producer plants or as heat sold from auto-producer plants. We now have a methodology for its estimation under Directive 2009/28/EC (Commission decision C(2013) 1082). Eurostat is now at final stages of adoption of proposal for new data collections for households, which will include space heating and space cooling as additional energy flow elements.

In 2011, in the SHARES tool with old methodology for heat pumps, the amount of additional renewable energy captured by heat pumps was 4 534 ktoe (= 189 829 TJ or 52 730 GWh) in the EU-28.

In 2012, where some of the countries already applies new methodology for heat pumps, the following quantities of renewable heat captured from environment based on criteria in Commission decision C(2013) 1082 were reported:

2010	2011	2012
5 519.0	6 120.0	6 776.1

 [ktoe]

This amount in 2012 is twice as much as reported gross inland consumption for solar thermal. It is also more than solar PV gross inland consumption as well as more than quantity of geothermal energy. It is roughly 50% of energy content of all biodiesel used in the EU28.

In energy statistics, heat produced in heat pumps reported in the transformation sector amounts to only around 530 ktoe (EU-28, 2012).

Heat pump output is indeed energy delivered to buildings that in the past was covered by other fuels (electricity, derived heat and fossil fuels). Use of energy data for the "buildings" sector without heat pumps might be thus seriously misleading the actual energy performance of the sector, especially if heat pumps gain more significant market and deployment share in the future.

Also, one can ask for reasons, why this energy flow is accounted for in Directive 2009/28/EC (renewables) while at the same time it is ignored under the Directive 2012/27/EU (energy efficiency).

If this ambient heat is included in the gross inland energy consumption, total gross energy consumption in the EU28 will be increased by 0.4%.

Questions – Discussion topics:

Should ambient heat captured by heat pumps be integrated in the energy statistics in future?

Should heat produced by heat pumps in various end-use sectors (households/residential, commercial/services, agriculture, industry, ...) be monitored and reported in the energy statistics?

If yes, taken into account that a significant part of it is at the end-use level in the buildings sector (residential, commercial, services, public, ...), what might be the possible approach on how to integrate energy flows related to heat pumps in energy balances?

If yes, should we also consider heat pumps for cooling (and especially reversible heat pumps for heating and cooling)?

4.2. Solar Thermal

During last year Eurostat received several questions on solar thermal energy.

European Commission already in 2010 confirmed to industry (in an email) that solar thermal energy for active air heating systems is to be counted towards targets in the renewable energy targets enacted in Directive 2009/28/EC.

Email of DG Energy from November 2010: *Although the renewable energy Directive does not explicitly exclude active solar systems from counting towards the renewable energy target, we have no common way for accounting for them in national statistics. Eurostat is aware of such solar systems as these have been discussed already in working groups on renewable energy statistics. It was the opinion of the working group (which also includes industry representatives, e.g. ESTIF), that as such technologies represent such small share of installed capacity, there is currently no statistical methodology for accounting in statistics. When the impact of the technology is more visible, we will probably have to develop a methodology. So while I do not foresee any change in the next few years, it is possible that such systems could be accounted for in future.*

As a consequence of this email in 2010, Eurostat now (in 2013) received a proposal with a methodology from the industry, which is based on the methodology developed for solar water heating in the IEA-SHC programme. More or less it can be assessed as a scientifically sound approach fully comparable in strengths and weaknesses of the methodological approach for solar heating of water.

Another request was related to hot water production in southern European countries: *Households can be equipped with a water tank which is placed on the roof. During the summer months the water inside the tank achieves considerable high temperatures through solar incidence on the tanks. The heated water in the tanks could be utilised for washing machines, dishwashers and other daily needs. As a result, end users do not require using their water heaters.*

The inclusion of this type of thermal capture from the tanks might be considered favourably, as it leads to reduced energy use for water heating from electricity and fossil fuels that would be needed otherwise. However, Eurostat concluded that: *After discussion with expert in the European Commission DG Energy as well as in the International Energy Agency, there is a mutual agreement that the description above corresponds to a passive system. A passive use of solar energy should not be considered in the energy balance of any country. Article 5(4) of Directive 2009/28/EC sets out the rules for what is to be considered passive renewable energy, it says: Thermal energy generated by passive energy systems, under which lower energy consumption is achieved passively through building design or from heat generated by energy from non-renewable sources, shall not be taken into account for the purposes of paragraph 1(b). It is our understanding that the water tanks described above are achieved passively as part of the building design.*

At the same time it is worth noting that the reporting instructions for Solar Thermal in the Renewables & Waste questionnaire, as well as Regulation (EC) No 1099/2008 provide the same particular definitions for Solar Thermal.

It can be argued that heating of swimming pools, that is to be counted towards the energy from renewable sources, is definitely less attractive for most energy efficiency policies and reduction of energy use than water heating via "passive" systems and its use for residential purposes (and industrial, commercial and public services might consider use of such systems in principle too). It seems to be questionable why luxury systems (swimming pool heating), for which a majority of users would not consider the use of electricity or fossil fuel use as back-up, is to be counted in the energy statistics and provided as data to energy analysts and policy makers, while other systems that could lead to credible energy savings (black water tanks on the roof), reduced fuel consumption of electricity and fossil fuels and for which people install back-up systems based on electricity and fossil fuels, are not to be counted.

Interests in solar energy is encouraged by the targets for renewable energies in Directive 2009/28/EC, spurred by high energy prices in the last 10 years and also a consequence of increased focus on energy efficiency stimulated, among other things,

by Directive 2012/27/EU. All these elements suggest that a more detailed approach to solar energy might be needed.

Questions – Discussion topics:

What is your view on the importance of solar energy in future energy mix?

Given the current magnitude of solar energy and its expected contribution in energy mix, are more details for solar energy in energy statistics needed? If it is not needed now, what are our expectations for the future (2020)?

Should solar thermal electricity be considered together with other types of solar thermal energies, or rather with photovoltaic, or as a separate element?

During the RESWG meeting in June 2013, Eurostat committed itself to development of more precise instructions for reporting solar thermal energy, especially with focus on the definition of active and passive solar systems. In your opinion which alternative should be the primary driving factor of such instructions:

- legal aspect: hard-core interpretation of current text of Regulations and Directives;
- minimal changes: better documentation and detailed description of currently existing reporting conventions and schemes for energy balances as understood by Eurostat and IEA;
- future reporting: reflection on the new structures and data needs in future?

4.3. Unconventional Fuels

It was suggested to Eurostat to be involved at a very early stage in the statistical measurement of quantities of unconventional fuels. Eurostat is aware of the European Council conclusions that: *In order to further enhance its security of supply, Europe's potential for sustainable extraction and use of conventional and unconventional (shale gas and oil shale) fossil fuel resources should be assessed.*

- Shale oil:

It is currently accounted for in the Annual Oil Questionnaire under the position "Other Hydrocarbons" (shale oil being only a part of this position):

Other Hydrocarbons: This category includes synthetic crude oil from tar sands, shale oil, etc., liquids from coal liquefaction, (see the Annual Coal Questionnaire), output of liquids from natural gas conversion into gasoline (see the Annual Natural Gas Questionnaire), hydrogen and emulsified oils (e.g. Orimulsion).

Note on the reporting of shale oil: Oil shale production and direct use should be reported in the Annual Coal Questionnaire. The production of shale oil (secondary product) is to be reported as "From other sources" in the "Other hydrocarbons" category.

Just for the record, the share of "Other hydrocarbons" [product code: 3193 - Other Hydrocarbons] in the crude oil [product code: 3105 - Crude oil] has evolved for EU27 from 0,03% in 1990 to 0,09% in 2000 and 0,11% in 2011 (percentages are based on the gross inland consumption basis). In 2012 for EU28 it is 0.18%.

- Oil shale:

It was accounted for in the Annual Coal Questionnaire under the position "Lignite/Brown Coal"

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 have been reported in this category. Oil shale and tar sands used as inputs for other transformation processes were also reported in this category. This included the portion of the oil shale or tar sands consumed in the transformation process. Shale oil and other products derived from liquefaction were reported on the annual oil questionnaire.

As of reference year 2012, in the new Annual Coal Questionnaire the "Oil shale and oil sands" has been split-out from the "Lignite/Brown Coal". Now there is a new category called "Oil shale and oil sands". As a consequence, we are able to capture these quantities in a statistically accurate manner.

- Unconventional gas:

There are three main types of unconventional natural gas produced:

Tight gas: this is natural gas trapped in relatively impermeable hard rock, limestone or sandstone;

Coal-bed methane (CBM): this is natural gas trapped in coal seams, adsorbed in the solid matrix of the coal (this is already part of Colliery Gas); and

Shale gas: this is natural gas trapped in fine-grained sedimentary rock called shale that has a characteristic 'flaky' quality.

Unconventional gas is currently very much "à la mode", due to the rapidly growing application of the hydraulic fracturing (also called "fracking") method for its extraction, in North America and especially in the USA; a dramatic increase in unconventional gas production in North America, to roughly 50% of domestic production, is reported.

But in Europe it is definitely not that far, we are still in the exploration and piloting phase. The European Commission has been looking carefully into the issues of the unconventional gas and has initiated a series of targeted studies, as it acknowledges that the unconventional gas knowledge-base is highly polarised.

The primary production value reported as total for "Oil shale & oil sand" for EU28 in year 2012 was 4 000 ktoe, which is 0.5% of primary energy production in the EU28 and 0.24% of total gross inland energy consumption in the EU28.

Questions – Discussion topics:

Which additional actions in short-medium-long term needed on unconventional fuels might be needed?

Do we need more accurately monitor more energy intensive production methods for unconventional fuels?

Do we need more accurately monitor those production methods for unconventional fuels that are (might be) subject to elevated environmental concerns?

Should we recommend complementing production categories "Associated gas", "Non-associated gas" and "Colliery gas" with other categories, for example: tight gas, shale gas, coal bed methane, hydraulic fracturing, ...?

4.4. Hydrogen

Hydrogen, specifically "renewable hydrogen", is highly relevant with respect to Directive 2009/28/EC. Taking aside the problem of definition (What exactly is "hydrogen originating from renewable sources"?), if we are to include renewable hydrogen into accounting of renewable energy flows, we should be accounting all consumption of hydrogen for energy purposes in the first place.

Questions – Discussion topics:

Do you have any statistics on the quantities of hydrogen produced in your country?

Do you have any statistics on the use of hydrogen in various sectors of the economy? (including split between energy and non-energy use)

Would you judge the use of hydrogen in your economy as statistically significant or insignificant, with respect to other "small" fuels currently included in the energy statistics?

Given the answers above, would you recommend including hydrogen in the energy statistics collected by Eurostat and IEA? ... and energy balances produced?

If hydrogen is included as new fuel, for all elements as other fuels (supply, import/exports, stock changes, transformation, non-energy use, final consumption by sectors), what is your estimate on additional burden for data collection and reporting?

4.5. Blending & Co-Firing

Previous as well as the latest version of the joint annual energy questionnaires allow blending of products:

- coal products (from other sources - memo items)
- all oil products via table 1 (from other sources - memo items)
- specific data for motor gasoline: bio + non-bio
- specific data for kerosene type jet fuel: bio + non-bio
- specific data for gas/diesel oil: bio + non-bio
- natural gas (from other sources - memo items)

In practice, renewable fuels and wastes are often co-fired in power, heat and CHP plants with other fuels (for example fuel oil).

Certain elements of blending and co-firing can be reported at some level of details, while other elements are difficult to be reported. Until recently only in theory, but recently more and more also in practice, all fossil fuels can be blended during production or post-production with renewable components.

Questions – Discussion topics:

Is current reporting of blended biofuels clear? Can you think of different form of reporting where it will be even clearer and easier?

Do you see a need for inclusion of other specific blended products? For example: bio-LPG, bio-bitumen (aka bio-asphalt), bio-industrial waste (renewable component in waste products), ...

Could a different form of reporting of the consumption of blended products help with the reporting of co-firing? Can co-firing be considered as blending?

Which elements of blending and co-firing are of high policy interest and consequently have to be monitored in detail?

Should blending and co-firing be treated together or clear separation should be made between them?

4.6. Micro-Generation of Electricity & Heat

Electricity and heat is more and more generated at micro level and at very small scale (residential units) – we observe a gradual shift to decentralised systems. Traditional split only into main activity producers and auto-producers might not be deemed as sufficient in future – especially if micro generation of electricity and heat is done also for contributing to the total production in the grid or district heating system. We might need more categories of producers.

Electricity consumption at NACE 4 digit level has to be reported every 4 years for the purpose of updating the carbon leakage list. During the recent exercise for this data collection some countries were able to indicate electricity production based on NACE 4 digit level, as additional information, to requested information for electricity consumption on NACE 4 digit level.

Questions – Discussion topics:

Do you think that information on electricity production on a more detailed, disaggregated level should be included in energy statistics? ... and what about heat production?

If data for electricity production are asked at NACE section level (21 categories) or division level (all 88 categories), what is your estimate for availability, reliability and additional reporting burden? ... and what about heat production?

Questions above with respect to the time of implementation: now, in future or in long term?

4.7. Heat Recovery

Euroheat & Power (association) claims that recovered heat and its subsequent use cannot be fully and correctly reported in current energy statistics and balances. It is simply allocated to heat generating industries, while the actual recovery might be by somewhere else in the district heating network, including traditional segments where only end-use was expected in past (households, commercial & public services).

Questions – Discussion topics:

Do we see it as a problem that heat recovery might be attributed to main activity producers and/or autoproducers instead of actual sector of production?

Similarly, heat recovery might not be even shown and could manifest only as lower end-use consumption.

Is it of significant magnitude to monitor heat recovery by various end-use types (residential, commercial, industrial, ...)?

4.8. Cooling Energy & District Cooling

Renewable cooling energy, including district cooling, could count towards the share of energy from renewable sources (Directive 2009/28/EC). So far it is not included in the accounting and none of the countries requested its inclusion. However, the reason might be that accounting renewable fuel inputs for coldness production might be more interesting than counting actual coldness produced, which could be lower amounts of energy due to transformation losses.

However, for heat pumps for cooling, heat released during the process is not counted as renewable energy. The main reasons are that definitions in the Directive 2009/28/EC imply that heat comes from ambient heat outdoor (not indoor) and that a heat pump in cooling mode does not deliver any useful heat (heat is released outside with no actual use).

The mass scale commercial deployment of tri-generation (combined cooling, heat and power) for district cooling or industrial applications might trigger higher needs for adapting our methodology and reporting structures in energy statistics.

Questions – Discussion topics:

Do you have more information on district cooling and ways of measuring energy distributed via district cooling? Is coldness negative energy?

Do we have access to any estimates how significant it is?

Do you think it is important to include district cooling as specific category in energy statistics and energy balances? (partial inclusion?) (in near future or distant future?)

Is there any renewable coldness, other than from heat pumps, where renewable energy inputs would be omitted in current reporting?

4.9. Administrative vs. Real Energy Flows – Sold & Unsold Heat

Currently the split for electricity and heat generation is based on *auto-producer* and *main activity producer* categories. For Autoproducers, only heat sold is reported. For Derived Heat, an administrative change (a change of the ownership of an installation) can cause a change in the energy balance flows: some energy

previously reported in the transformation sector will be reported in the final consumption of industry (or vice versa).

One might consider an approach that administrative changes (like installation ownership) should not affect allocation of fuels to main aggregates (transformation sector vs. final consumption sector). Essentially, the methodology for energy balances should be fully resistant to such influences resulting from administrative actions. Energy balances should be reflecting energy flows in all cases in the same way – change of logo above the entrance does not change real world energy flows.

The problem with the currently existing approach is that different legislative targets for energy efficiency (national target based on final consumption) and renewables (transformation sector inputs are excluded from the denominator when calculating share of renewables) might be affected.

As a theoretical example, a country might ask all auto-producers of heat to unbundle the activity of heat production from their core activity, thus creating a real market for derived heat and force all heat to come from main activity producer plants. If such an approach is implemented, denominators for energy efficiency target based on final consumption and also the denominator for renewable share would be slightly lower, thus slightly boosting the actual percentage and slightly simplifying compliance with targets – without changing any actual real world energy flows.

Another problem is with the use of heat that in past was wasted. For example due to tighter environment legislation and incentives for waste treatment, heat is now used for cleaning combustion gases. Other use of heat can be for drying fuels prior its combustion (mostly for biomass).

Questions – Discussion topics:

Do we have any additional information on reasons why in real world companies unbundle or merge? Is there any link to subsidies, incentives or feed-in tariffs for electricity and heat production?

Do you consider that reporting of heat is currently a real problem or problems are more of a theoretical construction due to financial incentives in some countries?

Given your answers above, would you recommend that Eurostat should work on developing and proposing a new approach for reporting derived heat on its use?

4.10. Reporting Petrochemical Industry

Some concerns have been raised about reporting of transformation processes in petrochemical industries. At one side we have diversity of technologies and operations, requirements for more detailed data, new technologies and new fuels. At other side we have reduced resources and request for reductions in reporting burden. Both elements manifested in requests communicated to Eurostat.

One side of requests is for reduction of complexity of oil questionnaire and petrochemical industry. Other side of requests is requiring more details and additional products/flows to be introduced in the structures.

Reporting in the oil questionnaire is more detailed than in other energy questionnaires, emphasizing the importance of petrochemical industries in energy mix of current energy economies.

Questions – Discussion topics:

Which approach in general should we take?

A) Should we develop a simplified structure allowing reporting in an easier form and reducing reporting burden? (for example, with more general aggregates)

B) Should we develop more complex structure and more detailed reporting, taking into account comments and experiences from Member States?

C) Should we provide more detailed reporting instructions for current reporting form, integrating comments and experiences from Member States in the current definition and structures for annual questionnaires?

What about bio-refineries and blending of bio-components with fossil components at various stages of production (including during production of feedstock elements)? How to properly integrate them in the reporting structures of petrochemical industries?

4.11. Criteria of Significance for In/Ex-clusions

One of the general principles of statistics is to monitor only statistically significant elements. Thus energy statistics should be collected only for commercially mature technologies and applications that have achieved a significant market penetration level and have a measurable impact to the overall energy balance. This principle assures cost effectiveness of data collection and a reasonable level of reporting burden to Member States. This guiding approach is now even more important due to diminishing resources available for data collections.

One of the possible approaches, to decide which fuels and energy flows should be monitored in energy statistics and for which elements Member States should make efforts to collect high quality data, could be the fuel's significance in the EU energy system. Under such approach a threshold could be established (absolute or relative).

New fuels above the agreed thresholds could be included in Regulation (EC) No 1099/2008. Existing fuels below the thresholds could be merged with other existing products. Also new energy flows can be introduced in data collections (in terms of annual energy questionnaires: fuels = columns, energy flows = rows) – or removed, if significantly below the threshold. Exemptions (if allowed) could be made for areas of long term high policy importance (e.g. bio products).

Actual importance of selected products in the EU-28 in year 2011 in TJ:

2011, EU-28, TJ	Gross Inland Consumption		Energy Available for Final Consumption	
All Products	71 435 229	100.0000%	51 197 140	100.0000%
Gas Coke	0	0.0000%	0	0.0000%
Gasoline Type Jet Fuel	299	0.0004%	256	0.0005%
Gas Works Gas	1 172	0.0016%	1 244	0.0024%
Tide, Wave & Ocean	1 922	0.0027%	0	0.0000%
Aviation Gasoline	-1 391	-0.0019%	3 713	0.0073%
White Spirit and SBP	5 297	0.0074%	5 497	0.0107%
Charcoal	4 136	0.0058%	6 685	0.0131%
Transport Diesel	880 135	1.2321%	8 423 331	16.4527%
Electricity	28 210	0.0395%	10 017 045	19.5656%

For example, one can consider a possible significance threshold for EU-28 at around the 10 000 TJ level (= 239 ktoe or 2778 GWh) for Gross Inland Consumption or Energy Available for Final Consumption.

Alternatively, reduced reporting should be implemented for certain products (removing them only from certain tables in the questionnaire, for example the import/export tables).

This approach will also facilitate discussions with various stakeholders that require inclusion of additional elements and more precise reporting (hydrogen, unconventional oil and gas, ...).

Questions – Discussion topics:

Do you think this type of approach is worth more detailed investigation?

Would an aggregate of certain “negligible” fuels with other fuels or into “other” category actually save any resources and reduce reporting burden?

Is there a real user need for some small scale fuels?

