

# POWER PLANTS OVERVIEW

WITH INSTALLED CAPACITY MORE  
THAN 100 MW  
IN CZECH REPUBLIC

 **SYNECTA**®



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Renewable energy generation gradually set to become a significant energy generation source, yet power plants are still and will be important energy suppliers in almost any country. Czech republic is a prime example among many countries of such situation. Czech power plants secure 75 TWh or 87% of total generated electricity. Considering that the vast majority of the 28 plants has been built in 1960-1970s, special attention has to be placed on modernisation works in order to improve efficiency, reduce environmental footprint and hence reduce energy bill.

SYNECTA a.s. has analysed historical and current situation in regards to power plants and highlighted importance of taking considerable actions. It is estimated that there are at least one - two power plants per year are required modernisation in the next 15 years. At such scale strong and efficient long-term cooperation among industry experts is vital.

At SYNECTA a.s. we are committed to apply our expertise so to collaborate and to mutually benefit for Czech energy industry. Such activity shall not only benefit end-user energy bill, but also shall stimulate overall research & development in the area of advanced technologies applications for forthcoming power plants modernisations and repowering activities.



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In the Czech Republic the electric power is supplied through the 4 main sources:

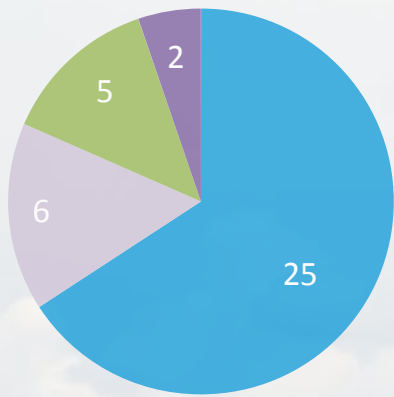
- Thermal power plants
- Nuclear power plants
- Hydroelectric power plants
- Wind and solar power plants

Thermal power plant generates the largest share of total amount of electricity - 57%. On the second place is nuclear power plants - 33%. These two kind of power plants produce 75 TWh annual with total count of 28 power plants with installed capacity more than 100 MW.

According to the fuel source coal power plants are most popular and their number amounts to 25 with total annual energy production 45 TWh. There are 2 nuclear power plants generating 30 TWh.

The graph below shows the number of power plants using a certain type of fuel:

Power plants number

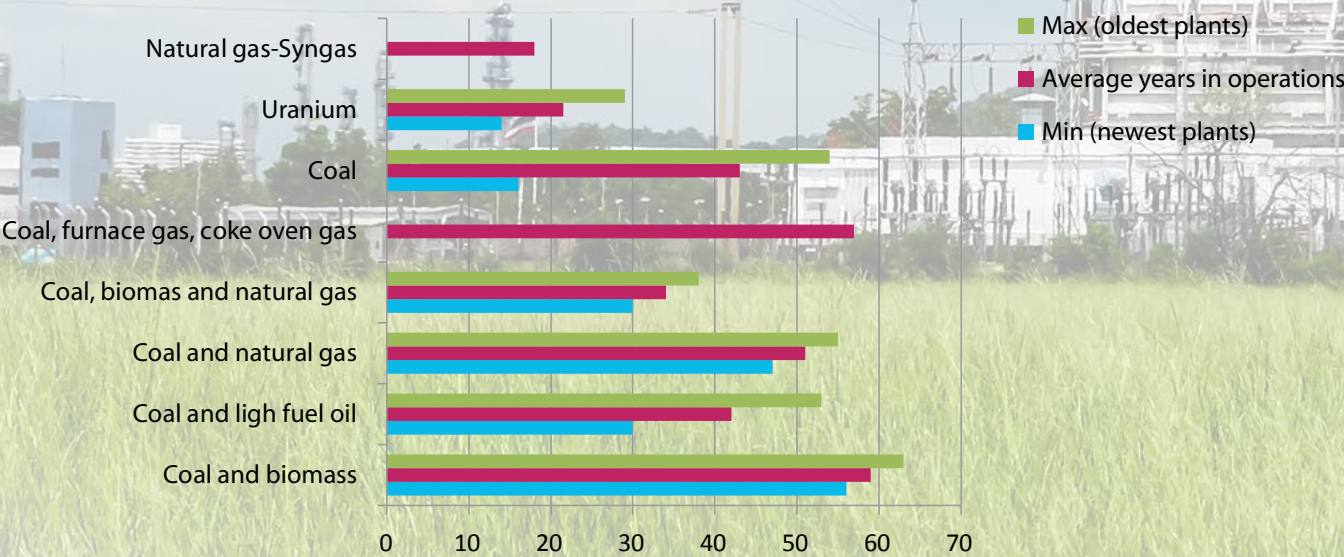


Most of power plants were built in 1960s-70s and according to the operation period they are expected to be modernized or reconstructed in the period of 2014 - 2020.

