Improvements and differences in comparison to the compilation of the 2013 energy balance

GOGITA TODRADZE
National Statistics Office of Georgia - GEOSTAT

INOGATE Energy Statistics Network Meeting
17-18 November, 2015 Tbilisi, Georgia
Activities carried out for preparation energy balance 2014

- Include survey on energy consumption in annual state statistical work program for 2015;
- Include costs for conducting survey on energy consumption in GEOSTAT’s budget for 2015;
- Enlarge number of statisticians, working on energy statistics issues (one permanent staff);
- Improve knowledge and expierence of statisticians.
Activities carried out for preparation
energy balance 2014

- Participate and attend trainings, workshops, study tours and share experience of various countries;

- Conduct preparatory work for surveys:
  - revise questionnaires
  - survey design
  - sampling frame
  - identification of respondents
  - revise and improve software for survey
Part I. Collection data from energy sector (energy companies)

- **Coal**
  1. Questionnaire A1 – (for coal mines)

- **Natural Gas**
  2. Questionnaire B1 – (for natural gas producers)
  3. Questionnaire B2 – (for TSOs, UGS operators)
  4. Questionnaire B3 – (for DSO)
  5. Questionnaire B4 – (for natural gas suppliers)

- **Oil and petroleum products**
  6. Questionnaire C1 – (for crude oil producers)
  7. Questionnaire C3 – (for oil products traders)
Part I. Collection data from energy sector (energy companies)

- **Electricity**
  8. *Questionnaire D1* – (for electricity generation companies).
  9. *Questionnaire D2* – (for electricity transmission companies).
  10. *Questionnaire D3* – (for electricity distribution companies).
  11. *Questionnaire D4* – (for thermal power plants).

- **Renewable and waste**
  12. *Questionnaire F2* – (for producers and traders of pallets, briquettes, wood chips, charcoal etc.)
Part II. Collection data on final energy consumption

- Industry, construction and service sector
  13. Questionnaire M1 - (for industry, construction and service sector)

- Transport sector
  14. Questionnaire T1 – (for rail transport)
  15. Questionnaire T2 – (for air transport)
  16. Questionnaire T3 – (for transport in inland waters)
  17. Questionnaire T4 – (for transport on sea and coastal waters)
  18. Questionnaire T5 – (for road transport (including Metro))

- Agriculture, forestry and fishing sector
  19. Questionnaire A11 - (for rail agriculture sector)

- Household sector
  20. Questionnaire H1 - (households)
Other implemented activities

- Discuss survey design and questionnaires with the Ministry of Energy;
- Discuss/revise survey design and other related issues with INOGATE experts.
- Conduct field work activities and data collection – from April, 2015 to September, 2015
- Database cleaning (checks and controls of data) – October, November 2015
- Revision of survey results and compilation of energy balance with ITS assistance – November 2015
Data collection for 2013 energy Balance

Final consumers:
- Non-financial corporations
- Financial corporations
- Non-profit institutions
- Public administration
- Households

Energy Sector:
- Mines and producers
- Suppliers
- Traders, distributors
- Operators and others
Data collection for 2014 energy Balance

Energy data

Energy Sector
- Mines and producers
- Suppliers
- Traders, distributors
- Operators and others

Final consumers
- Non-financial corporations
  - Agriculture
  - Industry
  - Construction
  - Transport
- Households
## Energy Sector

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Questionnaire</th>
<th>Number of Respondents 2014</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>A1</td>
<td>1</td>
<td>Coal mine</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>B1</td>
<td>1</td>
<td>Oil and Gas corporation</td>
</tr>
<tr>
<td></td>
<td>B2</td>
<td>1</td>
<td>Gas Transportation Company</td>
</tr>
<tr>
<td></td>
<td>B3</td>
<td>18</td>
<td>Gas distribution Companies</td>
</tr>
<tr>
<td></td>
<td>B4</td>
<td>3</td>
<td>Natural gas suppliers</td>
</tr>
<tr>
<td>Oil and petroleum products</td>
<td>C1</td>
<td>1</td>
<td>Oil and Gas corporation</td>
</tr>
<tr>
<td></td>
<td>C3</td>
<td>24</td>
<td>Oil products traders</td>
</tr>
<tr>
<td>Electricity</td>
<td>D1, D2</td>
<td>1</td>
<td>Georgian State Electric System</td>
</tr>
<tr>
<td></td>
<td>D3</td>
<td>3</td>
<td>Electricity distribution companies</td>
</tr>
<tr>
<td></td>
<td>D4</td>
<td>-</td>
<td>Thermal Power Plants</td>
</tr>
<tr>
<td>Renewable and waste</td>
<td>F2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
data collection from
Final consumers

Non-financial Corporations
Use existing business survey and add additional table related consumption of energy forms

<table>
<thead>
<tr>
<th>Survey object</th>
<th>Non-financial corporations (legal persons and individual entrepreneurs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>1. Agriculture, Industry, Construction, Transport</td>
</tr>
<tr>
<td></td>
<td>2. All regions, all municipalities</td>
</tr>
<tr>
<td>Survey method</td>
<td><strong>Stratified Random Sampling</strong></td>
</tr>
<tr>
<td></td>
<td>Large companies – with full coverage; medium and small companies – using sampling method</td>
</tr>
<tr>
<td>Sampling size</td>
<td>App. 5 000 enterprise</td>
</tr>
<tr>
<td>Data collection method</td>
<td>Online questionnaire (web-based application (PHP))</td>
</tr>
</tbody>
</table>
**Households**
Use existing Quarterly Household Survey and add additional table related consumption of energy forms

<table>
<thead>
<tr>
<th>Survey object</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>All regions</td>
</tr>
<tr>
<td>Survey method</td>
<td>Two stage stratified sampling</td>
</tr>
<tr>
<td>Sampling size</td>
<td>App. 3400 households</td>
</tr>
<tr>
<td>Data collection method</td>
<td>Face-to-face interview</td>
</tr>
</tbody>
</table>
Improvements and differences

- Changes in the Law on Official Statistics of Georgia
- Improved and updated sampling frame
- Increased knowledge of staff (interviewers, supervisors, operators, analytical staff)
- More active cooperation and communication with producers, providers and users of energy statistics data
Improvements and differences

- Improve software for data collection and develop more details output tables
- Starting activities related production of monthly statistics (gas, oil)
- Use more and more administrative data for production of energy statistics
Future plans (I)

- Implementation of international recommendations related energy statistics and ensure full compliance with international standards and methodologies;
- Keep and improve cooperation with relevant institutions and main stakeholders;
- Active cooperation with administrative institutions and working with administrative sources;
- Active cooperation with international organizations and experts;
Future plans (II)

- Share experience of various countries;
- Working with data quality;
- Collect data from energy sector (coal, natural gas, oil and petroleum products, electricity, renewable) every year
- Conduct survey on energy consumption in **industry, transport, agriculture and construction** sector as well as **households** every year
- Conduct survey on energy consumption in **service sector** – once in 3-5 year
- Formation of complete energy balance (annual basis);
Thank you for attention!

Gogita Todradze
Head of Business Statistics Division
National Statistics Office of Georgia

gtodoradze@geostat.ge
www.geostat.ge