4.12. Energy Prices

Current data collection for industrial natural gas and electricity prices is covered by Directive 2008/92/EC. Eurostat is currently discussing the need to put the voluntary agreement for data collection of natural gas and electricity prices for households under a legal umbrella. Main reason for this step is that several reporting authorities have flagged the danger that one or more of their national data suppliers might stop sending the data due to shortage of financial and human resources.

In August/September 2013, Eurostat has collected information on price components for electricity and natural gas. This data will be used for an analysis for the increase of the prices in recent times. Eurostat noted that nearly all Member States were able to reported also disaggregated prices for natural gas. In the next legal act, the disaggregated gas prices (network costs, production/import costs and taxes) might well be included if it turns out that there is a clear need for this additional information.

Eurostat has received several times requests to start data collection of electricity and natural gas prices at a shorter interval (monthly or quarterly). From preliminary feedback that was provided by some Member States it turns out that providing the quarterly price data should not be very difficult as price data is already collected on a quarterly basis. On the other hand several other Member States noted that data is not collected on a quarterly basis and consequently additional resources would be needed (increase in response burden).

Eurostat has done an analysis by using HICP data that is available for natural gas and electricity for households to estimate monthly price data. First results are looking promising, and this method will be further looked at in the near future. This method will not introduce additional reporting burden as it makes use of existing monthly HICP datasets.

Questions – Discussion topics:

How would you judge the response burden between reporting monthly, quarterly and bi-annual price data?

Do you consider approach to use other indices (PPI, CPI, HICP, ...) for estimating monthly or quarterly data as scientifically reasonable alternative approach? Do you have suggestions for other alternatives of estimating?

Who and how collect data for monthly/quarterly indices in your country? Is there any benefit we can have at "no costs"?

Which elements of reporting energy prices (actual prices, price systems, complementary information on the markets, ...) is the most difficult (resource demanding)?

Most countries have troubles meeting the existing deadlines in the Directive. What is your national experience with meeting the given deadline?

IEA collects quarterly data on average prices. How in your national systems is this done and how it is linked to the data collections/reporting for Eurostat? Are there any synergies possible?

4.13. Existing “Heavy Reporting Burden” & Problematic Elements

This topic is mostly for responses from national representatives only – these should start the discussion on this subject. Eurostat and IEA should contribute from the side of data validation and areas of problems observed during checking of received data.

Questions – Discussion topics:

Which of the existing aspects of current energy data collection systems pose most of the problems/troubles to you? Which of them in terms of the required resources to perform the task and in terms of reporting burden? And which of them pose problems from a methodological aspect?

Use of reporting tool (MS Excel questionnaires)

Existing checking and validation processes

Timeliness

Level of details in certain elements

Implementation of international methodological guidance and definitions into reporting requirements in national micro data

Generalized reporting concepts that do not sufficiently reflect on all national specificities

...

4.14. Additional “Easy to Report” Elements

This topic is mostly for responses from national representatives only – these should start the discussion on this subject.

Questions – Discussion topics:

National data collections systems evolve over time and current Eurostat’s energy data collections in their existing structures (timeliness, level of details, reporting format, ...) might not be fully reflecting all implemented practices at national level.

Based on your national circumstances, which additional elements of reporting would be possible to improve with limited or virtually no additional reporting burden?

Timeliness & Punctuality

Level of details in certain elements

...

How is the “cost-benefit ratio” for these elements? Are there national user needs?

4.15. Timeliness, Level of Details and Reporting Burden

In short, the request from stakeholders can be summarized as “more detailed data and at the same time, earlier”. As such, these objectives are nearly impossible to meet at the same time without supplementary effort, significant amount of additional resources at national level as well as in Eurostat or much more efficient and effective reporting system re-design.

As already presented during ESWG meetings, the nexus of timeliness, quality and number of revisions (workload for data treatment and validation) poses challenges with respect to current level of details. Increasing level of details without changes to any other elements require additional resources. Without additional resources, one of the elements might be compromised (and with high probability will be).

In practice, many activities requiring detailed data are not actually annual:

Article 22 of Directive 2009/28/EC requires reports on the progress in the promotion and use of energy from renewable source only every 2 years

Article 24 of Directive 2012/27/EU defines reporting obligation for energy efficiency on two levels: annual and every 3 years

PRIMES model, the main model used by DG Energy, works in 5 years intervals and its baseline/reference scenario undergoes major update only every 2-3 years

World Energy Outlook provides major update for its long term baseline/alternative scenarios only every 2nd year

There are also many annual activities, like the inventories of GHG emissions, however it might be well possible that a simplified energy balance will include all needed data for most annual reporting and complex, very detailed energy balance would be needed less frequently.

IEA also collects data in so called "mini questionnaires" for all products but oil – for oil detailed monthly data are used. Countries provide in early May a supply part (production, imports, exports, stock changes) of all products, including those not included in the monthly energy data collection (e.g. certain renewables & wastes).

Questions – Discussion topics:

Do you have examples of annual reporting for which detailed energy statistics and balances on annual level is needed on annual level and cannot be substituted by less frequent reporting (every 2 years)?

Could more detailed data be asked on the same time horizon? For example: NACE section level (21 categories) vs division level (all 99 categories).

If simplified energy balances need to be produced earlier, which elements are the most time consuming for reporting?

Which elements can already today be reported in more detail without any effect on timeliness?

Does a request for more details always mean that more time is needed for production, or if additional resources are provided, time aspect will not be compromised even if more detailed data are asked to be reported?

Does a request for less detail mean that data can be produced earlier and with fewer resources? Under which conditions?

4.16. Joint Questionnaires & Additional Data Collections

Various European legislations require reporting of additional, more detailed energy data than those covered by Regulation (EC) No 1099/2008 on energy statistics. Major examples are Directive 2009/28/EC and Directive 2012/27/EU.

Another example is the implementation of Article 10a(14) in Directive establishing a scheme for greenhouse gas emission allowance trading within the Community requests electricity consumption data collection on NACE 4 digit level and majority of European countries provide data in this level of details.

These additional data are often, but not always, collected by Eurostat and consistency has to be ensured with data reported in the joint energy questionnaires. Some legal acts include references to require this consistency directly: *The methodology and definitions used in the calculation of the share of energy from renewable sources shall be those of Regulation (EC) No 1099/2008 ... Member States shall ensure coherence of statistical information used in calculating those sectoral and overall shares and statistical information reported to the Commission under Regulation (EC) No 1099/2008.*

It might seem that the easiest approach how to ensure consistency is that these data are included in the annual energy questionnaires. However, these additional data in harmonised joint energy questionnaires would then be affecting also countries outside of the EU. It can also be that countries outside of the EU might have their needs for additional elements to be included in the energy data collections.

Questions – Discussion topics:

Do you know about multinational agreements for data reporting outside of Europe, which could require additional data reporting in the joint annual energy questionnaires? (this question is probably mostly for IEA)

How would you prefer data collection for needed additional data: in the joint annual energy questionnaires or in a different form? What are advantages and disadvantages of these approaches?

In case of preference for inclusion in the joint annual questionnaires: how to deal with it in the international context of reporting? ... Voluntary tables and voluntary elements?

In case of preference for separate data collections: would you prefer special dedicated questionnaires on each subject (like the SHARES tool for renewables) or rather one major questionnaire covering all additional data needs: renewables + energy efficiency + possibly others in future?

Do you have any suggestions how to ensure consistency with data reported under Regulation (EC) No 1099/2008 with other reporting obligations on energy subjects, efficiently and with low administrative and reporting burden?

4.17. Evaluation of User Needs & Priorities

The 1st meeting of the Task Force on the Future of Energy Statistics was dedicated nearly exclusively to discussions about user needs and priorities. For several users it seems very difficult to prioritise their needs as many elements were reported as high priority, important and essential – with many areas indicated requests for even more data needs. Very limited input was received on elements that can be removed (deleted) from existing reporting structures – actually, nothing specific was indicated in this respect.

Generalized issues from presentations and feedback received that applies to all domains (monthly and annual quantities, prices):

Energy data often need to be complemented by other indicators for the purpose of complex analysis and detailed reporting in specific domains. Consistency between such data from various domains can be an issue.

Member States, in their response for feedback during last ESWG, confirmed increasing demand for more detailed data coming also at national level.

General observations on questionnaire responses from countries: Some countries already collect some data and thus indicated low burden, while those not collecting certain data indicate high burden. Modelling is often used as response to data source, however, it might be the least preferred method for statistical data – surveys, administrative sources and metering are preferred method for statistical data.

Proposed means to reduced burden were judged in most cases as negligible/small. This seems to indicate that as such we cannot significantly free up resources for other task by reducing burden (unless we propose other areas).

As such, user needs and demands need to be reflected on with respect to national needs and demands for energy data. These might reinforce or weaken the demands at international level.

Questions – Discussion topics:

What are our specific conclusions from previous discussions on user needs and priorities? Is there an outstanding element on which can energy statistics have to deliver in future?

If countries revert to modelling as preferred method of data submission, is this desired approach and method of work for statistics?

For countries: Do these needs represent also the needs arising at national level?

4.18. Implementing Article 9 of Regulation (EC) No 1099/2008

Article 9: Renewable energy statistics and final energy consumption statistics

1. *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) reviewing 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 (Eurostat) shall present and disseminate the statistics generated from 2010 (reference year) onwards;

(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 situation, existing studies and feasibility pilot studies, as well as cost-benefit analyses yet to be conducted, and evaluating the findings of the pilot studies and cost-benefit analyses with a view to establishing breakdown keys for final energies by sector and main energy uses and gradually integrating the resulting elements into the statistics from 2012 (reference year) onwards.

Legal interpretation of paragraph (b) is that Eurostat is obliged to do more. Eurostat is now at final steps of working towards a proposal for a more detailed data collection for households – presented and discussed at several occasions during ESWG meetings. The adoption of these latest amendments to the Regulation is expected during the year 2014. This is the first step of “doing more” and as we are finishing the first step, we should start to gradually prepare for our second step.

It might be important to also reflect on relative importance of various end-user flows and consider the bigger ones for additional action, rather than those that are relatively small, aka road transport might be considered as the next candidate for more reporting details.

Questions – Discussion topics:

Which of the topics described elsewhere would be covered by this Article?

Which additional *legislative actions* should be considered by Eurostat?

Which *non-legislative actions* should be considered by Eurostat?

Which actions for *renewables* should be considered by Eurostat?

Which actions for *industrial sector* should be considered by Eurostat?

Which actions for *transport sector* should be considered by Eurostat?

Which actions for *services sector* should be considered by Eurostat?

4.19. Harmonisation of Methodologies for Energy Balances

There are various approaches for creating energy balances. Eurostat, IEA and Member States use various methodologies and conventions to create energy balances. Eurostat received several comments and suggestions that a harmonized approach with IEA should be developed and only one methodology for energy balances should be used.

Questions – Discussion topics:

What are the advantages/disadvantages of having various methodologies?

What are the advantages/disadvantages of having the same methodology?

Do you have sufficient information about principles and conventions of constructing energy balances in Eurostat and IEA?

(for national representatives only) Do you create your national balances? What is your national methodology and why do you choose that type of methodology?

Should Eurostat and IEA work towards developing one common harmonized methodology for energy balances?

4.20. Energy Data Dissemination

Eurostat used various forms of data dissemination in past. Due to recent cuts in budget, all (in optimistic case only a vast majority) of paper publications dedicated to energy will not be produced anymore in paper form but only in electronic form. The electronic forms of dissemination include:

Online database (Eurobase, nrg_100a, ...) & predefined tables

Several Statistics Explained articles (including possibly Statistics in focus)

One annual electronic publication in pdf format (Energy balances)

Three press releases per year highlighting new available data (prices, renewables, annual data)

Error! Reference source not found., taken from IEA website, shows a recently deployed innovative presentation of a well-known concept that was done in past in static form (on paper). This clearly indicates that innovation in data presentation still exists and we should further complement the existing dissemination formats.

Questions – Discussion topics:

What would you state as strong points of Eurostat's dissemination policy and practices for energy data? ... weak points?

How do you rate Eurostat and its presentation when compared to other sources of energy data: national websites, other international organisations, ... ?

What do you think about the annual pdf publication? Do you know the reasons why people ask for MS Excel files behind the tables presented there and do not use our online database?

Do you have any specific suggestions for Eurostat's dissemination policies for energy statistics and energy balances?

Do you have any additional ideas how to maximise the use of existing data on national level as well as on international level?

4.21. Future Data Revision Policy

In our domain, word "revisions" have two different meanings:

Type A: different versions of a questionnaire during one reporting cycle due to errors, mistakes, omissions, data delays, encoding errors and similar problems.

Type B: different data after short or long period of time, due to new information and/or methodologies at national and international level, leading to change in the longer period of time series

Revisions of type A are resulting from validation procedures. While they might be seen as inconvenience and are directly related to extra work load at national and international level, these revisions are needed to ensure high quality of energy statistics. The existing processes should be improved to minimise the number of revisions of type A during one cycle – this is the "validation ping pong". These revisions are in most of the cases initiated by questions from Eurostat and/or IEA.

Revisions of type B are however initiated by countries. Due to new information, data in historic time series are updated. We observe frequent updates of monthly data, mostly to be in line with updated annual data. For example, we have recently received revision of monthly data for 6 years back for one country. Also for annual

data we observe revisions back to 1990, aka 21 years. One can easily question what new information, in terms of data, is available today to change data in 1990. Methodological changes are of different nature – and in some cases they might be implemented in different ways than full revision of full time series.

European legislation needs also certainty in data. After policy decisions are made using energy statistics – and several directives use directly or indirectly energy statistics – it is difficult to explain to policy makers how come, the pathway is now different and the value for base year is higher/lower.

Questions – Discussion topics:

How should revisions of type B be treated for historic time periods in monthly and annual data?

How to ensure legislative certainty with respect to revisions?

Can participants provide concrete examples (or other additional information) why revisions affecting long time series are needed?

When do revisions stop to be statistics and start to be “modelled data”?

4.22. Change of Methodologies vs. 2020 Targets

European legislation established 2020 targets for renewables and for energy efficiency based on the existing concept and methodology of energy balances. Some changes in methodologies for energy statistics and balances might thus result in the change of stringency for various enacted targets. As a consequence any change has to be widely discussed before it is implemented.

For example, inclusion of hydrogen might increase values for gross inland consumption, non-energy use and final consumption of energy.

Questions – Discussion topics:

Should we completely give up on any methodological changes in near future?

Should we announce in advance a methodological change for a specific year in future and suggest that in future all legislative instruments of the Union have provisions reflecting on possible methodology changes?

Could we ignore the impact on 2020 targets, as any new element introduced would have only negligible impact vis-à-vis the magnitude of already included elements?

4.23. Standard Component in Data Treatment: Validation

Eurostat is held responsible for ensuring the quality of statistics disseminated on its website or published under its name. The issue of quality assurance becomes even more important in a context of shared statistical production.

Data validation is a key task performed by all statistical domains in Eurostat. The lack of common standards and procedures has led to a situation where statistical domains perform different validation approaches in different ways. These problems have been addressed by the ESS.VIP² on Validation Phase I, finalised in the first quarter 2013. The ESS.VIP on Validation is creating a set of documentation, standards, best practices, guidelines and examples on how to deploy a validation strategy in a statistical domain and how to treat it within the context of each Working Group.

Traditionally, the validation step is subdivided into two sub-steps: one is performed on Member States' side before data transmission and one on Eurostat's side before data dissemination. In many instances Eurostat and MSs perform similar validation checks ("**double-work**"), in other cases essential basic quality checks are

² ESS.VIP stands for European Statistical System – Vision Infrastructure Project

performed neither by the MSs nor by Eurostat ("**zero-work**"), because of a lack of coordination.

Validation procedures performed by Eurostat (and in the MSs) have not yet been harmonised and systematically documented. Validation rules are not always documented and formally agreed with the corresponding Working Group. The lack of coordination and the non-formalisation of the validation process combined with the sometimes weak engagement by MSs, produce a very inefficient validation process (various cycles of quality check report from Eurostat to MSs followed by revisions of data by MSs: the so called "**validation ping pong**"). This situation prevents or limits the possibility to redeploy resources in Eurostat from specific and repetitive validation functions to higher added value tasks.

The transmission of non or poorly validated data might lead to non-completeness and consequently to non-compliance. Indeed, legal acts prescribe, at least implicitly, that data sent to Eurostat have to have the adequate quality³. Today standard compliance monitoring is limited to verifying data completeness and punctuality, while the data quality assessment is less structured and it is left to the subjective interpretation of each domain manager.

The solution proposed lies on four different layers:

A better standard documentation of the overall data validation procedure should be part of a more general documentation of the complete production process. This is necessary for the units to keep full control of key steps of the production process. In addition, this would facilitate the efficiency of staff after mobility.

An agreed and standard description of checking rules will facilitate communication and cooperation both within Eurostat, between Eurostat and the Member States as well as between different communities. This should increase the overall efficiency of the production process. Common guidelines for the selection of the validation rules will facilitate a harmonised implementation of the concept of "minimum data quality standard". As a consequence, this should have a direct positive impact on the quality of the published results.

The use of common standard IT validation solutions and associated services should facilitate the automation of procedures and reduce IT development and maintenance costs both within Eurostat and at ESS level

The clear and agreed attribution of responsibility in the validation process, according to efficiency principles (as a general rule: "the sooner, the better"). The overall production chain will be re-organised by attributing the validation tasks to the level where they can be performed in the most efficient way and minimising the number of data validation interventions (steps). This will increase awareness and sense of responsibility about the importance of data quality and should reduce the current high number of validation iterations ("the validation ping pong"). It will avoid duplication of efforts ("double work") and will reduce the risk of uncontrolled dissemination of sub-standard quality results ("zero-work"). In a longer term, this could encourage a further harmonisation of the dissemination policy in the ESS so that increasingly, Member States' publications could correspond to Eurostat publications / be based on the same data sent to Eurostat.

Eurostat will propose to the ESSC a gradual introduction of a structured and objective measurement of "data quality", with relevant implication for reporting non-compliance on this aspect.

While many aspects in the description above are generic, these will apply also to the energy domain. Some of the aspects described above are already fully addressed and solved in certain domains in Eurostat. Energy domain lacks in the implementation of latest development in the area of validation. As a consequence, the checking manual will be developed over the next 2 years and subsequently

³ Regulation (EC) No 1099/2008 Article 6(1): *Member States shall ensure the quality of the data transmitted.*

agreed with the working group (planned for ESWG in June 2015). Later, automatic validation via EDIT will be fully implemented for all incoming questionnaires via eDAMIS. Pre-submission validation tools will be available to reporting countries.

Further information – Additional reading materials:

<http://www.cros-portal.eu/content/ess-vip-project-validation>

https://webgate.ec.europa.eu/fpfis/mwikis/ESSValidServ/index.php/Validation_in_the_ESS

https://webgate.ec.europa.eu/fpfis/mwikis/ESSValidServ/index.php/Validation_Levels

Questions – Discussion topics:

Are there specific considerations for the energy domain that might be outside of the generic validation approach?

Do you have sufficient information about validation procedures and validation rules for energy data used by Eurostat as well as those used by IEA?

On top of the already existing validation procedure in the energy domain, what additional validation procedures should be considered?

How can the existing validation procedure for energy data as implemented by Eurostat and IEA be further improved?

Are there any specific comments to the proposed general approach in the ESS.VIP on validation?

Should extending validation to levels 3, 4 and 5 be a priority for us?

4.24. Cross-Domain Harmonisation

The Single Entry Point (SEP) concept is that data for all statistical domains should arrive at a common reception area in Eurostat, so they can be automatically monitored, checked and delivered into the target production environment, with a set of common informatics tools. In May 2006, the Statistical Program Committee (SPC) endorsed the SEP strategy. All the partners involved in the regular transmission of statistics to Eurostat are bound by this decision. This decision has been implemented in eDAMIS (electronic Data files Administration and Management Information System) which is an integrated environment of data transmission tools.

The use of Single Entry Point (SEP) of Eurostat is a mandatory requirement prescribed in Regulation (EC) No 1099/2008 - see sections "Applicable provisions" in each annex.

Eurostat is further developing its IT systems with the aim of further automatisation of data collection, validation as soon as possible (by Member States before data submission), by use of standard data exchange formats (for example SDMX), and others.

In simplified terms, the future concept is guided by cross-domain harmonisation of processes under the condition of continuous reduction of human and financial resources. Eurostat will be affected by the agreed staff cuts of the European Commission. Discussions with Member States indicate the same type of problems. This seems to indicate a higher level of use of IT tools and automated data treatment in future.

Questions – Discussion topics:

Do you see any specificity for the energy domain that would prevent the use of harmonised tools for the full cycle of data processing (from collection to dissemination)?

