



# MINISTRY OF ENERGY AND INDUSTRY OF TURKMENISTAN



## DEVELOPMENT STRATEGY OF POWER INDUSTRY OF TURKMENISTAN

### THE ANALYSIS OF VOLUME OF INVESTMENTS INTO DEVELOPMENT OF A POWER INFRASTRUCTURE OF TURKMENISTAN



- As a country rich in energy resources, Turkmenistan actively integrated into the world economic, and in the electric power industry in particular.
- For a short time three gas-turbine power stations, complexes of substations were built, thousands of kilometers of existing power lines were reconstructed, hundreds of units of construction and other special equipment for the needs of electric power industry were purchased.



In Turkmenistan all conditions for normal work of our partners are created:

- the beneficial investment climate,
- free economic zones,
- variety of benefits,
- legislative base on protection of foreign investments





- At present Turkmenistan not only fully provides electricity to domestic consumers, but also exports it to neighboring countries.
- One of the main objectives of the energy sector is the reliable power supply of consumers, reconstruction of existing and construction of new power facilities.

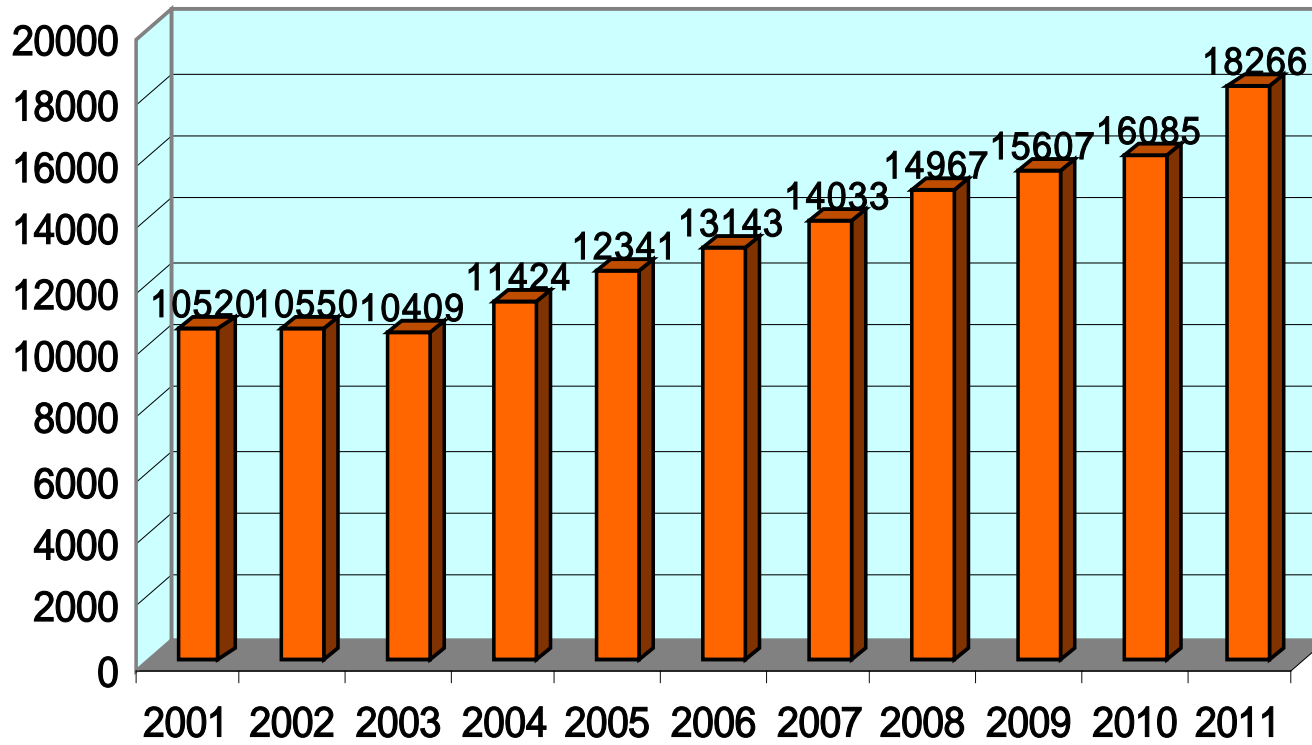


- During the years of Independence the Ministry of Energy and industry of Turkmenistan introduced 1723 MW of new capacities
- Capacity of gas-turbine power plants is 1643 MW, or 40% of total installed capacity
- The total installed capacity of the Ministry of Energy and industry is 3984,2 MW.



