

# GEORGIA ENERGY PROJECTS



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# Content

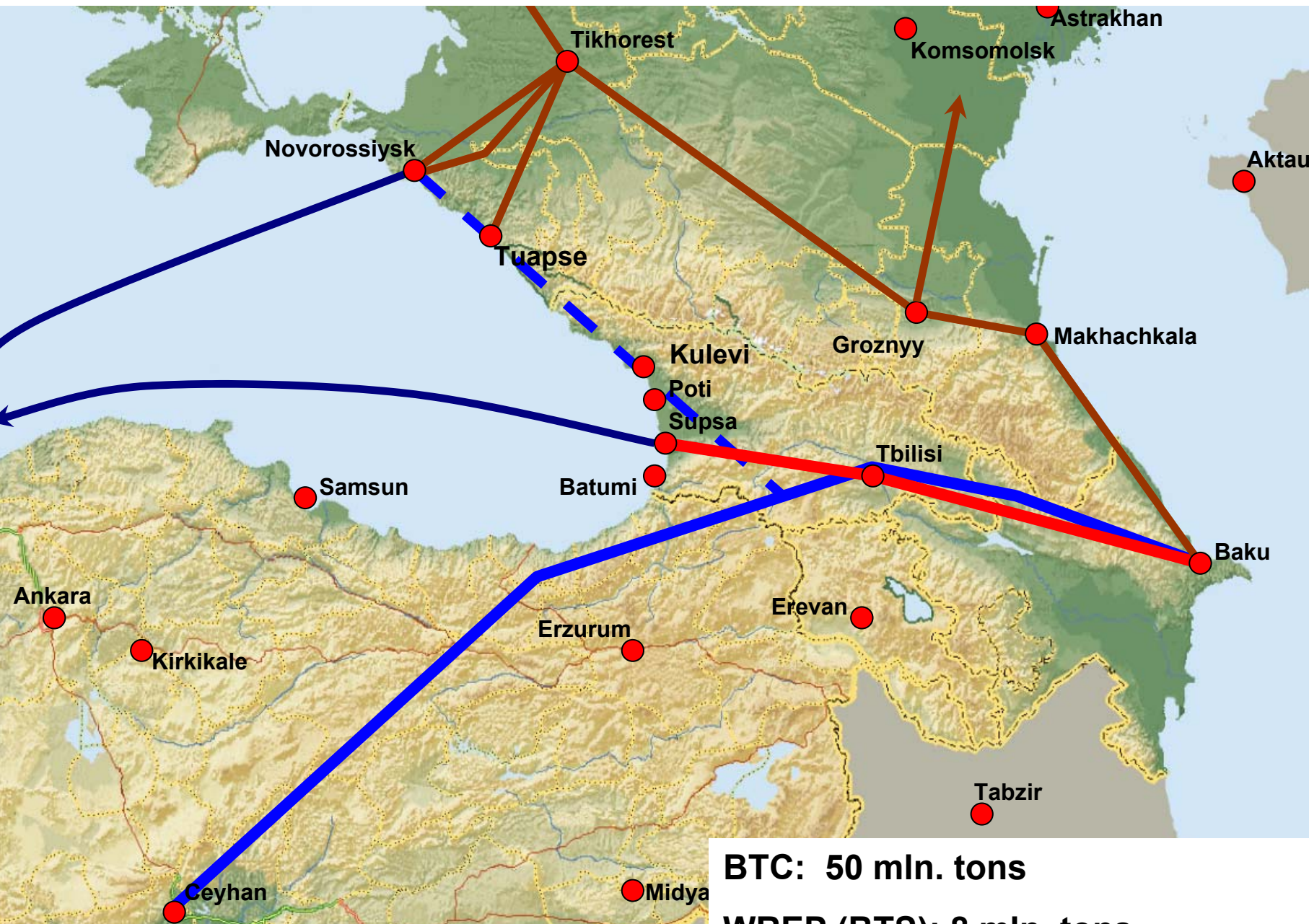
- **Directions of State Energy Policy**
- **Present Situation in Energy**
  - ✓ **Oil Transit**
  - ✓ **Gas Transit and Supply**
  - ✓ **Power Energy**
- **Perspective projects in Hydro & Thermal Power Generation and transmission infrastructure**
- **Conclusion**

