

The Electric Power System

- Iceland -



Basic facts

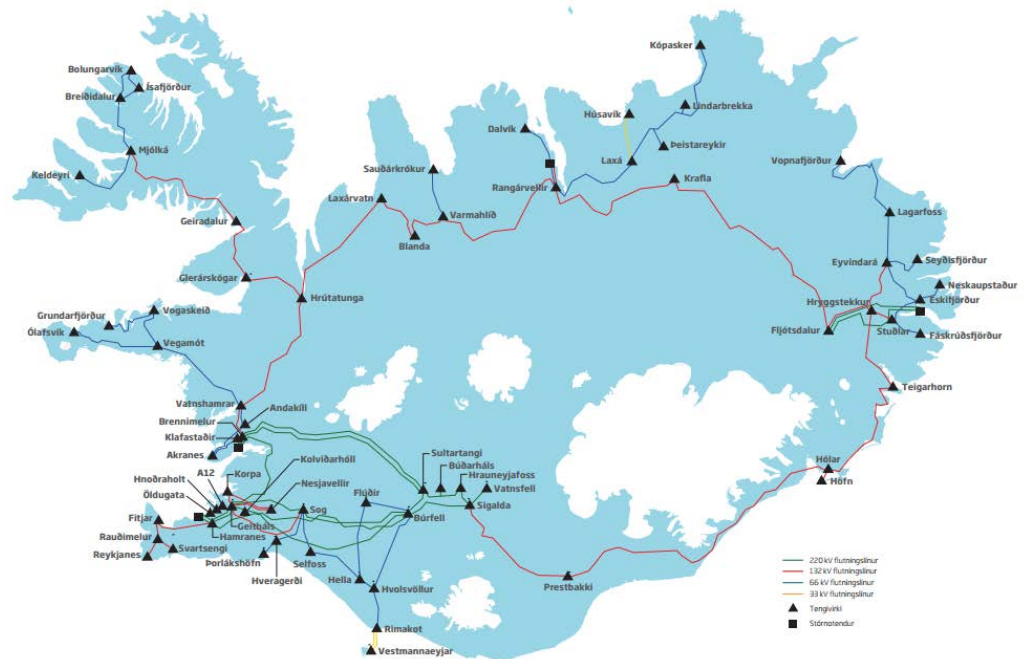
| | |
|----------------------------------------------------------------------------------------------|-------------------------|
| <input type="checkbox"/> Area: | 103.000 km ² |
| <input type="checkbox"/> Population 01.01.2015: | 329.000 |
| <input type="checkbox"/> Number of electricity consumers: | 184.000 |
| <input type="checkbox"/> Number of TSOs: | 1 |
| <input type="checkbox"/> Number of DSOs | 6 |
| <input type="checkbox"/> Peak load: | 2.330 MW |
| <input type="checkbox"/> Average interruption of electricity (from the distribution system): | 45 minutes |





The Icelandic transmission system

□ No interconnections with other countries:





Grid facts and characteristics

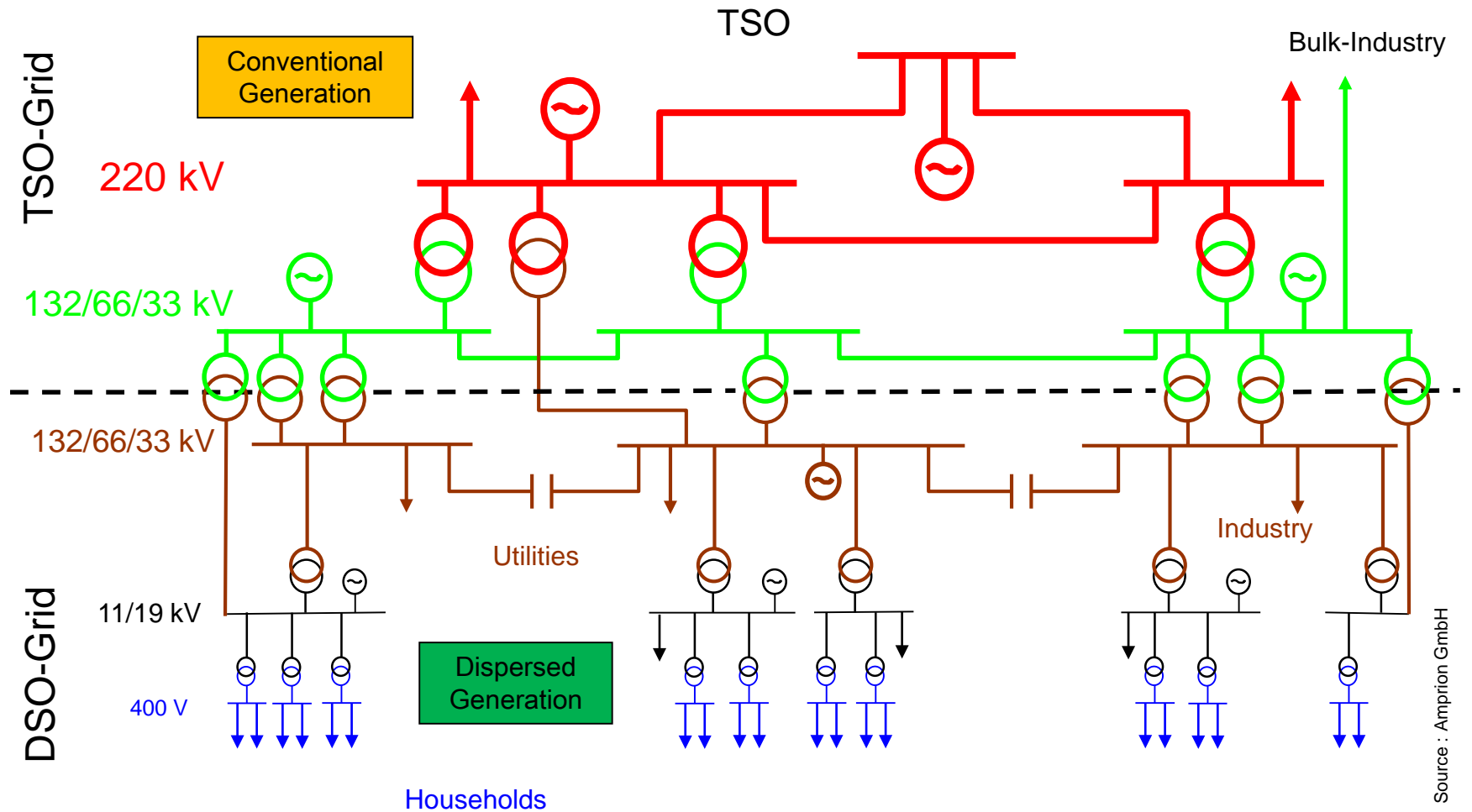
The electricity grid in Iceland is sub-divided into transmission grids (maximum voltage) and distribution grids (high, medium and low voltage)

| | Voltage level kV | Total length km | Responsibility |
|----------------------------|---------------------|--------------------|----------------|
| Transmission grid | 220 | 859 | TSO |
| Transmission grid | 132 | 1.323 | TSO |
| Transmission grid | 66/33 | 1.053 | TSO |
| Distribution, high voltage | 30 to 132 | 556 | DSO |
| Medium voltage | 11 to 30 | 10.663 | DSO |
| Low voltage | 0,23 or 0,40 | 14.700 | DSO |