## Production of electricity by power plants of State electric power corporation "Turkmenenergo" for years 2001-2011

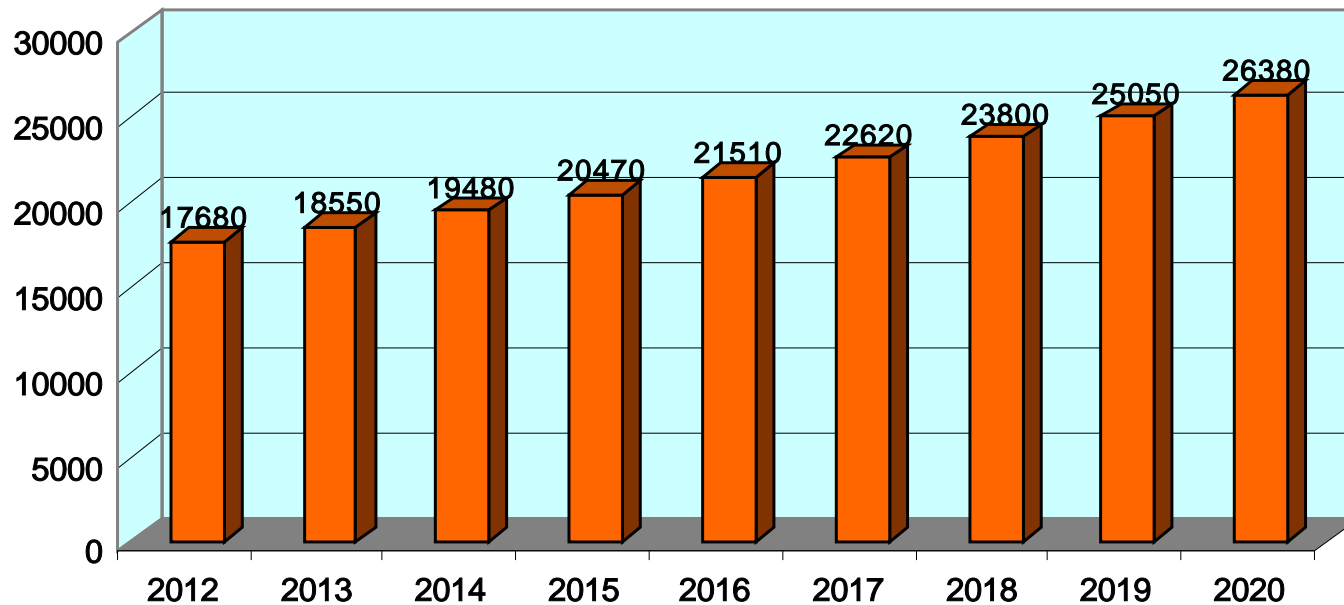
Mln. kWt\*h





## The prospect of electricity production for the years 2012-2020 by the State electric power corporation "Turkmenenergo"

