



The Energy and Water Sectors and Inclusive Growth in Georgia

Dialogue on Inclusive Growth
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ISET MA Program in Economics
Policy Institute

International School of Economics at Tbilisi State University



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Dialogue Series on Inclusive Growth

The purpose of this dialogue series is to have a critical discussion about policies, projects and programs aimed at promoting inclusive growth in Georgia.

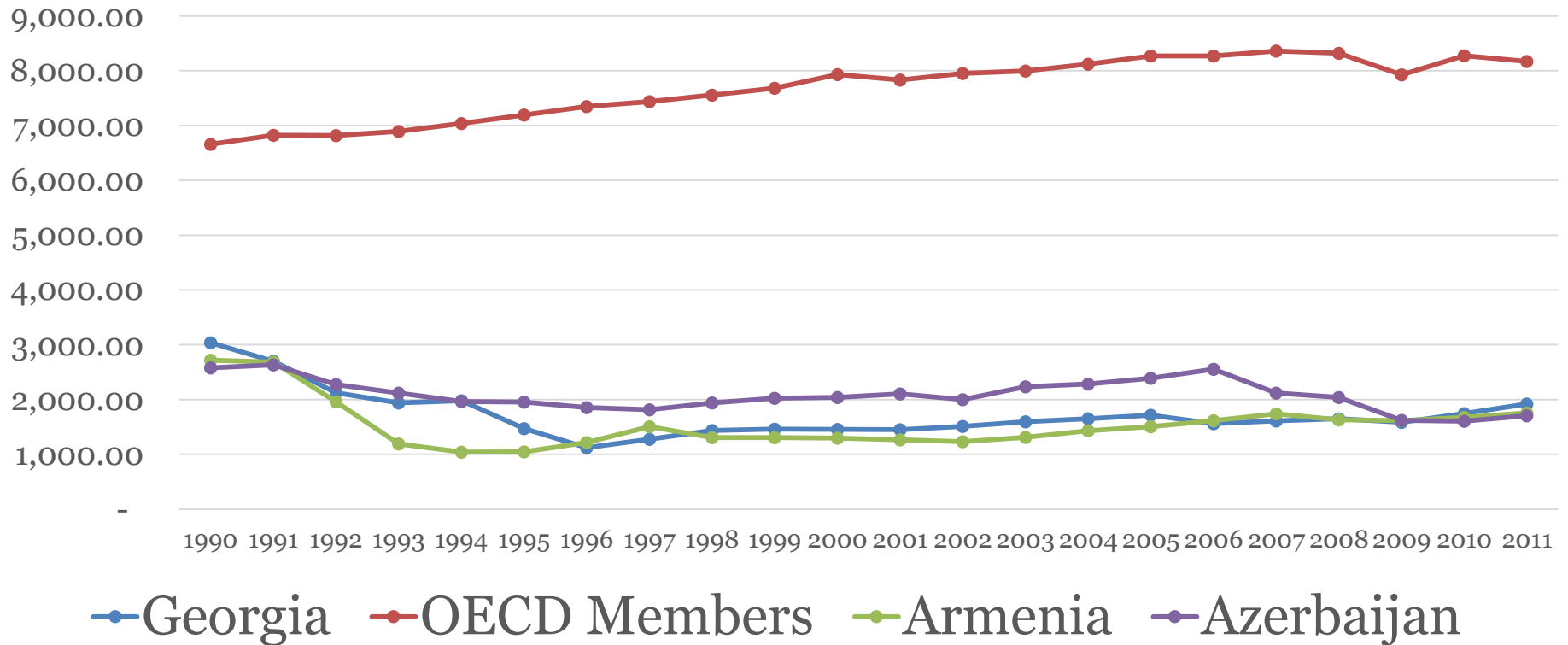
This platform provides an opportunity for private and public actors to come together to learn about various opportunities and constraints related to inclusive growth.

