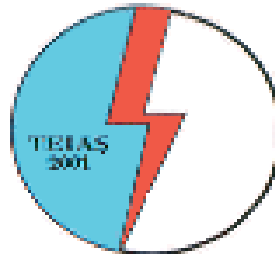




# RECENT DEVELOPMENTS IN TURKISH POWER SYSEM

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Turkish Electricity Transmission Corporation



BSTPP WG Meeting-Lviv(Ukraine),  
3-4 December 2008



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# Turkish Power System

BSTPP WG Meeting-Lviv(Ukraine),  
3-4 December 2008





# Generation & Demand (2007)

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- Installed Capacity                      41,00 GW
  - Hydro+Renewable                      32,67 %
  - Thermal                                      67,33 %
  
- Annual Consumption                      189 TWh
  - 8,9 % increase
  
- Peak Demand                              29,25 GW



# Transmission System (2007)

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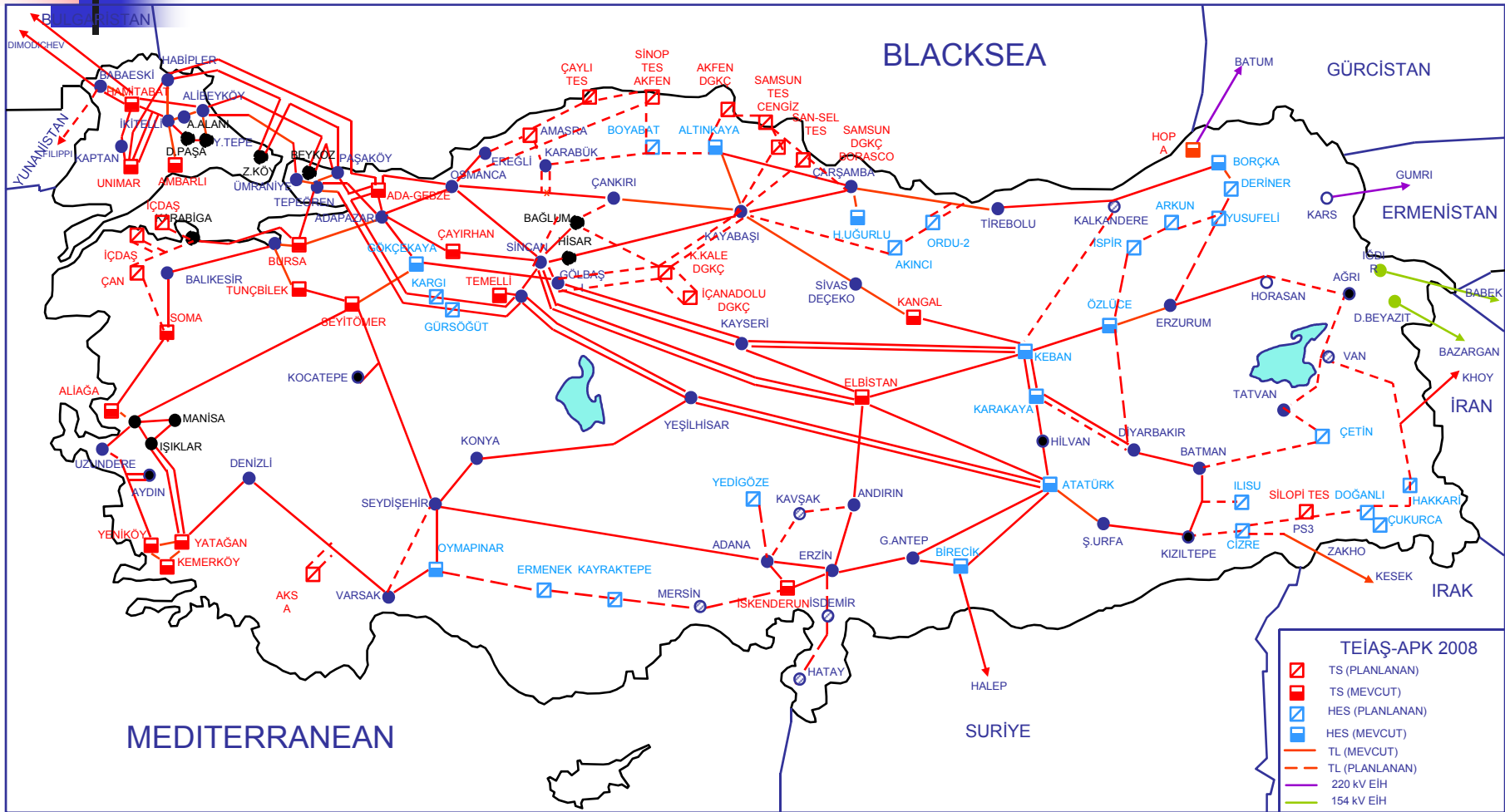
- Transmission Voltages 400, 154 & 66 kV
- Transmission Lines 46.000 km.
- Substations 535 substations
- Total transformer capacity 82.000 MVA



## Load Forecast (2008-2010)

Year	Peak Demand	Consumption
	GW	TWh
2008	32	204
2009	35	221
2010	38	239

# 400 kV Network



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## New Generation Applications For

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- Hydro PP's 9.937 MW
- Thermal and NG PP's 8.826 MW
- Wind PP's 5379 MW
  - 3943 MW (approved by EMRA)
  - 7250 MW (can be connected to the system until 2013 )
- Nuclear PP's 4000- 5000 MW (for the period of 2015-2020 under consideration)