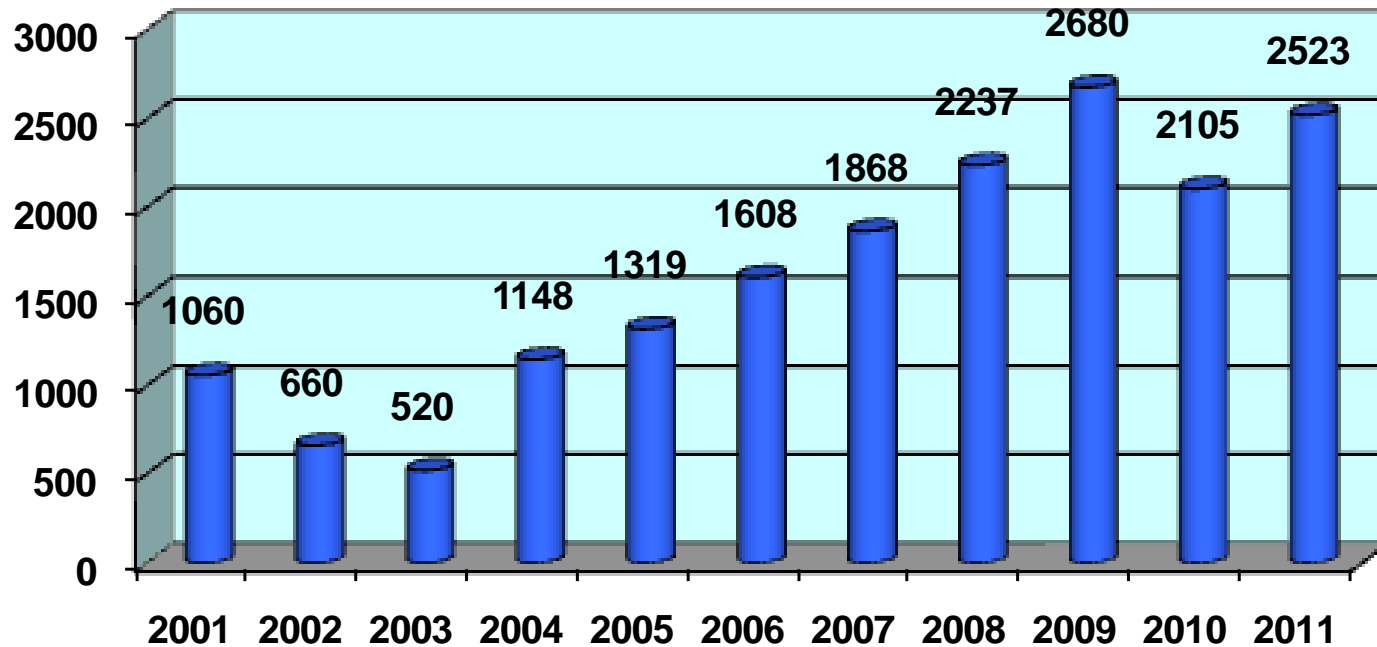
Mln. kWt\*h





## Export of electricity for the years 2001-2011

Mln. kWt\*h

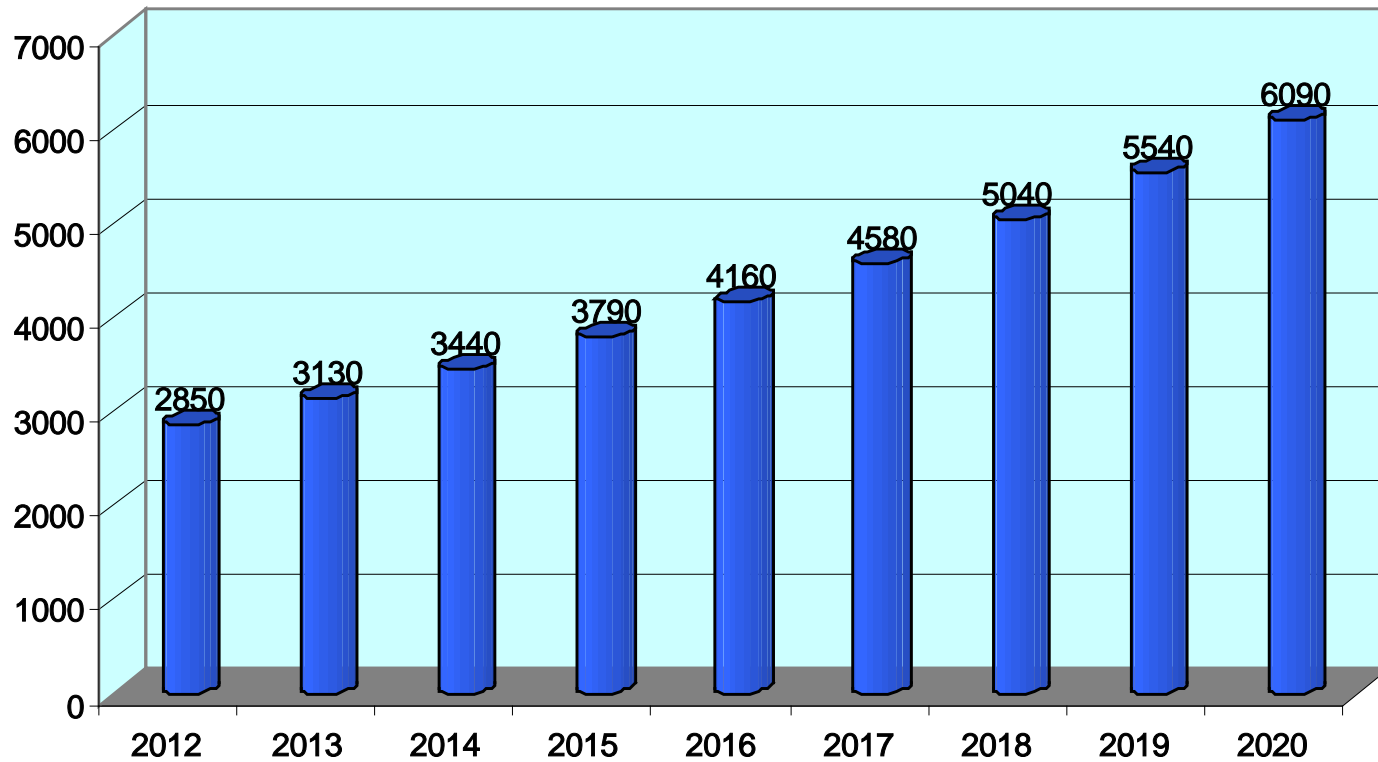






## The prospect of electricity exports during 2012-2020

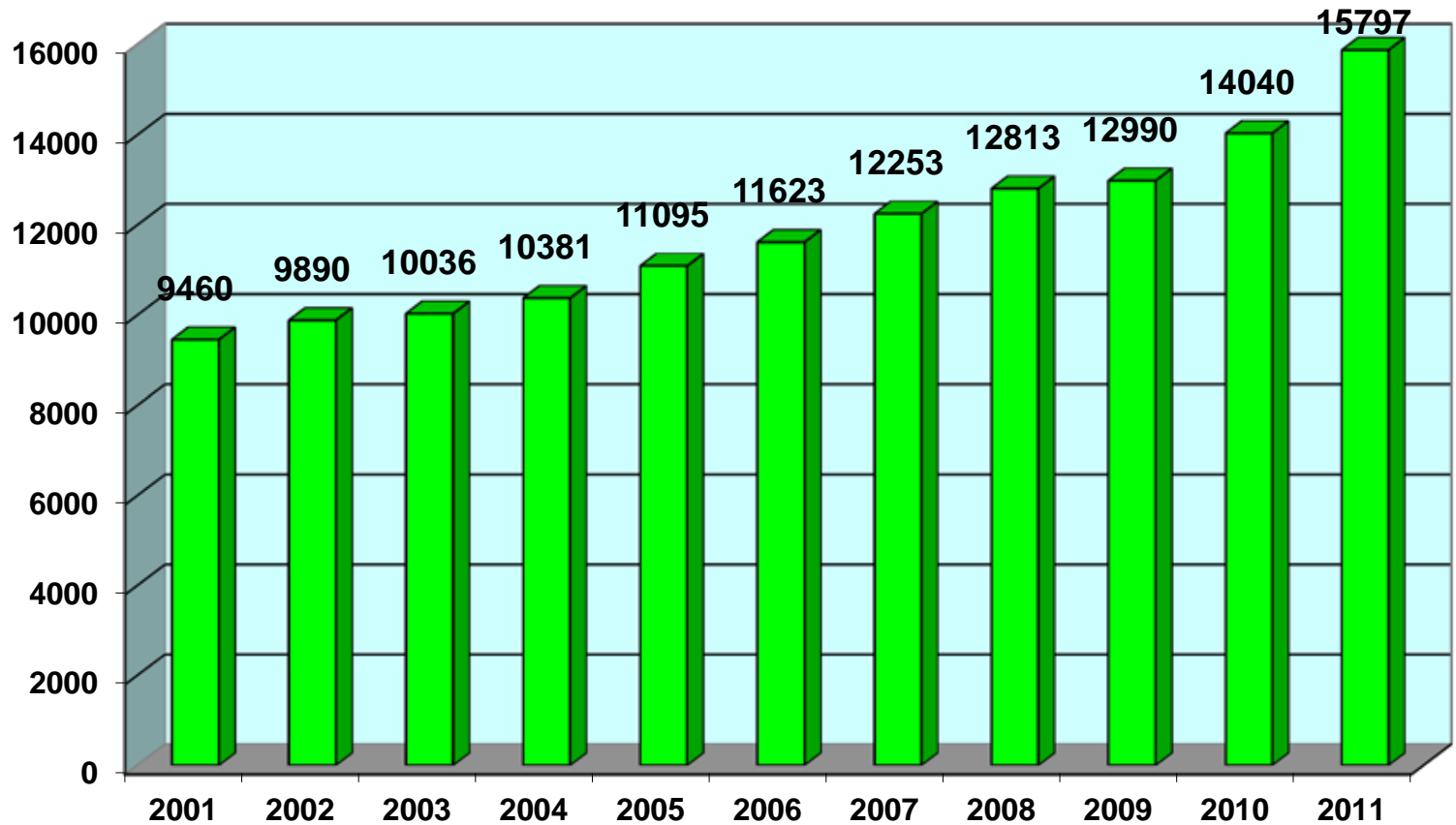
Mln. kWt\*h





## Power consumption for the years 2001-2011

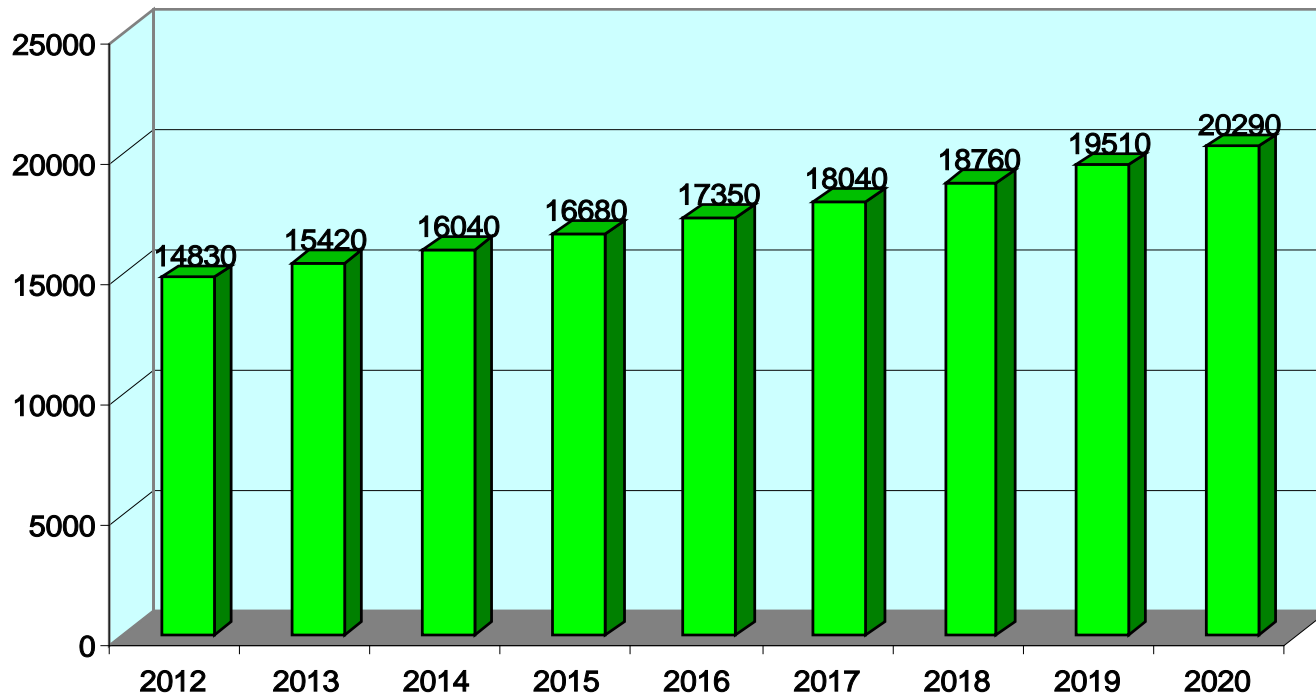
Mln. kWt\*h





## The prospect of electricity consumption for the years 2012-2020

Mln. kWt\*h





# Plans for the future

- The estimated level of the domestic consumption in 2020 will be 20 billion kWh;