Structure of electrical power system

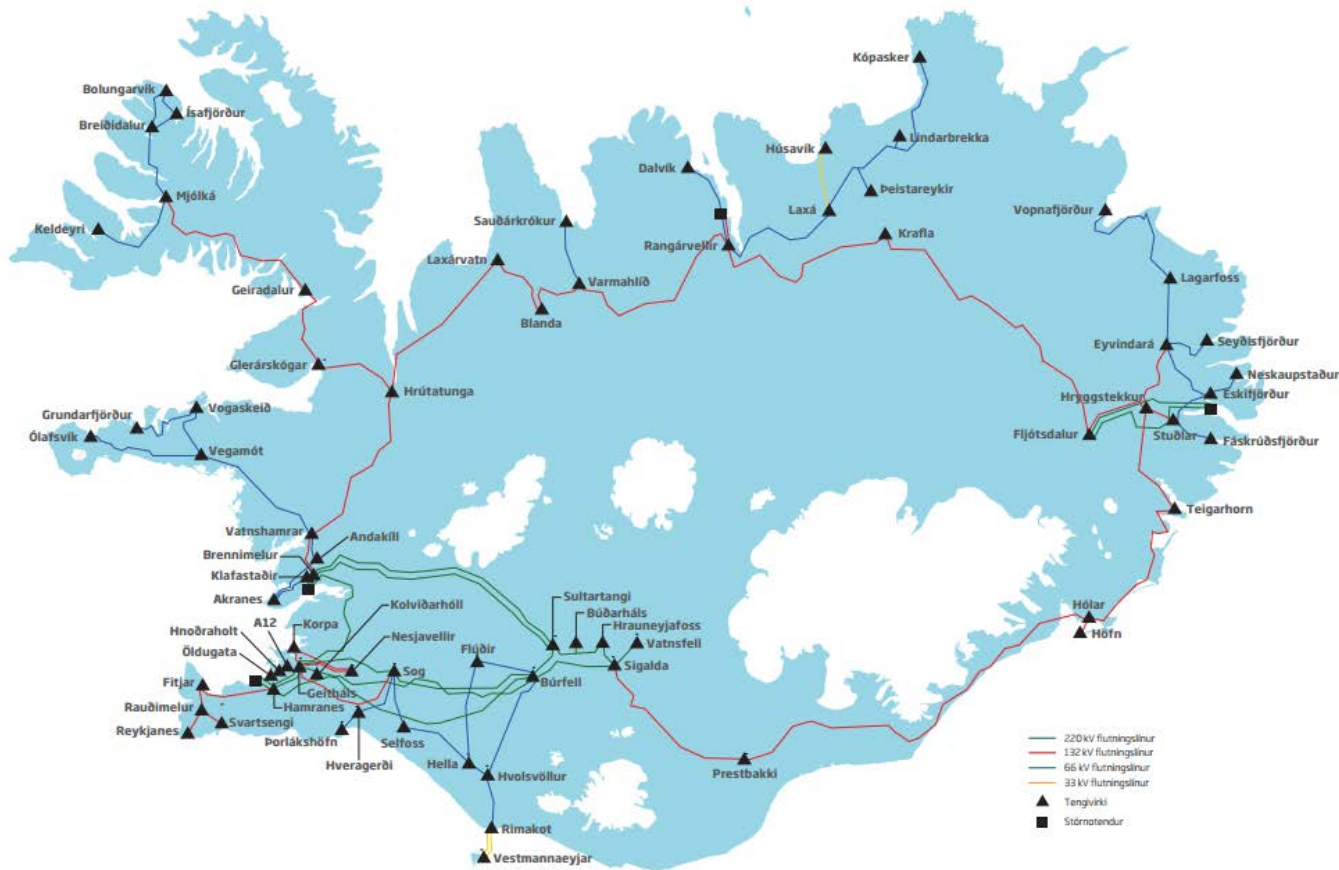


Source : Amprion GmbH





Map of the high voltage grid



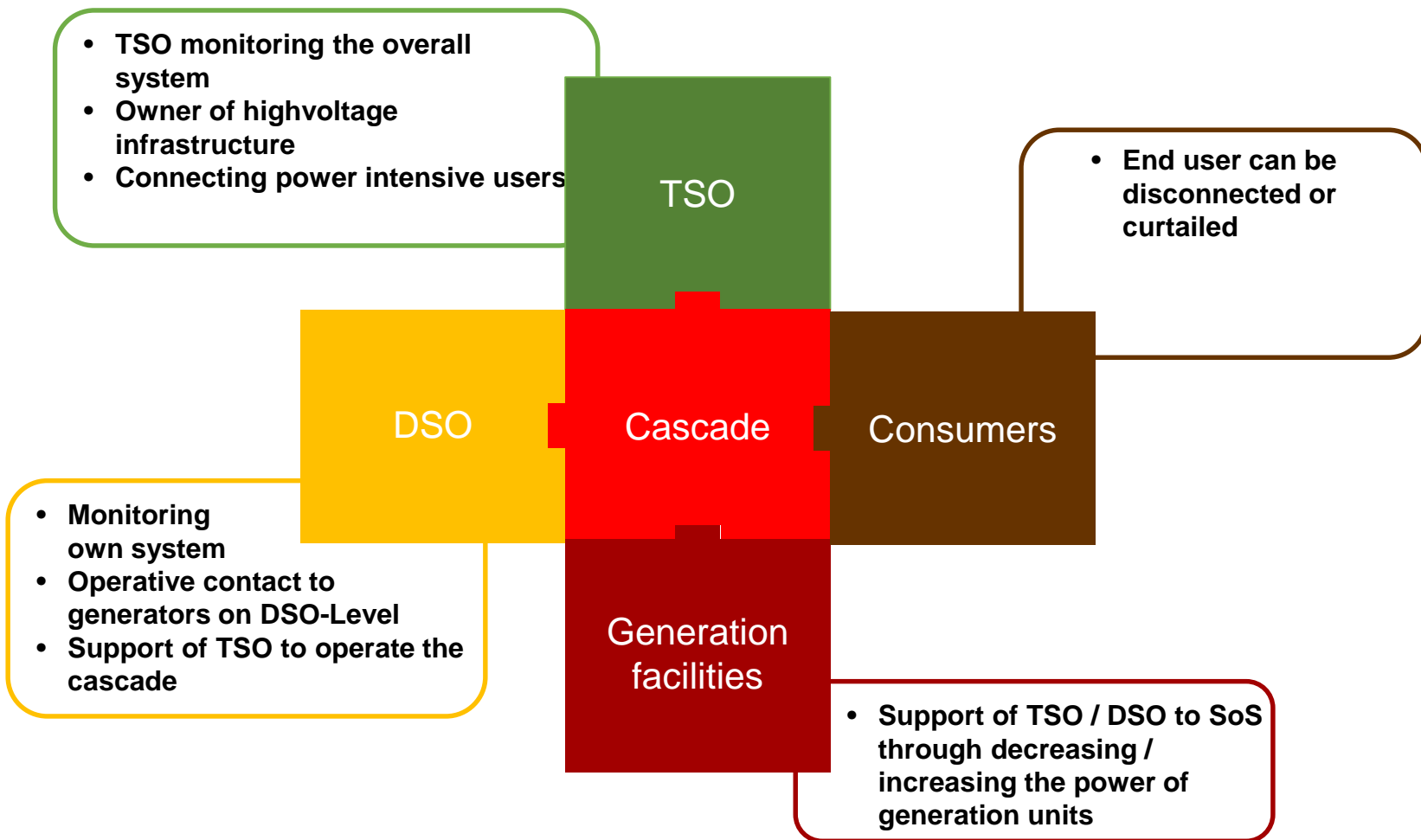


The Icelandic TSO

- Name: Landsnet
- Network length (km): 3.245
- Served area (km²): 103.000
- Annual transmitted energy (TWh): 18
- website: <http://www.landsnet.is>

