

Comments and recommendations by country

Azerbaijan

- **Overall rating**
 - Good (except for energy efficiency, which are in need of some improvement)
 - Only country with a disaggregation by urban/rural for access to modern energy services
 - Good use of excel tables to disseminate energy statistics
- **Possible improvements**
 - **Basic energy – good (8/8)**
 - Consistency of the data in the national energy balance should be reviewed and improved where possible.
 - **Modern energy services – good (10/12)**
 - Disaggregate price data by urban/rural regions
 - **Energy efficiency - in need of some improvement (4/9)**
 - Compile the indicator of energy consumption per unit of GDP by industrial sector; most of the required data appear to be available
 - Compile the indicators of freight and passenger transportation efficiency; again, all the basic data seem to be available
 - **Renewable energy – good (7/8)**
 - Metadata are missing for renewable energy stats
 - Compile the indicator of unit cost of renewable electricity; data should be available

Belarus

- **Overall rating**

- In need of some improvement (except for modern energy services, which are in need of major improvement)
- Main concern is accessibility; none of the data on the Belstat website can be downloaded easily in electronic format; the energy balance is available on in PDF format
- Coordination of data collection system between agencies working on energy statistics. Roles need to be better defined. Awareness of sustainable energy statistics needs to be increased. Training seminars could be organized to accomplish this.

- **Possible improvements**

- **Basic energy - in need of some improvement (8/8)**
 - New national energy balance being compiled according to the internationally accepted format
 - offers the opportunity to improve several of the basic energy indicators, most particularly the indicator of *transportation energy use by energy type and transportation mode*.
 - Commissioning of Belarus' first nuclear power plant, expected in 2020, represents a challenge for the national energy balance, as the methodology for introducing a nuclear power sector into the balance has not yet been developed. This should be considered a high priority, so as not to risk disruption of the time series and/or quality of the balance.
- **Modern energy services – in need of major improvement (hardly any indicators available) (0/12)**
 - Indicators of the average household prices of electricity, home heating fuel, petrol and diesel should be considered a high priority. The data for these indicators are already available from the Ministry of Energy, so compiling and regularly publishing them should be simple for Belstat. Energy prices are the same across the country, so there is no need to disaggregate the indicator by urban/rural regions.
 - Compilation of *average share of household disposable income spent on energy* should also be considered a priority, especially since Belstat already collects the basic statistics that are necessary.
- **Energy efficiency - in need of some improvement (6/9)**
 - *Business and public-sector investment in energy efficiency technologies* are available from the Department of Energy Efficiency, so it should be relatively simple for Belstat to compile and publish those indicators.
 - *Average efficiency of thermal power generating stations* is available through the state electric power enterprise, Belenergo, which accounts for about 90% of all the generated electricity in Belarus. Priority should

be given to compiling the statistics needed to cover the remaining 10% of electricity generation to permit an improved version of this indicator to be published by Belstat. Consideration should be given to ensuring that the commissioning of the new nuclear power plant in 2020 will be properly reflected in this indicator. It might be worthwhile, for example, to disaggregate the indicator by type of thermal power station (fossil fuel *versus* nuclear).

- **Renewable energy - in need of some improvement (5/8)**
 - Compiling the indicators of *public* and *private sector investment in renewable energy* should be relatively easy for Belstat, since the required statistics are available from the Department of Energy Efficiency.
 - Similarly, compiling the *unit cost of renewable generation by type* should be relatively straightforward, though it should be noted that renewable generation is very small at the moment.

Georgia

- **Overall rating**

- Variable – some good, some in need of some improvement and some in need of major improvement
- Main concern is limited range of indicators available
- Indicators that are available are generally of good quality
 - A lack of metadata, inadequate documentation of methods and poor timeliness are the main quality issues
- Need to:
 - clearly define the roles and responsibilities of relevant agencies in the collection and calculation of sustainable energy statistics; for example, by signing memoranda of understanding
 - improve the exchange of data between GEOSTAT and holders of administrative data
 - improve data producers' understanding of the requirements of data users
 - It is also important to cooperate and communicate with international organizations and experts.
 - standardize documentation for energy statistics and ensure it is available on-line from GEOSTAT
 - publish all sustainable energy indicators in a public database managed by GEOSTAT
 - increase cooperation with international agencies, especially those in the EU, to encourage knowledge sharing in the field of energy statistics