- Construction of 4 combined cycle power plants with total capacity 1496 MW till 2030.
- Two of them in the near future in a suburb of the capital.



## Conversion of Existing Power Plants to the Combined Cycle:

- will allow to increase capacity for 720 MW
- will save 1.5 billion cubic meters of gas annually
- will allow to reduce emissions into the atmosphere by more than 3 million tons
  
- It is also planned to modernize the existing steam turbine plants. Up to the 2020 at the power plants of this kind 11 power units will be covered, which will ensure the increase of available generating capacity of approximately 790 MW.



## Cooperation with GE

- It should be noted that the construction of gas turbine power plants preference is given to gas-turbine generators of the world-famous American company «General Electric».
- During the years of operation, they have shown their reliability in operation.

Gazagystan

**Türkmenistanyň**  
Elektrik energiýasyny daşary ýurtlara  
ugratmak üçin ulanyýan we gurulmagy  
meýilleşdirilýän 110-500 kW howa  
ulgamlary we beketleri

Özbekeistan

Hazar deňzi

Balkan  
welaýaty

Daşoguz  
welaýaty

Lebap  
welaýaty

Ahal  
welaýaty

Mary  
welaýaty

Eýran

Owganystan

**Şertli belgiler:**

- 500 kW gurulmaly elektrik geçirijiler.
- 400 kW gurulmaly elektrik geçirijiler.
- 500 kW elektrik geçirijiler.
- 400 kW elektrik geçirijiler.
- 220 kW elektrik geçirijiler.
- 110 kW elektrik geçirijiler.





## High-voltage transmission lines under construction and planned

- 220-500 kV line in Lebap region (under construction)  
Planned:
- 500 kV line in the direction of Ashgabat-Turkmenbashi-Balkanabad
- 500 kV line in the direction of Ashgabat-Mary
- 500 kV line in the direction of Dashoguz-Turkmenbashi

