

Indicative values of technical and economic parameters

Water energy – hydroelectric power stations

1. Expected life of the new generating plant: 30 years.
2. Required efficiency of using the primary energy content: The efficiency of a newly installed turbine is considered at its operating optimum, at least 85% (measured on the turbine coupling), and at least 80% for retrofitted older models.
3. Unit capital expenditure and annual utilisation of the plant's installed capacity:

Total unit capital expenditure [CZK/kW _e]	Annual utilisation of installed capacity [kWh/kW _e]
< 110 000	> 3,700
< 130,000	> 4,500
< 155,000	> 5,700

Biomass energy

1. Expected life of the new generating plant: 20 years.
2. Required efficiency of using the primary energy content: Economic rational use of waste heat is expected for plants that burn biomass in electricity generation.
3. Unit capital expenditure and annual utilisation of the plant's installed capacity:

Plant description	Total unit capital expenditure [Kč/kW _e]	Annual utilisation of installed capacity [kWh/kW _e]
Dedicated biomass-fired plant	< 75,000	> 5,000
Plant firing (separately) gas produced by solid biomass gasification	< 75,000	> 5,000

Total unit capital expenditure - total unit capital expenditure related to the electrical capacity installed.

The indicative parameters of biomass energy are based on the assumption of the 2007 biomass prices, at prevailing levels matching biomass quality and quantity.

Biogas, landfill gas, sludge gas, and mine gas from closed mines

1. Expected life of a new generating plant firing landfill gas, sludge gas or mine gas: 15 years, and plants burning biogas: 20 years.
2. Required efficiency of using the primary energy content: Rational use of waste heat is expected for plants that fire biogas in electricity generation.
3. Unit capital expenditure and annual utilisation of the plant's installed capacity:

Plant description	Total unit capital expenditure [Kč/kW_e]	Annual utilisation of installed capacity [kWh/kW_e]
Landfill and sludge gas fired plants	< 50,000	> 7,000
Biogas fired plants	< 80,000	> 7,000
Biogas fired plants, including new biogas production technologies	< 120,000	> 7,500
Plants burning mine gas from closed mines	< 50,000	> 7,000

Wind energy – wind farms

1. Expected life of the new generating plant: 20 years.
2. Required efficiency of using the primary energy content: Annual average wind speed on the wind power station building site is assumed at six and more metres per second at the height of the axis of the rotor of the proposed wind power station.
3. Unit capital expenditure and annual utilisation of the plant's installed capacity:

Total unit capital expenditure [CZK/kW_e]	Annual utilisation of installed capacity [kWh/kW_e]
< 38,500	> 1,900

Geothermal energy – use of low-potential heat

1. Expected life of the new generating plant: 20 years.
2. Required efficiency of using the primary energy content: The energy potential of the geothermal energy source is assumed at least at a level permitting to continuously obtain from it, through the heat carrying medium, a minimum heat gain equivalent to 50 to 70 litres of water per second at a temperature of more than 95 °C per megawatt of the plant's installed electrical capacity.
3. Unit capital expenditure and annual use of the plant's installed capacity:

Total unit capital expenditure,	Annual utilisation of installed
--	--

including boreholes [CZK/kW_e]	capacity [kWh/kW_e]
< 275,000	> 5,700

Photovoltaic

1. Expected life of the new generating plant: 20 years.
2. Required efficiency of using the primary energy content: The design and location of the photovoltaic cells are assumed to be such as to achieve an annual generator terminals electricity generation of at least 150 kWh per square metre of the solar active surface area. Decrease of power capacity about 0,8 % per year is considered.
3. Unit capital expenditure and annual utilisation of the plant's installed capacity:

Total unit capital expenditure [CZK/kW_p]	Annual utilisation of installed peak capacity [kWh/kW_p]
<135,000	>935

kW_p expresses a unit of peak electrical output of the solar panel achievable under the particular reference conditions.