# MAIN DIRECTIONS OF STATE ENERGY POLICY

- DIVERSIFICATION of ENERGY CARRIERS (HYDRO AND THERMAL ENERGY)
- DEVELOPMENT OF LOCAL ENERGY SOURCES INCLUDING REHABILITATION AND CONSTRUCTION OF HYDRO AND COAL FIRED POWER PLANTS
- STRENGTHENING REGIONAL COOPERATION AND INCREASING EXPORT POTENTIAL THROUGH RELIABLE TRANSMISSION INFRASTRUCTURE
- RENEWABLE ENERGY DEVELOPMENT



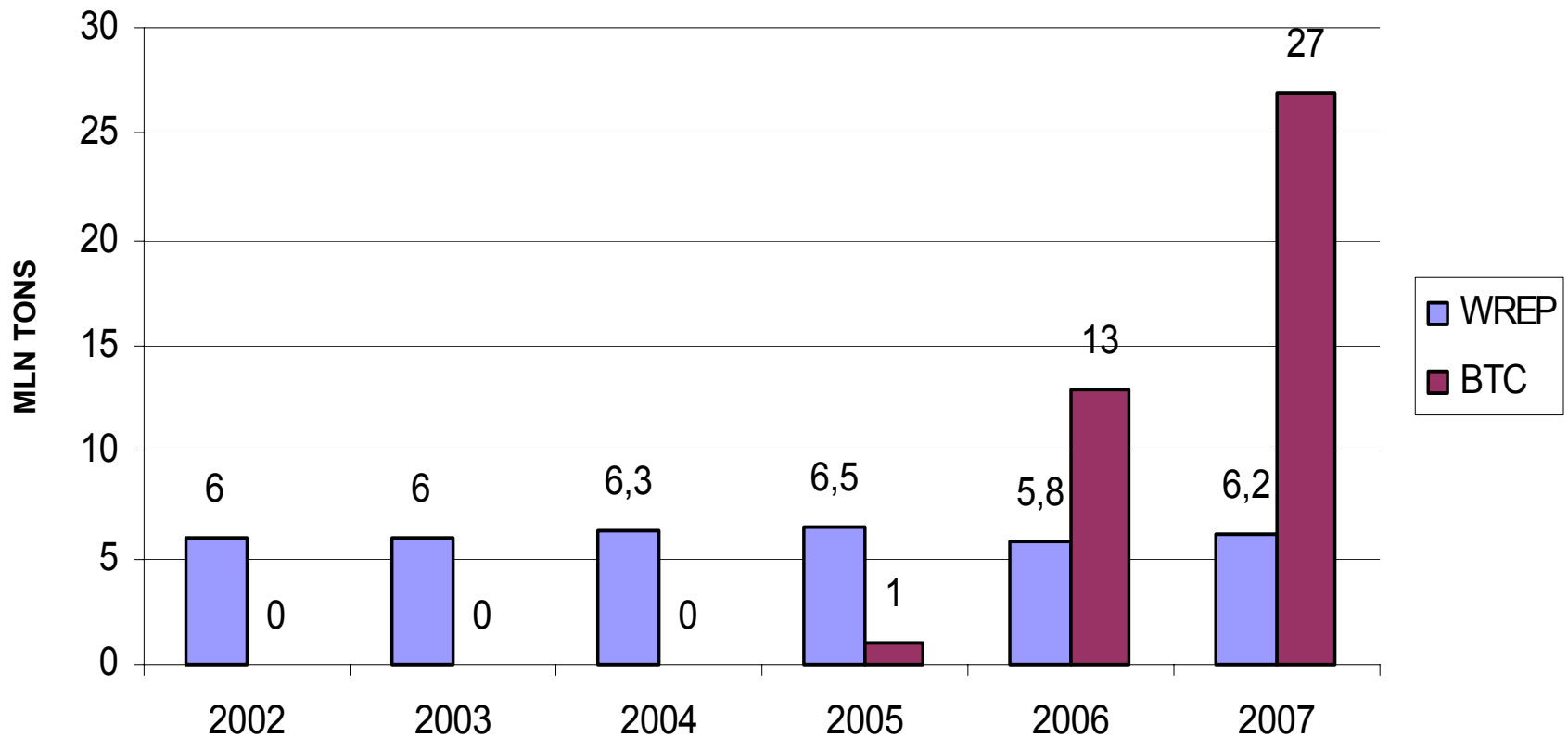
# OIL PIPELINE NETWORK



# Oil Transit

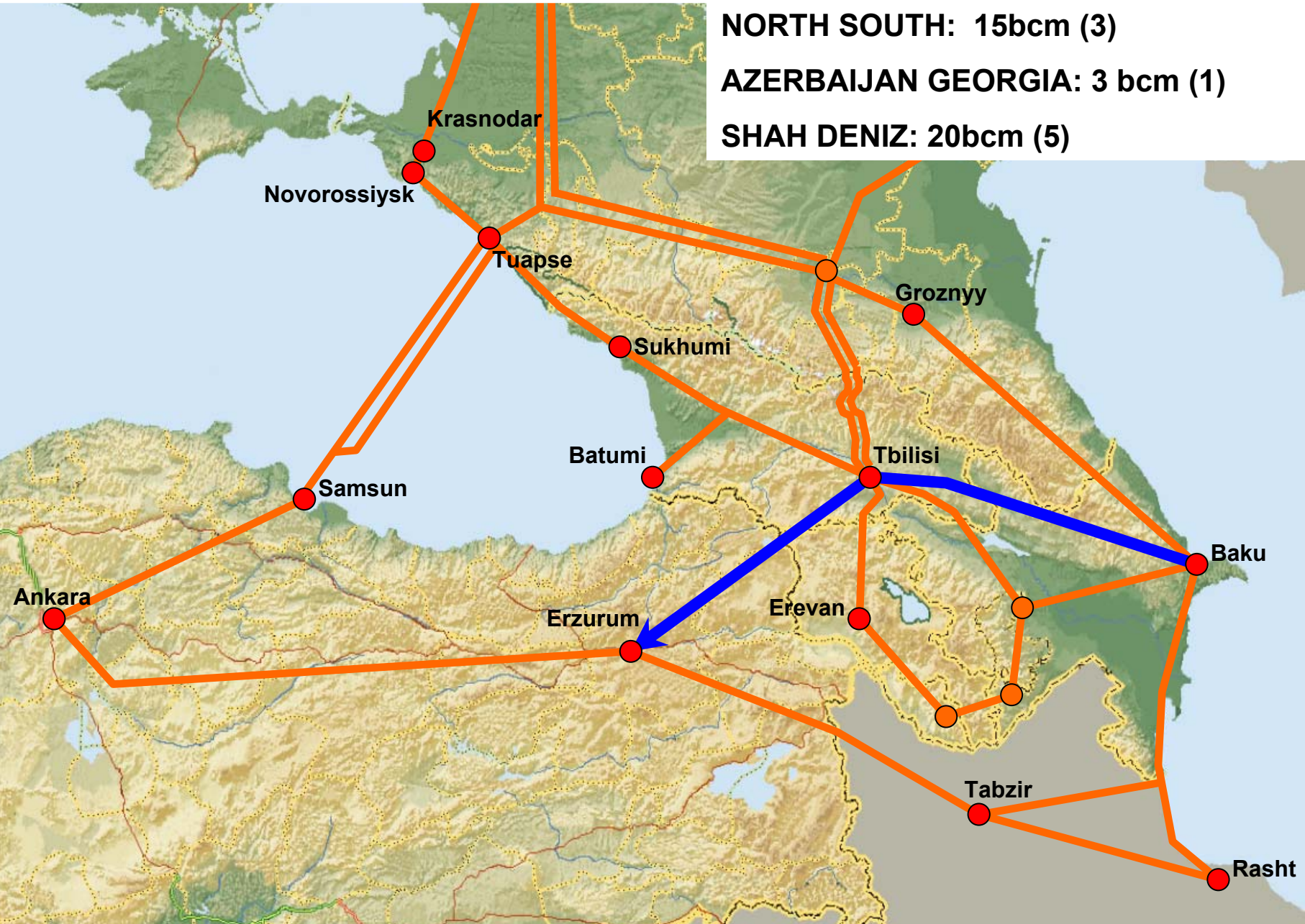
**BTC- Baku-Tbilisi-Ceyhan - 55% utilized, next year 100% forecasted**