According to your knowledge, which future challenges lie ahead of the energy domain in future harmonisation of cross-domain issues?

What exactly is happening elsewhere in this respect?

4.25. The 21st Century Statistics

<http://www.cros-portal.eu/content/business-case-21st-century-official-statistics/>

*While official statistics still plays a fundamental role for decision making at all levels of society, its future position should not be taken for granted. The ubiquitous flood of data streams generated through the internet and its real-time exploitation, provokes discussion about the usefulness of official information being provided with a considerable time lag. At the same time there is an increasing need for more comprehensive information relevant for measuring complex phenomena and their impact on society, economy and the environment. Confronted with these challenges, **official statistics** will need to actively define and defend its role in the statistical information market and in doing so it **will need to change**.*

This change will comprise moving into two opposing directions at the same time. On the one hand official statistics will need to standardise and industrialise its production chain, allowing for longer term efficiency gains, profiting from international co-operation and from ICT developments. On the other hand, it will need to specialize in those niches where it can provide a unique service to users, targeting specific users groups (such as policy makers). While these changes will require fundamental investments and organisational learning, they will allow statistical institutes to build upon and expand their core competences, such as the provision of integrated and mutually consistent data, a unique quality mix as well as an institutional background guaranteeing independence and impartiality.

Here is an extract from document presented to Eurostat Director's meeting

The on-going discussion on the need for standardisation and industrialisation of official statistics in the High-level Group for Strategic Developments in Business Architecture in Statistics also provided useful input to the proposed new profile of future statistical officers, indicating higher concentration of tasks on:

Development of statistical indicators

Design and co-ordination of data collection with Member States

Standardisation of processes, products and methods, with and increased use of new technologies such as cloud computing

User oriented development of statistical products

Use of big data, open data, cloud data and data from administrative sources ("the iStatistician")

Use of warehouse data and less tailor-made products ("warehouse quality guardian")

Statistical audit and labelling of official statistic ("the statistical auditor")

Questions – Discussion topics:

What are other than purely technical and practical future challenges for energy statistics domain?

Which challenges are energy specific and which are shared with other domains?

Which adaptation for future we need to start implementing already today?

4.26. Videoconferencing as a regular working method in the future

Budget for mission and working groups is under constant pressure. Videoconferencing is now being more promoted. There are now 4 video-conferencing rooms in Eurostat and a possibility to have videoconferencing for individual PCs of those who use this feature a lot (i.e. direct videoconferencing from the office).

While some errors and problems detected during validation are lengthy or difficult to explain in emails (in writing), it might be easier to show on screen in the

questionnaire directly. We believe that such additional communication can improve the validation process in some cases. Ideally, trilateral video-conversation (country – IEA – Eurostat) could be held with reporting countries in addition to the emails sent, especially when challenging and complicated issues are being discussed.

Questions – Discussion topics:

What is the opinion of TF on the proposal to introduce such aspect as regular working method? Would TF agree their countries to be volunteers for testing of such teleconferencing for validation during October-December 2014 period?

4.27. The split of energy data between ETS and non-ETS sectors

There is an upcoming user need signalled to us to have energy data split along the ETS/non-ETS boundaries⁴. There is a need to develop a consistent approach for allocating energy flows towards the ETS/non-ETS sectors (with the overall objective being to ensure consistency of the reported greenhouse gas emissions under the ETS and in the national inventory reports).

The colleagues at the EEA have developed a method to estimate “gross avoided GHG emissions from deployment of renewables”. Under this method, they would like to know if the effects take place in ETS/non-ETS sectors. But as no mapping is currently available, they use different alternative options in this step (based on the Common Reporting Format and other assumptions).

Some members of this task force mentioned that there are some national approaches developed in this regard.

The approach of splitting between ETS and non-ETS sectors is specific for European circumstances and might be difficult to implement in the questionnaires harmonised at wider international level.

Also, from a technical perspective, this is a different layer of split of already existing data in the existing reporting structures.

Questions – Discussion topics:

What is the view of the TF? Can we agree on some conclusions? Do we recommend development of methodologies, inclusion in questionnaires, special new questionnaire?

4.28. Dissemination of the completed annual questionnaires to the public

There is some demand for energy data in the form of the joint annual energy questionnaires. The main sources of these demands are “Energy Accounts” and “SHARES tool”.

In the SHARES tool, the main input element is the 5 annual energy questionnaires. Similarly, in the PEFA⁵ builder, the main input is the 5 annual energy questionnaires.

These demands are from the public, contractors (aka commercial entities) and also public administration, other than those providing energy questionnaires to Eurostat.

In the short ESWG survey, in answer to question 8, 20 countries answered in favour of sharing these questionnaires with the general public, while 8 countries were against⁴. This is roughly 70% vs 30%.

There were some valid comments raised, such as an increased burden as additional questions will come.

The issue of confidentiality is difficult to understand for Eurostat – current instructions are that no confidential values are to be included in the MS Excel

⁴ ETS: emissions trading system (Directive 2003/87/EC and its amendments)

⁵ Physical Energy Flow Accounts

questionnaires transmitted to Eurostat. Consequently, all data published on the basis of these questionnaires directly or via standard Eurostat dissemination tools, will contain exactly the same information.

A set of arguments for publishing is: more user-friendliness (alternative format for access to data); more transparency (anybody can verify SHARES tool calculations and work on energy accounts); no direct additional work (questionnaires are produced and transmitted to Eurostat already today, just a set of final versions need to be zipped into one file and uploaded to Eurostat website)

A set of arguments against publishing is: highly probable indirect additional work (questions from those accessing these files); non-standard data dissemination method

Questions – Discussion topics:

What is the opinion of the TF? Are there additional advantages and disadvantages? Will the TF agree with the majority on recommending for publishing or not recommending for publishing?

5. Annex III: Results of the Eurostat's user satisfaction survey

As the issue of user needs was a key element in various discussions, Annex III includes results of the main Eurostat user satisfaction survey. In total 4840 records exist in the overall results, of which 943 users selected energy statistics as one of their statistics they used mainly. The survey below shows evaluation of responses of these 943 users

To which user group do you belong?

	Energy users
Private user	18.6%
Student or academic	26.2%
Commercial company	23.5%
Trade association	2.9%
Public administration	11.9%
Commission DG or service	1.8%
European Institution / body (other than the Commission)	1.2%
National Statistical Institute	4.3%
International organisation	1.4%
Political party / political organisation	1.2%
Redistributor of statistical information	1.6%
Other	5.5%

Which European statistics do you mainly use? Please mark all relevant datasets.

	Energy users
Economy and finance - National accounts (including GDP, main aggregates, input-output tables)	62.1%
Economy and finance - European sector accounts	33.0%
Economy and finance - Price statistics	40.4%
Economy and finance - Government finance statistics	33.7%
Economy and finance - Balance of payments	27.8%
Economy and finance - Financial accounts and monetary indicators	24.5%
Industry, trade and services - Structural business statistics	39.4%
Industry, trade and services - Short-term business statistics	25.9%
Industry, trade and services - Tourism	21.5%
Industry, trade and services - Information society	22.1%
Population and social conditions - Labour market (including labour force survey)	45.2%
Population and social conditions - Population	47.0%
Population and social conditions - Health	26.5%
Population and social conditions - Education and training	32.4%
Population and social conditions - Living conditions and social protection	30.9%
International trade statistics	43.8%
Environment statistics	50.9%
Agriculture and fishery statistics	30.5%
Energy statistics	100.0%
Transport statistics	41.3%
Science, technology and innovation	33.4%
Regional statistics	38.5%
Europe 2020 indicators	35.3%
Sustainable development indicators	33.9%
Euro indicators / PEIs (Principal European Economic Indicators)	24.4%
Globalisation indicators	22.9%
Other	2.4%

How do European statistics influence your work?

	Energy users
They are essential for my work	26.6%
They are important for my work	36.4%
They are of value as background information	32.1%
They are of minor importance	3.1%
They are of no use to my work	1.8%

For what purposes do you use European statistics?

	Energy users
Monitoring or formulating policy	25.9%
Preparing legislation	6.9%
Negotiations	9.7%
Econometric model building and forecasting	32.6%
Research	61.3%
General background information	52.3%
Re-dissemination of statistical data	24.3%
Media use	10.1%
Market analysis	33.8%
Decision-making in business	19.3%
Other	6.8%

How often do you use European statistics?

	Energy users
Daily	9.9%
Weekly	20.1%
Monthly	31.4%
Quarterly	21.2%
Annually	9.5%
At other intervals	7.8%

What Eurostat products do you mainly use? (Please mark all relevant products)

	Energy users
Eurostat press releases	31.9%
Statistics Explained	30.6%
Statistics in Focus	37.0%
Other Eurostat publications	21.6%
Eurostat main tables accessible from its website	61.8%
Eurostat database accessible from its website	79.9%
Tailor-made Eurostat data	11.0%
Eurostat micro data	10.7%
Eurostat mobile apps (Country Profiles, EU Economy)	7.0%
Other products	2.3%

How do you rate the quality of Eurostat's:
1 = very good, 2 = good, 3 = adequate, 4 = poor, 5 = very poor

	1	2	3	4	5	n.a.
Statistics Explained	17.4%	28.4%	12.7%	9.2%	3.6%	28.6%
Yearbook	17.4%	27.6%	12.1%	6.2%	3.1%	33.7%
Regional Yearbook	12.4%	23.5%	14.3%	6.2%	2.8%	40.8%
Pocketbooks	12.6%	19.5%	12.7%	6.2%	2.1%	46.9%
Statistics in Focus	18.6%	25.2%	12.0%	7.3%	4.0%	32.9%
Press releases	13.8%	25.5%	12.4%	7.5%	3.6%	37.2%
Mobile apps	22.7%	33.3%	22.7%	1.5%	0.0%	19.7%

How do you rate the timeliness of European statistics for your purposes?
1 = very good, 2 = good, 3 = adequate, 4 = poor, 5 = very poor

[%]	1	2	3	4	5	n.a.
Energy	15.8	33.1	24.2	13.5	5.9	7.5
Economy and finance						
National accounts	23.4	36.2	18.3	10.9	4.9	6.3
European sector accounts	20.3	36.0	22.8	10.0	3.5	7.4
Price statistics	24.7	35.4	18.1	10.5	3.9	7.3
Government finance statistics	23.0	37.1	20.8	9.7	4.1	5.3
Balance of payments	21.0	38.9	18.7	9.2	3.8	8.4
Financial accounts and monetary indicators	20.8	41.6	19.0	7.4	3.9	7.4
Industry, trade and services						
Structural business statistics	14.8	35.8	25.5	10.5	4.8	8.6
Short-term business statistics	17.2	41.8	21.7	12.3	2.9	4.1
Tourism	20.2	32.5	24.1	11.8	3.9	7.4
Information society	15.4	39.4	19.7	9.1	4.3	12.0
Population and social conditions						
Labour market	19.2	34.0	23.0	11.7	4.5	7.5
Population	18.5	34.3	23.9	10.8	3.8	8.6
Health	20.4	34.8	21.6	12.4	2.8	8.0
Education and training	20.6	33.0	22.2	11.8	3.3	9.2
Living conditions and social protection	19.9	28.2	26.8	10.0	3.8	11.3
Other						
International trade statistics	22.0	32.0	22.0	9.9	4.6	9.4
Environment statistics	17.9	34.2	23.5	11.5	3.5	9.4
Agriculture and fishery statistics	17.4	33.3	25.0	10.1	5.6	8.7
Transport statistics	15.4	33.9	21.9	12.6	5.7	10.5
Science, technology and innovation	17.1	32.1	21.9	12.4	5.1	11.4
Regional statistics	15.7	30.6	25.9	12.9	4.7	10.2
Europe 2020 indicators	22.2	34.5	21.0	9.6	3.6	9.0
Sustainable development indicators	18.8	32.2	22.2	11.9	5.0	10.0
Euro indicators / PEEIs	24.3	33.5	19.1	10.4	3.0	9.6
Globalisation indicators	23.6	32.9	21.8	7.4	3.2	11.1

How does the timeliness of data published on the Eurostat website compare with that of data on the websites of the EU Member States' National Statistical Offices?

	Energy users
Better	21.7%
Same	34.6%
Worse	16.3%
No opinion	27.4%

How do you rate the overall completeness of European statistics in terms of e.g. breakdowns available by countries, regions, components, etc?

1 = very good, 2 = good, 3 = adequate, 4 = poor, 5 = very poor

[%]	1	2	3	4	5	n.a.
Energy	14.4	35.2	24.6	12.6	4.1	9.0
Economy and finance						
National accounts	19.1	34.8	22.2	12.6	3.1	8.2
European sector accounts	17.4	36.0	22.8	10.3	3.9	9.6
Price statistics	17.1	37.3	23.1	10.8	3.7	8.1
Government finance statistics	19.5	33.6	22.6	11.0	3.1	10.1
Balance of payments	18.7	33.2	23.7	12.6	3.1	8.8
Financial accounts and monetary indicators	17.3	37.2	23.8	9.1	3.9	8.7
Industry, trade and services						
Structural business statistics	13.4	32.0	26.9	12.9	5.4	9.4
Short-term business statistics	13.9	35.7	27.0	11.5	5.7	6.1
Tourism	15.3	31.5	29.1	10.8	3.9	9.4
Information society	11.5	36.5	28.4	10.6	2.9	10.1
Population and social conditions						
Labour market	13.8	36.4	23.7	12.2	4.2	9.6
Population	16.3	33.4	23.5	12.4	3.2	11.3
Health	15.6	34.0	24.4	11.2	4.0	10.8
Education and training	15.7	35.9	23.2	10.1	4.6	10.5
Living conditions and social protection	15.5	32.3	26.1	11.3	4.5	10.3
Other						
International trade statistics	19.6	31.2	21.3	11.9	4.6	11.4
Environment statistics	15.0	33.5	27.5	10.4	2.9	10.6
Agriculture and fishery statistics	13.2	33.3	27.8	11.1	3.8	10.8
Transport statistics	14.1	32.4	24.7	11.8	3.6	13.4
Science, technology and innovation	14.6	30.2	27.0	10.5	3.2	14.6
Regional statistics	13.2	29.8	25.3	15.2	3.9	12.7
Europe 2020 indicators	21.3	31.8	23.7	8.1	2.7	12.3
Sustainable development indicators	18.4	28.8	25.9	9.4	4.1	13.4
Euro indicators / PEEIs	21.7	30.4	20.9	10.4	2.2	14.3
Globalisation indicators	18.5	34.7	24.5	7.4	2.8	12.0

How do you rate the comparability of European statistics among regions and countries?

1 = very good, 2 = good, 3 = adequate, 4 = poor, 5 = very poor

[%]	1	2	3	4	5	n.a.
Energy	16.1	32.3	19.4	11.8	3.6	16.8
Economy and finance						
National accounts	19.5	30.9	21.3	9.0	3.8	15.5
European sector accounts	17.7	33.8	20.9	9.0	4.5	14.1
Price statistics	17.8	34.4	19.9	8.1	4.5	15.2
Government finance statistics	18.2	31.4	23.9	8.8	4.7	12.9
Balance of payments	19.5	31.3	20.6	8.4	5.3	14.9
Financial accounts and monetary indicators	19.0	34.6	20.3	7.8	3.9	14.3
Industry, trade and services						
Structural business statistics	14.0	30.1	22.8	10.8	4.3	18.0
Short-term business statistics	11.9	34.4	25.4	8.2	4.5	15.6
Tourism	17.7	29.6	23.6	9.4	4.9	14.8
Information society	15.9	30.8	26.0	10.6	3.4	13.5
Population and social conditions						
Labour market	17.8	29.3	20.9	14.1	4.7	13.1
Population	16.7	32.5	20.5	11.5	2.5	16.3
Health	16.0	32.4	21.2	14.4	1.6	14.4
Education and training	18.6	30.7	21.2	14.1	2.0	13.4
Living conditions and social protection	17.2	30.6	19.6	14.8	3.4	14.4
Other						
International trade statistics	16.0	32.4	20.3	11.6	3.9	15.7
Environment statistics	15.6	30.4	22.3	9.4	3.3	19.0
Agriculture and fishery statistics	14.6	34.0	24.0	9.7	3.5	14.2
Transport statistics	14.1	29.8	21.1	13.4	3.1	18.5
Science, technology and innovation	16.5	30.2	21.0	13.3	3.5	15.6
Regional statistics	15.4	30.0	22.3	12.9	3.0	16.3
Europe 2020 indicators	19.2	31.5	22.2	6.6	3.6	16.8
Sustainable development indicators	15.3	31.6	22.8	9.1	2.2	19.1
Euro indicators / PEEIs	17.4	31.3	23.9	10.0	0.9	16.5
Globalisation indicators	18.5	35.6	20.4	8.8	0.9	15.7

How do you rate the overall quality of European statistics?
 1 = very good, 2 = good, 3 = adequate, 4 = poor, 5 = very poor

[%]	1	2	3	4	5	n.a.
Energy	16.9	38.0	22.1	11.1	3.3	8.7
Economy and finance						
National accounts	20.8	43.0	16.2	9.6	3.8	6.7
European sector accounts	18.0	42.8	19.6	8.0	3.5	8.0
Price statistics	20.7	39.9	19.9	9.2	3.1	7.1
Government finance statistics	20.1	42.8	18.6	9.4	2.5	6.6
Balance of payments	20.6	40.1	17.2	10.7	2.7	8.8
Financial accounts and monetary indicators	19.0	41.6	20.3	6.9	3.0	9.1
Industry, trade and services						
Structural business statistics	14.8	39.8	24.7	9.1	3.2	8.3
Short-term business statistics	15.2	42.2	24.2	7.8	4.9	5.7
Tourism	19.2	32.5	24.6	10.3	3.4	9.9
Information society	16.8	38.0	23.6	9.6	2.9	9.1
Population and social conditions						
Labour market	17.4	39.0	21.6	9.6	4.0	8.5
Population	18.1	42.7	19.0	8.1	3.4	8.8
Health	16.4	38.8	22.8	8.4	4.4	9.2
Education and training	19.9	39.2	19.0	9.2	3.6	9.2
Living conditions and social protection	19.2	37.8	20.6	8.2	4.5	9.6
Other						
International trade statistics	20.8	38.7	18.9	9.9	2.7	9.0
Environment statistics	16.9	39.0	21.0	9.6	2.9	10.6
Agriculture and fishery statistics	17.0	40.3	21.9	7.6	4.2	9.0
Transport statistics	14.9	38.0	23.1	9.8	3.1	11.1
Science, technology and innovation	17.8	41.3	16.8	8.9	2.9	12.4
Regional statistics	17.1	34.2	21.8	12.4	3.6	11.0
Europe 2020 indicators	20.4	39.6	19.2	7.5	1.8	11.4
Sustainable development indicators	16.9	35.6	23.4	10.0	3.1	10.9
Euro indicators / PEEIs	20.9	37.0	20.4	7.8	2.2	11.7
Globalisation indicators	19.0	39.8	21.8	6.9	1.9	10.6

How does the quality of European statistics compare with that of statistics published by National Statistical Institutes, the IMF, OECD, UN/ECE, World Bank and FAO?

	Energy users
Better	26.7%
Same	43.9%
Worse	10.0%
No opinion	19.4%

Personally how much do you trust the statistics produced by Eurostat?

	Energy users
Trust them greatly	37.4%
Tend to trust them	54.4%
Tend not to trust them	4.9%
Distrust them greatly	0.6%
No opinion	2.7%

Are you aware of the release calendar on Eurostat's website?

	Energy users
Yes	29.6%
No	70.4%

Do you think it contains sufficient and relevant information for your needs?

	Energy users
Yes	59.9%
Partly	26.5%
No	3.6%
No opinion	10.0%

Do you use the metadata provided by Eurostat?

	Energy users
Yes	49.1%
No	50.9%

Which metadata do you use?

	Energy users
Metadata explaining the statistics	84.7%
Metadata describing the statistical production	44.7%
Metadata on quality	32.0%
No opinion	10.0%

Do you find the metadata sufficient for your purpose?

	yes	partly	no
Metadata explaining the statistics	55.6%	41.6%	2.8%
Metadata describing the statistical production	52.2%	44.9%	2.9%
Metadata on quality	56.1%	39.9%	4.1%
Do you find the metadata easily accessible?	48.2%	44.3%	7.6%

Is it easy to access the European statistics you need on the Eurostat's website?

	Energy users
Yes	47.1%
Partly	37.9%
No	11.5%
No opinion	3.6%

Are European statistics presented in a way that is easy-to-understand?