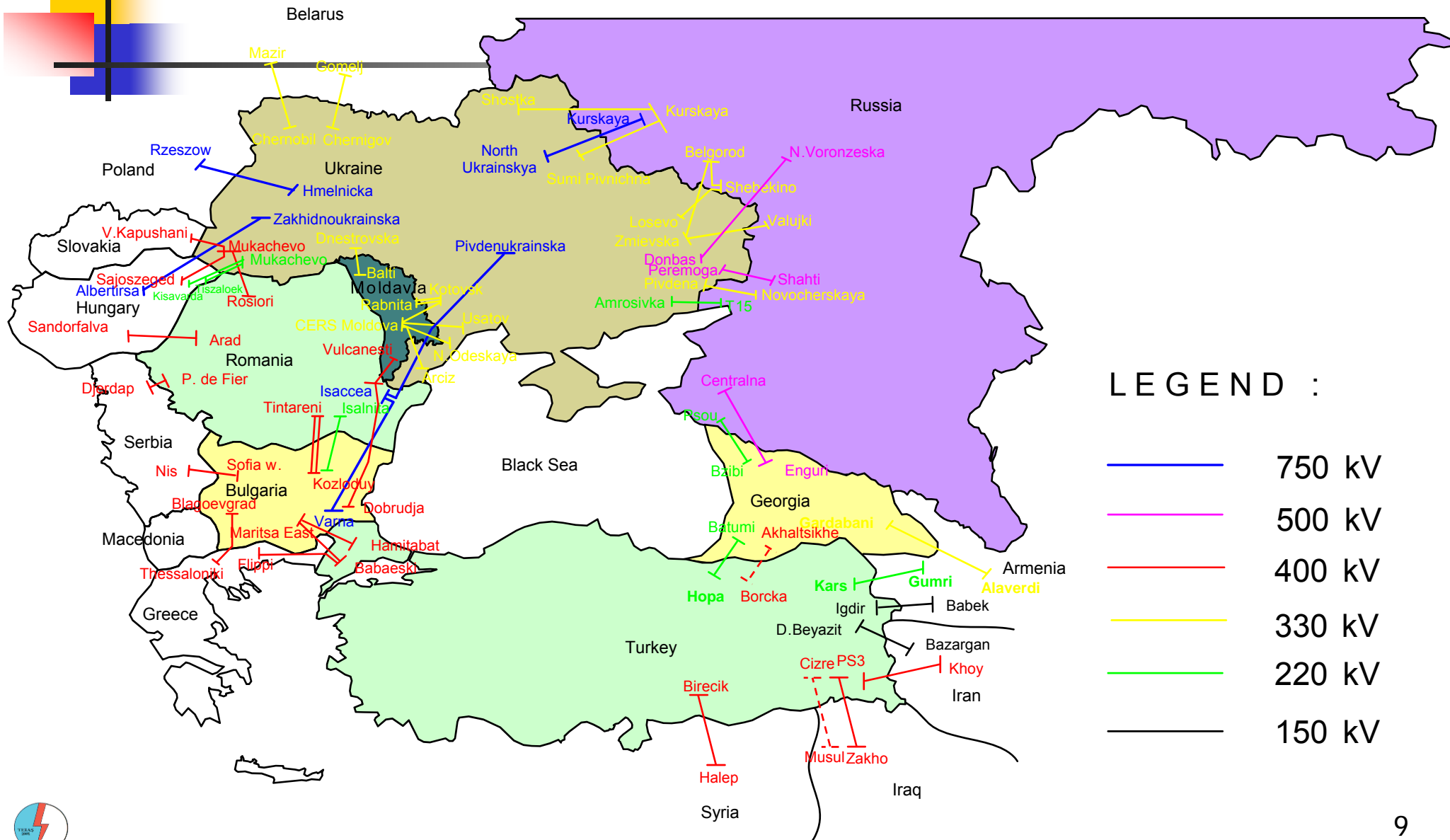
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# Existing and Planned Interconnections of Turkey related with BSEC Region

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# Existing Interconnection Lines in BSEC Region





# TURKEY AND GEORGIA POWER SYSTEMS INTERCONNECTION

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- 650 MW power transfer from Turkey to Georgia or in reverse direction with 400 kV Akhaltsikhe (GEO) – Borcka (TR) transmission line and DC Back to Back station at Akhaltsikhe Substation (GEO)
- Routing and border crossing point of 400 kV interconnection line already performed, negotiations for the technical details are ongoing and tendering process for the construction of the line and relevant facilities are expected by the June of 2009
- Reinforcement of the existing 220 kV Hopa-Batumi tie line by replacing the conductors and energizing it at 400kV and constructing a DC Back to Back Station at Batumi is under consideration.



## UNDERSEA CABLE PROJECT BETWEEN TURKEY AND ROMANIA

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- 400 kV HVDC undersea cable across the Black Sea with carrying capacity 600 MW is under consideration.
- Terms of Reference prepared, reviewed and finalized by the Parties for a Bankable Feasibility Study for HVDC Submarine Cable Project.
- Tendering process for the consultancy contract to the Feasibility Study is underway (it is expected that tendering agreement will be in January 2009, completion time for the feasibility study is 9 months and total cost of project is 400 million Euro).

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## ENERGY EXCHANGE BETWEEN TURKEY AND GREECE

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- Turkish part of Turkey-Greece 400 kV interconnection line completed in 2006 and the Greece part by the second quarter 2008.
- The first energy transfer to Greece realized during the summer months of 2007 to meet summer demand of Greece by energizing 400 kV Turkish part of the line at 154 kV and connecting it to 150 kV network of Greece.
- The studies for the operation of the line at 400 kV ongoing.



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Thank you for your attention...