The Electric Power System

- China -
Basic facts

- Area: 9,634,060 km²
- Population: 1,367,820,000 (2014)
- Number of TSOs: 2
- Number of DSOs: 2
- Peak load: 658GW (2014)
- Average interruption of electricity (2013):
  - 3.66h for urban area and 8.30h for rural area
Global map of the grid and of its interconnections

- Interconnectors with:
  - Mongolia;
  - Russia;
  - Kazakhstan;
  - Kirghizia;
  - Southeast Asia.
Grid facts and characteristics

<table>
<thead>
<tr>
<th>Voltage Level</th>
<th>Total length</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra High Voltage</td>
<td>more than 1000kV</td>
<td>TSO</td>
</tr>
<tr>
<td>Extra High Voltage</td>
<td>330 kV to 1000kV</td>
<td>TSO</td>
</tr>
<tr>
<td>High Voltage</td>
<td>20 kV to 330 kV</td>
<td>TSO</td>
</tr>
<tr>
<td>Medium Voltage</td>
<td>1 kV to 20 kV</td>
<td>DSO</td>
</tr>
<tr>
<td>Low Voltage</td>
<td>below than 1kV</td>
<td>DSO</td>
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<tr>
<td></td>
<td>572 000 km (220kV-and-above)</td>
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</tbody>
</table>
Map of the high voltage grid
Information on TSO(s)

- Name: SGCC (State Grid Corporation of China)
- Network length (km): 1 095 000 (110kV and above)
- Served area (km²): 8 477 972
- Annual transmitted energy (TWh): 3469.4
- Website: http://www.sgcc.com.cn/
Information on TSO(s)

- **Name:** CSG (China Southern Power Grid Co., Ltd.)
- **Network length (km):** 76,688 (220kV and above)
- **Served area (km²):** 1,000,000
- **Annual transmitted energy (TWh):** 523.9
- **Website:** [http://www.csg.cn/](http://www.csg.cn/)
Development of generating capacity
Installed capacity with reference to primary resources

- Installed capacities (GW), 2014
  - Thermal 915.69
  - Hydro power 301.83
  - Nuclear 19.88
  - Solar power 26.52
  - Wind power 95.81
  - Others 5.03
Energy production with reference to primary resources

Electricity generated (TWh), year

- Thermal 4173.1
- Hydro power 10661
- Nuclear 126.2
- Solar power 23.1
- Wind power 156.3
- Others 1.1
Consumption per customer groups
Location of RES-wind power
Location of RES-solar energy

[Map of China showing distribution of solar energy]
Power balance in 2014

- Generation (TWh): 5431.64
- Consumption (TWh): 5420.41
- Imports (TWh): 7.44
- Exports (TWh): 18.67
- Losses (TWh): 314.07