	Energy users
Yes	56.7%
Partly	34.1%
No	5.8%
No opinion	3.3%

How do you rate the content of Eurostat's website in relation to your needs?

	Energy users
Very good	18.3%
Good	43.8%
Satisfactory	29.1%
Poor	6.2%
Very poor	1.2%
No opinion	1.5%

In which language do you access Eurostat's website?

Please mark all relevant languages.

	Energy users
English	90.3%
French	17.4%
German	17.1%

How would you rate the Eurostat's website?

1 - very good, 2 - good, 3 - adequate, 4 - poor, 5 - very poor

	1	2	3	4	5	n.a.
Navigation to required information	13.1%	35.2%	26.2%	16.4%	5.1%	3.9%
Performance/speed	16.1%	41.3%	22.5%	10.8%	5.3%	4.0%
Database extractions tools	15.1%	35.5%	25.1%	12.0%	6.3%	6.0%
Help texts/help facilities	11.0%	28.2%	29.2%	13.3%	5.1%	13.3%
Search facilities	10.8%	31.3%	27.1%	16.4%	6.7%	7.6%
Alert and notification	9.4%	23.5%	19.7%	8.1%	3.0%	36.3%

How satisfied are you with the user support provided by Eurostat?

	Energy users
Very satisfied	9.9%
Satisfied	33.4%
Neither satisfied not unsatisfied	12.4%
Unsatisfied	3.0%
Very unsatisfied	0.8%
No opinion	17.6%
Not known	22.9%

How do you rate the overall quality of the data and services provided by Eurostat?

	Energy users
Very good	21.2%
Good	43.7%
Adequate	24.5%
Poor	4.7%
Very poor	0.2%
No opinion	5.7%

Comparing with the situation in April 2013, when the previous survey was conducted, how do you rate the overall quality of the data and services provided by Eurostat in terms of...

	Better	Same	Worse	No opinion
Timeliness of data?	14.7%	40.2%	1.7%	43.4%
Comparability of data?	12.6%	42.4%	1.2%	43.8%
Completeness of data?	15.7%	39.1%	2.0%	43.2%
Metadata	11.9%	36.7%	1.0%	50.5%
Website	18.1%	37.2%	1.6%	43.1%
Support services	9.2%	34.0%	1.4%	55.4%
Overall	16.5%	39.7%	1.4%	42.4%

6. Annex IV: Evaluation of user survey on energy statistics

Eurostat launched user survey on energy statistics at the end of June 2014. This survey was announced in the Energy Statistics Working Group meeting as well as advertised within the dedicated section for Energy on the Eurostat website. It was open until second half of November 2014.

This document presents the received responses from 59 respondents. Some respondents did not answer all questions. In some questions, multiple answers could have been provided. All open questions are as received and were not edited for grammar and spelling.

1. What type of organisation / institution do you represent?

	Ratio
Individual citizen	10%
Business: Commercial or industrial sector, private company	22%
Research: University, Think-tank, Research organization	7%
NGOs	3%
Press, Media and Journalists	2%
National statistical office	15%
Other national administration: Ministry, Federal/Local/Municipal administration	27%
European institution: European Commission, European Parliament, European Council or other	8%
Other international organization	0%
Other, not specified above	5%

2. Where do you work?

Belgium	5%
Bulgaria	7%
Croatia	0%
Czech Republic	3%
Denmark	3%
Germany	3%
Estonia	0%
Ireland	0%
Greece	2%
Spain	8%

France	14%
Italy	0%
Cyprus	7%
Latvia	2%
Lithuania	5%
Luxembourg	0%
Hungary	3%
Malta	0%
Netherlands	12%
Austria	3%

Poland	0%
Portugal	2%
Romania	0%
Slovenia	0%
Slovakia	0%
Finland	5%
Sweden	0%
United Kingdom	7%
Other	8%

3. Which of these main datasets disseminated by Eurostat do you use?

	Ratio
Annual energy statistics	83%
Monthly energy statistics	31%
Energy prices statistics	49%
Energy indicators and other data	64%
None	5%

4. Have you ever contacted Eurostat when you needed help to understand and analyse energy statistics as disseminated by Eurostat?

Yes: 16

No: 39

Assessment of overall supporting service: Identifying the contact method

	Answers
Very good	5
Good	8
Average	2
Poor	2
Very poor	1
No opinion	0

Assessment of overall supporting service: Promptness/timeliness

	Answers
Very good	6
Good	9
Average	1
Poor	1
Very poor	1
No opinion	0

Assessment of overall supporting service: Comprehensiveness/extensiveness

	Answers
Very good	6
Good	6
Average	2
Poor	2
Very poor	1
No opinion	1

Assessment of overall supporting service: Clarity/ease of understanding

	Answers
Very good	4
Good	9
Average	1
Poor	2
Very poor	1
No opinion	1

Assessment of overall supporting service: Overall assessment of support received

	Answers
Very good	6
Good	7
Average	2
Poor	2
Very poor	1
No opinion	0

Do you have any specific comments and/or suggestions for improvements for supporting service?

Typically the answers are very general. E.g. if asked by when the database would be uploaded, the response was something like it is being looked at right now.

"La cuestión planteada estaba referida a una ruptura metodológica en las series de los componentes de los precios de la energía. Si la persona que atiende inicialmente la cuestión no tiene conocimientos específicos de este tema, debería dirigirla a alguien responsable del banco de datos, en este caso, el de precios de la energía eléctrica.

The question raised was referred to a methodological break in the series of the components of the energy prices. If the person who initially answers the question has no specific knowledge of this topic, you should direct it to someone responsible for the database, in this case, the price of electricity."

I took contact straight to an expert at the Energy Statistics unit (I knew the right person there), and I think that this ensured the good quality of help.

5. What is your opinion about metadata, methodology description and other supporting documentation for energy datasets available and published by Eurostat in the energy domain?

	Answers	Ratio
Very good	9	15%
Good	21	36%
Adequate	17	29%
Poor	5	8%
Very poor	2	3%
No opinion	5	8%

Please provide comments to explain your answer.

The Eurostat system is one of the worst, most difficult to use, data systems I have ever had the displeasure of using.

to be more user friendly regarding dealing with the application

Plenty of interesting and useful information.

"I was looking for gas prices (time line)

After 10 minutes I still could not get the information I wanted Got stuck here:

<http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/data/database> "

It is a useful tool for calculating market share and the general and seasonal trend of the local market

The energy statistics manual is very useful.

"-The scope of some categories is not clear. For example in energy prices: what taxes are included

-Sometimes it is not directly clear what categories are aggregates of others"

It is good that methodology of table is available at the same page.

The information is adequate but it is difficult to be found on the website.

There is little methodological documentation on energy statistics as for example manuals and, in addition, they are old.

It is useful to see more definitions.

For better harmonization between IEA and Eurostat definitions of terms, sometimes it would be useful to better explain or comment differences in IEA's and Eurostat's terms description and meaning (what is what) and explanatory texts (now in progress). It would be better to exchange old examples of questionnaires from 2002 to new questionnaires from 2014 (annual and monthly ones).

the documentation I've seen focuses mainly on technical matters, issues like raw data quality and how technical parameters compare to reality receive too little attention

I am involved in the process of data provision. For me the metadata and methodology descriptions are satisfactory.

The methodology description is insufficient to grasp the differences with national statistics, which makes it difficult to interpret the meaning of Eurostat data for the Netherlands

Relevant data is quite easy to find and its description is adequate

Adequate

I use national data. More accessible and suits my needs.

It is sometimes difficult to find the metadata when you work on datasets

"The methodology description is adequate, the problems come from the methodology itself.

Energy consumption is related with other statistics (industrial production for instance), it is a pity your questionnaire does not deal with these other statistics. You should have a deep look on the difficulties due to statistical secret : too much statistics are hidden and you should propose a more or less detailed in order we can access to quite precise statistics not covered by statistical secret."

We work on the air pollutants and GHG emissions inventories. We base our work on the French energy balance but we will have to compare the data we use with data published by Eurostat. I am not familiarised with your website so I find it difficult to find what I am looking for.

It is not very detailed but gives enough information to work with

Supporting notes about the methodology used are of good quality but the data on energy consumption by fuel for each sector (energy balances) and electricity generation by fuel are not detailed enough.

A search function would be good. All I wanted was the current electricity generating efficiency and I could not find it.

6. Have you visited the Statistics Explained article related to energy statistics?

Yes: 27

No: 28

Overall assessment of Statistics Explained articles on energy statistics

	Answers
Very good	7
Good	11
Adequate	7
Poor	1
Very poor	2
No opinion	1

Please provide comments to explain your answer.

I found the description of data but not the data itself. Nothing to click to get access to data

The presented information is good, need to be more disaggregated.

This system is a very direct and easy way to disseminate the important energy information

It is a well structures publication.

I would like to see them more in the field of energy.

7. How important is annual energy statistics for your work?

	Answers
They are essential/indispensable for my work	26
They are important for my work	11
They are of value as background information	7
They are of value as supporting/supplementary information to other data sources	4
They are of minor importance	1
They are of no use	0

8. How often do you need to use annual energy statistics?

	Answers
Nearly on a daily basis	2
On a weekly basis / Several times per month	13
Several times per quarter	11
At irregular intervals / Several times per year	23

9. How do you judge data quality as regards the following factors?: Relevance: the degree to which it meets your needs

	Answers
Very good	12
Good	18
Adequate	13
Poor	3
Very poor	1
No opinion	2

9. How do you judge data quality as regards the following factors?: Accuracy: the closeness of statistics to the unknown true values

	Answers
Very good	2
Good	24
Adequate	10
Poor	3
Very poor	0
No opinion	10

9. How do you judge data quality as regards the following factors?: Accessibility: the way you can access and use data

	Answers
Very good	8
Good	15
Adequate	19
Poor	3
Very poor	1
No opinion	3

9. How do you judge data quality as regards the following factors?: Clarity: how you understand and interpret data

	Answers
Very good	7
Good	24
Adequate	13
Poor	2
Very poor	1
No opinion	2

9. How do you judge data quality as regards the following factors?: Comparability: the comparison between countries, statistical domains and over time

	Answers
Very good	11
Good	20
Adequate	7
Poor	6
Very poor	1
No opinion	4

9. How do you judge data quality as regards the following factors?: Timeliness: the time when data are available

	Answers
Very good	8
Good	11
Adequate	16
Poor	9
Very poor	2
No opinion	3

10. Eurostat would also like to have your views on whether you need additional data, i.e. more detailed data or aggregated data with different breakdowns or a smaller and simplified set of annual data available several months earlier, etc. Do you need additional data?

Yes: 20

No: 27

Please indicate the indicators and/or additional breakdowns or aggregations you refer to. And also please tell us why and benefits resulting from these additional data.

"Demand breakdown by sectors, e.g. for fuel oil, marine bunkers, burning, industry, use as feedstock

Supply breakdown by refineries and product qualities. E.g. for fuel oil, breakdown into SRFO or cracked fuel, HSFO or LSFO etc, for diesel, 10 ppm, 50 ppm or 500 ppm etc"

"It would be very helpful if Eurostat provided detailed Energy Balances (MS Excel files) for all years starting with 1990, and not only for selected years. The functionality of the online database is very limited compared to the Excel files.

Given the significance of (offshore) wind (currently Wind power [5520]), it would be helpful if Eurostat provided the split between onshore and offshore wind energy, even though this applies only to selected countries."

We occasionally need data for electricity consumption on NACE 4-digit level for the carbon leakage list.

"I would like to have a good connection (maximum match) between the template for the renewable energy progress report in the framework of the Renewable Energy Directive and the national and European statistics.

To my opinion an improvement of the biomass for energy statistics is necessary."

I would appreciate the same breakdown by branches as in the National accounts (38 or 64 branches). It would ease energy-economic modelling and monitoring.

"energy production per type of renewable energy technology. I find it very aggregated.

more sectoral disaggregation."

"Additional data are needed as example:

- fuel consumption of cars to calculate specific consumption per car
- energy consumption for production of energy intensive products - steel, other metals, cement etc. to calculate specific energy consumption "

For renewable energy they end-use figures provided do not give a clear picture of the biogas market. Since this market is presented as part of electricity, heat and transport it is difficult to find.

final energy use by type of end use (e.g. heating, cooling, electric apparatus, water etc), but I believe Eurostat is working on this.

"-I would like to be able to directly download energy balances from Eurostat. This helps me to be sure I add and use the appropriate fuels or flows

-I would like to know how much electricity is used for heating and cooling

-I would like to be able to directly make an overview of all electricity generation per source: now it is not always clear which categories are aggregates.

-I would like to be able to directly construct the RES shares according to the RES directive: including gross final energy consumption, heat pumps and transport fuels. Now I have to combine different datasets and make sure I included everything.

To fulfill the EU requirements. That's why the Eurostat should be consistent with the relevant deadlines in the EU documents.

Heating and cool Degree days, detailed information about energy consumption by uses for residential sectors and services, detailed information for all modes of transport.

The indicators should also be published with correction of energy consumption for Heating Degree Days deviating from long term average HDD, in order to make them more policy relevant (a higher energy-intensity due to a cold winter could lead to wrong policy conclusions)

Origin of imports

no distinction between residential consumption and firms' consumption

"The break down of energy statistics in industrial sector is too poor.

What is the methodology for tertiary sector ? Do you examine how do work the 27 countries to produce their statistics ?"

Detailed data per sectors and technologies are missing.

"Would like electricity production and installed capacity data based on energy commodities (e.g solar, Wind, Nuclear, gas, coal....). "

Don't need data on monthly basis. In Quebec, We use energy data as a basis of comparison. We need data on an annual basis but detailed: detailed energy data and detailed electricity generation data. I believe these are the main statistics analysed to portray the energy situation.

as above

11. Do you have any specific comments and/or suggestions for improvements of annual energy statistics?

It would be very helpful if Eurostat provided detailed Energy Balances (MS Excel files) for all years starting with 1990, and not only for selected years. The functionality of the online database is very limited compared to the Excel files.

Revisions need to be reduced for data submitted after the legal deadline. Also, greater consistency needs to be ensured between energy data reported under the GHG inventories and that reported under the ESR. With the new requirement on consistency checks under the MMR, hopefully we can respond to discrepancies and improve the quality of both reporting streams.

"Quick, easy access like EIA

Type in Google ""EIA gas prices"" You get:
http://www.eia.gov/dnav/ng/ng_pri_top.asp

Click Natural Gas Monthly. you get <http://www.eia.gov/naturalgas/monthly/>

Why can't you provide the same service?"

the timeliness

"The data for value added, or industrial production and energy consumption for the same industrial branches.

Average annual heating degree day, per country, calculated on the base of populated area."

"-Create an API so we can directly download data to databases or embed in websites.

-improvement of Infrastructure - electricity - annual data (nrg_113a) . Capacities are not reliable (or in line with Eurelectric of Platts), e.g. hydro capacities and inclusion of CHP capacities"

There are not enough information in annual statistic. There are could be more tables about heat plants and CHP

The methodologies used by different countries should be comparable

Statistics on heat pumps/ambient heat would be interesting.

Use for energy consumption in general the official unit Joule as the standard (and give an opportunity to download in other units if needed). In specific overviews other units should be used, e.g for refineries kg of oil (products), for electricity generation kWh, etc.

A simplified version for secondary school students

Web site needs attention. Both speed and reliability a concern. Navigation also not ideal, though realise how difficult it is - as different users require different levels of linkages etc.

Since the sources are Eurostat statistics ditintos governments, organizations would be recommended from time to time quality control information received in Eurostat was established.

Let me see the annual production of energy split by ressource from different countries

Like I said previously, the data on energy consumption by fuel for each sector (energy balances) and electricity generation by fuel

as above

"Dear Sir/Madam

Any stats on the market concentrations on energy (es. natural gas) supply to domestic markets would be ver useful. Together with this data, you can also provide sales of companies as well. This would be necessary to understand the level of market entry and liberalisation in EU members."

12. How important is monthly energy statistics for your work?

	Answers
They are essential/indispensable for my work	7
They are important for my work	2
They are of value as background information	3
They are of value as supporting/supplementary information to other data sources	6
They are of minor importance	0
They are of no use	0

13. How often do you need to use monthly energy statistics?

	Answers
Nearly on a daily basis	1
On a weekly basis / Several times per month	5
Several times per quarter	4
At irregular intervals / Several times per year	8

14. How do you judge data quality as regards the following factors?: Relevance: the degree to which it meets your needs

	Answers
Very good	4
Good	6
Adequate	5
Poor	1
Very poor	1
No opinion	1

14. How do you judge data quality as regards the following factors?: Accuracy: the closeness of statistics to the unknown true values

	Answers
Very good	1
Good	8
Adequate	3
Poor	3
Very poor	0
No opinion	3

14. How do you judge data quality as regards the following factors?: Accessibility: the way you can access and use data

	Answers
Very good	3
Good	7
Adequate	5
Poor	1
Very poor	0
No opinion	2

14. How do you judge data quality as regards the following factors?: Clarity: how you understand and interpret data

	Answers
Very good	1
Good	9
Adequate	4
Poor	2
Very poor	0
No opinion	2

14. How do you judge data quality as regards the following factors?: Comparability: the comparison between countries, statistical domains and over time

	Answers
Very good	6
Good	4
Adequate	3
Poor	2
Very poor	0
No opinion	3

14. How do you judge data quality as regards the following factors?: Timeliness: the time when data are available

	Answers
Very good	2
Good	7
Adequate	3
Poor	3
Very poor	1
No opinion	2

15. Eurostat would also like to have your views on whether you need additional data, i.e. more detailed data or aggregated data with different breakdowns. Do you need additional data?

Yes: 5

No: 11

Please indicate the indicators and/or additional breakdowns or aggregations you refer to. And also please tell us why and benefits resulting from these additional data.

"Demand breakdown by sectors, e.g. for fuel oil, marine bunkers, burning, industry, use as feedstock

Supply breakdown by refineries and product qualities. E.g. for fuel oil, breakdown into SRFO or cracked fuel, HSFO or LSFO etc, for diesel, 10 ppm, 50 ppm or 500 ppm etc"

"I would like to have a good connection (maximum match) between the template for the renewable energy progress report in the framework of the Renewable Energy Directive and the national and european statistics.

To my opinion an improvement of the biomass for energy statistics is necessary."

a questionnaire on monthly statistics on renewables and waste would be very useful, mainly to have more reliable estimates of CO2 emissions from fossil fuel combustion in t-1 and to better explain GHG emission trends in t-1

Need more disaggregated data.

Data per energy carrier/fuel, by hub/trading exchange, with higher time resolution (daily, sometimes hourly).

16. Do you have any specific comments and/or suggestions for improvements of monthly energy statistics?

It does not seem to follow a fixed timetable, as a result, sometimes 1 yr of data is updated in 1 go. This defeats the purpose of a monthly energy statistics

"In the Netherlands we do have the protocol renewable energy. In this protocol it is described and prescribed who to deal with statistics.

See

<http://www.rvo.nl/onderwerpen/duurzaam-ondernemen/duurzame-energie-opwekken/duurzame-energie/monitoring>

also for a version in english.

I think it should be good to develop such a protocol for the European community, in which on a uniform basis is described how to interpret and implement the Renewable Energy Directive"

no

Monthly energy statistics are important to us as input to the CO2 early estimates.

perhaps one could include 'energy' units in the downloads (TJ for example) and NCV

17. How important are energy prices for your work?

	Answers
They are essential/indispensable for my work	9
They are important for my work	11
They are of value as background information	4
They are of value as supporting/supplementary information to other data sources	5
They are of minor importance	0
They are of no use	0

18. How often do you need to use energy prices statistics?

	Answers
Nearly on a daily basis	2
On a weekly basis / Several times per month	4
Several times per quarter	12
At irregular intervals / Several times per year	11

19. How do you judge data quality as regards the following factors?: Relevance: the degree to which it meets your needs

	Answers
Very good	6
Good	11
Adequate	10
Poor	1
Very poor	1
No opinion	0

19. How do you judge data quality as regards the following factors?: Accuracy: the closeness of statistics to the unknown true values

	Answers
Very good	2
Good	9
Adequate	11
Poor	2
Very poor	1
No opinion	4

19. How do you judge data quality as regards the following factors?: Accessibility: the way you can access and use data

	Answers
Very good	7
Good	9
Adequate	11
Poor	0
Very poor	2
No opinion	0

19. How do you judge data quality as regards the following factors?: Clarity: how you understand and interpret data

	Answers
Very good	4
Good	12
Adequate	9
Poor	4
Very poor	0
No opinion	0

19. How do you judge data quality as regards the following factors?: Comparability: the comparison between countries, statistical domains and over time

	Answers
Very good	3
Good	11
Adequate	7
Poor	5
Very poor	0
No opinion	3

19. How do you judge data quality as regards the following factors?: Timeliness: the time when data are available

	Answers
Very good	3
Good	10
Adequate	9
Poor	5
Very poor	1
No opinion	1

20. Eurostat would also like to have your views on whether you need additional data, i.e. more detailed data or data with different breakdowns. Do you need additional data?