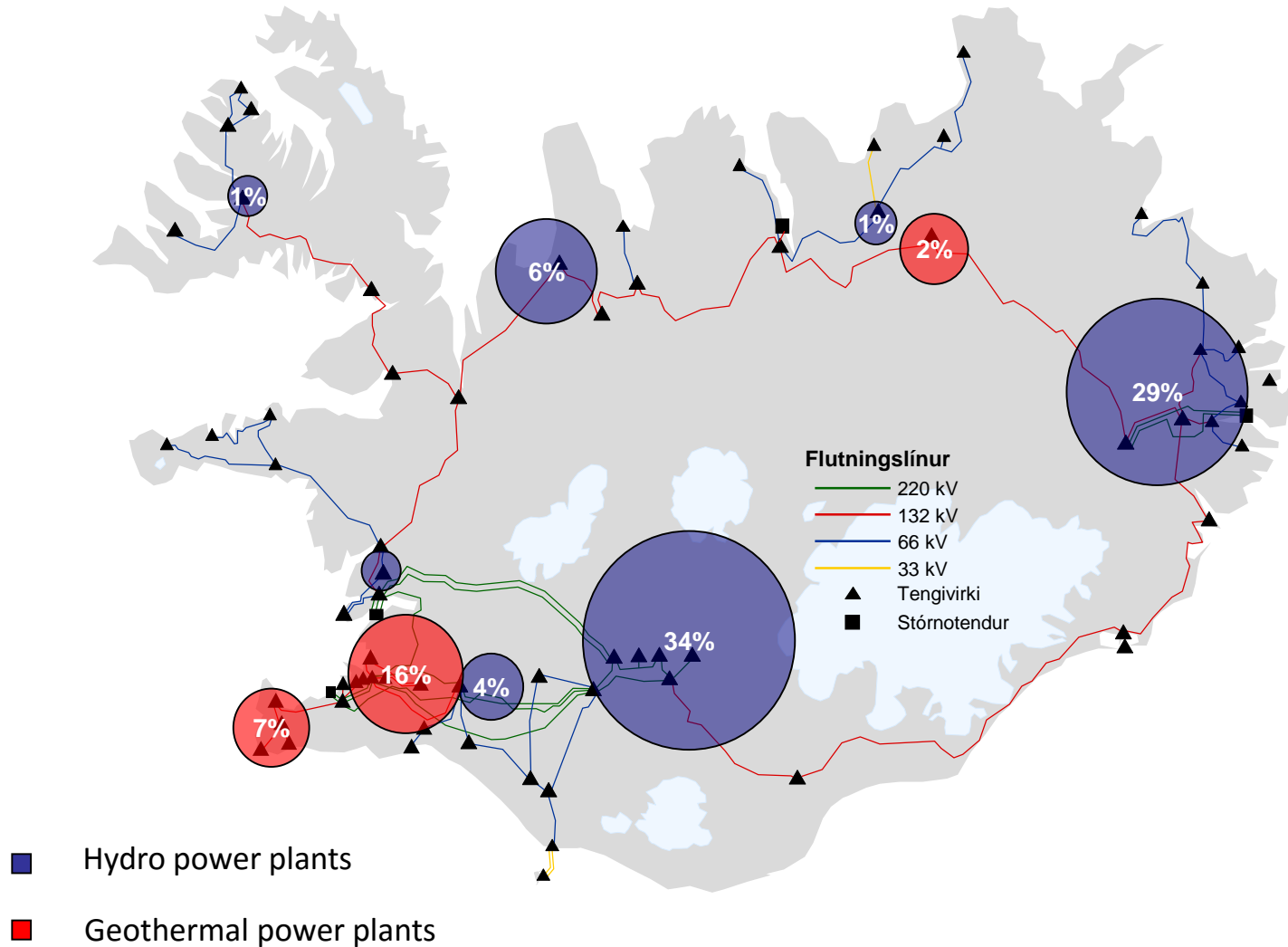


Responsibilities of TSO & DSOs



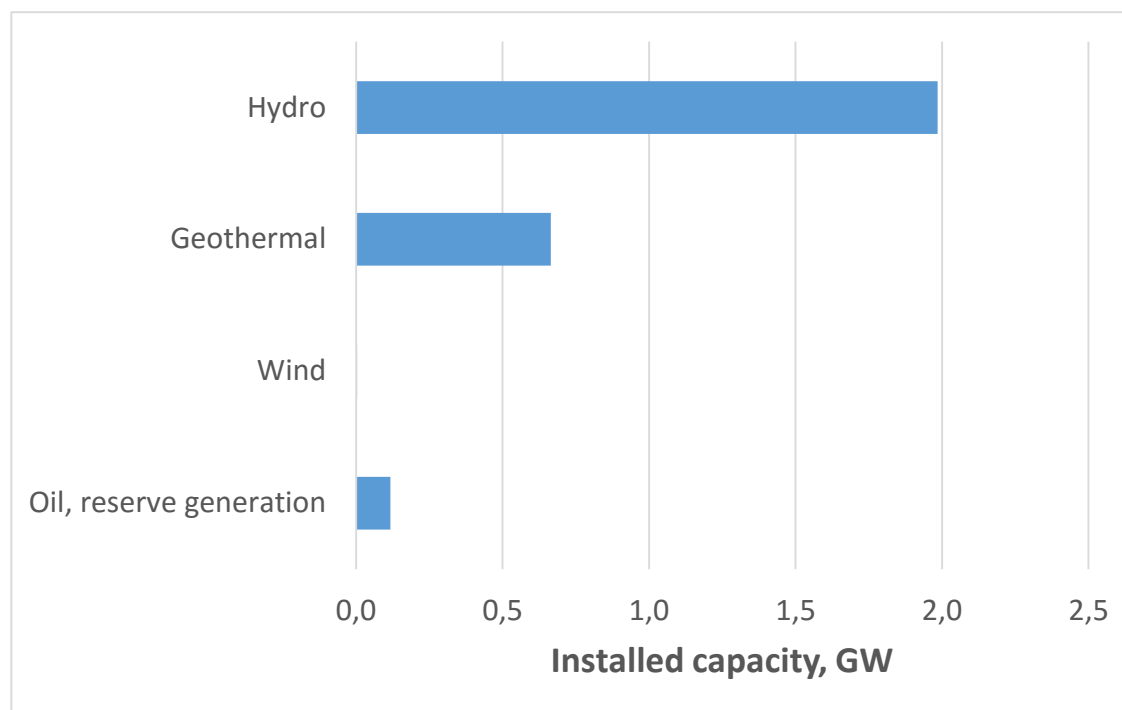


Power structure of the country



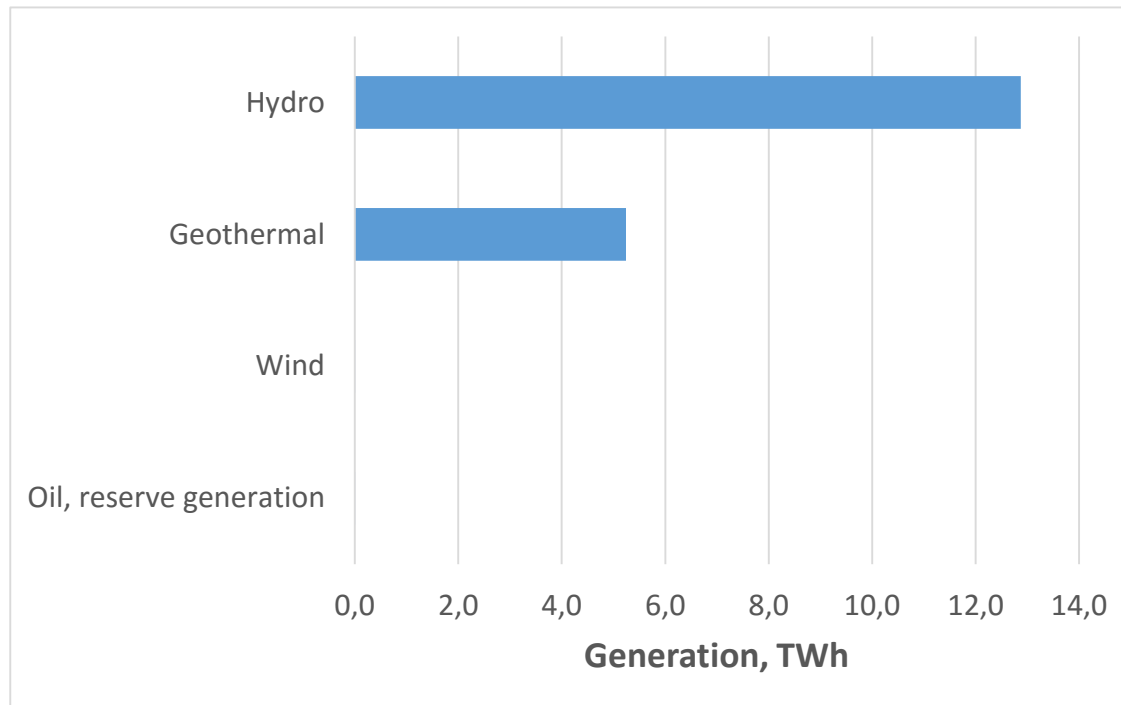


Installed capacity in 2014 with reference to primary resources