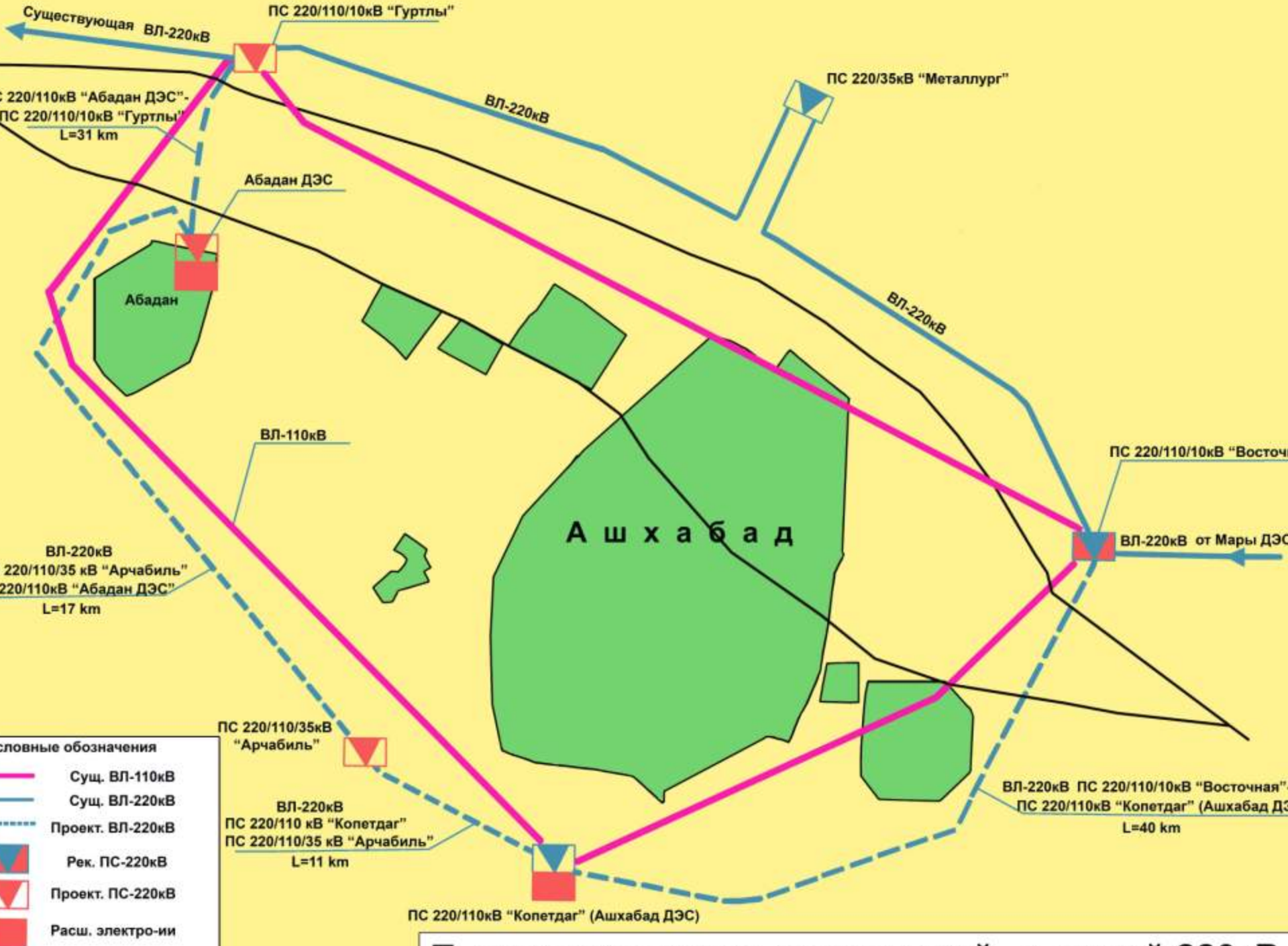




## the further development of the distribution grids

Only in Ashgabat in the nearest years it is planned to build and reconstruct:

- 63 substations with a voltage of 35, 110 and 220 kV
- 70 transformer centers with the voltage of 10 kV
- 110 km of overhead transmission lines with voltage 110 and 220 kV
- and 870 km cable transmission lines with the voltage of 10 and 35 kV
- Similar modernization of power grids will affect and other cities of the country.



**План размещения подстанций и линий 220кВ**



- In 2008 - 2011 years 2,427 km of electrical networks with a voltage of 0.4 - 110 kV were built and reconstructed.
- For 2011 957,4 km of electrical networks with a voltage of 0.4 - 110 kV were built and reconstructed.
- Up to 2030 more than 24 thousand km of power lines in urban and rural outback are envisages to be constructed.



- We invite you to participate in the 5<sup>th</sup> international exhibition and conference "The main Trends of Development of the Electric Power Industry of Turkmenistan 2012" on September 8 - 10, 2012, in Ashgabat exhibition palace.
- For the further information [www.minenergo.gov.tm](http://www.minenergo.gov.tm)



Thank you for your kind attention!