

# Residential PVT system, Prague, Czech Republic



## Project overview

Location: 50.047263°, 014.421597°

Household electricity demand: 30kwh per day

Total heating area: 150m<sup>2</sup>

PVT panels: 12 pcs EN450-36V-MH

Electricity output: 450W

Thermal output: 1210W



## Solar Calculation

Annual electricity output 5608kwh

Annual thermal output 14955kwh

Annual hot water output 498 ton

Reduced SO<sub>2</sub> remission: 168.24kg per year

Reduced carbon dioxide (CO<sub>2</sub>) remission: 5591.175kg per year

Investment: 9800 EUR

Annual profit: 5600 EUR

## Map data

<https://globalsolaratlas.info/map?c=49.372359,13.758167,7&s=50.047263,14.421597&m=site&pv=small,180,36,5>

Direct normal irradiation	DNI	1074.8	kwh/m <sup>2</sup>
Global horizontal irradiation	GHI	1182.6	kwh/m <sup>2</sup>
Diffuse horizontal irradiation	DIF	595.5	kwh/m <sup>2</sup>
Global tilted irradiation at optimum angle	GTI opta	1389.2	kwh/m <sup>2</sup>
Optimum tilt of PV modules	OPTA	37/180	°
Air temperature	TEMP	9.8	°C
Terrain elevation	ELE	328	m

## ☀️ PV system configuration



Pv system: **Small residential**

Azimuth of PV panels: **Default(180°)**

Tilt of PV panels: **Default(9°)**

Installed capacity: **5kwp**

## ☀️ Annual averages

Total photovoltaic power output and Global tilted irradiation

**5.608**

Mwh per year

**1389.2**

kw/m<sup>2</sup> per year

## ☀️ Operation diagram