- **Possible improvements**

- **Basic energy – good (8/8)**
 - Nothing specific
- **Modern energy services – in need of major improvement (none available on the GEOSTAT website)**
 - Increasing the number of the relevant indicators available as official statistics through GEOSTAT's website:
 - This should be relatively easy for those indicators already compiled by GEOSTAT but not published on-line (*average retail prices of gasoline and diesel; average share of household disposable income spent on energy purchases; annual gross fixed capital formation in electricity production and distribution systems*).
 - For indicators produced by other agencies, arrangements should be made to permit GEOSTAT to publish the indicators on its website (*share of households connected to the national electric power grid; share of households connected to the national natural gas distribution network; share of households without access to electricity; average household*

electricity prices; average annual number of days of household electrical outages)

- **Energy efficiency – in need of major improvement (0/12)**
 - *Business and public-sector investment in energy efficiency technologies* are available from the Department of Energy Efficiency, so it should be relatively simple for Belstat to compile and publish those indicators.
 - *Average efficiency of thermal power generating stations* is available through the state electric power enterprise, Belenergo, which accounts for about 90% of all the generated electricity in Belarus. Priority should be given to compiling the statistics needed to cover the remaining 10% of electricity generation to permit an improved version of this indicator to be published by Belstat. Consideration should be given to ensuring that the commissioning of the new nuclear power plant in 2020 will be properly reflected in this indicator. It might be worthwhile, for example, to disaggregate the indicator by type of thermal power station (fossil fuel *versus* nuclear).
- **Renewable energy - in need of some improvement (6/9)**
 - Publishing indicators of *total production of renewable energy; production of renewable energy by type, share of renewable sources in total primary energy supply; share of renewable sources in electricity production and installed renewable energy capacity* on GEOSTAT's website. This should be easily accomplished, since the basic statistics are available from the national energy balance.
 - Compiling the indicator of *unit cost of renewable generation by type*. Since renewable energy production is already well measured in Georgia, it is possible that the necessary additional data on the costs of production by type are already collected by some agency in the country (possibly the Ministry of Energy). The ratio of costs to production would simply have to be calculated and published by GEOSTAT.

Kazakhstan

- **Overall rating**

- Good
- Only country to have an on-line database (Taldau) that permits direct download of data in a variety of format
- To improve the situation in Kazakhstan further:
 - greater integration of survey questionnaires would be required. Current approaches are noted as being chaotic and to not include sufficient analysis or concern for the interests of business.
 - The content and structure of survey questionnaires must be reviewed to ensure greater harmonization across surveys and reduction in response burden. Similarly, methods must be reviewed. An interdepartmental working group or commission could be usefully created to carry out this work.
 - Finally, the policies regarding the dissemination of statistics via the media should be reviewed to ensure equal access to statistical information for all users.

- **Possible improvements**

- **Basic energy – good (8/8)**
 - Nothing specific
- **Modern energy services – good (9/12)**
 - **Nothing specific**
- **Energy efficiency – in need of some improvement (5/9)**
 - Compiling the indicator of *final domestic energy consumption per unit of value added by industrial branch*. The basic data on real (inflation-adjusted) value added by industrial branch appear to be available from the Taldau database. In addition to these, it would be necessary to compile data on final energy consumption by industrial branch that are consistent with SNA principles. The main adjustment required for this is to add consumption of energy for own-account transportation purposes to the estimates of final energy use by branch from the national energy balance.
 - Compiling the indicators of *freight transport energy consumption per tonne-kilometre* and *passenger transport energy consumption per passenger-kilometre*. The basic energy statistics required for these are available from the national energy balance. The data on transport activities (tonne-kilometres of freight transport and passenger-kilometres of passenger transport) are available in the transport statistics database of Taldau. Combining these statistics to produce the two indicators should be straightforward.
 - The indicators of *investment in energy efficiency technologies* should be considered lower priorities, as their compilation requires data on

investment expenditures that currently do not exist in Kazakhstan. However, unlike in the other beneficiary countries, Kazakhstan already conducts a survey of environmental protection expenditures that would be a suitable vehicle for the collection of these data. Thus, the possibilities for compiling these indicators are greater in Kazakhstan than in any of the other countries.

