

## **ALTERNATIVE SOURCES OF ENERGY IN MEDITERRANEAN REGION TURKEY**

### **1.Solar Power Plants Turkey**

- The total installed power of the Solar Power Plants in Turkey is 7,325 MW.
- In 2019, 9,620,335,000 kilowatt-hours of electricity was produced with Solar Power Plants.
- Number of Registered Switchboards: 667
- Installed Power Ratio: % 7,51
- The highest energy in Turkey is produced in Konya There are 47 power plants, 918 MWe of energy is produced. There are 11 power plants in Adana, producing 134 MWe of energy.

### **Adana**

- There are 11 solar power plants in Adana, producing 134 MWe of energy.
- T Dinamik Energy Solar Power Plant
- Weblink: <https://tdinamik.com/>
- <https://www.teknoraysolar.com.tr/adana-gunes-enerji-santrali/>
- 37.010674836398664, 35.2842020983907

### **Mersin**

- There are a total of 15 solar power plants in Mersin, producing 199 MWe of energy.
- Kivanç 2 GES Energy Solar Power Plant
- Weblink: <https://www.kivancenerji.com.tr/kivanc2ges.html>
- 36.803349947715084, 34.61860307994269

### **Antalya**

- There are 44 solar power plants in Antalya, and 189 MWe of energy is produced.
- Küçükköy energy Solar Power Plant
- Weblink: <https://www.asunim.co/>
- 36.91036752180717, 30.70073720927315

## **2.Geothermal Power Plants**

- The total installed power of the Geothermal Power Plants in Turkey is 1,624 MW.
- In 2019, 8,929,730,000 kilowatt-hours of electricity was produced with Geothermal Power Plants.
- Number of Registered Switchboards: 60
- GES Installed Power: 1.624 MWe  
registered: 1.624 MWe
- Installed Power Ratio: % 1,66
- In our country geothermal energy is produced in the highest in Denizli Kızıldere 3 GPP 165 MW.
- There is no geothermal energy source in the Mediterranean region

### **Denizli:**

- Kızıldere geothermal energy Power Plant
- Power 165 MW
- 38.01360378718985, 28.820739194147862

## **3.Wind Power Plants**

- The total installed power of the Wind Power Plants in Turkey is 9,559 MW.
- In 2019, 21.749.838,000 kilowatt-hours of electricity was produced with Wind Power Plants.

### **Adana:**

- Adana, Wind Farms in Operation: 1 power plant, 4.00 MWe
- Andoz Wind Power Plant
- 37.42550621875464, 34.87397152408754

### **Hatay:**

- Hatay, Wind Farms in Operation: 13 power plants, 421 MWe
- Ziyaret (Türbe) Wind Power Plant 76 MW
- 36.45361916134486, 36.2646795686066
- Sebenoba Wind Power Plant 60 MW
- Belen Wind Power Plant 48 MW
- <https://www.guris.com.tr/? dil=2>

#### **4. Biogas, Biomass, Waste Heat and Pyrolytic Oil Power Plants**

- The total installed power of Biogas, Biomass, Waste Heat and Pyrolytic Oil Power Plants in Turkey is 1,184 MW.
- In 2019, 4.266.000.000 kilowatt-hours of electricity was produced with Biogas, Biomass, Waste Heat and Pyrolytic Oil Power Plants.
- Number of Registered Switchboards: 106
- BES Installed Power: 1.184 MWe  
registered: 588 MWe
- Annual Electricity Production: ~ 2.659 GWh

#### **Adana:**

- Sofulu Dumpster Biogas Plant 16 MW
- <http://www.itcturkiye.com/tr/tesislerimiz/adana-sofulu>
- 37.05173965000451, 35.39604267391646

#### **Antalya:**

- ITC Antalya Biomass Power Plant 25 MW
- 36.59769237842835, 32.01085913977471
- <http://www.itcturkiye.com/tr/tesislerimiz/antalya-kizilli>

## 5. Hydroelectric Power Plants

- Total installed power of Hydroelectric Power Plants in Turkey is 31,336 MW.
- In 2019, 88,850,170,000 kilowatt-hours of electricity was produced with Hydroelectric Power Plants.
- **Number of Registered Switchboards: 685**
- **Installed Capacity:** 31.336 MWe  
registered: 31.360 MWe
- **Installed Power Ratio:** % 32,11
- **Annual Electricity Production:** ~ 80.030 GWh

### Adana Hydroelectric Power Plants

- Adana, HEPPs in Operation: 29 power plants, 1.906 MWe
- **Adana Aladağ Kavşak** HPP Coordinates: 37.56479858925057,  
35.52973208187474

Stream Göksu Stream

Maximum operating level (altitude) 321 meters

Net head 79 m

Kavşak Bendi and HEPP can meet all the electrical energy needs of 159.148 people in their daily lives (such as housing, industry, metro transportation, government offices, environmental lighting) with an average electricity production of 578,023,881 kilowatt-hours.

