

Prospects and Challenges of Cross-Border Power Trade- Case Georgia

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- Amendments to improve legal framework for power transit and trans-border trade,
- Export oriented HHP projects targeting Turkish market and beyond- ENTSO-E
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- Legal framework governing Georgia –Turkey Power Trade
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Structure of Georgia's Power Sector

- Ministry of Energy
- GNERC
- Distribution companies
- Trade:
 - direct long term or short term contracts with generators
 - ESCO

Georgia's Power Sector

Main Developments of 2012–13

- Power consumption increased (by 2– 3%);
- For the first time in the last five years negative trade balance has been registered in 2012 (import – 614.6, export – 528.2 GWtH), the same should be expected for the 2013;
- In generation - the trend of growing thermal power production (2010 – 7%; 2011 - 21%, 2012 - 28 %, 2013–17%);
- Actual indicators of power market openness made 17 in 2012 and 19% in 2013;
- The market shares in generation were distributed as follows:
2012 Enguri – 33%; Mtkvari – 11.8%; Tbilisresi – 11.7%;
2013 Enguri – 36%; Mtkvari – 8.8%; Vartsikhe – 8.4%;

Ownership Structure of the Power Sector

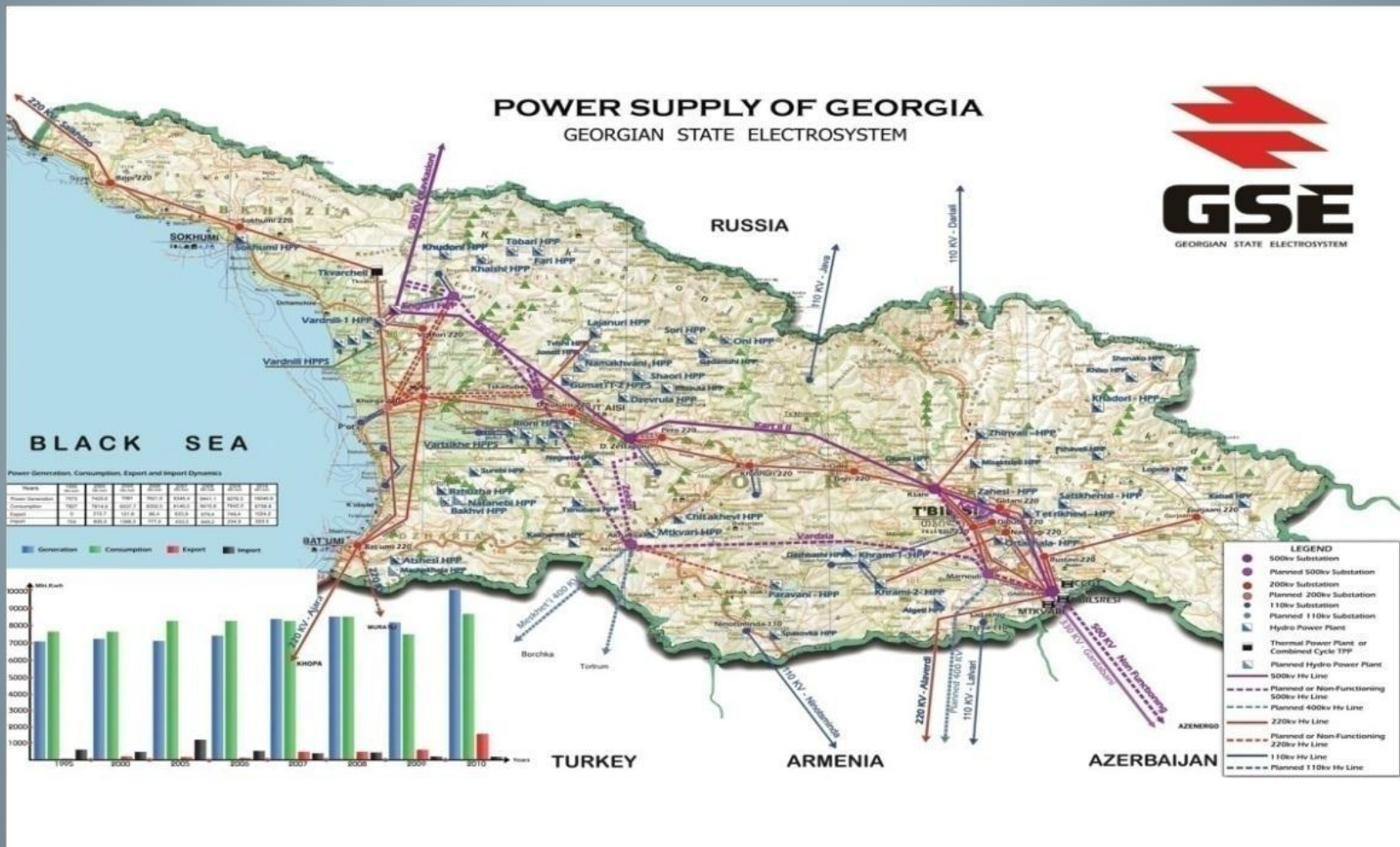
- Generation: state share –39%; Energo-Pro Georgia – 17%; Inter-Rao –15% ; Other – 29%
- Transmission: GSE – 100% state-owned; SakRusEnergo – 50% state-owned, 50% – Inter-Rao; EnergoTrans 100% state-owned (GSE);
- Dispatch: GSE – 100% state-owned
- Distribution: Energo-Pro –60% Telasi-Inter-RAO – 31%, Kakheti Energy Distribution – 9%
- Consumption: Direct consumers – 7 (18% of the total consumption); Retail consumers – 1,437,000 (82% of the total consumption)