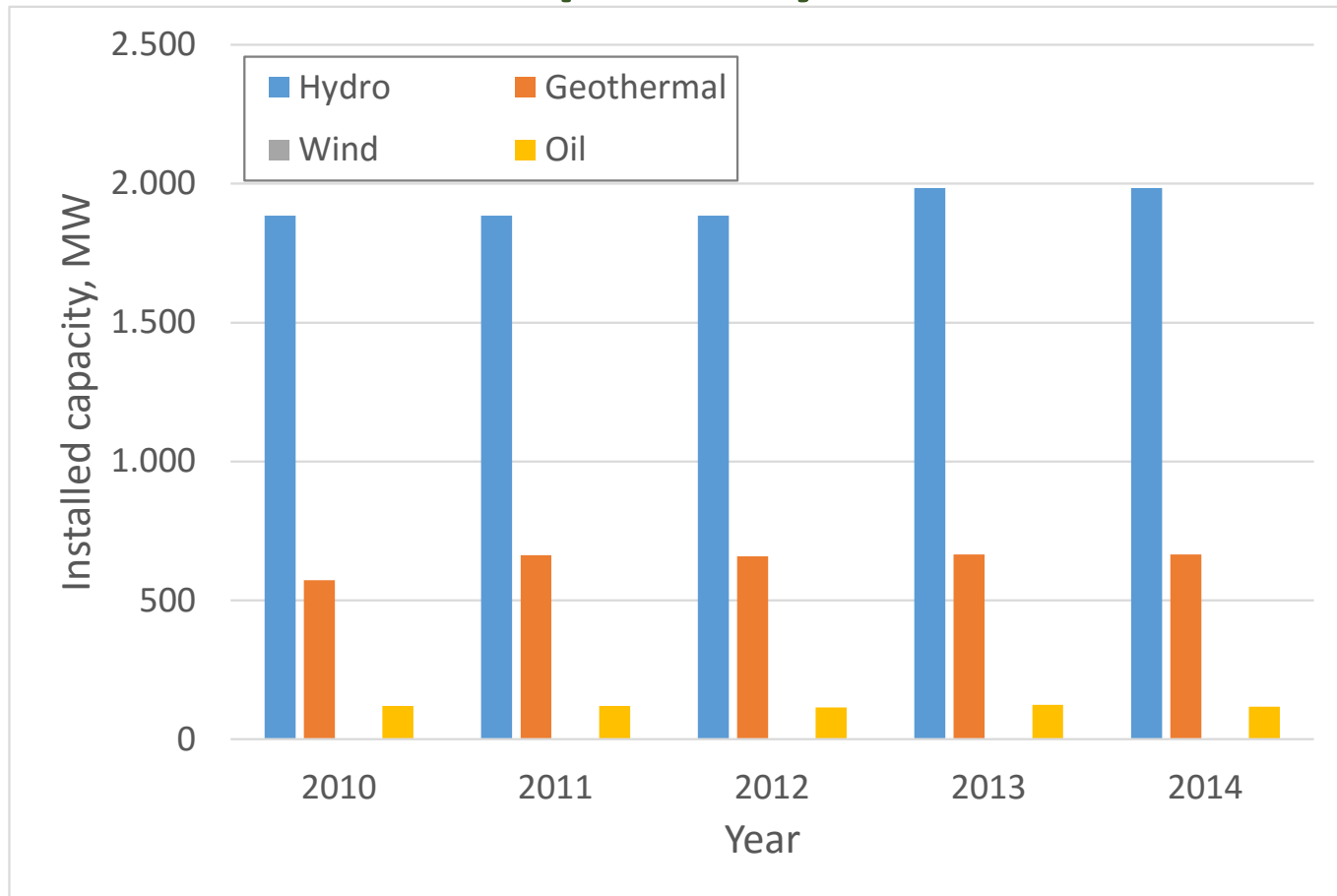




Energy production in 2014 with reference to primary resources

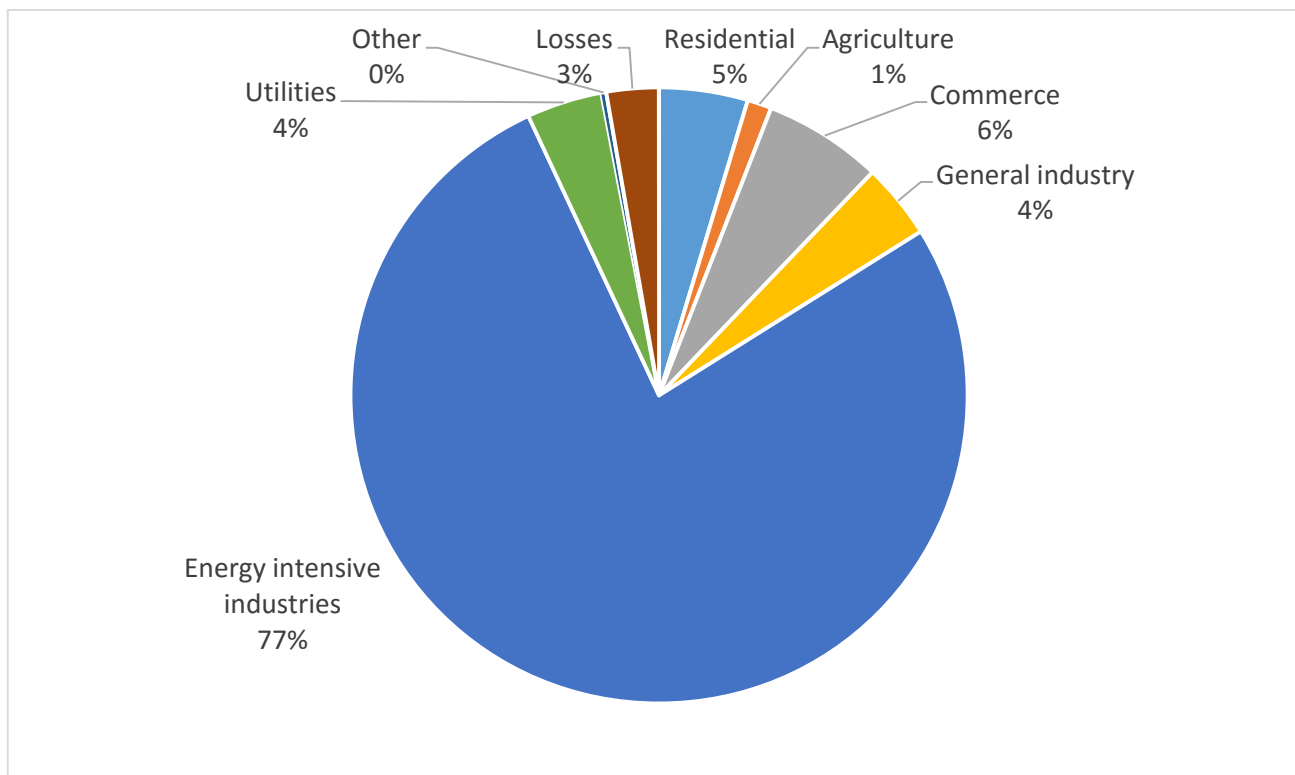


Development of generation capacity since 2010





Consumption per customer groups in 2014





Location of renewable energy sources

- ❑ In 2014 99.99% of the generation was from renewable resources, hydro and geothermal
- ❑ Location of main power plants is shown on slide 9





