



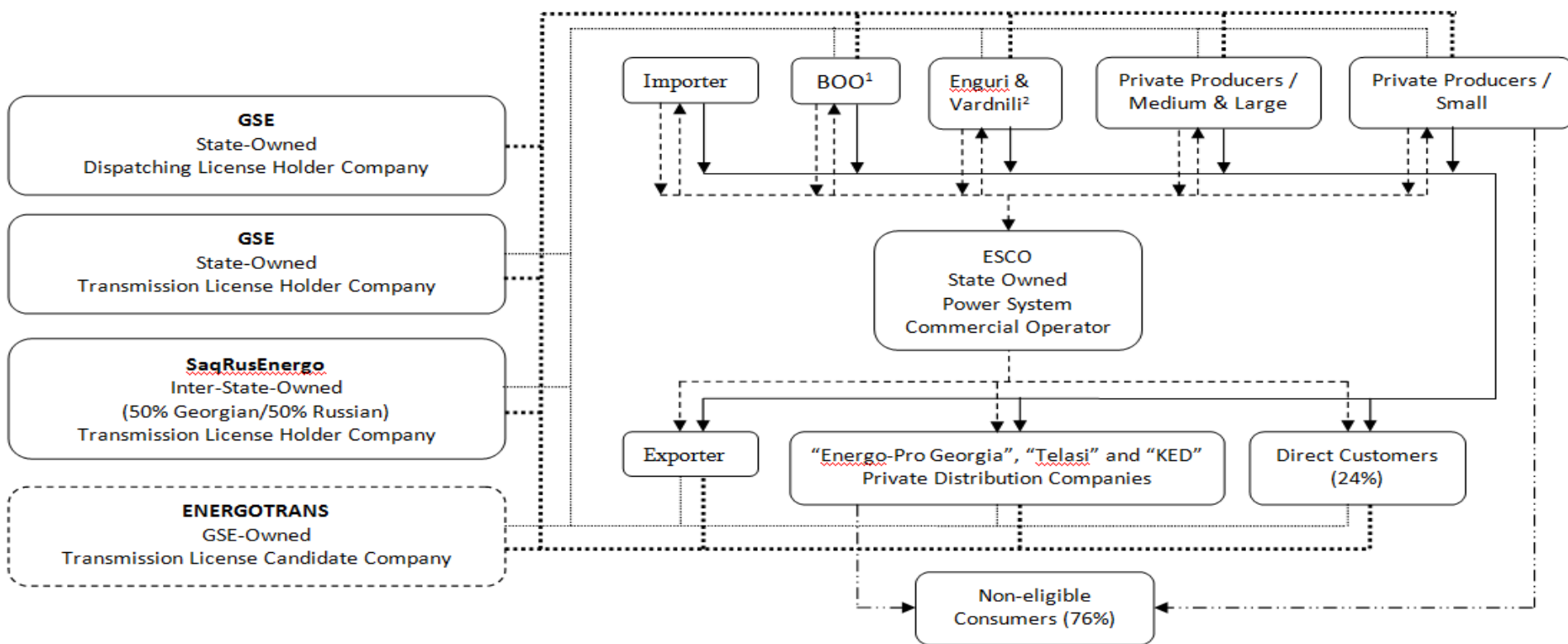
GEORGIAN STATE ELECTROSYSTEM GSE

CROSS-BORDER ELECTRICITY FEES, REGULATIONS, CONTRACTS & PRACTICES, FLOWS & INFRASTRUCTURE

www.gse.com.ge

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Georgian Utilities Sector / Electricity Market Structure



Payable Fees and Taxes for Cross-Border Electricity Flows

Payables by Exporters:

- ❖ 1) Fee for Dispatch Services 0.09 US Cents per KWh to GSE
- ❖ 2) Fee for Transmission Services 0.30 US Cents per KWh to GSE for 220/110/35 KV
- ❖ 0.67 US Cents per KWh to GSE for 10/6 KV
- ❖ 0.11 US Cents per KWh to SAQRUSENERGO for All KV
- ❖ – US Cents per KWh to ENERGOTRANS (To be calculated and approved by Regulatory Commission)
- ❖ 3) Warranted Capacity Fee 0.36 US Cents per KWh to ESCO
- ❖ 4) State Tax 0% VAT for Exported Electricity

Payables by Importers:

- ❖ 5) State Tax 18 % VAT for Imported Electricity
- ❖ 6) Fixed Customs Clearance Fees Depending on the Money Value of the Electricity Imported for
Range levels: A. For 0-1800 USD Range, Fee = 90 USD; B. For 1800-9000 USD, Fee = 180 USD;
C. For 9000 USD and Higher, Fee = 240 USD.