Existing and Planned Transmission Lines

- Armenia 835 MW
- Azerbaijan 1150 MW
- Russia 1155 MW
- Turkey 2000 MW

- New high voltage 500/400 KV line connecting to Turkey is finished.
- MoU for additional 154 KV line connecting to Turkey is signed.
- Georgian Power Grid is connected to the grids of all of neighboring countries.

Georgia is Well Interconnected with Neighboring Countries



68 HPP on-going Projects

Total installed capacity of 2, 500 MW and annual generation up to 8 TWH

Projected investment 3 bln. USD .

Construction works to be finished in 2014-2020

Major Projects under construction with DFI coming from Turkish companies and targeting the Turkish market:

- Paravani HHP – 85 MW – Georgian Urban Energy – expected to be completed in Summer 2015
- Nabeglavi HHP – 1,9 MW Alliance Energy - almost completed
- Kirnati HHP– 36,5 MW- Achar Energy 2007- - to be completed in 2017
- Khelvachauri HHP -47,48MW-to be completed in 2017
- Arakali HPP – Optimum Energy 8.9MW –to be completed in Summer 2015
- Abouli HHP – 22, 2 MW- to be completed in summer 2017
- ☐ 23 May 2014 Memo was signed between The Ministry of Energy of Georgia and Enego Windpower – a Turkish company on conducting the study of the wind power data within the territory having the potential of about 1400 MW

Total -201, 98 MW

But

But Main Obstacles for CB Trade

- Insufficient legal and regulatory framework in Georgia for a competitive electricity market
- Low capacity in electricity sector institutions to plan and implement a competitive electricity market
- Lack of tools to operate a competitive electricity market

NEED FOR A FRAMEWORK FOR CB ELECTRICITY TRADING

- Lending institutions require specificity on the legal, regulatory and contractual frameworks.
- Laws and regulation must be clear on rights and responsibilities of parties during the operation of the new HPPs.
- Contracts for energy and services must specify the rights and liabilities of all parties.
- Parties assuming liabilities must be creditworthy and capable of operating the cross border markets.

GEMM 2015 – USAID Supported

In 2012 Georgian Ministry of Energy signed a Memo with USAID on GEMM – Georgian Electricity Market Model

Main Goals:

- Support developers in receiving financing of new run-of-river HPP projects through non-recourse (project-based) loans
- Facilitate cross-border, competitive clean energy trading

Main Tasks of GEMM 2015 and Electricity Trading model Implementation Are:

- Design and planning of the Electricity Trading Mechanism
- Human and Institutional Capacity Building
- Development of Primary and Secondary Legislation
- Development of Electricity Market Regulations, licensing, tariffs, and guarantee of origin
- Contractual framework development (domestic and cross border) and cross-border harmonization of legislation and regulations with Turkey

Amendments to Market Rules for Improving CB Trade

- Regulating power trade by the new transmission facilities;
- Rules for calculation and allocation of cross-border transmission capacities;
- On the auctions for cross-border transmission capacities.