Yes: 9

No: 16

Please indicate the indicators and/or additional breakdowns or aggregations you refer to. And also please tell us why and benefits resulting from these additional data.

Inclusion of coal prices (industry, services, household) and prices of motor fuels would be also appreciated. These prices are used for economic evaluation of projects and in feasibility studies.

"-More detailed breakdown of transport costs and taxes

-coal import prices for different consumers"

It would be good that electricity and natural gas prices would be published not only for one band.

Prices on: commercial renewable fuels, diesel, heating oil, fuel oil and coal

"Ideally would like quarterly data. Now at the start of September - the comparisons I produce and publish relate to the second half of 2013 - so over 8 months out of date. Prices can evolve quickly, so I think more timely data is required, ie quarterly data submissions and publications.

Happy though that speed of delivery and processing has improved and that 2014s1 data will be available at the end of September."

datas are bad on coal, wood and heat

Average prices for gas and electricity for industry and households. This would allow accurate comparisons between all countries. The average price being circulated concern a slice of consumption and is not totally right..

Detailed prices for most energy carriers/fuels are missing. Much higher geographical (by hub/trading exchange) and temporal resolution (daily, hourly) is needed.

please provide data for energy price components not only for s2 but also for s1

21. Do you have any specific comments and/or suggestions for improvements of energy prices statistics?

-The scope of some categories is not clear. For example in energy prices: what taxes are included? Sometimes it takes too much time to find the definitions

"Need for splitting costs into fixed quantities (connection charges) and variable quantities.

Need for splitting taxes/levies into energy tax and levies for specific purposes (e.g. support of renewables) "

Apart from quarterly data - anything to improve stability and performance of web. Find computer often hangs when I try to download data - this should be easy to sort.

Speed up...sometimes data are delayed by almost 12 months

public support policies through prices is good to be provided in separate component in order to see the real energy and supply and net prices. this will improve the price comparability.

22. How important are energy related indicators for your work?

	Answers
They are essential/indispensable for my work	13
They are important for my work	8
They are of value as background information	11
They are of value as supporting/supplementary information to other data sources	4
They are of minor importance	2
They are of no use	0

23. How often do you need to use energy related indicators data?

	Answers
Nearly on a daily basis	0
On a weekly basis / Several times per month	10
Several times per quarter	8
At irregular intervals / Several times per year	20

24. How do you judge data quality as regards the following factors?: Relevance: the degree to which it meets your needs

	Answers
Very good	9
Good	17
Adequate	7
Poor	3
Very poor	0
No opinion	2

24. How do you judge data quality as regards the following factors?: Accuracy: the closeness of statistics to the unknown true values

	Answers
Very good	4
Good	15
Adequate	10
Poor	1
Very poor	0
No opinion	8

24. How do you judge data quality as regards the following factors?: Accessibility: the way you can access and use data

	Answers
Very good	10
Good	14
Adequate	11
Poor	1
Very poor	0
No opinion	2

24. How do you judge data quality as regards the following factors?: Clarity: how you understand and interpret data

	Answers
Very good	7
Good	12
Adequate	15
Poor	2
Very poor	0
No opinion	2

24. How do you judge data quality as regards the following factors?: Comparability: the comparison between countries, statistical domains and over time

	Answers
Very good	6
Good	16
Adequate	10
Poor	4
Very poor	0
No opinion	2

24. How do you judge data quality as regards the following factors?: Timeliness: the time when data are available

	Answers
Very good	5
Good	12
Adequate	14
Poor	3
Very poor	1
No opinion	3

25. Eurostat would also like to have your views on whether you need additional data, i.e. more detailed data or dis-aggregated indicators. Do you need additional data?

Yes: 2

No: 34

Please indicate the indicators and/or additional breakdowns or aggregations you refer to. And also please tell us why and benefits resulting from these additional data.

Differently defined indicators.e.g. both Total primary energy consumption per Euro and per capita, for industry energy consumption per unit of production and per unit of value added, etc. (see Odyssee database, IEA publications, etc.)

heated areas in tertiary sector - disaggregation of energy consumption in tertiary sector - industrial productions in physical units (tons each time it makes sens, etc....

26. Do you have any specific comments and/or suggestions for improvements of energy indicators?

Check whether the indicators comply with that in known sources like UN, IEA, WEC, etc.

Good to have an advance timetable of when data will be published. For example, when will new data become available on import dependency ?

I do not answer these questions, because I use very often this kind of data for France only, and I use statistics from INSEE and not Eurostat. I only tried data on industrial production, as I mentioned above

27. Compared to the situation 5 years ago, your overall impression of Eurostat energy statistics is:

	Answers	Ratio
Better	31	53%
The same	7	12%
Worse	1	2%
Cannot judge	12	20%
No opinion	8	14%

28. For what purpose do you use energy statistics?

	Answers
Energy policies (monitoring)	30
Energy policies (formulating, decision making)	21
Research, econometric modelling, forecasting	30
Educational purposes	8
Re-dissemination of data	14
Media use (news, articles, blogs)	6
Decision making in business (commercial and industrial)	5
General background information	26
Other	4

Please specify.

Climate action policy monitoring, understanding drivers behind emission trends, decomposition analysis, climate action policy formulation and decision-making

Climate change policy formulation, monitoring of Europe 2020 climate and energy targets, analysis of drivers behind emissions

"QA/QC of energy data reported by MS in GHG inventories, and assessment of GHG emission trends "

National air emission inventories

29. Do you use energy statistics from other sources instead of or in addition to Eurostat

Yes: 50

No: 5

Which sources do you use?

	Answers
Official national statistical data	42
Other National Sources	28
IEA – International Energy Agency	39
Other international organisations	27
Commercial data sources	12
Other	6

Please specify.

No

Eur'ObservER

-scientific literature

Data and indicators from the Odyssee database, set up with support of the EC

Franche organizations : ADEME, CEREN

NordPool, other national sources, TSO, national regulator, different NGOs.

30. What do you consider as strengths and weaknesses of Eurostat's energy statistics?

No fixed timetable. Very irregular. No update given to users on when new data is available

Impossible to use, search doesn't work - no returns for wood chip, wood pellets or their CN Codes, seriously? Awful.

"Strengths: European dataset, official statistics, high quality

Weaknesses: only European dataset (occasionally we need data on US, China, etc.), discrepancies with energy data reported under the GHG inventories, timeliness (no data available for year X-1)"

Large database from the EU countries.

It is an accessible source of information that would not otherwise be easily given to you. The accuracy of such is not known as there may be cross selling or misinformation but it gives us a good idea.

"La principal fortaleza es la posibilidad de establecer comparaciones entre países en un ámbito tan regulado y opaco como es el energético.

La posibilidad de comparar los precios que pagan hogares y empresas es un gran avance en la transparencia de estos mercados, pero para consolidar la credibilidad del banco de datos es importante que si hay rupturas metodológicas se expliquen adecuadamente y que las revisiones de datos de años anteriores sean pocas y que estén muy justificadas.

The main strength is the ability to make comparisons between countries as regulated and opaque as the energy field.

The ability to compare prices paid households and businesses is a breakthrough in transparency of these markets, but to strengthen the credibility of the database is important that if there are methodological ruptures are adequately explained and that revisions to data for previous years are few and they are very justified.

I consider it -and expect it to be- as the most legitimate and reliable source. It is very important that an independent statistical institute like Eurostat exists, due to the connection to the implementation of multiple directives on energy.

"Detailed data received by MS are published which is useful for international comparisons.

No weaknesses."

The Eurostat statistics is suitable for international comparisons because the data are methodologically consistent.

Strengths: European datasets

"The weaknesses are the time gap of 3 years before some data are available (energy balance) and lack of some more detailed data.

Consistency and stability over years are strong points of the statistics. Weak points are them automatically the introduction of new field as biogas and renewable energy production, where biomass is input and where for the European renewable energy directive (RED) sustainability is required.

"main strength: comparability across member states"

"-strengths: broad acceptance, consistency

-weaknesses: accessibility, usability of the database"

Accuracy, consistency, comparability

"Weaknesses: the comparability between countries

Strengths: development of common methodologies"

Ability to standardize approach should lead to better comparison between countries than is possible with other organizations. The other side is slow publication process.

The statistics are freely available.

"Strength: comparable figures for all EU countries which enables to compare one country with others

Weakness:

- unclarity about the relation with national statistics, which makes it difficult to draw conclusions from Eurostat data

- leadtime of several years before historic data become available "

Major strength is the unity of available data. Weakness - long delay updating data with newest information.

"Strengths - common regulations etc that promote harmonised statistics

Weakness - Accessibility to stats from poor web interface and no pre-published timetable indicating when new data become available."

Not known and considered as a reference by our partners

"strengths : comparison between countries"

The more strength of Eurostat should be the comparison between European countries. We do not know how the statistics are produced, therefore the comparisons remain fragile

Not easy to access.

A lot of information is still missing, and the available information is poorly organised.

"Strengths - comparative statistics across countries, it is user friendly, easy to export to excel

Weaknesses - deviation from national statistics"

"Many countries, data are comparable

The main weakness is the delay."

strengths: accuracy, reliability

Less detailed than IEA.

too complicated to navigate

31. What do you like/appreciate with respect to Eurostat's presentation of energy statistics?

Excellent way to download

Nothing

Since I know how to extract the data, I like to be able to have access to the detailed database. But not all users will be familiar and it's not intuitive how to do it.

Easy to conceive.

Accessibility

"Mayor detalle sobre la homogeneización de datos de los distintos países. Por ejemplo,, en el caso de los componentes del precio de la electricidad, especificar qué partidas en nomenclatura nacional, se incluyen en cada componente.

More details on the standardization of data across countries. For example, in the case of the components of the price of electricity, specify which items in national classification, are included in each componente"

Good structure of databases and easy for navigation.

Weaknesses: discrepancies with data reported under the GHG inventories (e.g. on international bunkers)

The presentation is generally adequate.

The effort taken to provide consistency in data for the Renewable energy directive.

"-Downloading of the data in Excel

-In time (earlier than IEA statistics)

-completeness, e.g. the completeness of import/export data"

Accuracy, consistency, comparability

Friendly and simple systems

"1. More definitions on each item - what does it consist of / what is included-excluded

2. More interactive tables - to be easier and less cumbersome to make up your own tables choosing only the data you need."

The graphs are appealing when one is presenting data to audiences.

"The extent of the data is very huge. The structure of the database is not the most convenient for data users not specialised to energy issues/statistics.

A lot of help requests are received at the Finnish Statistical Office by Finnish data users"

Bulk data option

The possibility to choose oneself the dataset, i.e. years, sectors, etc.

Clearly presented and explained data with the possibility to sort it further.

Colourful pie charts and graphs

Comparison of data from several countries.

It is quite easy to find the datas (a bit less for metadatas)

Perhaps you know how poor is the French Energy Balance produced by the French Ministry of Energy. The Eurostat frame is very appreciated (I use it when I teach students on Energy statistics). Unfortunately, this publication (.pdf format) seems to be no more available.

User friendly - easy to change axes on illustrative graphs

clarity

Good accessibility. Don't need to search through the website to find the needed data.

32. What do you dislike/averse with respect Eurostat's presentation of energy statistics?

Only in 1000T, not in bbls

The database may be too complicated for inexperienced users.

A bit old school.

Standard of accuracy no known

Too hard to find on the Eurostat website. It is not intuitive at all where they are and how to extract them (for most people). The presentation given by Marek was very useful.

Discrepancy between branches with data for energy consumption and data for value added to calculate energy intensity indicators and lack of some data.

-accessibility. In the dataselection there is not much guidance and often tables have a random set of pre-selected data.

aggregation of the data

More explanations about the methodologies used

"1. The search engine must be improved.

2. The website can be very slow sometimes..."

Frequent update of the datasets (compared to IEA, once a year).

Sometimes data is well out of date

,lack of explaining

Energy statistics only presented in joule and toe, not in TWh.

sometimes hard to get the table you want

"the browser doesn't work very well. After looking through the menu and then trying afterwards to find some data through the browser, no satisfying results appear. "

33. Do you have any suggestions for improvements?

Yes, make the database easier to navigate. Make visualisation tools, similar to those of the IEA on the energy balances.

Layout of the web page could be more attractive.

There can be further work examining why there are discrepancies between energy statistics and the energy data reported under the GHG inventories. Under the Monitoring Mechanism Regulation, Member States will have to carry out consistency checks and report the results. This should yield some insight which we will have to follow up together (ESTAT&CLIMA).

To correct already mentioned weaknesses

"- Add biogas production and final use in sectors

- Provide more data on biomass production as demanded for country report for the EC. There is a format from the EC for country reporting with a number of tables. The energy statistics do provide only parts of the data required. This could be improved.

- Split wind from off shore and on shore"

sometimes I think that the energy balance could be presented like in the (paper) publications, with rows for the energy balance items and columns for the fuels. It would be more intuitive, but I am very fine with the current presentation. So it would be in addition.

More guidance in the databases when selecting parameters. For example by using a coding that would make clear what categories are subcategories and which are aggregates.

Member States send a lot of tables (AQ). It would be good that more information from AQ would be published.

"Promote greater involvement of Member States through the development of statistics projects.

Economically help the first time that Member States implements new information requirements"

"Energy consumption:

- also data with correction for Heating Degree Days, in order to see the man-made trends

- energy consumption data for end-users without the statistical shift of CHP production at the end-users place to the supply (electricity) sector. This alternative approach is more consistent with the financial flows between end-use sectors and energy supply (electricity of own CHP is not bought from the grid but in the current energy statistics it is ""delivered"" to end-users). The energy consumption figures become more policy relevant (e.g. for policies focusing on end-user savings including CHP).

Prices:

- actual average prices as perceived by the end-users, thus including all taxes "

Improve the easiness of the website to find the data we need at a country level.

more user friendly way to use the data in the tables and to sort it

"The data I can't find on your website is electricity generation for non renewable fuels like petroleum products, which is very surprising.

You show on your website the consumption of renewable energy. It is summed up and not detailed. How do you account for renewable electricity. What is your methodology?"

34. If you had to choose one single element for improvement, which one would you select and why?(for example: data available earlier, more detailed energy consumption data, more data on new technologies, ...)

Greater breakdown into quality of products

Make data available earlier (for year X-1).

Layout of the web page could be more attractive.

Data takes some time to appear online.

data available earlier

more statistics on the use of biomass for energy purposes.

Timeliness. Considering the number of revisions, the data needs to be reported once (by the legal deadline) and with a high quality. Further revisions should be exceptional, not customary.

More detailed data.

More insight in renewable energy sectors where availability of resources is a main issue and therefore more insight in e.g. biomass flows is required.

data available earlier (end of January actually)

-To be able to construct energy balances instead of having to combine different databases

Data about CHP and heat plants

More detailed consumption data

Definitions and comments harmonization (IEA, Eurostat, UN)

Clarity about the yearly differences with national statistics

Earlier data availability. Reliable data on time is very important in my line of work.

Data to assist with A levels

See above comments ... think you can guess my answer

Presentation and links in national public websites

data available earlierNo ne

More explanations on how the statistics are produced by the countries before being sent to Eurostat

Energy data consistent with the need for inventories.

More and better price data.

Speed

easier way to customize available data

"More detailed energy data (final consumption by fuel for each sector (transport, etc.). It is the prime data we look at when comparing ourselves to European countries."

35. Do you have any other specific comments or messages for us?

Please can you follow a fixed timetable

The quality of the data should be indicated, e.g. the error margin. In this way the user of the data can better draw conclusions about whether yearly changes in energy data really represent a change or could be due to statistical errors.

I talk direct to your officials if I have.

Why is there a difference between IEA data and yours on energy consumption for a given year, let's say total final energy consumption in France in 2011 for example. Although there are few differences between your presentation format of energy balances, I thought you published the same data or at least use the same methodology. I am referring to the energy statistics handbook you produced together with IEA and OECD.

36. Eurostat reduced the number of paper copy publications and is moving to electronic distribution of data and statistical information. Do you have a need for paper copy publications or is electronic distribution suitable for you?

Electronic is fine

Paper copy for the Pocketbook. No one will browse such a pocketbook online.

I prefer electronic.

We do not use any paper copy publications

Electronic distribution is OK for me.

electronic distribution is suitable.

no

Since I process most data using computer I prefer the electronic way of data presentation.

The Pocketbook should stay as a paper copy as it's easier to use as fast reference.

Electronic distribution is suitable.

no paper need.

electronic publications suffice

no.

no

Electronic distribution is suitable for me.

Electronic distribution is good for me

Electronic distribution works just fine - no need for paper copies.

Electronic distributions is suitable for us.

Electronic is just fine.

Electronic distribution is applicable.

Electronic is sufficient.

Electronic distribution is quite satisfactory, provided that the status is clear (i.e. the issue date and differences with an earlier distributed version)

I prefer electronic data. If there is a need it can always be printed out.

Paper is easier but I am fine with electronic distribution.

Electronic OK - though do still find for annual digest type publications printed copies are useful.

Electronic is ok

No need of paper. For datas, the electronic mode is good. And it is easier for you too to update the datasets.

electronic distribution is enough . Please propose directly telechargement in Excel form (.xlsx or .csv format) including quite big tables. Iµ would like to get directly acces files for energy balance 2010-2012 for 4 contries. Did you count how many tables I have to export ?

Electronic distribution is suitable.

Electronic is enough, but plain Excel files are more than enough, no need for fancy browsing systems.

Electronic distribution is suitable for us.

Electronic is fine

electronic is suitable

No.

37. If you like to receive a simple evaluation of this survey by email (a short summary of responses covering only answers to closed questions), please indicate your email address.

This document was sent by email to 13 respondents that indicated their email addresses in the response to this question.

7. Annex V: Short ESG survey

This survey was designed for all countries participating in data collections and transmitting data to Eurostat according to Regulation (EC) No 1099/2008 (energy statistics) and Directive 2008/92/EC (gas and electricity prices).

Answers provided by reporting countries helped the Task Force on the Future of energy statistics in its discussions.

1. Please indicate the name and contact details of the person that can be contacted for further clarification questions. Also please indicate if you agree to publish your answers or if they should be treated as confidential.

Name:

Email:

Telephone:

- Please treat our answers as confidential. (*Answers in red font with certain information anonymised.*)
- Eurostat can publish our answers in the future ESG meetings or other relevant places (for example: CIRCABC). (*Comments in green font.*)

Answers from 30 countries have been received by 26 August 2014. This includes 24 EU Member States and 6 European non-EU countries. 7 countries indicated that their answer should be treated as confidential.

2. Do you experience regularly problems with the current version of templates for data transmission (MS Excel questionnaires)? If yes, please describe these problems in details.

- No problems
- Yes, there are systematic problems

Bulgaria:

MOS OIL and OIL (annual)

- Columns "TOTAL" in all sheets of the questionnaire are entered manually, which often leads to errors and loss of time for detection and correction.

Our proposal is these columns to become automatic.

COAL monthly

- Row "Stock changes" in tables ME1 and ME2 is entered manually.

Our proposal is this row to become automatic.

Ireland :

- It is not possible to mark data as confidential in the monthly questionnaires by default. Eurostat have kindly created a template for Ireland so that it is possible to mark confidential data in the monthly coal questionnaire. However, ideally this should be built into the default questionnaire.
- Excel tends to crash when closing a monthly questionnaire. The only way to avoid this is to ensure that no other Excel documents are open at the same time, or closing these before closing a monthly questionnaire.
- Annual questionnaires force rounding of data. This has led to problems. For example in Table 6 the electricity and heat questionnaire, in 2007, Ireland reported solid biomass fuel input of 4 TJ. However, the Gross electricity production was 0.41 GWh which the questionnaire rounds to 0. A Missing Output error is then reported in the questionnaire.
- Annual questionnaires cannot be opened in Excel 2010

Belgium: Questionnaires of Coal (monthly), Electricity (SEG and MES) make MS Excel crash upon closing.