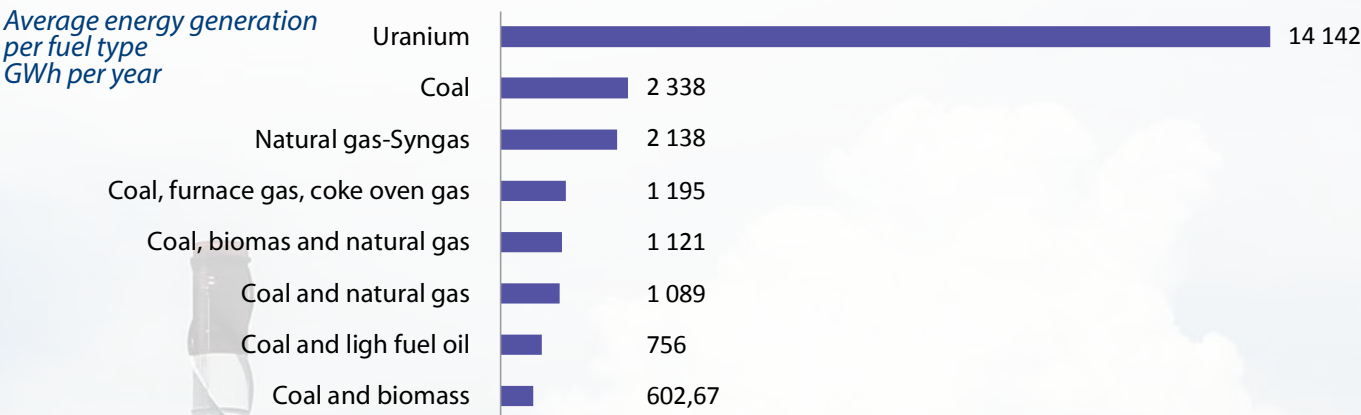
- Coal
- Biomass
- Natural gas
- Uranium

Note: Some plants operate on combined fuels.

The operating period of power plants:



Depending on the fuels combination used in the power plants the average energy generation per year could be calculated as:

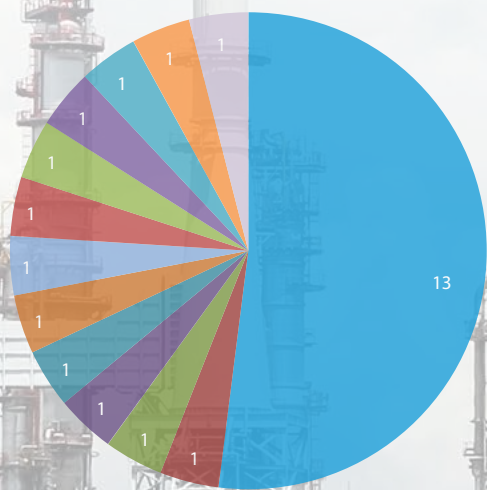


The owner of the power plants on the Czech market according to the energy source:

Uranium, two plants  
Natural gas and syngas, one plant

- ČEZ, a. s.
- Sokolovská uhelná, právní nástupce, a. s.

Coal, twenty five plants



Biomass, six plants



- ČEZ, a. s.
- Mondi Štětí, a.s.
- Plzeňská teplárenská, a.s.
- Alpiq Generation (CZ), s.r.o.

Natural gas, five plants



- Alpiq Generation (CZ), s.r.o.
- Sokolovská uhelná, právní nástupce, a. s.
- Plzeňská teplárenská, a.s.
- United Energy, a.s.



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WE CREATE VALUE-ADDED SERVICE THROUGH A WELL-THOUGHT AND EFFICIENT APPROACH WHICH WILL WORK FOR GENERATIONS



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