Changes in the Market Rules for Improving CB Trade (1)

Priorities on the Export on the new Transmission line (related to cross-border transfer/transit) are the following:

- Export/Import in during emergency mode;
- Power Stations working on RE built after 2010 (including Hydro);
- Electricity of other power stations or imported electricity in Georgia (Transit, Re export);

Changes in the Market Rules for Improving CB Trade (2)

- Satisfaction of next priority group in the list begins only after complete satisfaction of the previous priority group;
- In that case, if the available capacity is not enough to meet the requests of the certain Priority Group, insufficient capacity should be allocated through the special auction;
- If any capacity user is unable to provide full utilization of capacity allotted to it, the dispatch licensee makes re allocation with the special auction keeping with the order of priorities;

Changes in the Market Rules (3)

- Rules of the special auction and re allocation of transmission capacity on the new transmission line, is approved by the dispatch licensee after agreeing with the Ministry of Energy, and is published on a Web page for general accessibility;
- Price ensuring the volume of the allocated or re allocated transmission capacity is an additional source of income for the transmission licensee (owner of the line);
- Described above rules and priorities can later be extended to the "old" lines and related cross-border flows.

KEY ACCOMPLISHMENTS

- The Electricity and Gas Law was amended in December 2013 providing for daily planning, increased responsibility for GNERC and other aspects of GEMM 2015
- Initial parts of the Uniform System of Accounts will be adopted by GNERC in Summer 2014 and full implementation is expected by January 1, 2015
- Day Ahead Planning by the market participants has commenced and software models are developed
- GNERC has been re-organized to better manage the electricity sector
- The Transmission Grid Code is in final draft and is expected to be adopted by Summer 2014

GEMM 2015 IS CONSISTENT WITH EU REQUIREMENTS

- GEMM 2015 facilitates Third Party Access to infrastructure and supports market competition;
- GEMM 2015 strengthens independent regulatory authority;
- GEMM 2015 implements independent MO and TSO
- GEMM 2015 “fills” the gap between existing Georgian electricity market regulations and EU directives
- GEMM 2015 is fully consistent with the EU Second Energy Package

Next Steps

- Hourly Balancing and Settlements
- Price Zone on the Turkish PX
- Day Ahead Market for Georgia
- Cost and Incentive-based network tariffs
- Further Transparent and predictable market for Non-Recourse (project financing) financing and an electricity corridor through Georgia

Legal Framework Regulating CB Trade Between Georgia and Turkey

- Agreement between Georgia and Turkey Concerning Cross-Border Electricity Trade Via Akhaltsikhe-Borcka Interconnection signed on 20 January 2012
- Interconnection Operation Agreement between Turkish Electricity Transmission (Teiasgj) and Georgian State Electrosystem and Energotrans LTD Relating to Asynchronous Operation of 400 KW Bortcka- Akaltsikhe Interconnection line signed on 18 September 2013

• But decision on identifying the power delivery point in Turkey as well as the Price Zone on the Turkish PX is to be agreed upon;
Obviously, power producers in Georgia apart from having long term supply agreements would prefer to have an access to wholesales and spot market in Turkey;

Amendments to the Law Regulating transit (1)

- The agreement on technical provision of the power transit shall be made with dispatch licensee.
- No regulation fees are charged for power transit.
- The respective tariffs set by the Commission for transmission and dispatch services shall not be applied in case of power transit;

Regulating transit (2)

- The losses of the power incurred during the technical provisioning of the transit can be compensated by the supply of respective amount of power (compensating power);
- •The dispatch and transmission licensees shall enter into the separate agreement, which shall stipulate the amount of compensation for the use of transmission licensee's networks.
- •If there is no such agreement in place between the dispatch and transmission licensee, the compensation amounts shall be defined and reimbursed in accordance with the market rules.

Regulating transit (3)

- In case the transmission licensee refuses to enter into agreement on transit of the power, it is obliged to bear the usage of it's network and provide the transmission services;
- •The issues related to the power transit are also regulated by the rules of power (capacity) market and by the agreement on technical provisioning of power transit;
- •The participants of transit process are obliged to submit information to the market operator;