Development of wind power

- Only two small wind parks are in Iceland with total installed power of 3 MW.
- Increased interest in wind power





Development of photovoltaic power

- No photovoltaic power connected to the grid in Iceland.
- Photovoltaic power has been used in small scale in remote location for measurement equipment and camping





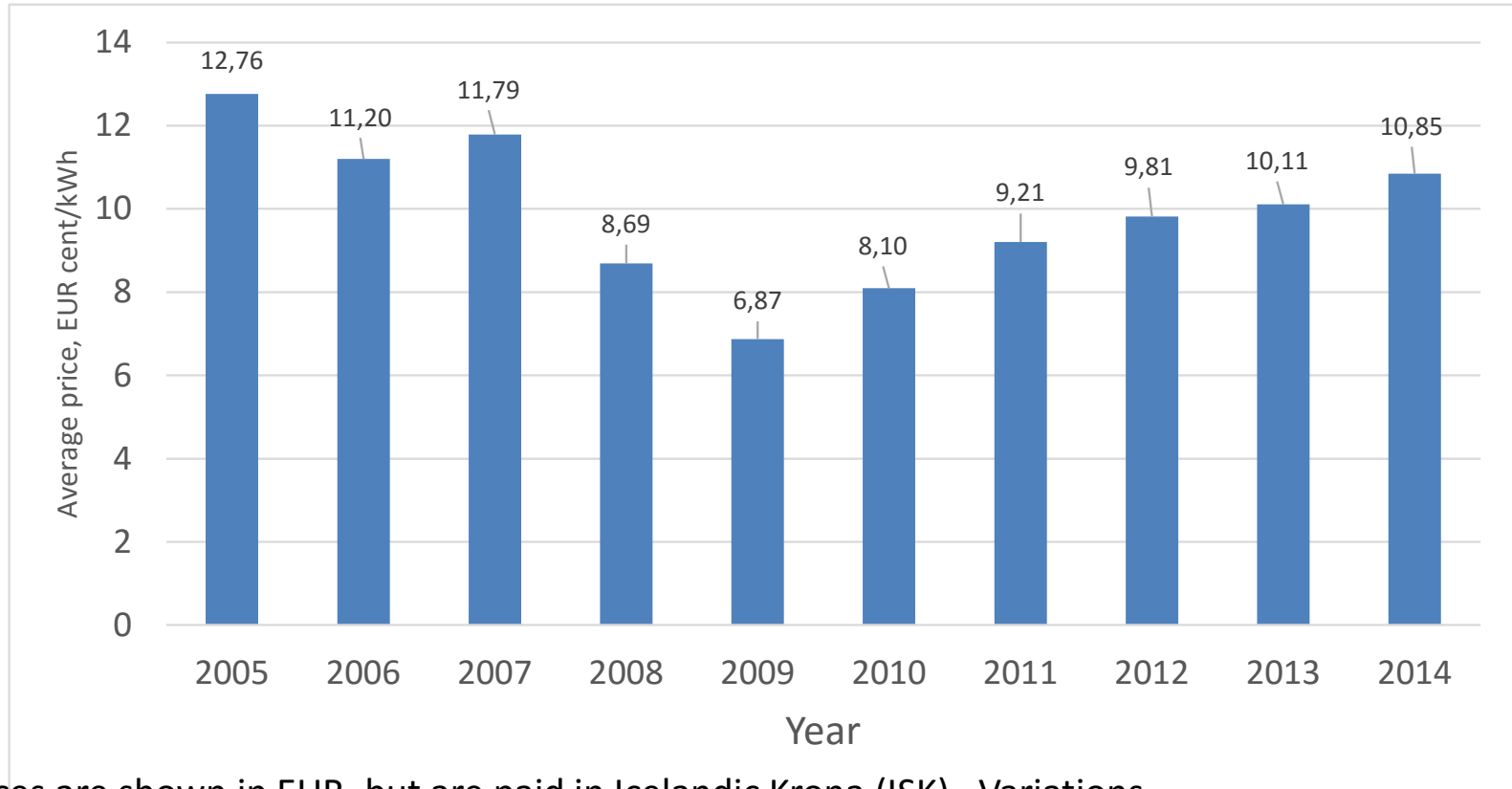
RES installed capacity and production since ...

☐ See figure in slide 12





Price development for households including VAT



*Prices are shown in EUR, but are paid in Icelandic Krona (ISK). Variations are therefore also reflecting the EUR/ISK currency exchange





Electricity market organisation

- There is no electricity energy/power spot market organization in Iceland
- Bilateral contracts between sellers and buyers
- TSO is operating market for balancing adjustment
- No import or export of electricity as this is an island system with no interconnection