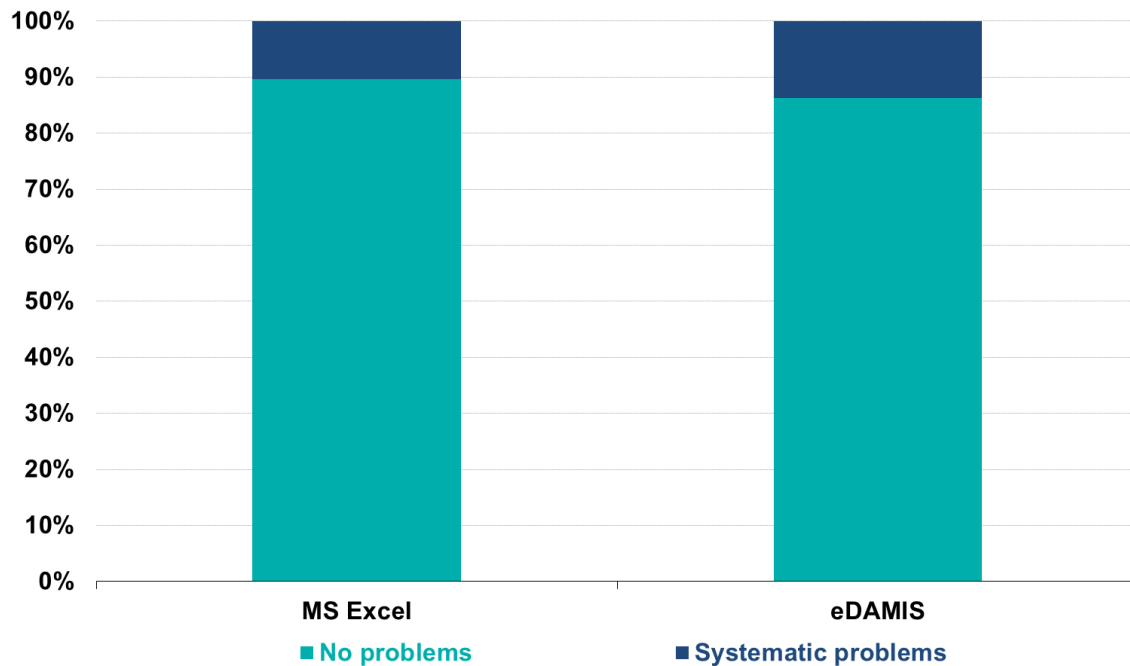
Finland: No regularly problems, but temporarily ones sometimes occur (e.g. with Electricity and Heat Questionnaire 2013)

Netherland: We have no problems, except for the MOS and AOS. These are very complicated questionnaires. Our basic data are in the form of an energy balance. It is very complicated to translate the balance data in the MOS and AOS, which have non-balance posts like returns, transfers and extra not-useful petrochemical lines. Further, in the MOS it is very complicated how stocks interfere with the balance.

France: there is a discrepancy in the French and the English versions as far as the annual gas questionnaire is concerned; according to the French gas expert, data asked are "pouvoir calorifique inférieur" whereas what is asked in English is "gross calorific value" which is translated by "pouvoir calorifique supérieur".

UK: Submitting revisions to monthly data is difficult as we have to complete a separate file for each month. Having all the monthly data together in one file would make this easier.

Do you experience regular problems?



3. Do you experience regularly any problems with transmitting data to Eurostat via eDAMIS? If yes, please describe these problems in details.

- No problems
- Yes, there are systematic problems

[confidential]: Several times when uploading files to eDAMIS, the appropriate dataset is not available in the dropdown list. Another problem is, that the Advance And Highly secure upload form rarely works properly.

[confidential]: Yes, when changes made to login by ECAS. It has also been unclear how to report JODI Gas but people on Eurostat has always been very helpful to facilitate the reporting process.

UK: But unable to do web form entry – however, no problem loading spread sheets. Issue we believe is with the firewall at our end.

Netherlands: The only problem worthwhile to mention is with revisions of monthly data. One cannot send all monthly revisions in one file. An idea is to use for natural gas, coal and electricity files in which all months of a year are taken up. An extra advantage of this, is that this contains an implicit validation by checking data with previous months of the same year.

Norway: It makes an extra burden for us to report the 5 yearly questionnaires both to IEA and Eurostat. For the last few years also Eurostat have questions about the figures reported in these

questionnaires. Some of the questions from Eurostat and IEA can lead to revised figures. Then we have to revise the figures in the web-questionnaires at the IEA Data Center and then download the revised questionnaire one more time and send it by eDamis. Potentially several rounds of this process is very time consuming and not optimal. The best solution for these common questionnaires would be a common dialog about the figures (Eurostat or IEA ask and not both at different times) and one data transfer (we report in the IEA Data Center and Eurostat can get the figures from there).

4. The current format of all template questionnaires is MS Excel "xls" file compatible with older versions of MS Excel (the only exception is the *SHARES tool* using the "xism" file format). Automatic systems of Eurostat can currently treat only MS Excel files in "xls" file format.

With this question we aim to investigate the future potential for innovation – can we upgrade to a new MS Excel version already today?

Which version of MS Excel do you use at national level and are all organisations involved in the preparation of questionnaires for transmission able to use "xlsx" and "xism" file format?

- we can use "xlsx" and "xism"
- we are not able to use "xlsx" and "xism"
- we do not know

If you know, please indicate your MS Excel version:

Romania: NIS is currently using MS Excel 2003; Only on one computer I also have Excel 2010 for SHARES tool; so if it is possible, for the time being, we would like to use "xls" files for monthly and annual questionnaires.

Macedonia: We use currently "xls", we also use "xlsx" with conversion, "xism" format we can't use.

Bulgaria: MS Excel 2010, MS Excel 2007

Montenegro: "xls"

Ireland: Excel 2010. We also use Excel 2003 so that we can open the annual questionnaires without error

Belgium: MS Excel 2010

[confidential]: MS Excel 2007

Portugal: MS Excel 2010

UK: MS Excel 2010

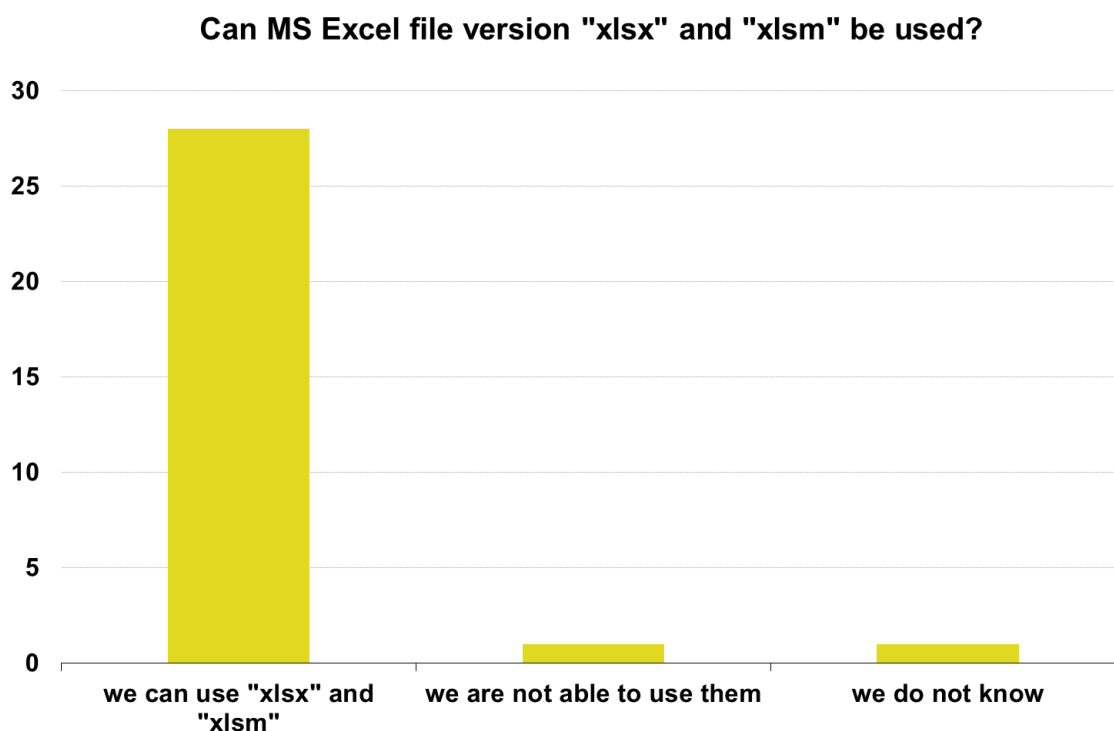
Netherlands: MS Excel 2010

Estonia: MS Excel 2010

Norway: MS Excel 2010

France: The Ministry has chosen Libre Office (free software) and not MS Office. Therefore we can open Excel 2003 files without difficulty, but more recent versions of MS Excel will result in the loss of formats.

[confidential]: MS Excel 2010



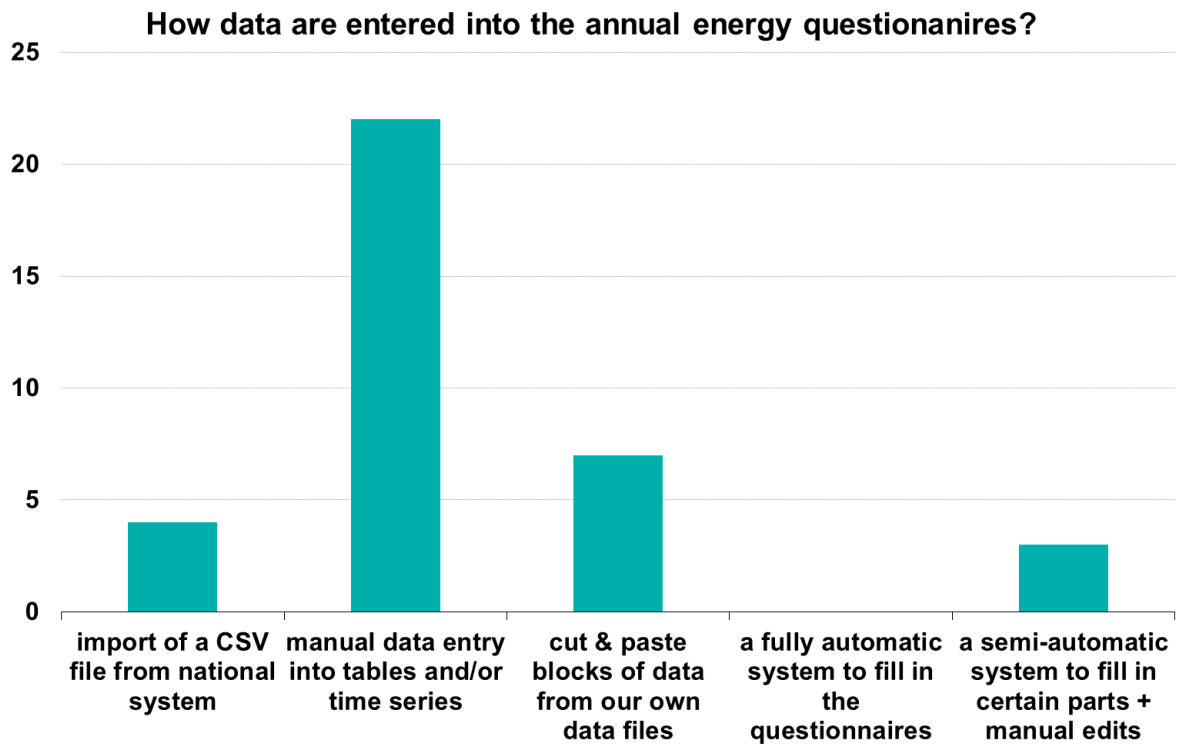
5. Eurostat is trying to understand how exactly data are entered into the 5 joint annual energy questionnaires. (This question targets only the joint IEA-Eurostat questionnaires).

a. How do you enter data?

- we import a CSV file, created by our system
- we type in data manually into tables and/or time series
- we cut & paste blocks of data from our own data files
- we have a fully automatic system to fill in the questionnaires
- we have semi-automatic system to fill in certain parts of the questionnaires, for other parts we edit figures manually

Norway: We are developing a new technical solution for the Energy balance of Norway. The new solution is supposed to make the reporting of the common questionnaires easier and safer.

France: We had better cut & paste blocks of data from our own data files, but this is not compatible with the rounding of data and the fact that the templates are locked.



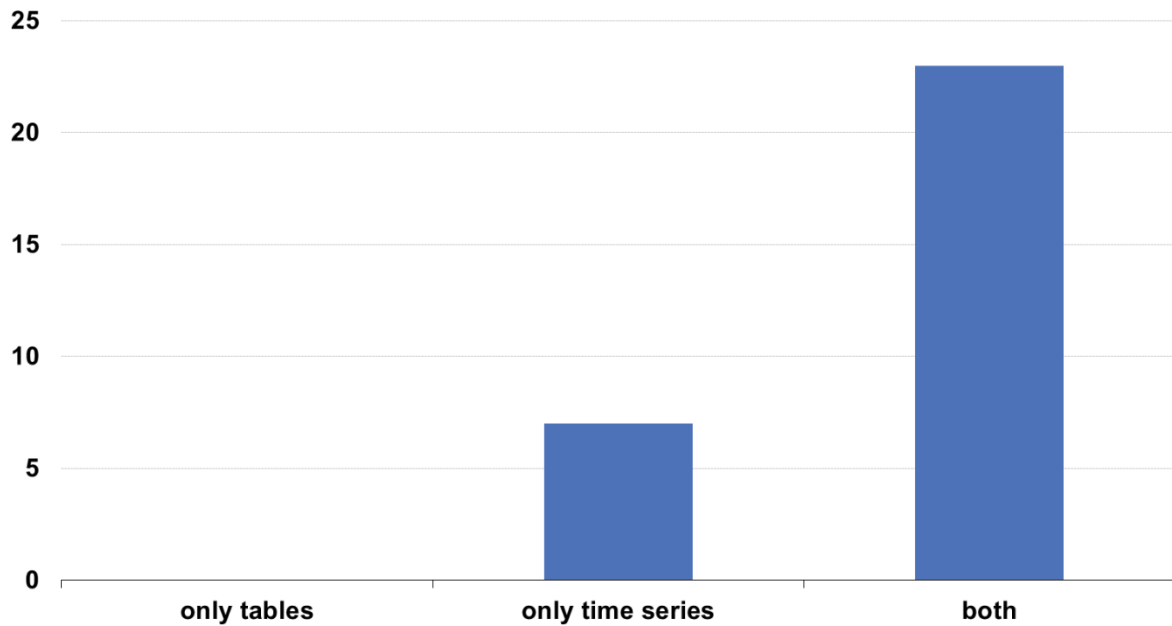
b. Do you use tables (forms), time series or both?

- we use only tables (forms)
- we use only time series sheets
- we use both

Ireland: We find the time series sheets easier to use as all years are visible at once. This allows us to view trends over time and it is also easier to spot any errors if there is a significant change from one year to the next.

Netherlands: It depends on the person who fills it in. One uses tables, the other time series, the other both

How data are entered into the annual energy questionnaires?

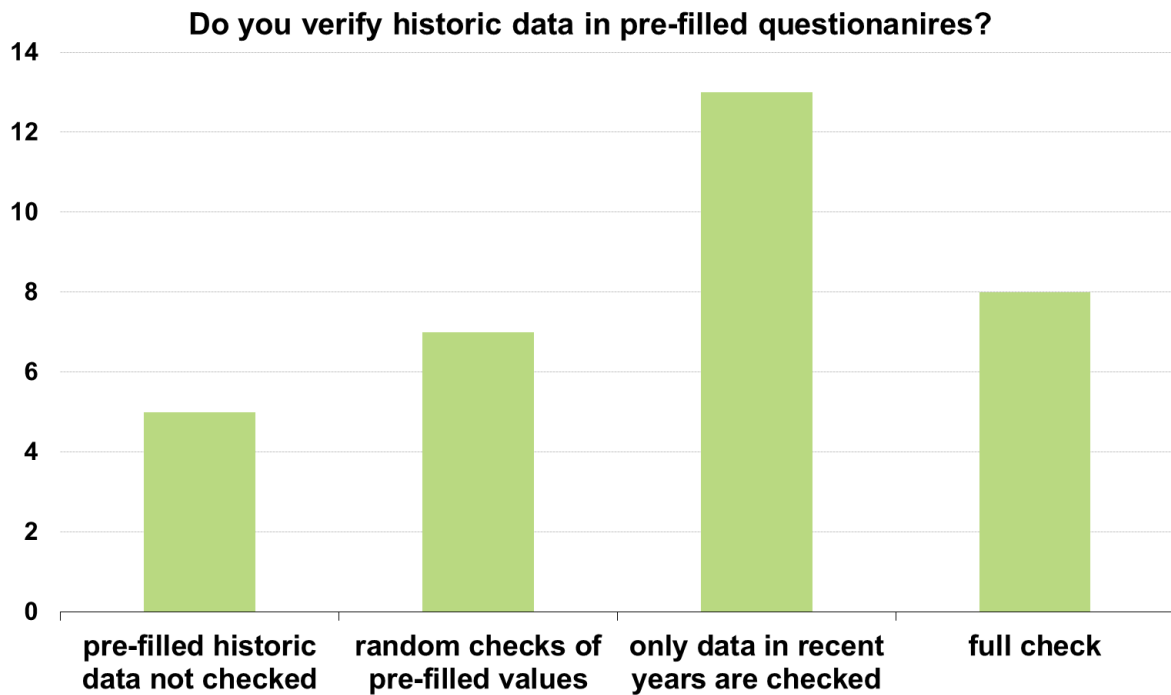


- c. Do you consistently verify and double check the historical information in the received pre-filled questionnaire?
- we do not focus on checking pre-filled data for historic time periods
 - we randomly check some pre-filled values to see if there is any discrepancy
 - we check only recent years
 - we always check data for all time periods in the pre-filled questionnaires

Ireland: The csv file which is created by our own system pulls data for all years. This ensures that the annual questionnaires contain data which corresponds to Ireland's Energy Balance. It is useful that the questionnaire highlights any modified cells in yellow which allows us to confirm the new value and also to prepare an explanation for the modification.

Cyprus : Historic time periods are more systematically checked only when questions arise either on behalf of the IEA, Eurostat or national bodies such as the Energy Service or the Environment Department.

Finland: The main focus is on the data of the latest reference year. Typically the revisions to the historical data are made in line with changes in the national statistics. Comprehensive checking for historical data occur less frequently (about once in 5 years). It's the question of resources.



6. Regulation (EC) No 1099/2008 and Directive 2008/92/EC established a set of deadlines for data transmissions. Eurostat cannot agree that countries are compliant with these deadlines if only preliminary, incomplete or very low quality data arrives by the indicated deadlines, and subsequently this first transmission needs to be significantly revised. For example, in the latest annual data collection for 5 joint annual energy questionnaires (reference year 2012), around 500 questionnaires were received, while only 160 are expected for the 35 countries processed by Eurostat (this roughly means 2 revisions for each questionnaire received – and we are still counting).

a. Following the adoption of Regulation (EC) No 1099/2008 on energy statistics, did you change your national data collection and compilation system to be able to provide data in time as required by the Regulation?

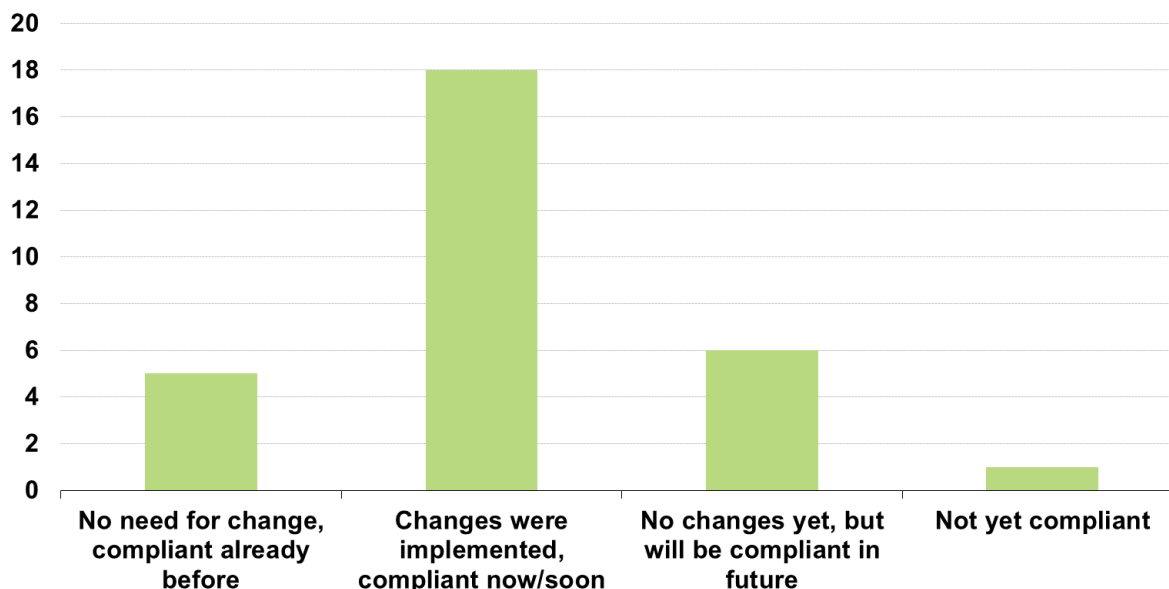
There was no need for any change as our national system was able to provide data fully compliant with the Regulation even before its adoption.