Common Payables:

- ❖ 7) ESCO Service Fee 0.01 US Cents per KWh to ESCO
- ❖ 8) Regulating Fee 0.5% of Total Annual Income to Regulatory Commission

Not Available / Payable Cross-Border Fees in Georgia

- ❖ **Export/Import Licensing Fees;**
- ❖ **Capacity Allocation Fees;**
- ❖ **Auction Payments;**
- ❖ **Inter-TSO Compensation.**

*In Case of Transit of Electricity via Georgia, System Technical Operator compensates Energy Losses in National Electricity Grid and only for this purposes may purchase Electricity.

Cross-Border Regulations, Contracts and Practices (1/4)

- ❖ Georgian Law on Electricity and Natural Gas of 1997;
- ❖ The Order of Georgian Ministry of Energy and Natural Resources on Electricity (Capacity) Market Rules” of 2006.

Cross-Border Regulations, Contracts and Practices (2/4)

Legislation Regulates the Following Areas of Cross-Border Trading:

- ❖ Bilateral Commercial Contracts as a basis for cross-border trade
- ❖ Simple principles of Cross-Border Capacity Allocation
- ❖ Monthly and Daily inter-TSO planning of cross-border flows
- ❖ 2 Days Ahead corrections of planned cross-border flows
- ❖ Monthly metering of cross-border flows
- ❖ Procedures allocating total metered cross-border flow by each importer/exporter for financial settlement purposes
- ❖ Responsibilities of TSO for non-contract based cross-border flows

Legislation Do Not Regulates:

- ❖ Un-planned cross-border flows during cross-border synchronizations and emergency situations
- ❖ Allocation Rules of cross-border flows
- ❖ Hourly Cross-Border trading
- ❖ Auction Rules for Cross-Border Congestion Management

Cross-Border Regulations, Contracts and Practices (3/4)

1. Construction Agreement (Only in case of new cross-border power transmission line)

Formed between Parties: GSE (Georgian Party) & Technical Operator of Electricity Sector of Neighboring Country / As a third Party other Electricity Sector Participant is also allowed as the Relevant Transmission Licensee and/or Private Investor

2. Interconnection Agreement / Parallel Operations Agreement:

Formed between Parties: GSE (Georgian Party) and Technical Operator of Electricity Sector of Neighboring Country (Is agreed with ESCO, also could be agreed with the relevant Transmission Licensee)

3. Agreements on Organization of Electricity Metering:

Formed between Parties: GSE (Georgian Party) and Technical Operator of Electricity Sector of Neighboring Country (Is agreed with ESCO, also could be agreed with the relevant Transmission Licensee). Regulated directions under such Agreements are as follows:

- ❖ Methodic of Metering Factual Cross-Border Electricity Flows
- ❖ Metering Data Exchange Regulations
- ❖ Inspection/Test Procedures of Cross-Border Metering Points

Cross-Border Regulations, Contracts and Practices (4/4)

4. International / Inter-Governmental Cross-Border Trading Agreements:

Formed between Parties: Government of Georgia and Government of Neighboring Country;

In case when such Agreement is not formed then:

Such Agreement Could be Formed between: System Commercial Operators of Georgia and Neighboring Country.

5. Bilateral Commercial Contracts

Formed between Parties: Commercial Entities of Neighboring Countries, Including ESCO.