Georgian households have limited access to energy

- **Energy poverty:** Households cannot afford basic energy-intensive equipment for their everyday needs:
 - ✓ Refrigeration
 - ✓ Washing machines
 - ✓ Heaters/coolers
- **Access to energy services:**
 - Around 28% of households in Georgia do not have access to natural gas supply
 - 761 households in 28 Georgian villages do not have access to electricity

Per capita electricity consumption in the region is 1/4 of the OECD's average

Electricity Consumption: Kwh/Per Capita



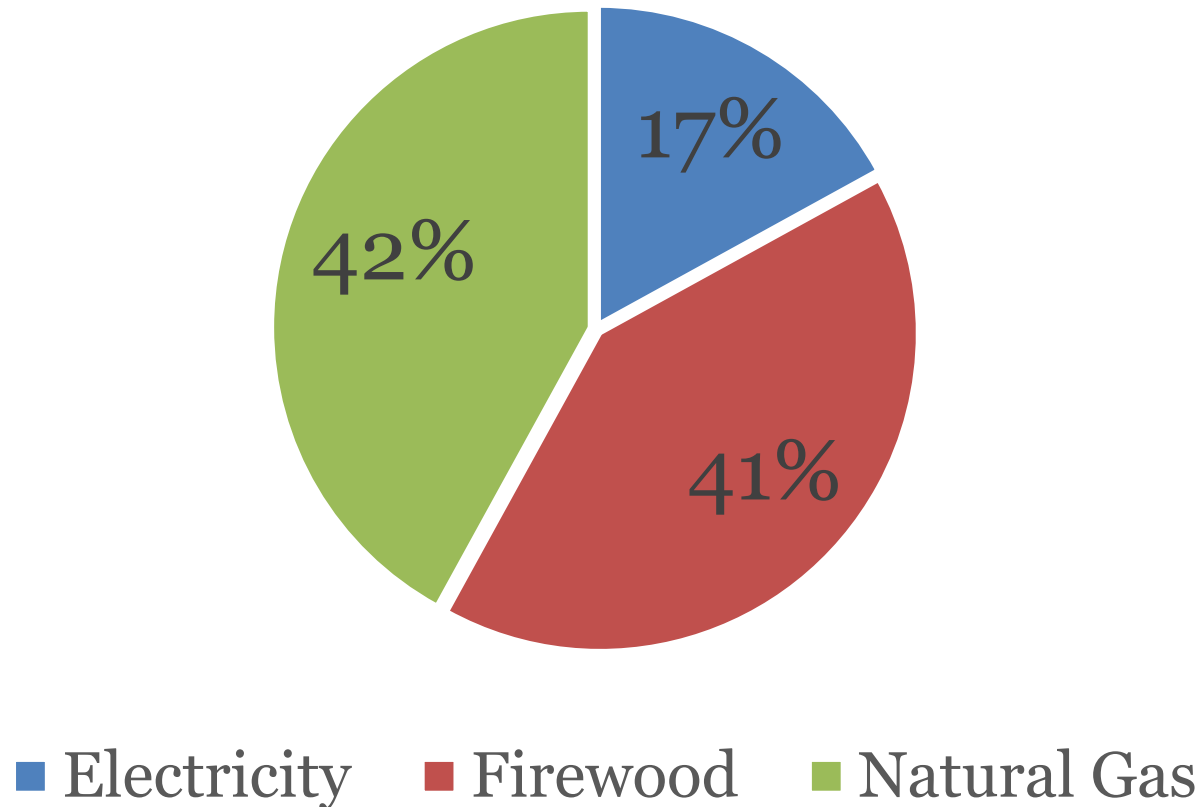
Source: World Bank, 2014

Expensive energy is used inefficiently

- **Affordability of energy sources:** due to the high costs of energy, people try to limit energy consumption, especially in rural areas, primarily by:
 - ✓ Cutting firewood, which is either free, or cheaper than electricity and gas
 - ✓ Heating only one room in the winter
 - ✓ Minimizing the use of energy-intensive equipment
- **Inefficient use of energy resources:**
 - ✓ High share of inefficiently used firewood in total household energy consumption
 - ✓ Lack of information and liquidity to improve the energy efficiency of the household sector

