Improvement of energy statistics system and data quality in Georgia

GOGITA TODRADZE
National Statistics Office of Georgia - GEOSTAT

Zagreb, Croatia, 26-27 November 2014
Progress and developments

- Memorandum of understanding between MOE, GEOSTAT and INOGATE Technical Secretariat
- Institutional arrangements
- Improved access on administrative sources
- International cooperation
- Increased knowledge of staff
- Develop methodology for data collection
- Data collection from energy sector and final consumers
Activities carried out (I)

- 1st ITS Technical Assistance Mission and Workshop for GEOSTAT and MOE on the identification of stakeholders and data items needed for energy balance compilation (March, 2013);
- Include survey on energy consumption in annual state statistical work program for 2014;
- Include costs for conducting survey on energy consumption in GEOSTAT’s budget for 2014;
- Enlarge number of statisticians, who is working on energy statistics issues (cost for this person is included in GEOSTAT’s budget for 2014 and 2015);
Activities carried out (II)

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

- Conduct preparatory work for surveys:
  - revise existing questionnaires in business and household surveys (add additional questions, tables etc.)
  - survey design
  - sampling frame
  - identification of respondents
  - methodology, instructions
  - new questionnaires
Energy Statistics Questionnaires (I)

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**
  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

- **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

- **Household sector**
  20. Questionnaire H1
Other implemented activities

- Discuss survey questionnaires and instructions with the Ministry of Energy;
- 2nd ITS Technical Assistance mission (discuss and agree survey design, questionnaires, instructions and other related issues with INOGATE experts to avoid possible misunderstanding of questions, irrelevant items and possible overlapping (March 2014);
- Conduct field work activities and data collection – from April, 2014 – to September, 2014
- Database cleaning (checks and controls of data)– October, November 2014
- Review of survey results and compilation of energy balance with ITS assistance – October, November 2014
Data collection

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

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

#### Questionnaire and Number of Respondents

<table>
<thead>
<tr>
<th>Sector</th>
<th>Questionnaire</th>
<th>Number of Respondents</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>A1</td>
<td>1</td>
<td>Coal mine</td>
</tr>
<tr>
<td><strong>Natural Gas</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>1</td>
<td>Oil and Gas corporation</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>1</td>
<td>Gas Transportation Company</td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>25</td>
<td>Gas distribution Companies</td>
<td></td>
</tr>
<tr>
<td>B4</td>
<td>14</td>
<td>Natural gas suppliers</td>
<td></td>
</tr>
<tr>
<td><strong>Oil and petroleum products</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>1</td>
<td>Oil and Gas corporation</td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>61</td>
<td>Oil products traders</td>
<td></td>
</tr>
<tr>
<td><strong>Electricity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1, D2</td>
<td>1</td>
<td>Georgian State Electric System</td>
<td></td>
</tr>
<tr>
<td>D3</td>
<td>3</td>
<td>Electricity distribution companies</td>
<td></td>
</tr>
<tr>
<td>D4</td>
<td>3</td>
<td>Thermal Power Plants</td>
<td></td>
</tr>
<tr>
<td><strong>Renewable</strong></td>
<td>F2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
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. All kind of economic activities (NACE rev. 1.1) except J, P, Q, L, and 52.62.2); 2. All regions, all municipalities</td>
</tr>
</tbody>
</table>
| Survey method                 | Stratified Random Sampling  
Large companies – with full coverage; medium and small companies – using sampling method |
| Sampling size                 | App. 12500 enterprise                                                |
| Data collection method        | Online questionnaire (web-based application (PHP))                  |
## Financial Corporations

**Conduct new survey**

<table>
<thead>
<tr>
<th>Survey object</th>
<th>Financial corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>Banks, Microfinance Institutions and Insurance companies</td>
</tr>
<tr>
<td>Survey method</td>
<td>Census (full coverage survey)</td>
</tr>
<tr>
<td>Survey size</td>
<td>App. 20 Banks, 12 Microfinance Institutions and 14 Insurance companies</td>
</tr>
<tr>
<td>Data collection method</td>
<td>Online questionnaire (web-based application (PHP))</td>
</tr>
</tbody>
</table>
data collection from

Final consumers

Non-profit Institutions
Use existing annual survey for Non-profit institutions and add additional table related consumption of energy forms

<table>
<thead>
<tr>
<th>Survey object</th>
<th>Non-profit institutions serving households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>1. All kind of economic activities</td>
</tr>
<tr>
<td></td>
<td>2. All regions</td>
</tr>
<tr>
<td>Survey method</td>
<td>Stratified Random Sampling</td>
</tr>
<tr>
<td>Sampling size</td>
<td>App. 400 entities</td>
</tr>
<tr>
<td>Data collection method</td>
<td>Online questionnaire (web-based application (PHP))</td>
</tr>
</tbody>
</table>
Public Administration

Conduct new survey

<table>
<thead>
<tr>
<th>Survey object and Coverage</th>
<th>Public Authorities, Ministries, Legal persons of Public law, other central and local government institutions; Public Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey method</td>
<td>full coverage</td>
</tr>
<tr>
<td>Sampling size</td>
<td>App. 2500 unit</td>
</tr>
<tr>
<td>Data collection method</td>
<td>Paper and online questionnaire (web-based application (PHP))</td>
</tr>
</tbody>
</table>
data collection from

Final consumers

### 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>
Future plans (I)

- Formation of complete Energy Balance for 2013 (December, 2014);
- Implementation of international recommendations related energy statistics;
- 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;
- Share experience of other countries;
Future plans (II)

- Working with methodology and data quality;
- Revise and improve existing system for energy data collection;
- Collect data on energy sector (annual basis);
- Conduct survey on energy consumption (regularly);
- Formation of complete energy balance (annual basis);
Thank you for attention!

Gogita Todradze
Head of Business Statistics Division
National Statistics Office of Georgia
gtodradze@geostat.ge