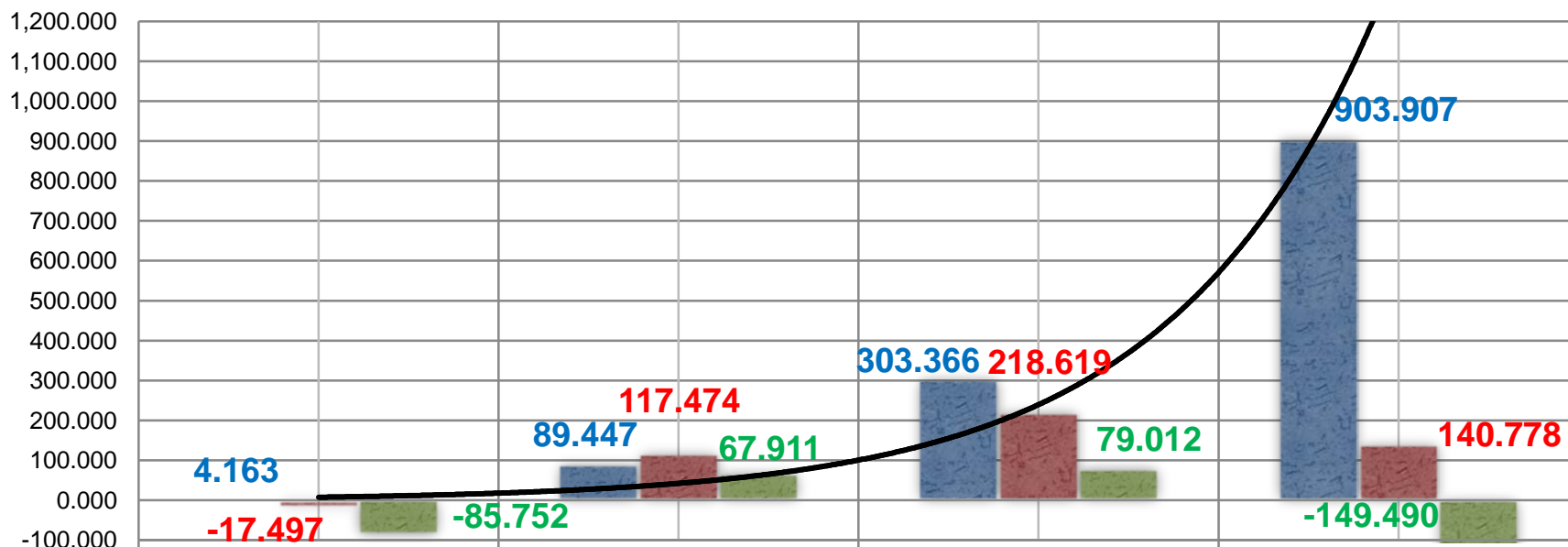
Actual Cross-Border Electricity Flows 2010, 2011 & 2012

Export	To Azerbaijan	To Armenia	To Turkey	To Russia
YEAR	mln KWh	mln KWh	mln KWh	mln KWh
2010	14.344	89.447	303.366	1,117.123
2011	5.923	117.474	218.622	588.576
2012	11.790	67.911	79.012	369.438

Import	From Azerbaijan	From Armenia	From Turkey	From Russia
YEAR	mln KWh	mln KWh	mln KWh	mln KWh
2010	10.181	0.000	0.000	213.217
2011	23.420	0.000	0.003	447.797
2012	97.541	0.000	0.001	518.928

Net Export Trend 2010-2012

Million KWh



	Azerbaijan	Armenia	Turkey	Russia
2010	4.163	89.447	303.366	903.907
2011	-17.497	117.474	218.619	140.778
2012	-85.752	67.911	79.012	-149.490

Georgian Cross-Border Interconnections by Type

1) Parallel Synchronous - used for:

- ❖ Russia/Georgia;
- ❖ Azerbaijan/Georgia;
- ❖ Armenia/Georgia (only on 220 KV Line “Alaverdi”, for limited periods of time, for minor cross-border flows);

2) Parallel Asynchronous - used for:

- ❖ Turkey / Georgia – Only for 400 KV Line “Meskheta”;

3) Island (Isolated) - used for:

- ❖ Armenia/Georgia – Mostly;
- ❖ Turkey/Georgia – Only on 220 KV Line “Achara”;
- ❖ Russia/Georgia – Only for 220 KV Line “Salkhino”.