- **Renewable energy – good (5/8)**
 - Of the indicators that are not available, priority should be given to compiling the *unit cost of renewable generation*, as the data required for it are likely readily available.

Kyrgyzstan

- **Overall rating**

- Mostly in need of major improvement; other than basic statistics, which are good
- The main concern that not enough indicators are available.
- Those that are available are generally of good quality, though the statistics on access to modern energy services suffer from weaknesses in terms of accuracy and interpretability.
- In general, greater effort is required to ensure that all indicators are publicly available *via* the National Statistical Committee's website. At the moment, a number indicators are available only upon request.
- For the majority of indicators, only incomplete metadata are available and even these are available only upon request. Improvements in this direction are being made however. National Statistical Committee is working with Statistics Norway on a project to improve metadata relating to classifications, the business register, questionnaires, databases and variable definitions throughout the statistical system.
- There is a high turnover of staff due the large workload and low wages in the statistical system. Considerable effort is required to respond to international questionnaires on industry and energy, leaving less time to produce national statistics. Additional funding is required to conduct surveys on renewable energy and household energy consumption.
- Priority should be given to improving the communications between the ministries and agencies responsible for energy to increase the access to and use of administrative data in compiling energy statistics. A formal system of interaction between the National Statistical Committee and other ministries and agencies with mandatory use of common classifications, nomenclatures, definitions and units of measure is needed.
- Closer cooperation with international experts is needed to improve energy statistics encourage development of energy efficiency indicators. To this end, the Industry and Energy Statistics Department of the National Statistical Committee has engaged with the INOGATE program to improve the surveys used to compile the national energy balance.
- To improve the knowledge and skills related to energy statistics, the National Statistical Committee conducts training and seminars for its own staff and representatives of ministries and agencies in the energy domain. In addition, Industry and Energy Statistics Department staff have the opportunity to attend training and seminars organized by international organizations, which helps improve their knowledge and skills.
- With financial and expert support of the UN Population Fund, the National Statistical Committee has developed a new official website where all data and relevant information are publicly available. A special section on SDGs and open

data has been created on this website. In addition, the National Statistical Committee has developed a mobile phone application with support from UNDP that provides five years of data through a dynamic interface.

- **Possible improvements**

- **Basic energy – good (7/8)**
 - Extend the national energy balance to include a disaggregation of the transport sector by mode
- **Modern energy services – in need of major improvements (7/12)**
 - Improving the accessibility of the indicators by ensuring that all of them are available on-line *via* the National Statistics Committee's website.
 - Compiling the indicator of the *average share of household disposable income spent on energy purchases by household type (urban/rural)*, which is a key measure of the affordability of energy.
 - Compiling the indicator of *annual gross fixed capital formation in energy production and distribution systems*, which is a key measure of national investment in ensuring sustainable energy services.
- **Energy efficiency – in need of major improvement (2/9)**
 - Compiling the indicators of *total primary energy supply per capita* and of *final domestic energy consumption per unit of GDP*, both of which should be easily compiled based on existing data available from the National Statistics Committee.
 - Compiling the indicator of *final domestic energy consumption per unit of value added by industrial branch*. The basic data on real (inflation-adjusted) value added by industrial branch appear to be available from the national accounts compiled by the National Statistics Committee. In addition to these, it would be necessary to compile data on final energy consumption by industrial branch that are consistent with SNA principles. The main adjustment required for this is to add consumption of energy for own-account transportation purposes to the estimates of final energy use by branch from the national energy balance.
 - Compiling the indicator of *average efficiency of thermal power generating stations*, as the required data should be readily available from the national energy balance.
- **Renewable energy – in need of major improvement (3/8)**
 - All available indicators are related only to hydroelectricity
 - Compiling the indicators of *total production of renewable energy; production of renewable energy by type; share of renewable sources in total primary energy supply; installed renewable energy capacity; and unit cost of renewable generation*, as renewable sources are important in Kyrgyzstan's overall energy mix (according to the GTF, 28% of Kyrgyzstan's energy is from renewable sources). Kyrgyzstan already collects data on the quantity of electricity generated by hydroelectric stations. In addition to this, it would require data on wind, solar and any other renewable forms of production. If

the latter are negligible, then no additional data beyond that already existing on hydroelectric power are required.