**WREP-Western Rout Export Pipeline (Baku-Tbilisi-Supsa) - 80% utilized**





# Gas Pipeline Network of the Region

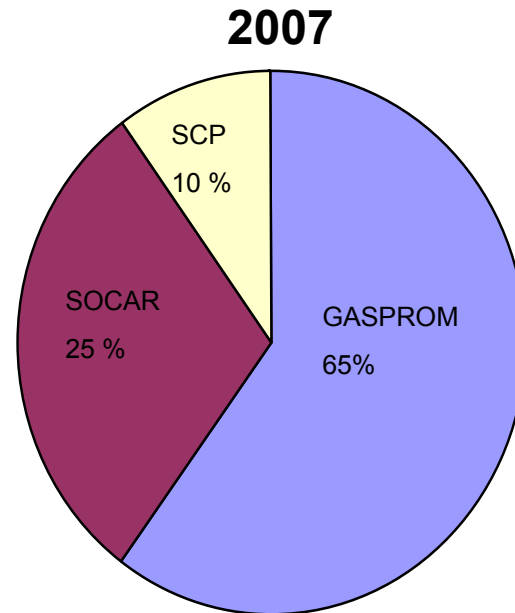
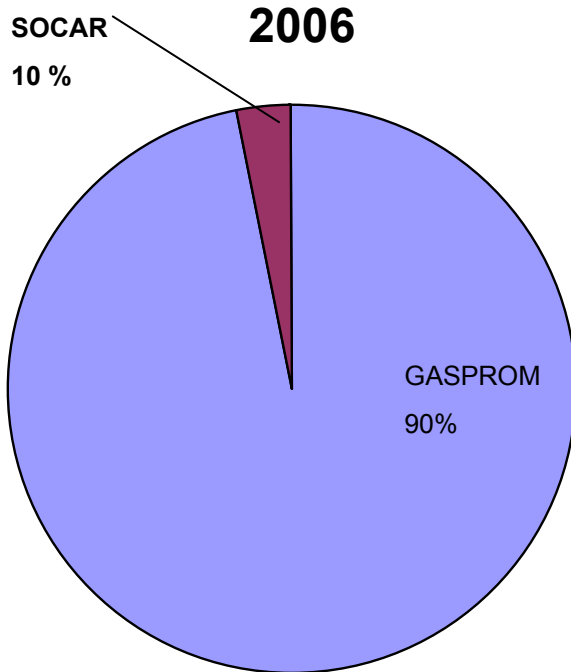
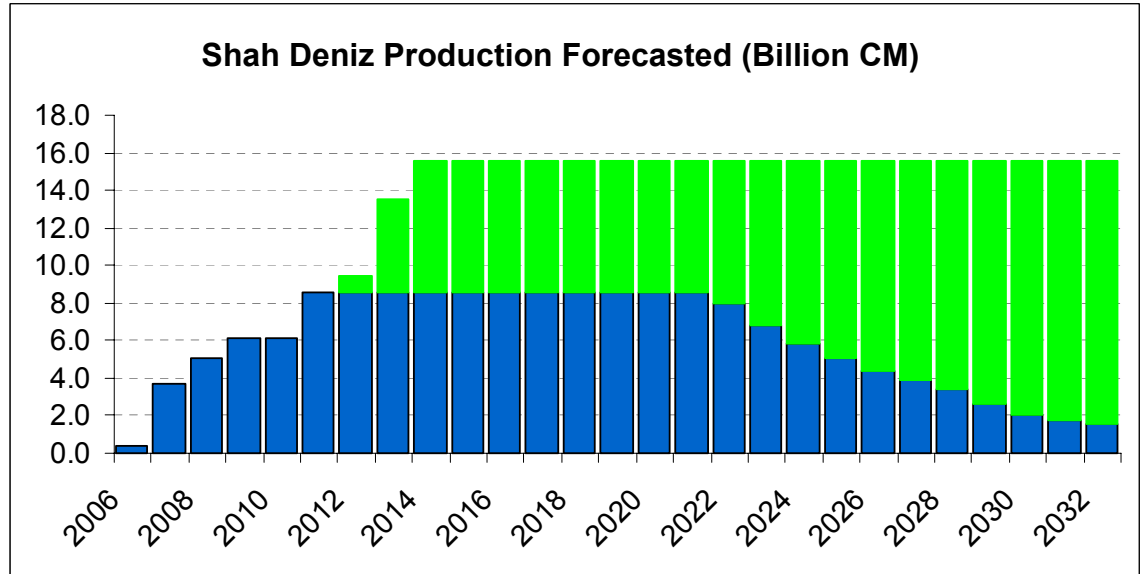