Cross-Border Infrastructure - Existing

with Russia: 500, 220 & 110 KV – 1010 MW

1. „Kavkasioni“ 500 KV - 850 MW
2. „Salkhino“ 220 KV - 100 MW
3. „Dariali“* 110 KV - 30 MW * To be Put in Operations in 2013-2014
4. „Java“** 110 KV - 30 MW ** Power Transmission Line is utilized for Import of energy for the occupied territory of Georgia

with Azerbaijan: 500, 330 KV – 1100 MW

5. “Mukhranis Veli” 500 KV – 850 MW* – To be Put in Operations in 2013
6. „Gardabani“ 330 KV - 250 MW

with Armenia 220 & 110 KV – 230 MW

7. “Alaverdi” 220 KV - 180 MW* - Planned to Increase Capacity up to 250 MW by using HVDC B2B Station
8. „Lalvari“ 110 KV - 30 MW* - To be Put into Operations
9. „Ninotsminda” 110 KV - 20 MW* - To be Put into Operations

with Turkey: 400, 220 KV – 820 MW

10. “Meskheti” 400 KV – 700 MW* - To be Put in Operations in 2013
11. „Achara“ 220 KV - 120 MW* - Will stay in Reserve

once 400 KV “Meskheti” Line in Operational in 2013

On-Going Cross-Border Projects:

1. To Turkish Direction - 2013:

Finalization of Construction of New Cross-Border Power Transmission Line:

“Meskheti”- 400 KV / 350MW(2012)+350MW(2013)= 700MW

With two HVDC “B2B” Units;

2. To Azerbaijan Direction - 2013:

Finalization of Construction of New Cross-border Power Transmission Line „Mukhranis Veli“ - 500 KV / 850 MW

3. To Armenia Direction - 2013:

Implementation of preparation works for putting into commercial operation of two old Cross-Border Power Transmission Lines (Only in Island Mode):

“Lalvar“ – 110 KV: 30 MW

„Ninotsminda“ – 110 KV: 20 MW

Perspective Cross-Border Projects (1/3):

1. To Turkey direction:

Construction of New Cross-Border PT Line & New 220/110 KV SS:

“Batumi-Muratli” - 154 KV: 350 MW

With One HVDC “B2B” Unit

Turkey

Georgia

Inter-State Border

Existing

154 KV

SS “Muratli”

New

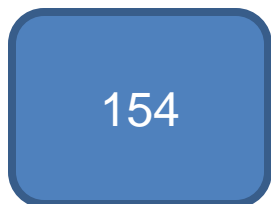
220/154 KV SS “New Batumi”

New B2B Unit

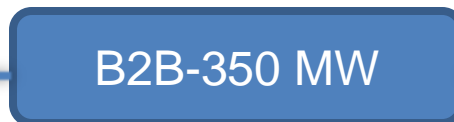
Existing

220/110KV

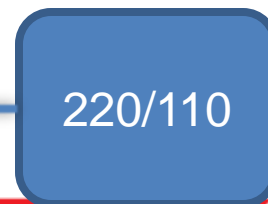
SS “Batumi”



154KV



220 KV



Perspective Cross-Border Projects (2/3):

2. To Turkey Direction:

Construction of New Cross-Border Power Transmission line:

With No. 3-rd “B2B” Unit

“Akhatsikhe-Tortum” - 400 KV / 700MW+350MW=1050 MW

Turkey

Inter-State Border

Georgia

400/154 KV

500/400/220 KV

SS “Borcka”

SS “Akhatsikhe”

400/154

B2B-1-350 MW

B2B-2-350 MW

400 KV SS “Tortum”

400

+ B2B-3-350 MW

Perspective Cross-Border Projects (3/3):

3. To Armenia Direction = 1050 MW*:

* - Includes Existing Cross-Border PT Line: “Alaverdi”

Construction of New Cross-Border Power Transmission Line:

Marneuli - Alaverdi - Hrazdan- 500/400 KV

With three new HVDC B2B Units in Territory of Armenia OR Some Other Technical Decisions

Armenia

Upgraded

400/220 KV

SS “HRAZDAN”

400KV

400/220

New

500/400/220 KV

SS “ALAVERDI”

B2B-1-350 MW

B2B-2-350 MW

B2B-3-350 MW

Inter-State Border

Georgia

Upgraded

500/220 KV

SS “MARNEULI”