We have implemented some changes to our national system and it is now (or it will be soon) able to provide data fully compliant with the Regulation.

We have not yet implemented changes to our national system, but we plan to do so in near future. Once these changes are implemented, we expect that our national system will be able to provide data fully compliant with the Regulation.

We know that our national system is not able to provide data fully compliant with the Regulation but we have valid reasons why we cannot implement any change.

Following the adoption of Regulation (EC) No 1099/2008 on energy statistics, did you change your national data collection and compilation system to be able to provide data in time as required by the Regulation?



Belgium: We have to recognize that the Belgian reporting's are often late due to a lack of staff (just 1 statistician remaining from January to April 2014). The Energy Observatory tries to provide nevertheless data fully compliant with the Regulation directly (with the first transmission).

Cyprus : It is worth noting that the need for revising the questionnaires is almost exclusively arising as a result of answering to clarifications and comments of the IEA and Eurostat

Finland: There is a new database and data processing system for energy statistics under construction at Statistics Finland.

Netherlands: In the introduction, you are very critical about early submissions (the underlined 'cannot'). We like to make clear that we send in definite data, which are not incomplete or of very low quality. However, we have sometimes more than one revision. These are the consequence of the questions Eurostat and IEA pose (or, in case of the AOS, the consequence of a too complicated questionnaire). Some of these questions are about details, however either you or IEA ask to submit the changes, albeit small. To prevent multiple revisisons, it would help if Eurostat and IEA combine their questions, which are processed in the revised questionnaire in one step.

In the answer which we chose, the wording 'fully compliant' is not exactly defined, because the quality criteria are not exact. It is hard to completely change our system, therefore we have the strategy of stepwise improvements that are directed at more robust processes to comply with international demands

France: There were several revisions for France data in the 2012 round, but we will try to improve the inter-questionnaires consistency before sending the first version of the questionnaires. Some discrepancies that implied later revisions are due to a big effort to improve the methodology, especially for renewables, and the first introduction of heat data.

b. Eurostat is currently in the process of drafting a new Regulation on natural gas and electricity prices, replacing Directive 2008/92/EC. The existing deadlines being 2 months after the reference period are not expected to change. The only major change will be that current reporting for households will be under legal umbrella (currently gentleman's agreement). Several countries are not respecting existing data transmission deadlines. Do you plan to change your national data collection and compilation system to be able to provide data within the required deadlines?

There is no need for any change as our national system is able to provide data fully compliant with requirements.

We have implemented some changes to our national system and we will now be able to provide data fully compliant with the requirements.

We have not yet implemented changes to our national system, but we plan to do so in near future. Once these changes are implemented, we expect that our national system will be able to provide data fully compliant with the requirements.

We know that our national system is not able to provide data fully compliant with the existing Directive but we have valid reasons why we cannot implement any change.

If Eurostat would extend the deadline for reporting the price data from 2 months to 3 months after the reference period, we will be able to report the price data within the required deadline and/or report more reliable price data.

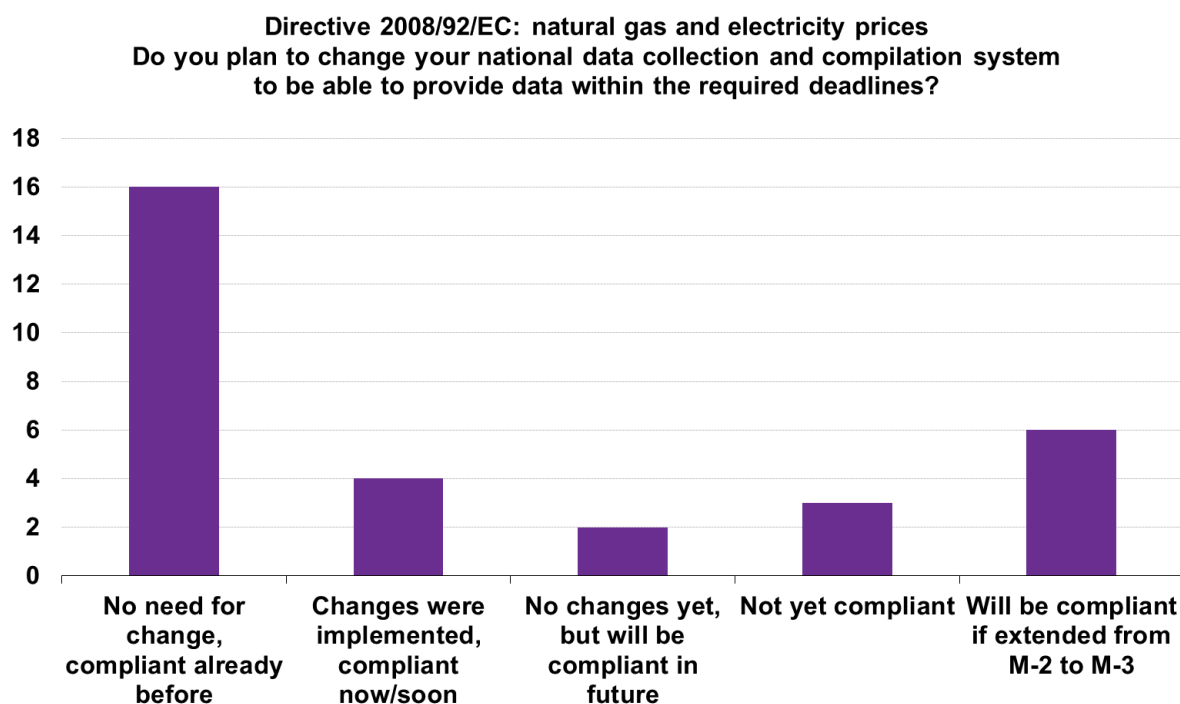
Latvia: We are respecting existing data transmission deadlines and we are able to provide data fully compliant with requirements. But we need to correct our national system because the electricity price in Latvia is estimated as a sum of Energy and Supply + Network cost + Taxes and levies + Mandatory Procurement Component (MPC). In our case MPC is not tax or levy, it is a separate part of the total electricity price. After consultation with EUROSTAT we reported MPC under Energy and Supply. But as we know Euroelectric in "EURELECTRIC Analysis of Power Price Increase Drivers" reported MPC under Tax and levies. Therefore we think that you should more clearly to explain under which level EU countries should report MPC to provide the same reporting of electricity price.

Belgium: The Belgian Observatory has nevertheless the project having a collaboration with the national regulator to improve the data quality on prices.

Finland: Statistics Finland doesn't have data collection on household natural gas prices. This is due to the fact that the significance of natural gas in a household sector is unsubstantial. This is the question of resource allocation. If the new legislation will come into force, the issue will be consider again.

France: So far we are not able to transfer good quality data for France as our main business in the field, EDF SA, cannot transmit any data in the 2-months spam. Therefore we are compelled to transfer a gross estimate for the missing figures. However EDF usually transfers the requested data 3 months after the reference period. So changing the deadline would improve our capacity to respect it.

UK: DECC republish Eurostat data before the end of the 3rd month – so any delay from Eurostat would impact on UK use and users of the data.



7. We are interested in the processing status of the annual energy data transmitted by your country to Eurostat by the official deadline (end of November). Those that are not directly involved in statistical compilation (such as policy makers, members of the European Parliament, national representatives in the European Council, general public) expect, after reading Regulation (EC) no 1099/2008 that data published by Eurostat at the end of January are final and definitive. Are your national data considered to be final or are they only estimates/preliminary data?

By the end of November we transmit final energy data for all data flows as required by the Regulation.

Romania: (excepting imports/exports data that are final two years after the reference period, according to foreign trade Regulation)

Our national system does not allow for transmission of final data by the end of November, at that time transmitted data are estimates/preliminary data.

Ireland: If better data becomes available after the November submission we will include these revisions in the following energy data submission.

Belgium: The data of our first transmissions can be considered as definitive (except the precise distribution of the consumption which could be modified a little).

Finland: The data provided at the end of November is mainly final. The Annual Oil Questionnaires have been delayed for some weeks in last years. We expect that our national system will be able to provide final data earlier in the future.

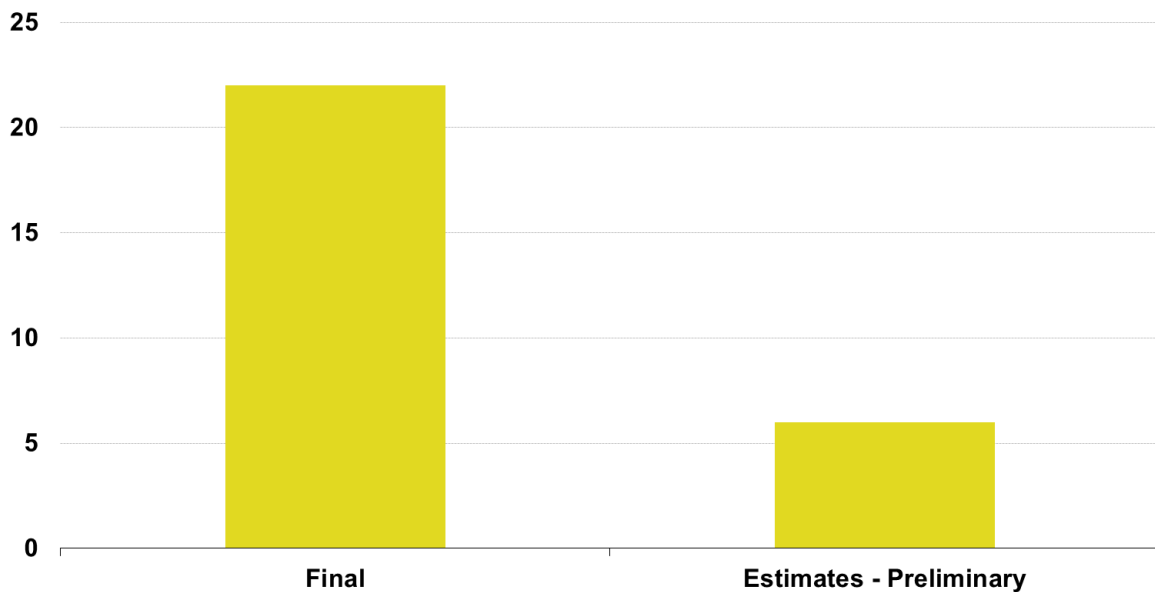
[confidential]: This year, for the first time, the data that [confidential] provide will be definitive and we will submit them at the end of November.

Netherlands: There are a few exceptions. Data on agriculture are not definite on the 30th of November. For the other sectors in general, we might have preliminary data if the data from the client files are not available in time. We are dependent on the data supplier for this.

Norway: It's final for the year t-2 and preliminary for t-1.

France: It depends on the fuels, we may review some estimates. Besides we don't have annual data sources for all the renewables. However even if data are not final, revisions after November are generally limited.

By the end of November, are your national data considered to be final or are they only estimates/preliminary data?



8. The joint annual questionnaires are not published by Eurostat – only data in the format of energy balances in specific (tonnes, GWh, ...) and common units (TJ, ktoe) are published and available to public. However, there is some demand for data in MS Excel file format. Would you agree that the last officially transmitted versions of joint annual questionnaires are made available and disseminated by Eurostat?

- We would not agree to publication of the questionnaires.
- We would allow publishing our questionnaires.

Luxembourg: The publication of these files will increase the burden of NSI which must answer to question of clarification in the case of the Eurostat calculation methods are not the same as the national methods.

Latvia: We have confidential information, such as bioethanol and biodiesel production, but not permission to write in the questionnaires, the data is confidential.

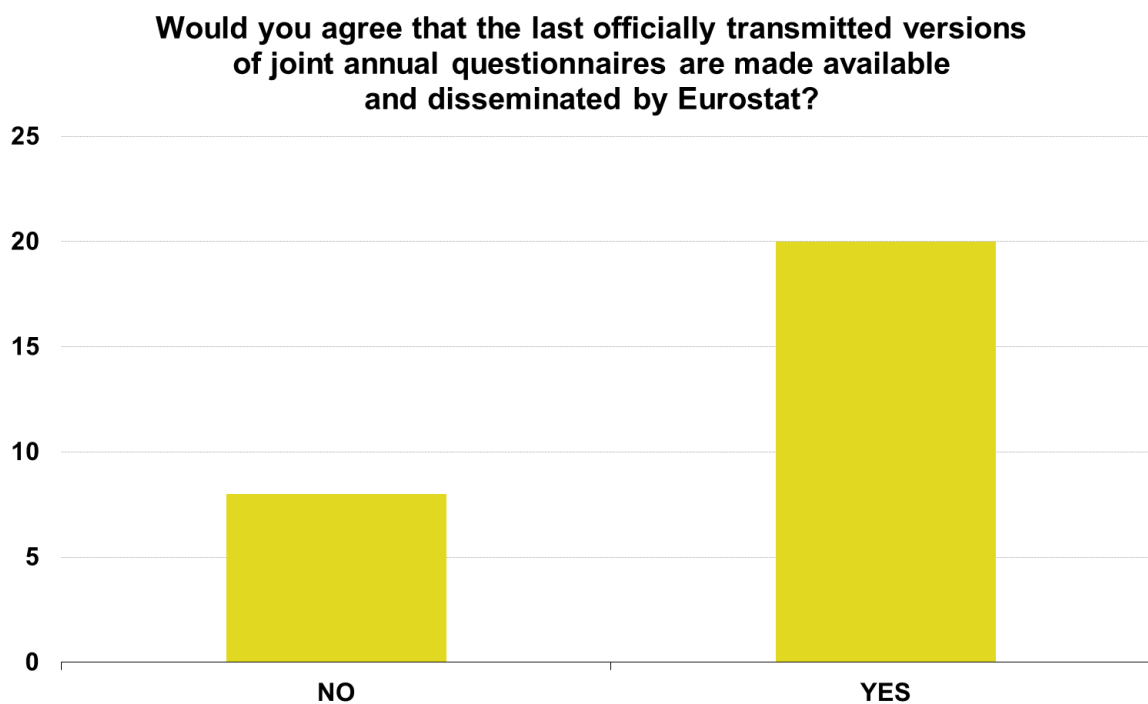
Slovenia: But not before the flag for the confidential data is introduced.

Ireland: We would allow publishing of our questionnaires once any confidential data is suppressed

Norway: But as long as IEA publish these figures at <http://data.iea.org/IEASTORE/DEFAULT.ASP> we see no reason for Eurostat to publish the same figures. At the above link we can get the figures in excel.

UK: I am not sure if they would be especially user-friendly. It would make including further detail in the questionnaires difficult though, as may cause disclosure issues, but without comments specific changes may be hard to understand

[confidential]: I don't really see any problem with this, though not sure if they would be especially user-friendly. It would make including further detail in the questionnaires difficult though, as may cause disclosure issues, but without comments specific changes may be hard to understand. So agree in principal but would like to discuss more.



9. On top of energy data as defined in Regulation (EC) No 1099/2008, Eurostat and also members of the Task Force on the Future of Energy Statistics are interested to know what additional energy data are available and reported on the national level. This data might stem from national reporting obligations and your national needs. The following examples are not exhaustive, just to highlight the areas we are looking for in your detailed answers:

- Regional energy data on NUTS2 or NUTS3 level for production/consumption of energy
- Energy data available much earlier (weeks, months before deadlines in the Regulation)
- Energy data available more frequently (weekly data, real time data)
- Energy data available in higher level of details (e.g. all categories of 2 digit NACE classification)

Please describe:

Romania: At this moment we have available data for all 2 digits NACE classification for annual data

Luxembourg: No additional energy data is available

Macedonia: SSO additionally publishes consumption of electricity in industry by regions and capacity for production of electricity by regions.

Austria: We are publishing energy balances at NUTS2 level and could provide a sectoral breakdown on 2 digit NACE classification

Bulgaria: Additional energy data available in Bulgaria:

- Incomplete energy data on NUTS2 or NUTS3 level for consumption of energy.
- Energy data available in higher level of details (e.g. categories of 2 digit NACE classification) – only for codes from 01 to 35, from 41 to 43 and from 49 to 51.

Poland: Energy data available in higher level of details (e.g. all categories of 2 digit NACE classification)

Montenegro: Statistical office of Montenegro – MONSTAT produced annual energy statistics according to Regulation 1099/2008 and IEA/OECD/EUROSTAT Energy Statistics Manual. Annual energy statistics contains the data for electricity, oil products, renewables and solid fuels. There is non-existence of a natural gas distribution network in Montenegro.

MONSTAT started to deliver data to EUROSTAT regularly for 2011 - November 2012. The data are available since 2005.

Croatia: So far, Croatia has no more detailed data for the energy flows. For the future we plan to develop the monitoring of energy production and energy consumption at the regional level (county level). We also plan to introduce a permanent periodic surveys (every 5 years) of individual sectors of final energy consumption (households, services sector, transport, agriculture, construction) to better determine the structure of energy consumption.

[confidential]: could be available only as a result of a quite heavy rearrangement of our queries.

We could have regular elaboration of energy balance at Regional level (eg. NUTS2) with one methodology compatible with the Eurostat standards. [confidential] is working on this and in the next year we hope it can be available.

France: We're working on regional NUTS2 statistics, as far as production and consumption are concerned. However, there are discrepancies with the national balances as not all fuels data are available at the regional level.

Latvia: Energy data available all categories of 2 digit NACE classification

[confidential]: We are not able to satisfy your proposals that you mentioned above.

Ireland: We are a small team in Ireland and currently we do not report on any additional energy data

Switzerland : We pretty much use all data collected in surveys to compile the annual joint questionnaires. No additional surveys are planned. Further information is available where modeling is used, e.g. in our analysis of energy consumption by specific use

http://www.bfe.admin.ch/themen/00526/00541/00542/02167/index.html?lang=en&dossier_id=02169

Lithuania: Energy data available 3 months before deadlines in the Regulation.

Belgium: The Belgian authority of energy statistics do not have energy data available earlier, more frequently or in higher level of details. However, the regional authorities have more information (for example : more detailed data on the distribution of the consumption).

[confidential]: We have no additional energy data available on national level to improve the data submitted by means of the joint questionnaires.

Cyprus: Regarding the second bullet point, data for the Electricity Monthly Questionnaire (M-3) and Monthly Solid Fuels Questionnaire are usually available and can be submitted at M-1, along with the Monthly SEG Electricity Questionnaire. Apart from this, no additional energy data are available.

Portugal: On Electricity, Natural Gas and Oil products consumption PT as available annually, on DGEG site (www.dgeg.pt), a detail information of consumption by NACE and by Municipality (can be choose NUTS I, NUTS II and District)

[confidential]: Our Office publishes detailed statistics on the power system and on the natural gas system on its website. These publications are disseminated annually and most of the data included are derived from our licensee's reports. Certain tables disseminated both in the Annual questionnaires and in these publications, are not comparable, because of the different methodologies. In addition to the annual publications, tables are published on a monthly basis on the key figures of the electricity and natural gas industry. We do not compile statistics at regional level currently, even though there is a growing demand for it. Our most detailed products are the Annual questionnaires that are sent to Eurostat and the IEA.

Finland: Regional energy data is not available in Finland.

The data collection of solid biofuels (fuel classification in Finland) is more detailed compared to that of international statistics.

[confidential]: For the moment we are not in the position to provide additional energy data.

[confidential]: Regional data available for some sectors.

Netherlands: - we have very detailed regional data on deliveries of electricity and natural gas from the public grid.