# Gas Demand and Suppliers

## Consumption

2006 – 1,8 billion cm

2007- 1,9 billion cm



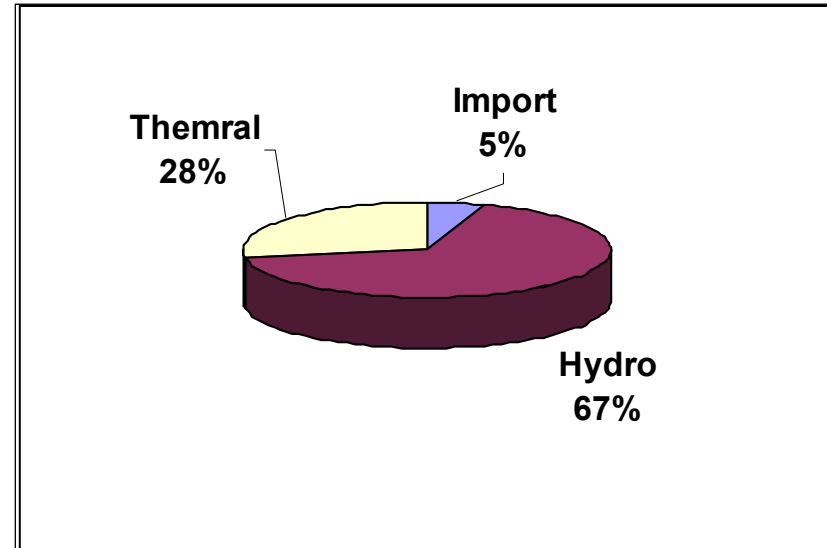
# Georgia's Energy Balance

2006

- Hydro Energy 5,4 billion kWh
  - Thermal Energy 2,2 billion kWh
  - Export 0,1 billion kWh
  - Import 0,5 billion kWh
  - Consumption 8 billion kWh

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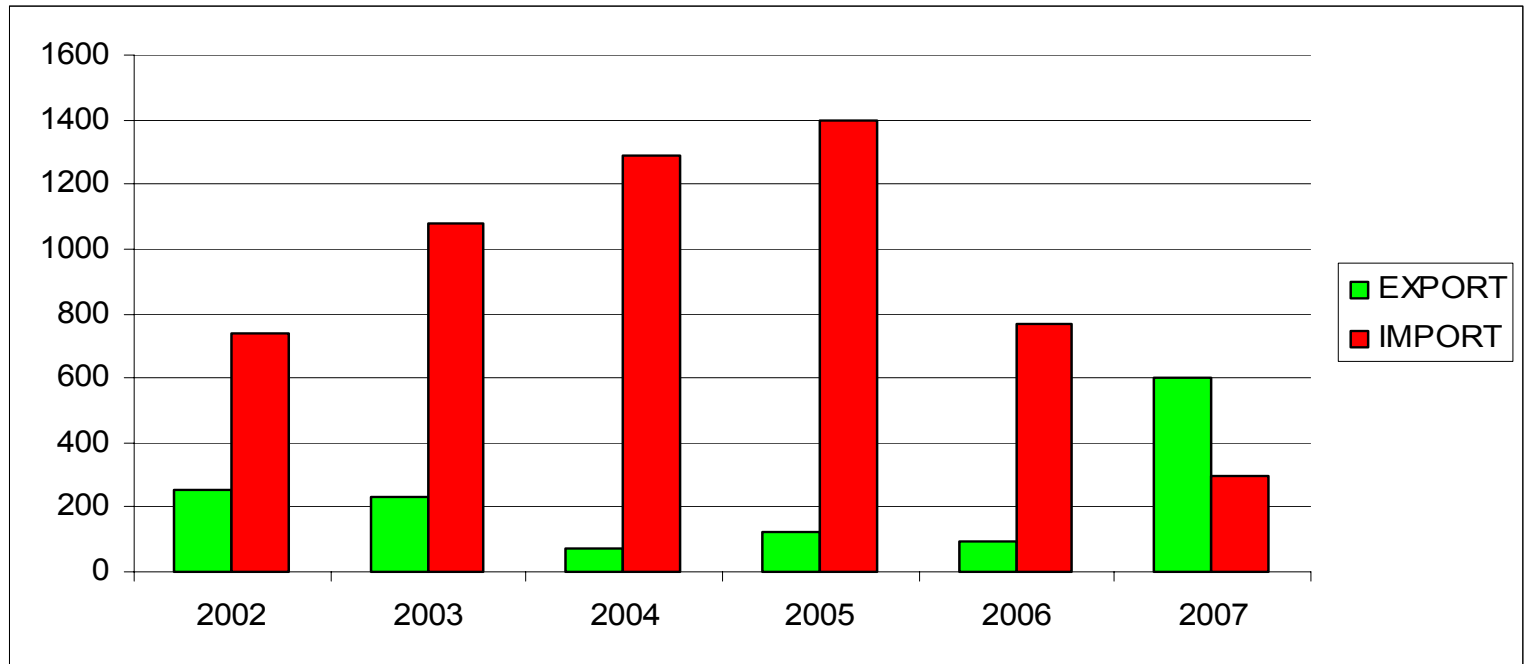
  - Net Import 0,4 billion kWh
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- Import – Russia, Turkey, Azerbaijan, Armenia
  - Export – Russia, Turkey, Azerbaijan





