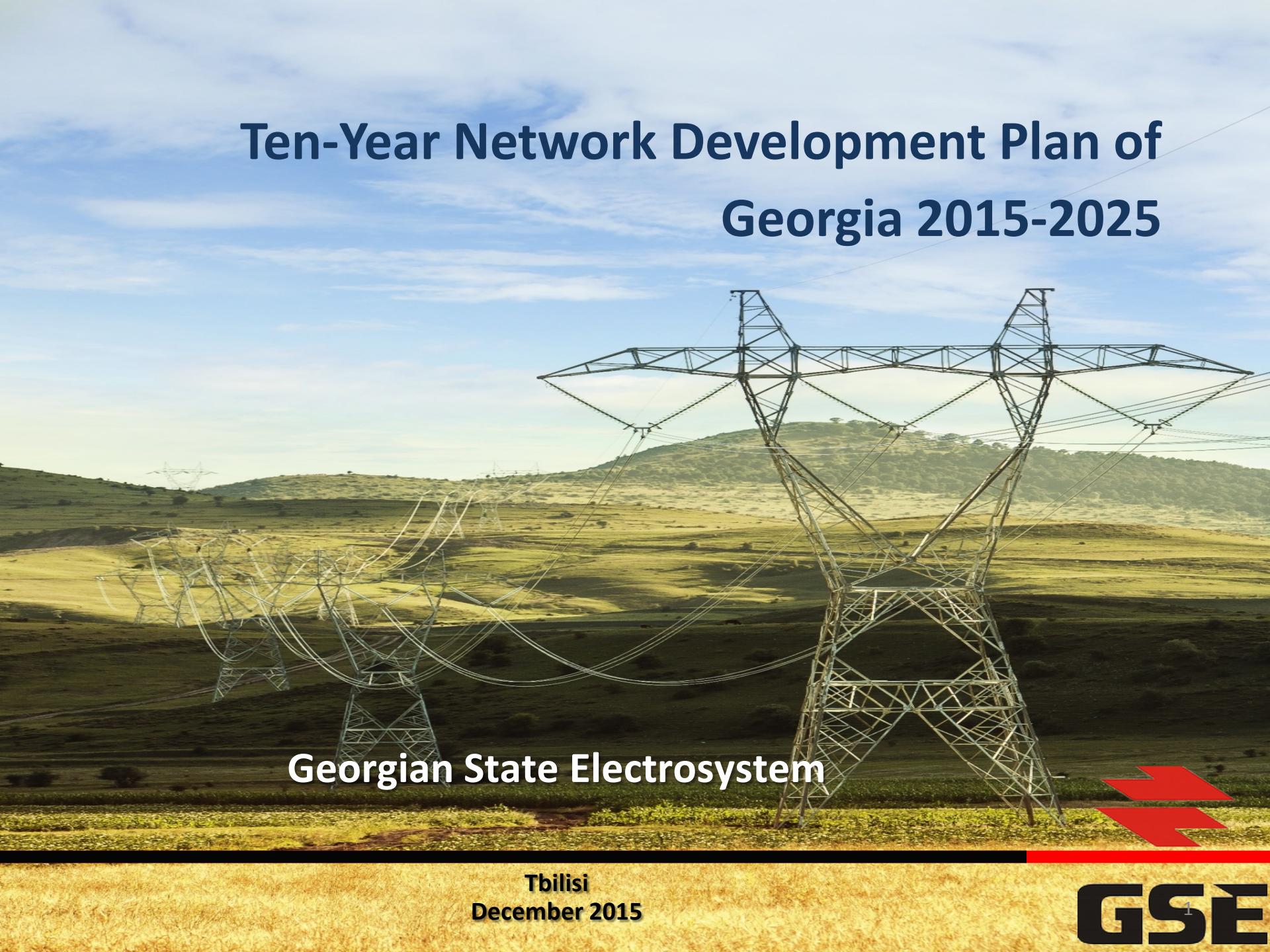


Ten-Year Network Development Plan of Georgia 2015-2025



Georgian State Electrosystem

Tbilisi
December 2015

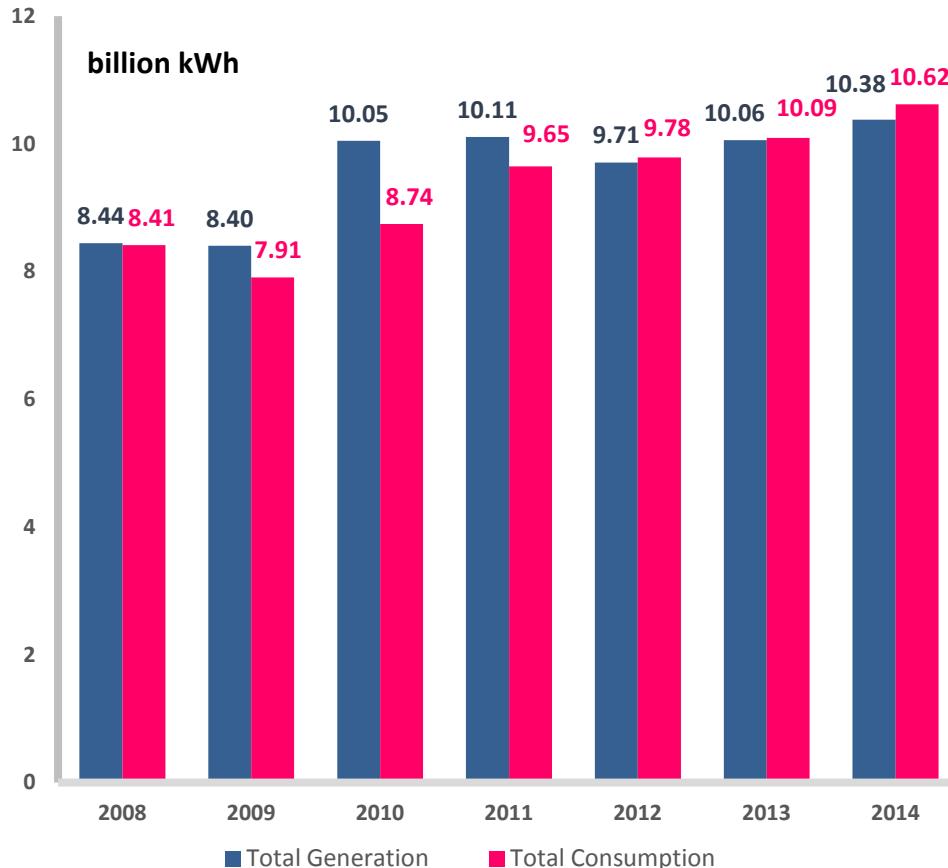


TYNDP Goals

- 10-year development plan of the transmission network of the country's transmission system infrastructure to strengthen time-bound program, which is a response to remedy the problems, challenges and opportunities for future implementation.
- GSE, (the ten-year plan) is to develop a sustainable, reliable, economical and efficient transmission system that provides any stage of development
 - network security, reliability, and **N-1 Criteria Performance**;
 - the quality of electricity;
 - sufficient capacity for
 - Integration of renewable energy sources in the network;
 - electricity trading between the neighboring countries;
 - Readiness for Integration with the ENTSO's-10-year development Plan.