500/220

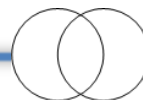
Existing

SS “GARDABANI”

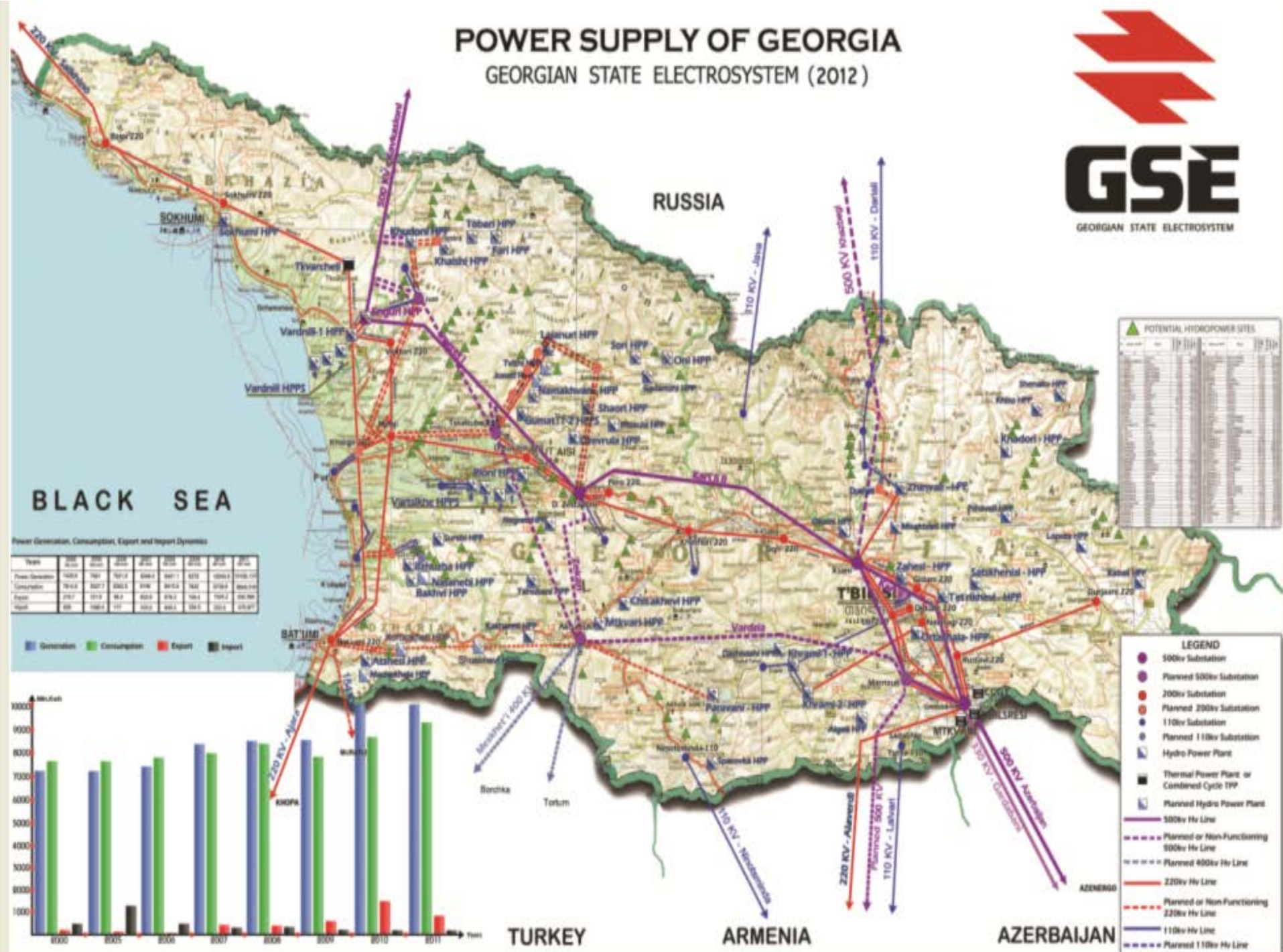
500/330/220/110

500 KV

500/220KV



GEORGIAN STATE ELECTROSYSTEM (2012)



Thank You For Your Attention!!!