# Export-Import Dynamics

(1000kWh)



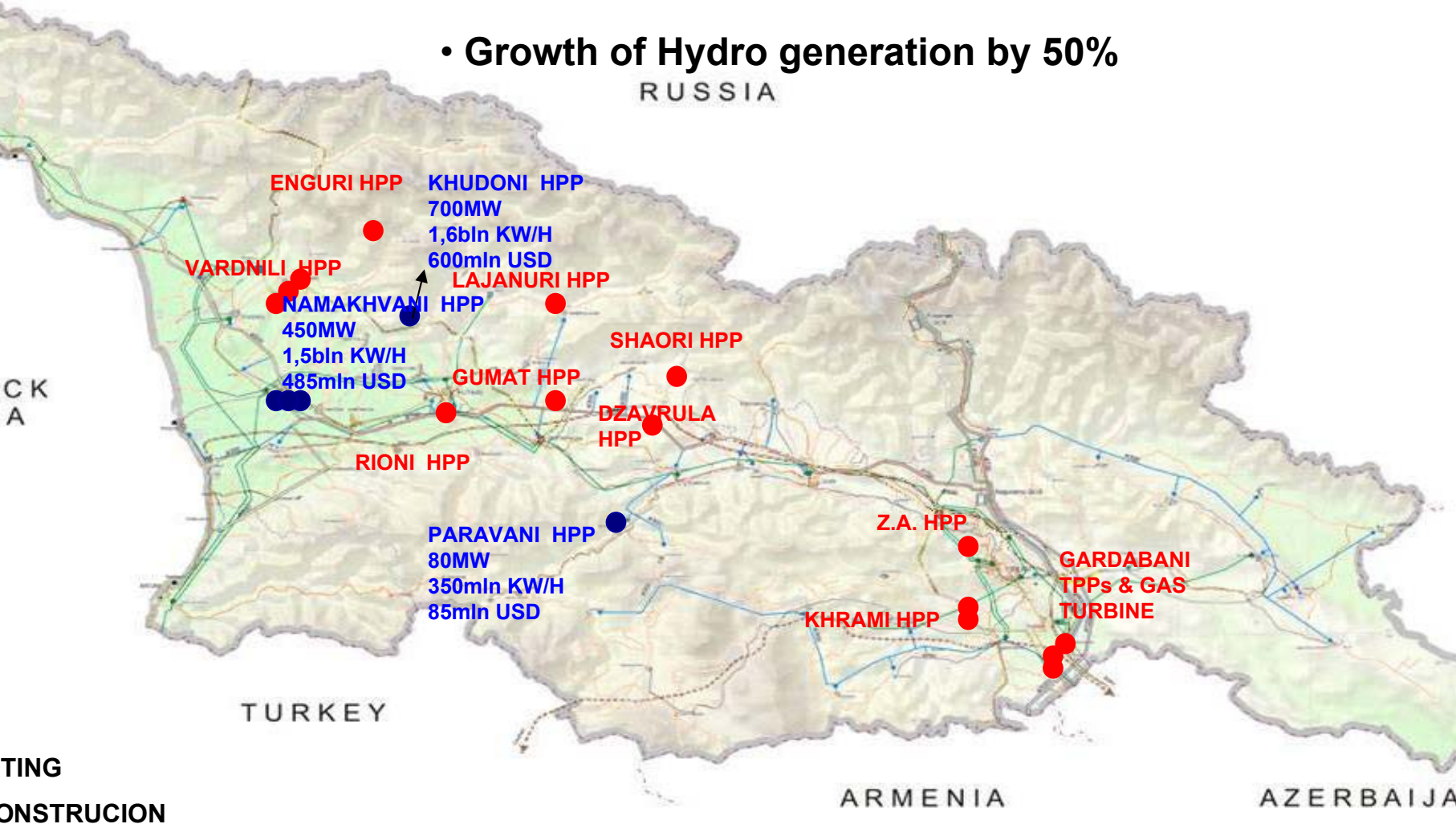
State Budget allocated to support and rehabilitate the energy sector in 2004-2006 more than 270 mln. USDs which added 335MW additional capacity (Including 205MW hydro power)

# Existing Electricity Grid



# MAIN EXISTING HPPS AND PERSPECTIVE PROJECTS

- Additional Installed Capacity 1300MW until 2012
- Actual Generation 3.4 bln kWh
- Growth of Hydro generation by 50%