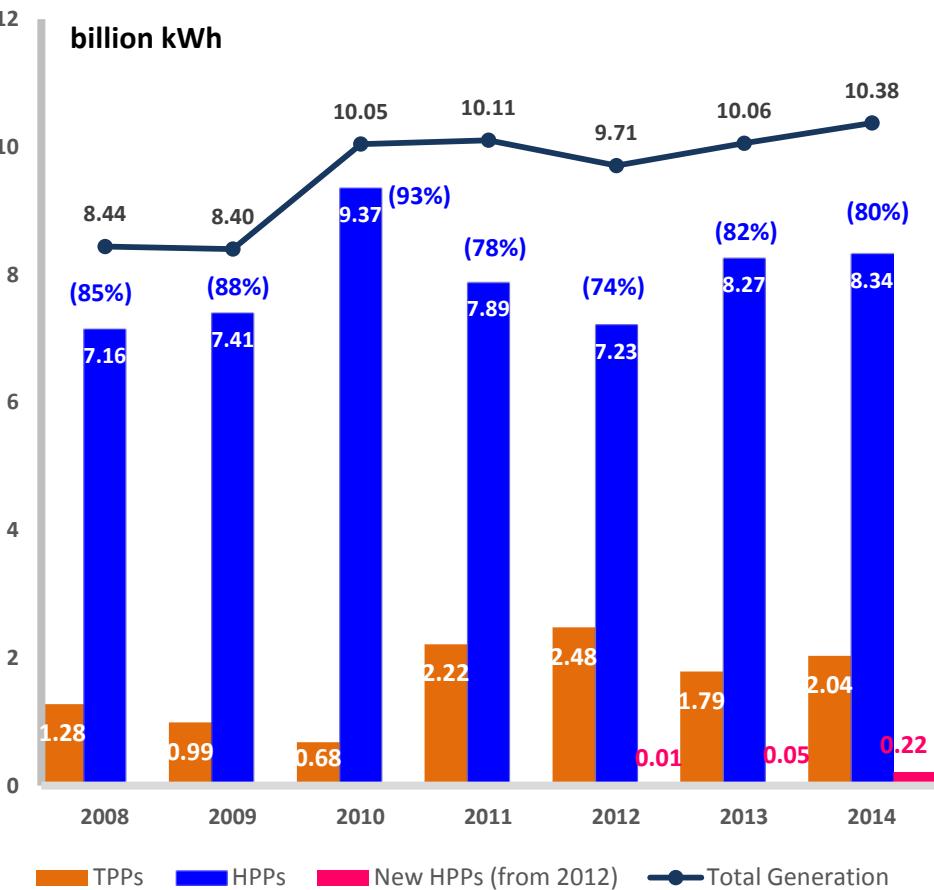
Current Situation

Generation and Consumption



Average consumption growth from 2010 : 4.2%

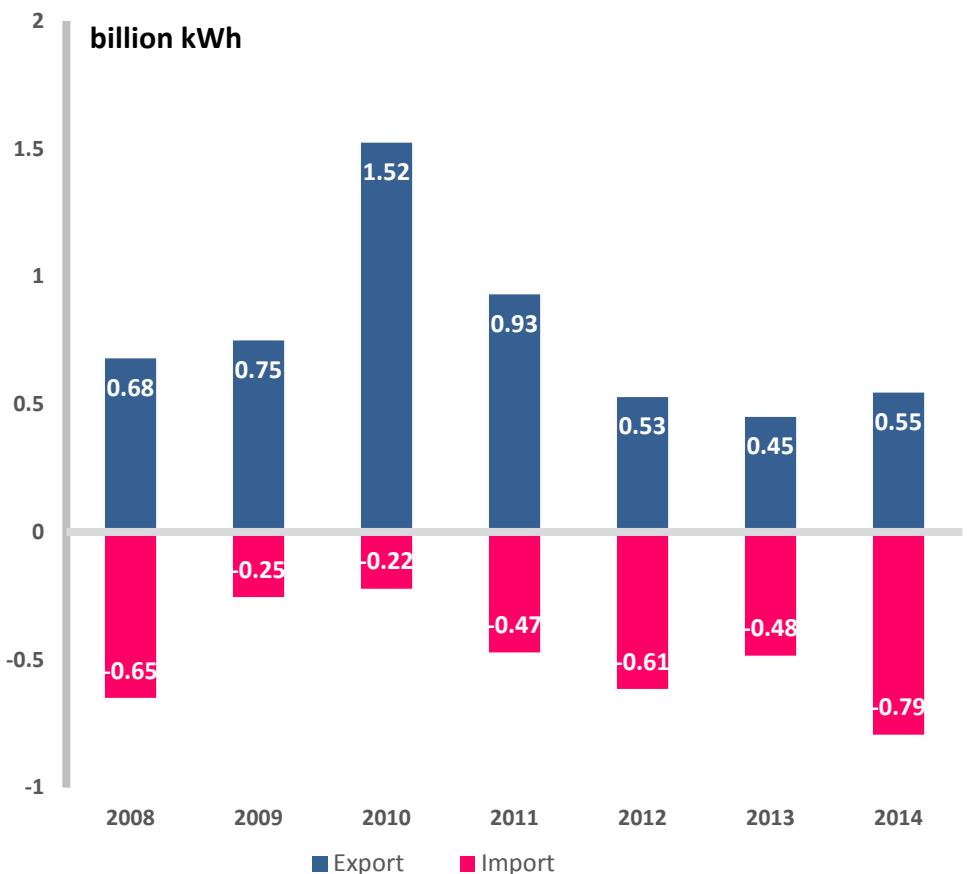
Generation of HPPs and TPPs



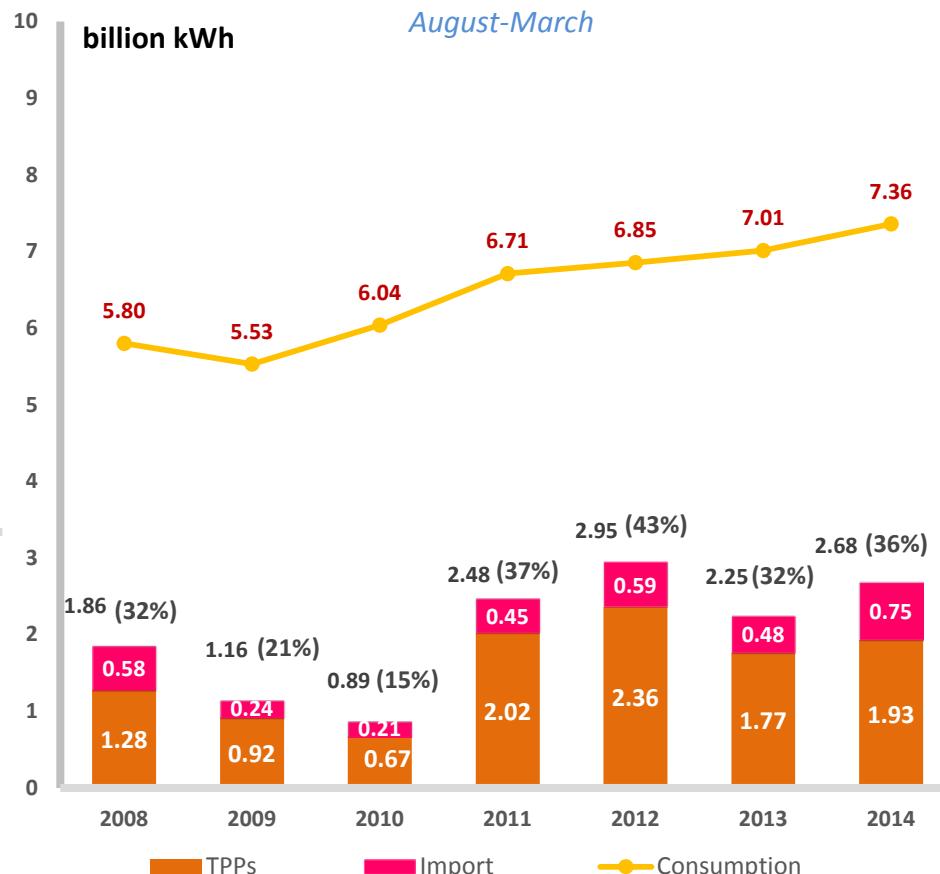
Average portion of hydropower in the total generation from 2010: 81%

Current Situation

Export and Import



Import and Generation of TPPs



Objectives of the Ten-Year Network Development Plan

The document is based on the best European practices and experiences in the field. It describes a plan for achieving three major goals:

- Increasing network stability and **fulfilling N-1 criterion**;
- Connecting new HPPs to the network and satisfying growing demand for electricity;
- Fully utilizing Georgia's export and transit potential.