Energy Consumption Patterns among Households in Georgia

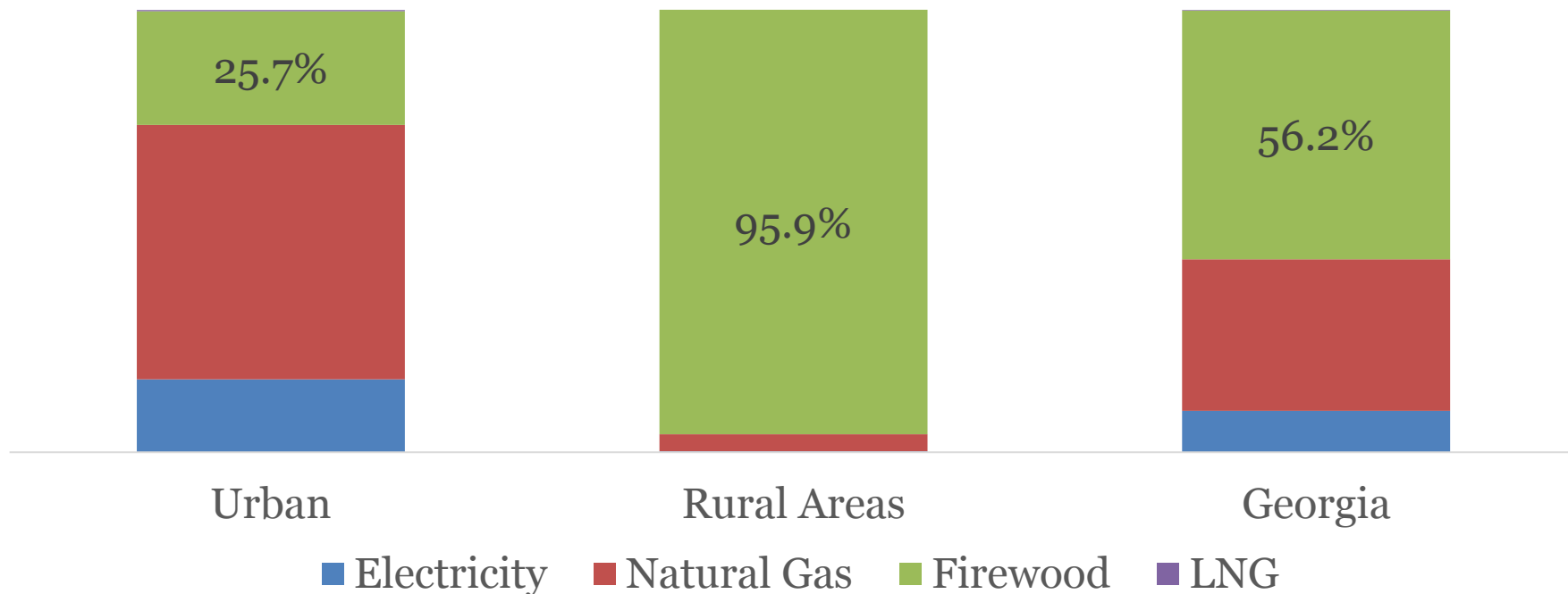
Share of Energy Resources in Household's Total Energy Consumption



Source: *Household Energy End-Use Survey, USAID, AYPEG, 2014*

Firewood is the main source of energy for household heating in rural Georgia

Energy used for household heating in Georgia



Source: *Household Energy End-Use Survey, USAID, AYPEG, 2014*

Opportunities in Georgia's energy sector

- Development of off-grid small and medium hydro power plants (HPPs) can be a cheap energy source for **electricity-intensive industries**
- HPPs require significant initial investment while creating construction **jobs** in the regions
- Energy projects are frequently the reason for **improvement of local road, water supply and electricity infrastructure** which have a long-term impact on development
- With 250-280 sunny days and 1,250-1,800 kWh/m² solar radiation annually, Georgia has the potential for **solar power** development, particularly useful as an off-grid alternative for **high mountain villages**.

Pricing and quality of water supply are problematic

- Frequent water **supply interruptions** in Tbilisi
- Water **supply schedules** in most locations
- **Poor quality** of water supply in Georgia's regions
- **Inefficient use** of water for lack of metering and inadequate pricing (household consumption of tap water is **cross-subsidized by businesses**)
- **Old or no sewage networks** in regions
- Lack of treatment facilities and no standards for **wastewater treatment**

Water supply is a major constraint for Georgia's agriculture

- **Damaged and inefficient infrastructure** for irrigation of agricultural lands causing:
 - ✓ Oversupply/deficit of water in agriculture
 - ✓ Harvest losses
- One **per hectare tariff** for irrigation (regardless of actual consumption) leads to inefficient use of water
- **Confusion regarding** the tariff setting authority in the sector

This Dialogue

- How to **improve access** (affordability) to energy resources, particularly electricity and gas for priority businesses and vulnerable households?
- How to ensure more **efficient use** of energy and water resources?
 - ✓ Raising awareness
 - ✓ Addressing liquidity constraints
 - ✓ Certifying and promoting energy efficient technologies
- How to overcome ‘political economy’ constraints for **adjusting tariffs and rationalizing** the use of water resources by residential consumers and businesses?
- Are state-owned water distribution network operators doing a good job or is there scope for their **privatization**?

Panel Discussants

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