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# MAP OF NEW SMALL & MEDIUM HPPs

30 New Small HPPs

Additional Installed Capacity 300 MW

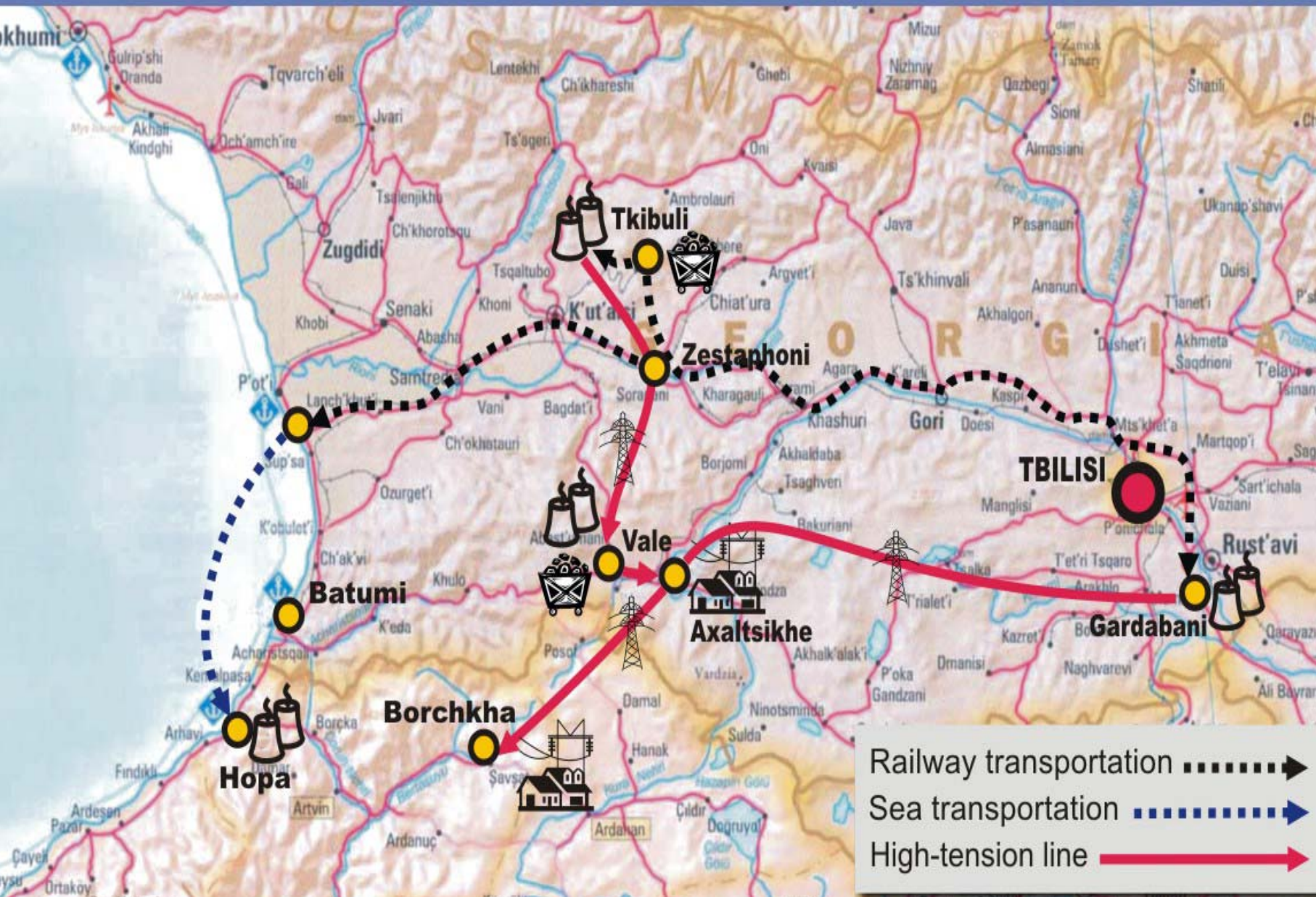
Including GIEC's Small HPP Projects:

- Construction of 7 small HPPs (30MW)
- Rehabilitation of existing HPPs (42MW)