Development Drivers



Inputs for the Ten-Year Network Development Plan

- Existing capacities of the network and HPPs;
- Future capacities of planned HPPs (location, capacity, generation, and year of inception);
- Projections of consumption growth;
- Agreements with neighboring countries regarding a cross-border network development

Results of the Ten-Year Network Development Plan

- Energy and power balances
- Cross-boarder energy exchange capabilities
- Access points for new HPPs
- Forecasted investments and CBA (Cost-benefit analysis)



2015 Year and Projects for reinforcement of Western 220 kV grid





Project “Jvari-Tskaltubo-Akhalsikhe”





Projects „North-Ring-Tskaltubo“ and „Namakhvani Tskaltubo“





Projects „Batum-i-Akhalsikhe“ and „Ozurgeti“

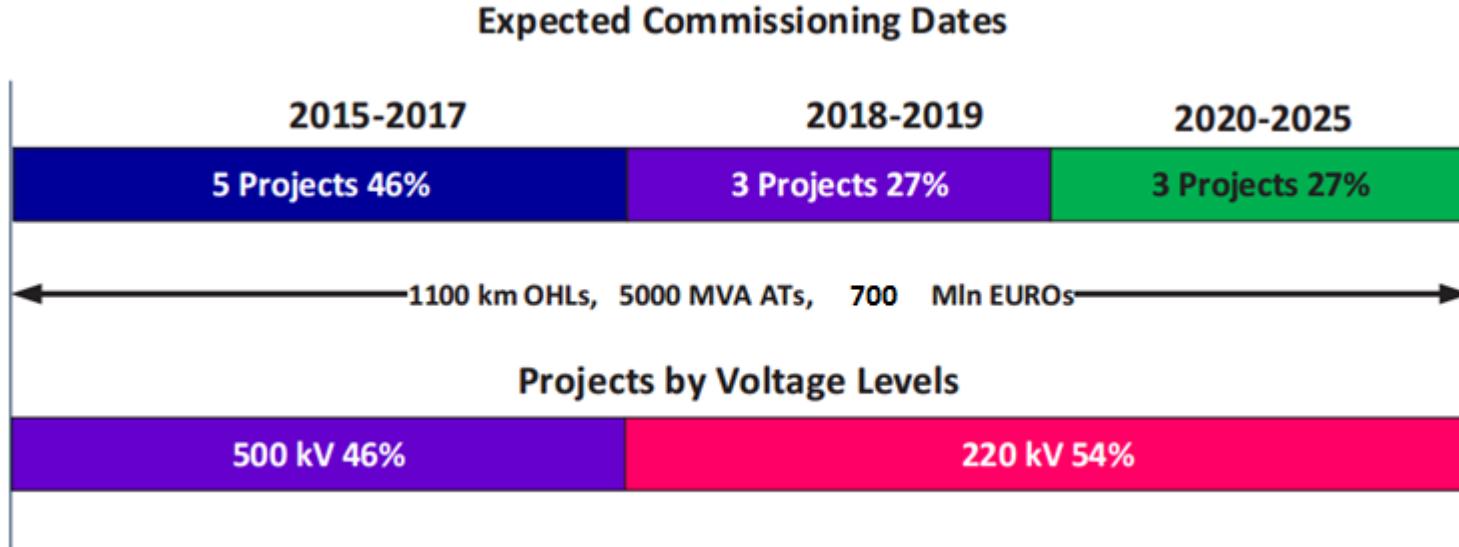




Projects of Reinforcement of Cross Border Transmission Grid



Identified projects and investments for network reinforcement



According the TYNDP

- OHLs LENGTH will be increased by 1100 km
- Capacities of Substations will be increase by 5000 MVA
- Investments of 700 Million € will be needed for network reinforcement

As a result it will be possible

- Integration of more than 100 HPPs
- Total Capacity of integrated HPPs is 4000 MW.
- Annual Generation will be increased by 15 Bill kWh
- Total investments of HPPs will be 5.2 Bill €



Capacities for Cross-border Power Exchange for 2022



Thank You For Your Attention!

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