<https://www.enerjisauretim.com.tr/enerji-uretimi/hidroelektrik-santrallerimiz/kavsak-bendi-hes>

- **Adana, Çatalan Dam** and HPP Coordinates: 37.1985209922437,  
35.282510726040314

Çatalan Dam and HEPP can meet all the electrical energy needs of 132,916 people in their daily lives (such as housing, industry, metro transportation, government offices, environmental lighting) with an average electricity production of 482,752,309 kilowatt-hours.

<https://www.euas.gov.tr/santraller/catalan-hes>

Çatalan Dam and HEPP Information

Installed Capacity: 168,90 MWe

Installed Power Ratio: 0.18%

Production Capacity: 596 GWh-year

Annual Electricity Production: ~ 483 GWh

2020 Production: 629 GWh

Plant Location: Adana, Sarıçam

- **Adana ,Köprü Dam** And HPP Coordinates: 37.630473407889866,  
35.616699183724336

<https://www.enerjisauretim.com.tr/enerji-uretimi/hidroelektrik-santrallerimiz/kopru-hes>

Köprü Dam and HEPP can meet all the electrical energy needs of 73,846 people in their daily lives (such as housing, industry, metro transportation, government offices, environmental lighting) with an average electricity production of 268,210,402 kilowatt-hours.

Köprü Dam and HEPP Information

Installed Capacity: 155,85 MWe

Installed Power Ratio: 0.17%

Production Capacity: 383.88 GWh-year

Annual Electricity Production: ~ 268 GWh

2020 Production: 336 GWh

Plant Location: Adana, Kozan

- **Menge Dam** And HPP Coordinates: 37.704619531566706,  
35.72224936838517

The Menge Dam and HEPP can meet all the electrical energy needs of 37,105 people in their daily lives (such as housing, industry, metro transportation, government offices, environmental lighting) with an average electricity production of 134,766,569 kilowatt-hours.

<https://www.enerjisauretim.com.tr/enerji-uretimi/hidroelektrik-santrallerimiz/menge-hes>

Menge Dam and HEPP Information

Installed Capacity: 89.42 MWe

Installed Power Ratio: 0.10%

Production Capacity: 203.14 GWh-year

Annual Electricity Production: ~ 135 GWh

2020 Production: 155 GWh

Plant Location: Adana, Kozan

- **Yamanlı 2** HPP Coordinates: 37.704517670955994, 35.72226009722053

Yamanlı 2 HEPP can meet all the electrical energy needs of 48,539 people in their daily lives (such as housing, industry, metro transportation, government offices, environmental lighting) with an average electricity production of 176,295,446 kilowatt-hours.

<https://www.enerjisauretim.com.tr/enerji-uretimi/hidroelektrik-santrallerimiz/yamanli-iki-hes>

Yamanli 2 HEPP Information

Installed Capacity: 81,85 MWe

Installed Power Ratio: 0.09%

Production Capacity: 234,126 GWh-year

Annual Electricity Production: ~ 176 GWh

2020 Production: 234 GWh

Plant Location: Adana, Tufanbeyli

- **Karakuz Dam** and HPP Coordinates: 37.20005182162834, 35.116621824192826

Karakuz Dam and HEPP can meet all the electrical energy needs of 56,703 people in their daily lives (such as housing, industry, metro transportation, government offices, environmental lighting) with an average electricity production of 205,944,279 kilowatt-hours.

<https://www.alarko.com.tr/ajax/page/karakuz-hidroelektrik-santrali>

Karakuz Dam and HEPP Information

Installed Capacity: 76 MWe

Installed Power Ratio: 0.08%

Production Capacity: 276 GWh-year

Annual Electricity Production: ~ 206 GWh

2020 Production: 300 GWh

Net Head : 530,00 m

Plant Location: Adana, Pozantı and Karaisalı

- **Feke 2 Dam** Coordinates: 37.74518718707389, 35.86514841071579

Feke 2 Dam and HEPP can meet all the electrical energy needs of 45,018 people in their daily life (such as housing, industry, metro transportation, government offices, environmental lighting) with an average electricity production of 163,505,281 kilowatt-hours.

Feke 2 Dam and HEPP Information

Installed Capacity: 69,35 MWe

Installed Power Ratio: 0.07%

Production Capacity: 223.41 GWh-year

Annual Electricity Production : ~ 164 GWh

2020 Production: 155 GWh

Plant Location: Adana, Feke

- **Seyhan Dam** and HPP Coordinates : 37.0859892870572, 35.29721674235523

Seyhan Dam and HEPP can meet all the electrical energy needs of 71,530 people in their daily lives (such as housing, industry, metro transportation, government offices, environmental lighting) with an average electricity production of 259,797,223 kilowatt-hours.

[https://tr.wikipedia.org/wiki/Seyhan\\_Baraj%C4%B1\\_ve\\_Hidroelektrik\\_Santrali](https://tr.wikipedia.org/wiki/Seyhan_Baraj%C4%B1_ve_Hidroelektrik_Santrali)

Seyhan Dam and HEPP Information

Installed Power: 60 MWe

Installed Power Ratio: 0.06%

Production Capacity: 350 GWh-year

Annual Electricity Production: ~ 260 GWh

2020 Production: 353 GWh

Plant Location: Adana