# Coal Energy



# **Coal Energy & Power Transmission Lines**

**Coal Deposits Potential Reserves 405 mln. Tons  
(Tkibuli, Vale)**

**Coal Thermal plants construction period: 3-4 years**

**Total Capacity: 1200 MW, Total Generation 8,4 bln kWh**

**Tkibuli: 600MW, 4bln kWh**

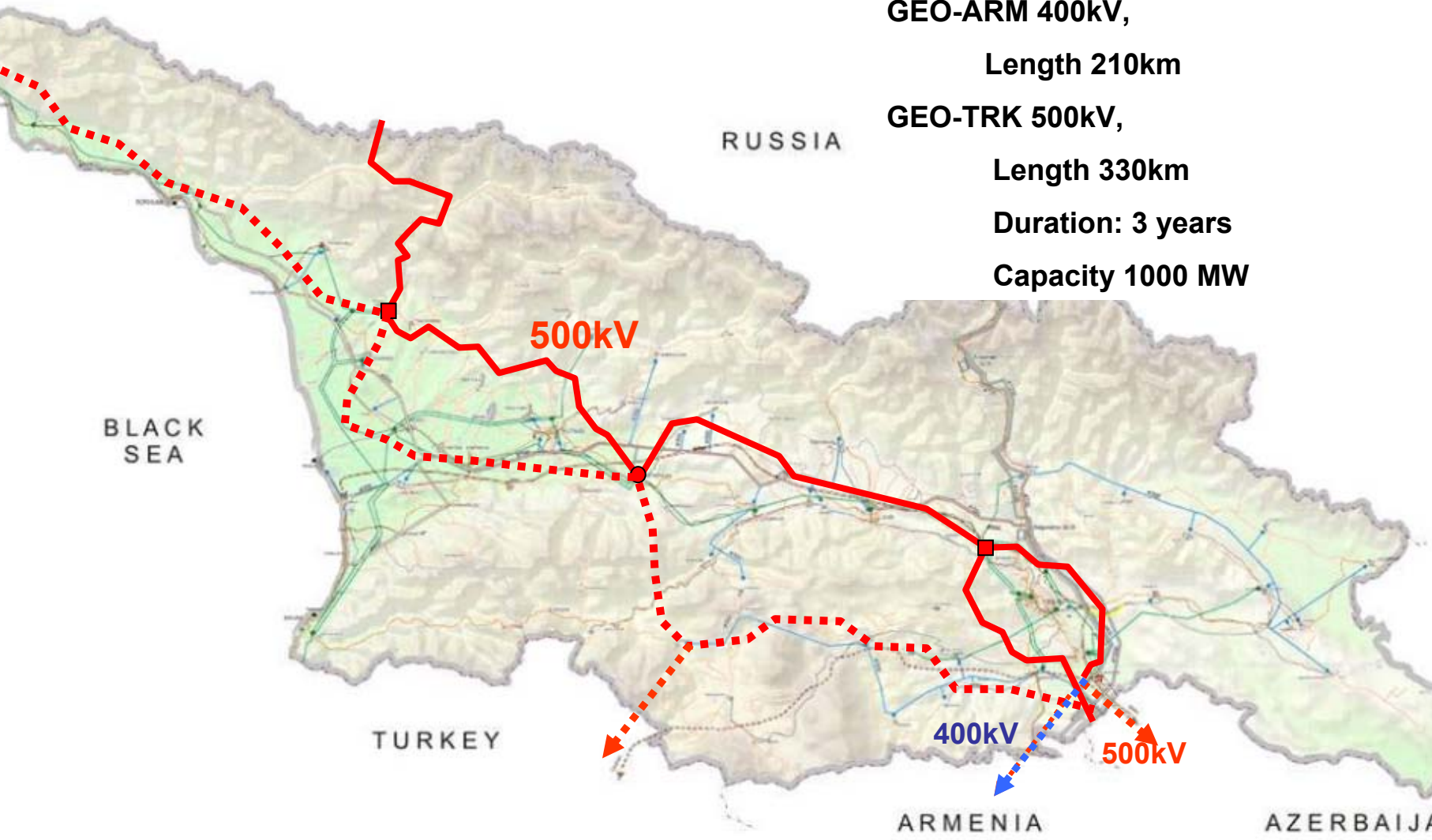
**Gardabani: 300MW, 2,2 bln. kWh**

**Vale: 300MW, 2,2 bln. kWh**

**Relevant transmission line infrastructure to access  
export markets**

# Grid System Development

- GEO – AZR 500kV,  
Length 20km
- GEO-ARM 400kV,  
Length 210km
- GEO-TRK 500kV,  
Length 330km  
Duration: 3 years  
Capacity 1000 MW





# FUTURE ENERGY BALANCE OF GEORGIA (2012)

Hydro Energy 7bln kWh

Thermal 10 bln kWh

Consumption: 12 bln kWh

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Net Export 5 bln kWh

