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DATA GAPS IN THE ENERGY STRATEGY WHITE PAPER OF GEORGIA (2015-2030)

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1.0 ABBREVIATIONS

AYPEG	Association of Young Professionals in Energy of Georgia
GDP	Gross Domestic Product
GoG	Government of Georgia
MoE	Ministry of Energy
RES	Renewable Energy Sources
USAID	U.S. Agency for International Development

2.0 Overview of Gaps in Energy Strategy

This report outlines the additional required data that is needed to further develop a comprehensive short-term and medium-term energy strategy and a long term vision for Georgia (2015-2030).

The Energy Strategy White Paper has been prepared for the MoE through the USAID funded Hydro Power and Energy Planning Project (HPEP). The Energy Strategy of Georgia is a comprehensive Energy Strategy plan, which addresses critical concerns and issues in supply and demand sides of energy developments to meet and safeguard the future energy needs. The document covers the entire energy sector and provides strategies for natural gas, oil, coal and electricity sectors and renewable energy sources (RES). The Energy Strategy also focuses on customer protection, demand-side management, environmental and social impacts, technology and innovation and security of supply.

Table 1 shows the main thematic areas and relevant datasets needed for a more comprehensive Energy Strategy for Georgia (2015-2030).

Table 1: Thematic areas and the required data for the strategy

Area	Topic	Data
Equipment	Saturation levels of equipment	Use of refrigerator, AC, washing machines, etc. in households
		Use of equipment in commercial sector
	Age of equipment	Age of equipment in Georgia (year of manufacture, data on used and new equipment)
Energy Consumption by resource	Coal	Coal consumption by sector (commercial, household, services, transport, agriculture, industry)
	Electricity	Electricity consumption by sector
	Gas	Gas consumption by sector
	Oil	Oil consumption by sector
	Biomass	Biomass consumption by sector
		Wood use in the commercial sector broken down
Transport	Fuel types	Different fuel (gasoline, natural gas, electricity) shares used in transport sector
	Vehicle load factor	Vehicle load factor
	Fuel switching	Number of vehicles converted to natural gas 2010-2014
	Fuel use	Average fuel use per 100 kms
Trade	Fuel imports	Fuel imports based on type 2010-2014
	Coal Prices	Coal price structure for import, export and local market
Elasticity	GDP growth and energy use	Relationships (elasticities) between economic sectors and GDP growth
		GDP growth elasticity (how energy intensive is each sector)
Social	Residential sector	Number of houses and apartments in Georgia by cities

In order to accurately project the growth of future energy use based on specific sectors and resources, the elasticities for specific sectors that will drive the economic growth in the country need to be known. In order to calculate a credible forecast of future energy use and

to determine the relationship between the economic growth and energy use, elasticities will need to be calculated first.

Energy consumption for each resource (coal, oil, gas, RES, electricity, biomass) needs to be known by sector (household, commercial, service, agriculture, transport, industry). The time series data from 2010 to 2014 would be followed over time to detect a trend or a relationship between different sectors.

The rate of vehicle conversion from gasoline to natural gas would help us evaluate the accuracy of the projected increase of natural gas use in Georgia at the expense of the transport sector. Average fuel use per 100 kms and vehicle load factor would also need to be known to run the model accurately and come up with an energy balance for Georgia.

In order to facilitate further improvement of the Energy Strategy of Georgia (2015-2030), better energy planning and making more accurate forecasts on future demand, the above outlined data needs to be considered. This data can either be collected from already existent analyses or by conducting more surveys similar to that of USAID's household energy end-use survey implemented by AYPEG. Once the data is gathered and the forecast projections are conducted based on reliable statistics, the Energy Strategy of Georgia will be a more credible template upon which the GoG can base its action plan for the energy sector.

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