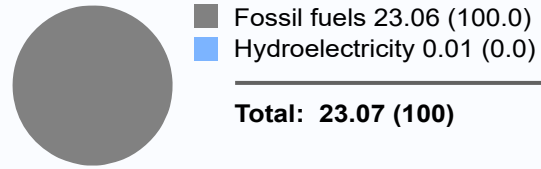


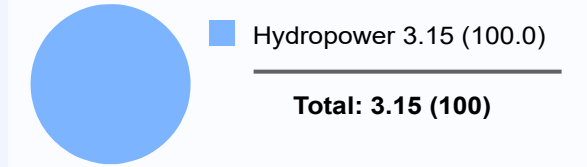
# Turkmenistan • Electricity and Renewable energy

## Gross electricity generation 2022, TWh (%):



Source: Based on the U.S. Energy Information Administration data (Mar 2024).

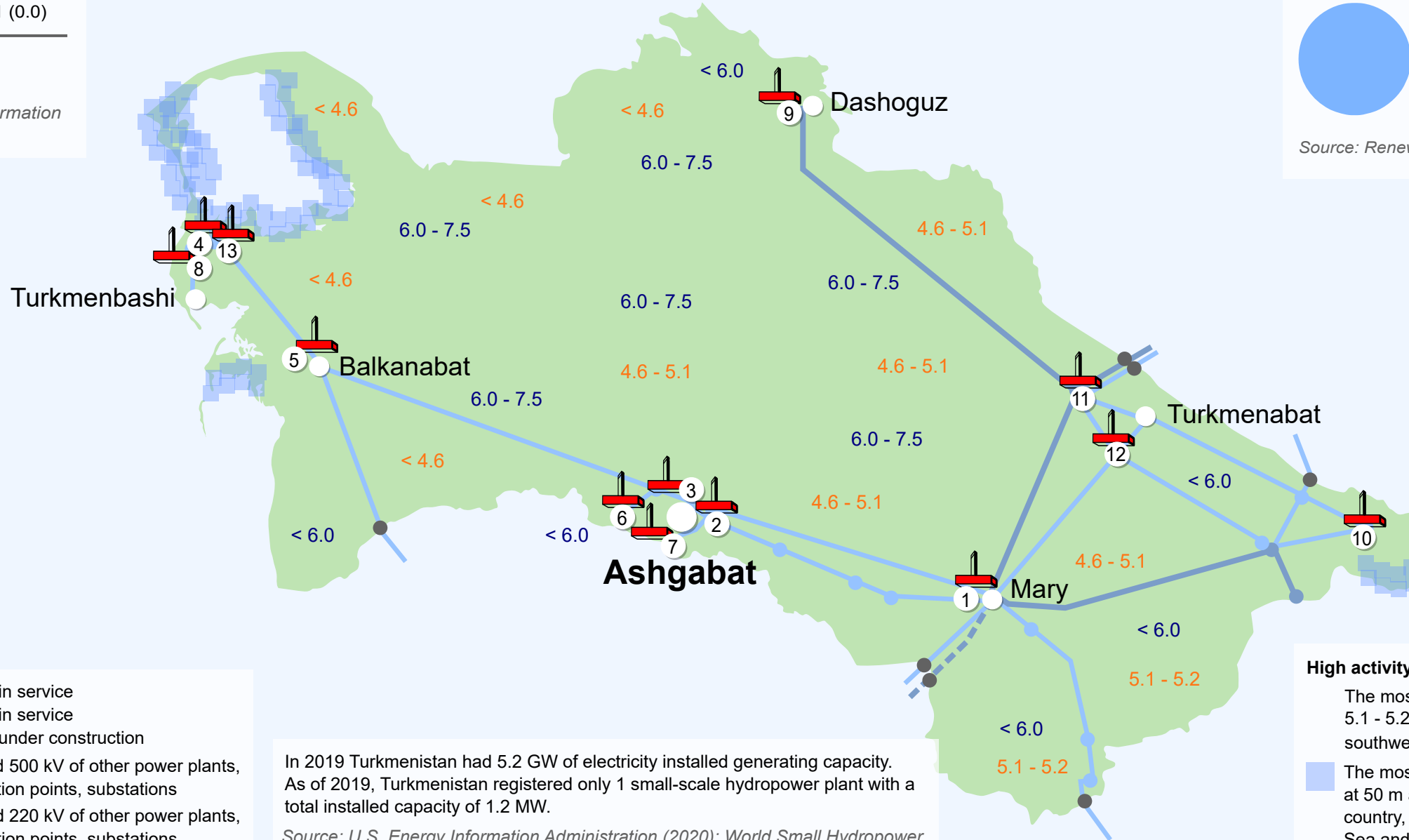
## Gross electricity generation from renewable sources by 2021, GWh (%):



Source: Renewable Energy Statistics 2023 © IRENA

## Key natural gas power plants over 100 MW, MW:

- 1 Mary, 1832
- 2 Ahal, 648
- 3 Derweze, 504
- 4 Turkmenbashi, Turkmenenergo, 420
- 5 Balkanabat, 380
- 6 Abadan, 321
- 7 Ashgabat, 254
- 8 Awaza, 254
- 9 Dashoguz, 254
- 10 Watan, 254
- 11 Seydi, 160
- 12 Lebap, 149
- 13 Turkmenbashi, Çalık Enerji, 126



0.0 kWh/m<sup>2</sup>/d Global Horizontal Irradiation (GHI)  
0.0 m/s Wind speed

- 500 kV line in service
- 220 kV line in service
- 500 kV line under construction
- National grid 500 kV of other power plants, grid connection points, substations
- National grid 220 kV of other power plants, grid connection points, substations
- Border crossing

In 2019 Turkmenistan had 5.2 GW of electricity installed generating capacity. As of 2019, Turkmenistan registered only 1 small-scale hydropower plant with a total installed capacity of 1.2 MW.

Source: U.S. Energy Information Administration (2020); World Small Hydropower Development Report 2019; Wikipedia.

## High activity areas:

The most common solar GHI intensity is 5.1 - 5.2 kWh/m<sup>2</sup> per day, distributed in the southwestern part of country, in Mary region.

The most common wind speed is 7.5 - 8.5 m/s at 50 m are distributed in the western part of country, along the coastal line with the Caspian Sea and Garabogaz Gulf, in Balkan region.

Source: Energydata.info