Energy data collection and institutional set up in Armenia

Tigran Gnuni, Leading Researcher of Scientific Research Institute of Energy, CJSC

Anahit Avetisyan, Head of Industry and Energy Statistics division of the Statistical Committee

Tigran Sekoyan, GHG Inventory Expert

Joint IEA, UNEP, UNFCCC Workshop on Energy Data for Climate Policy: Strengthening energy data for an effective Enhanced Transparency Framework

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Energy balance legal arrangements

• Amendments to the Energy Saving and Renewable Energy Law, which were adopted in 2016, have set out the mandatory requirement for running, development and publication of the RA Energy balance on annual basis by the Statistical Committee (Armstat) and the Ministry of Energy Infrastructures and Natural Resources (at present Ministry of Territorial Administration and Infrastructure of RA).
Institutions in charge of energy statistics

• According to the Memorandum of Understanding (MoU) signed between Ministry of Energy of RA (at present Ministry of Territorial Administration and Infrastructure of RA) and Armstat.
• Armstat is responsible for main data collection required for Energy balance.
• Public Service Regulatory Commission – regulatory body for all monopoly services including power and gas supply is the source of certain detailed information.
• Ministry of Territorial Administration and Infrastructure of RA compiles the Energy balance:
  – using the approved methodology following Eurostat and International Energy Agency, guidelines
  – based on energy statistics data and provides to the Armstat
• Armstat is responsible for the quality check and publication of Energy balance by the end of each year.
Legal framework to collect energy statistics

- "Law on Official statistics of the RA" (adopted on March 21, 2018)
  - Data collection is formed with consideration of the statistics quality, data provision costs and response burden.
  - Respondents are obliged to provide the producers of official statistics, free of charge, with data in their possession at the level of detail necessary for the production of official statistics, as well as with the metadata that enable assessing data quality.

- Statistical programs
  - Statistical programs are the basis for the implementation of official statistics on the territory of the Republic of Armenia. These are developed based on the demand of official statistics users.

- Procedure of running administrative (information) registers and the form of receiving information from them" (Order N 109 approved by decision of the State Council on Statistics of RA and adopted on May 10, 2002)
  - The Ministry of Territorial Administration and Infrastructure provides monthly administrative information to Armstat by the approved procedure and form.
Collecting energy data across sectors

• Armenia has good official statistics on Electricity and Natural gas as all customers, including households are charged by commercial meters.

• The economic entities of industry, construction and transport included in the statistical monitoring of ARMSTAT annually provide data on the production, purchase, sale and final consumption of energy carriers based on the statistical form according to the NACE Rev.2.

• The Integrated Living Conditions Survey (ILCS) is conducted annually by Armstat in residential including questions on energy consumption, and use of biofuels: fire wood and manure burned.

• Data about used for local fossil deposit lignite (no commercial amounts) is based on expert estimation taking into account the location of deposits and neighboring population size.
The major data gaps to fill a complete energy balance

• Data on fuelwood and manure are not accurate enough.
• Since the electricity and natural gas sector does not keep records by statistical codes, certain information is not available (for example energy consumption in fish and greenhouse farming).
• It is difficult to keep records on the use on solar water heaters. The data from the customs service is used, which rarely contain energy indicators.
2018 Energy balance preparation

- Pilot Energy balances of Armenia for 2010, 2011, 2012, 2014 were developed
- Official data collection from Armstat, PSRC, MTAI and R2E2 have been accomplished.
- Energy balance of Armenia for 2018 has been compiled in the formats of Eurostat and International Energy Agency,
- Draft Energy balance of Armenia for 2018 has been discussed with the specialists from Armstat, MTAI and UNDP expert’s GHG Inventory team.
- Based on compiled balance the Fact sheet was developed for public awareness.
Energy balance 2018 Fact sheet

**ARMENIA ENERGY FACTSHEET 2018**

**TOTAL PRIMARY ENERGY SUPPLY**

3.15 TPE

In 2018, the total primary energy supply in Armenia was 3.15 million tons of oil equivalent (toe).

**Energy intensity of the GDP, (quintillion AMU)**

This corresponds to 1.17 toe of energy consumption per capita per year. In 1990, the share of energy consumption by the Northern and Southern border points of Armenia was 3.3%.

**ARmenia ENERGY MIX**

Total Primary Energy Supply (TPES)

- Coal: 3.15 TPE (10.2%)
- Natural Gas: 1.18 TPE (38.0%)
- Hydro: 0.32 TPE (10.3%)
- others: 0.55 TPE (17.5%)

**ENERGY SELF-SUFFICIENCY**

28.4%

**Electricity generation**

Armenia produced 0.67 qtoe of electricity in 2018 produced by nuclear power plant (46.61%), natural gas fired thermal power plants (43.3%), hydro power plants (29.85%) and wind and solar plants (0.38%).

**Total Final Consumption**

2.15 qtoe

**DID YOU KNOW?**

Natural gas is the main energy source of Armenia

**TRANSFORMATION**

**Electricity Generation**

Although Armenia's energy mix is dominated by gas, the electricity sector is well diversified in comparison to many of its neighbors.
Activity data sources for GHG Inventory

• Energy Sector is by far the largest producer of GHG emissions in the country and thus the Energy balances published by the Armstat are the main data sources for determination of activity data for category 1.A “Fuel Combustion Activities”.

• Development and improvement of the Energy balances on a continuous basis is extremely important for improving accuracy, consistency and completeness of the National GHG Inventory.
Quality Control procedures

• Considering that the elaboration of Energy balances is a rather new process in RA and with the aim to improve consistency of data provided in the Energy balance for the purpose of GHG Inventory:
  o Activity data have been collected from the initial data sources, including the Public Services Regulatory Commission (PSRC) and "Gazprom Armenia" CJSC and cross-checked with those provided in the Energy balance.
  o The GHG inventory expert team involved closely collaborates with the Energy balance compilers for ensuring accuracy and consistency of the data reported and certain inconsistencies were resolved.
Thank you