- we have a break down of deliveries of electricity and natural gas from the public grid in the services sector (1 digit NACE)

- we have provisional data of the main aggregates for the National Energy balance in the previous year in April
- we have provisional data for the complete National Energy balance in the previous year in June
- we have provisional data on the share of renewable energy in final energy consumption in the previous year in May.

Turkey: Because of the national energy sector structure we can not able to compile the data in detail and so can not able to provide data fully compliant with the Regulation

Estonia: Data are available on NUTS2 level

UK: DECC produces a lot of local area consumption data at NUTS level and in much more detail, down to areas covering around 400 homes. However, this is collected on a different basis to the overall UK figures, so would not be consistent. It is also one full year in arrears. On coal, renewables and electricity, we cannot provide the same level of detail on a more frequent basis, or any earlier, since much of the data are only available annually, and published in the summer. Renewables and CHP (autogen) data are published at regional level using the same basis as national level.

Other data published by DECC, but not collected by the annual survey include: split of wind (capacity and generation), by onshore and offshore. Renewable electricity gen/cap split by UK country. Number of renewable electricity installations, by technology. Additional data are also published showing greater breakdowns of oil and gas trade data and the petrol/diesel retail/commercial market.

For prices DECC publish a wide range of additional price information in our Quarterly Energy Prices Publication available from the DECC web site.

<https://www.gov.uk/government/collections/quarterly-energy-prices>

Examples of additional data include:

- greater detail on domestic prices looking at methods of payment, split with time of use tariffs etc (table 2.2.1 thru 2.5.2)
- Prices paid by electricity generators (table 3.2.1)
- Monthly petrol prices (weekly data from smaller sample sent to Commission) (4.1.1)
- Industrial prices for non-metered fuels: coal, heavy fuel oil and gas oil (3.1.1 thru 3.1.4)

Also DECC collect prices for our producer price index (PPI) with data collected on electricity, gas, crude oil, petroleum products (AVTUR, DERV, unleaded petrol, gas oil). These data are published by the UK Office for National Statistics.

DECC produce annual estimates of fuel poverty and these data are also available at local authority areas.

In addition DECC produce a large amount of monitoring data linked to policies, specifically around energy efficiency and small scale renewables. This allows for tracking of performance of policies, but

also provides key data on the impact of energy efficiency measures on reducing energy use.

All decc stats can be found at:
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics>

10. Eurostat is looking for possible ways to smoothen the workload in December and January. Around 30% of all joint annual energy questionnaires are transmitted to Eurostat by the end of October, around 50% during last week of November and around 20% after the deadline. Eurostat is looking for countries (beyond the already existing 30% of questionnaires) that based on a gentleman's agreement, would agree to provide at an earlier date the final version of joint annual energy questionnaires. Please note that we do not ask for early data transmission of preliminary data, we look for early transmission of final data.

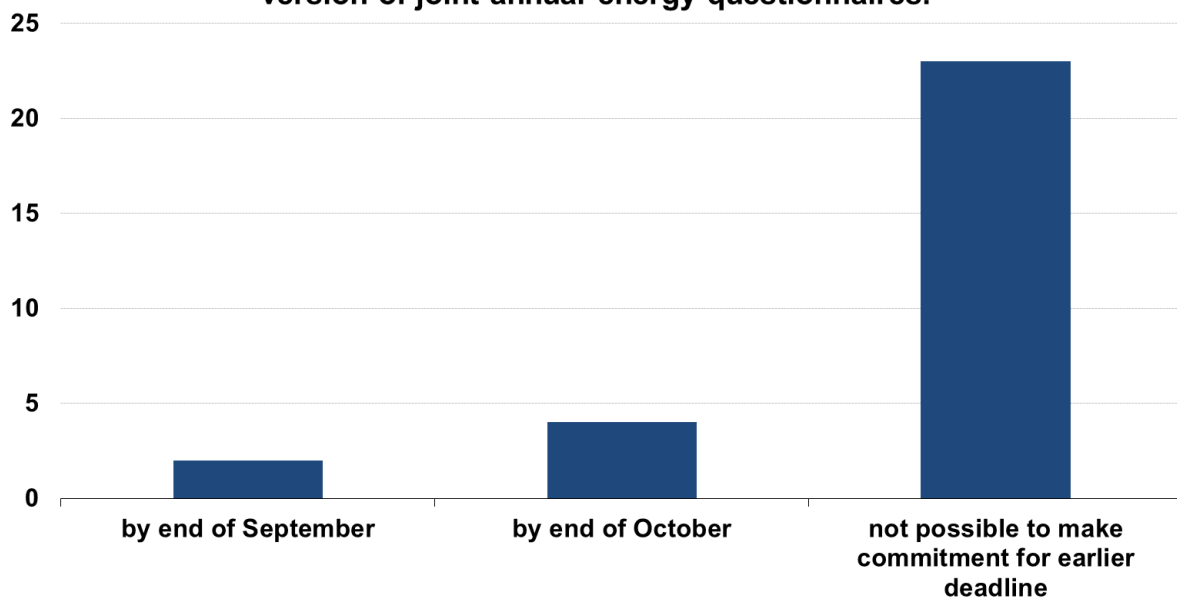
- We can make a gentleman's agreement for end of September
- We can make a gentleman's agreement for end of October
- We cannot make any commitment for earlier date of transmission

Austria : We are working on accelerating data collection, but we are dependent on external data sources and therefore we cannot guarantee an earlier data submission.

Portugal: (NOTE: for Oil Questionnaire should be maintained end of November. PT have yet difficulties to finish in earlier date)

UK: We already submit at the end of September, since this is the IEA's deadline.

Eurostat is looking for countries that based on a gentleman's agreement, would agree to provide at an earlier date the final version of joint annual energy questionnaires.



11. Do you create your national energy balance?

- No, we do not create national energy balances
- Yes, we create national energy balances according to Eurostat's methodology
- Yes, we create national energy balances according to IEA's methodology
- Yes, we create national energy balances with our own national methodology

Latvia: Except transformation sector input where we show data as a negative sign. Ireland: Our national methodology is closely aligned to that of Eurostat

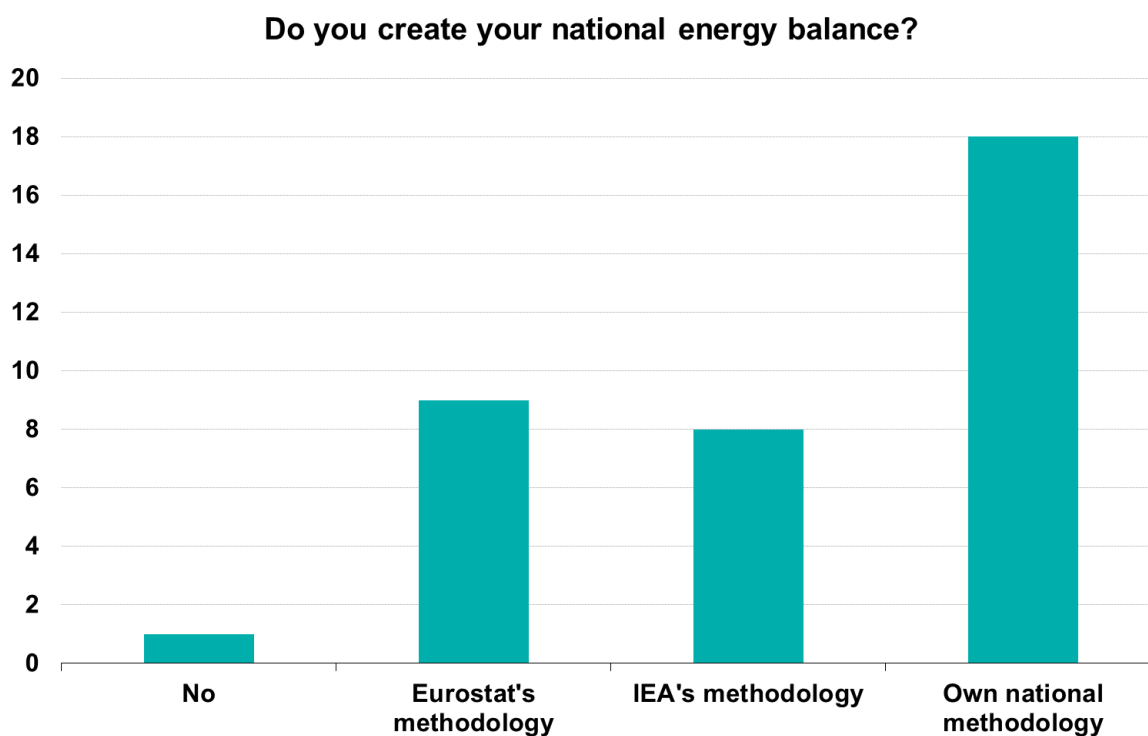
Lithuania: We create 2 types of energy balances:

- National energy balance in an energy units is created according to Eurostat's methodology (the production is limited to primary production);
- National energy commodities balances are created according to IEA's methodology (both primary and secondary production are reported in the "production" row.

Cyprus: The Statistical Service of Cyprus does not create national energy balances. This work is undertaken by the Energy Service of the Ministry of Energy, Commerce, Industry and Tourism and creates the balances according to their own national methodology. There is a very close collaboration between the Statistical Service and the Energy Agency and we try our best to be consistent with the energy data, as defined in Reg. (EC) No.1099/2008.

Finland: The methodology used is close to IEA's methodology.

UK: The UK methodology though is very much in line with the UN IRES, IEA and Eurostat methodologies. The [confidential] main headline balances are published based on data converted using gross calorific values, but data are also published converted on a net basis in July each year. Provisional balances are published each year at a headline level in March.



12. Rules for revising already reported questionnaires

Many MS send us revisions for already supplied questionnaires. This is of course welcome, because it normally helps to improve data quality. However, sometimes revisions arrive very late, e.g. many years after the original deadline. These revisions are interpreted rather as "modelling" than as improving statistics. Therefore, we want to limit the timespan within which revisions make sense from a statistical perspective.

Netherlands: We do not agree with your view in this point. Modelling can be a tool to improve statistics as a representation of reality consistent in time. Especially if improved methods are introduced to better comply with internationally agreed definitions. For example, for household wood statistics we discovered with the aid of CA-RES that we could improve our estimate for the density of wood. If we apply this improved density in past years the trend in the time series would represent different assumption on wood density and not the real trend in wood use. A second example is non-energy use in the petrochemical sector. We discovered that for many years we classified some chemical products as an energy commodity. From 2007 onwards we

improved this, resulting in a substantial increase of final non-energy use between 2006 and 2007. This methodological break in time series should be repaired, because otherwise time series on the non-energy use have little meaning.

UK: This is an area that merits further discussion, where a key question is the balance of work loads and taking on additional reconciliation tasks in June will be difficult. I would disagree with the use of the phrase modelled in the question. Revisions are not through modelling, but often from obtaining data from surveys of smaller energy business which are only run on an annual basis. The key has to be a revisions policy that allows scope for longer term revisions when needed and explained.

Eurostat would prefer a revisions policy (timespan for revisions) to be limited. However, for well justified cases, the timespan can be extended.

Please indicate, based on your national circumstances, which time span for revisions of monthly and annual data is in your opinion the most appropriate.

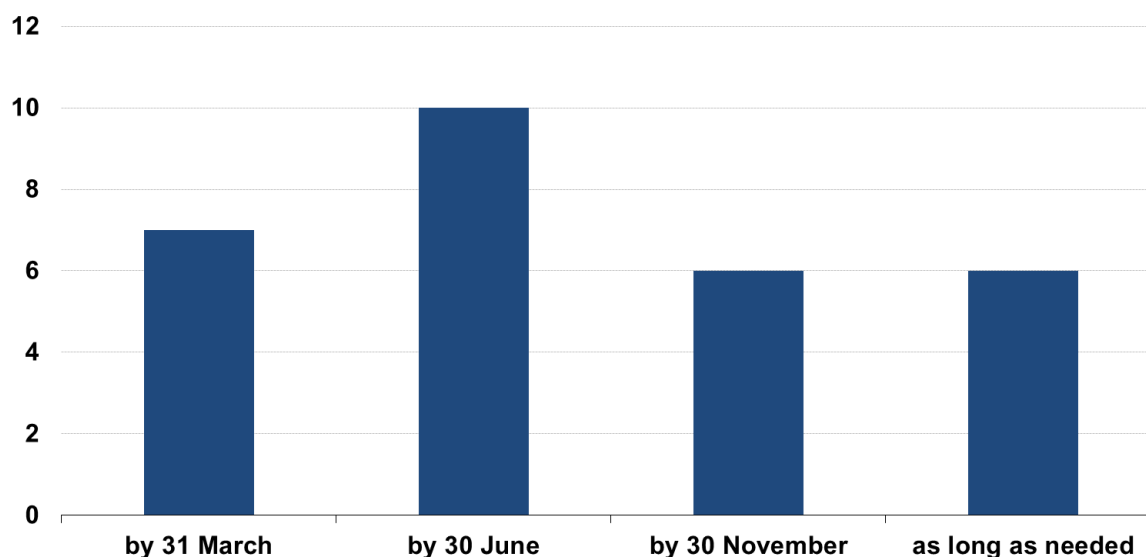
- a) Revisions for monthly (M-2 and M-3) questionnaires
 - By 31 March for the months of the year before
 - By 30 June for the months of the year before
 - By 30 November for the months of the year before
 - As long as needed

Latvia: Revisions are dependent on it whether we receive Eurostat data table on mirrow checks with a request to clarify the oil reserves data by country.

Ireland: We have some difficulty with collecting monthly data as there is currently no legal basis for this in Ireland. Therefore some monthly data may be very delayed, with a solid fuel supplier recently behind on ten months of data. Data is estimated in the meantime. Other data sources may also be used, e.g. The Emissions Trading Scheme provides annual data in April for the preceding year.

Netherlands: We would prefer to revise the full time series. This is also the preferred option for our other key data users.

Please indicate, based on your national circumstances, which time span for revisions of monthly data is in your opinion the most appropriate.



b) Revisions for annual questionnaires

- Up to the last 5 years (4 years before the reference year; e.g. if reference year is 2013, the years 2009 – 2012 can be revised)
- Up to the last 10 years (9 years before the reference year; e.g. if reference year is 2013, the years 2004 – 2012 can be revised)
- Full time series starting in 1990

Romania: Revisions are performed as a necessity, if we come to the conclusion that wrong data have been reported in the previous years by NIS or better data are obtained; in this situation the respective cell will be yellow.

I take this opportunity to stress again the fact that, as a rule, we do not check or verify the time series that are prefilled by IEA; also, we believe that a flagging of any changes performed by IEA would be useful (the colour green or blue of that cell, for example).

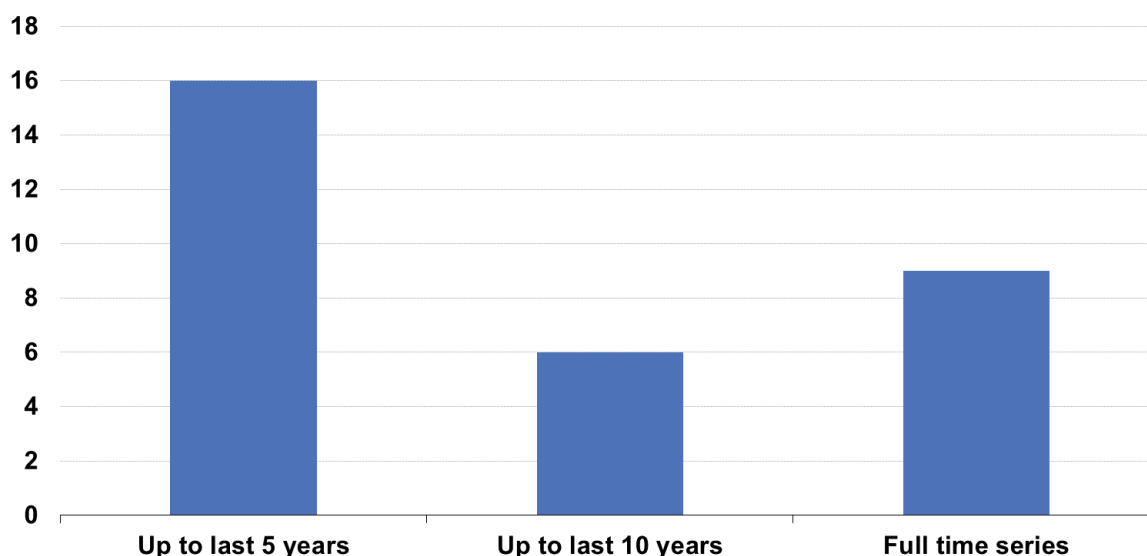
Luxembourg: It will preferable to define a period during which it is possible to submit revisions. For example, the revisions of the data up to the last 5 years will only possible during the cycles of the years 2015, 2020, 2025.

Switzerland : According to principle 6 of the Code of Practice, "errors discovered in published statistics are corrected at the earliest possible date and publicised."

Defining a period during which revisions are possible may violate principle 6 of the Code of Practice. Further, not all revision may be

regarded as modeling. We e.g. have just adjusted calorific values of oil products back to 1998 based on the results of a "12 month measuring campaign" that was conducted in a joint project of our office, the Federal Office for the Environment and the Swiss Petroleum Union (Union Pétrolière Suisse). This will lead to changes in the joint questionnaires that are due to the gathering of new information.

Please indicate, based on your national circumstances, which time span for revisions of annual data is in your opinion the most appropriate.



Please feel free to provide any additional comments you have:

Bulgaria: CN codes of energy products

In order to improve the quality of data for Imports/Exports, we would like for each energy product of monthly and annual questionnaires to be added its corresponding code of the Combined Nomenclature.

Nuclear heat

For the calculation of the indicator "ENERGY INTENSITY OF THE ECONOMY" NSI uses data on gross inland energy consumption, prepared on the basis of the real reported quantities of energy.

For the calculation of the same indicator Eurostat uses data on gross inland energy consumption, in which the production of nuclear heat is calculated by using of average coefficient for the European Union.

Difference in the manner of calculation leads to a difference in the NSI and Eurostat data.

Our proposal is Eurostat to calculate the indicator using the real quantities for 'Production of nuclear heat', reported by Member States in Nuclear Questionnaire.

[confidential]: For the 5 Joint Annual questionnaires it is important to coordinate the control system with the IEA because this is one of the motivation of such updating activity on the questionnaires. It is mainly after the IEA control that such figures have to be revised and so consequently the file is resent to Eurostat.

What normally happen is:

The MS compile and send the Questionnaire to IEA and Eurostat;

Eurostat made the control and ask for such clarification/changes (before respect to IEA);

The MS made the changes and send again the questionnaires to both IEA and Eurostat;

Several weeks after IEA run the control and ask to the MS for such more and different clarification/changes;

The MS made the further controls and changes and send again the questionnaires to both IEA and Eurostat.

This process is not optimized: maybe is can be useful an agreement between Eurostat and the IEA in force of which the IEA have to made the control of the questionnaires of EU Member States with a timing compatible with the Eurostat necessity. Otherwise the change after one deadline (End Jan of M+2 for example) will not to be incorporated in the Eurostat data for the current cycle but if necessary in the next cycle.

Ireland: Where better data is available we would like to revise the full time series

Cyprus:

- a) We believe that revisions on the monthly questionnaires should be made by 30th November for the year before, so as to reflect any revisions presented in the Annual Questionnaires.
- b) A sensible time-span for revisions of annual data could be a 10-year period. However, it should be noted that in the case of Cyprus, the great majority of revisions which were made for such long time-spans were requested either from the IEA or Eurostat. It should be therefore decided on behalf of these bodies that data within the 1990-2000 decade are final and "frozen".

[confidential]: It is a burden for us both from technical and coordination point of view (handling revisions, reply to overlapping queries, etc.) to provide the same data services both to the IEA and Eurostat. It involves not only the Annual questionnaires, but some monthly questionnaires as well. It would facilitate our work if Eurostat and IEA could share their database and we could submit them only to one organisation.

Netherlands: Please have more co-ordination with the IEA when checking errors and inconsistencies (data validation procedures). We would prefer to have contact with only one organisation for data

validation. It would be preferred if this organisation makes the definite data available for other organisations.

Norway: It's important with a close dialog between IEA/Eurostat and the member reporting countries. As an example of the opposite is that IEA this year used some figures for production of gas they found at the website for Norwegian petroleum directorate. These figures did not cover exactly the same as the Energy balance made by Statistics Norway, so when IEA put these two sources together without consulting us the balance was wrong.

France: It would be useful to completely harmonize the methodology between the IEA and Eurostat.