

MPPTt is a patented technology which delivers high power in solar thermal systems. The technology is only available in Surface Power solar systems and can deliver up to 7 times the kWhr production of standard solar systems per sqm of collector space installed.



MPPTt (Fast recovery of hot water cylinder using solar ONLY - after major depletion of hot water)

MPPTt in “boiler mode”, weather cloudy with breaks of sunshine.

*(Result on last slide)*

# The situation

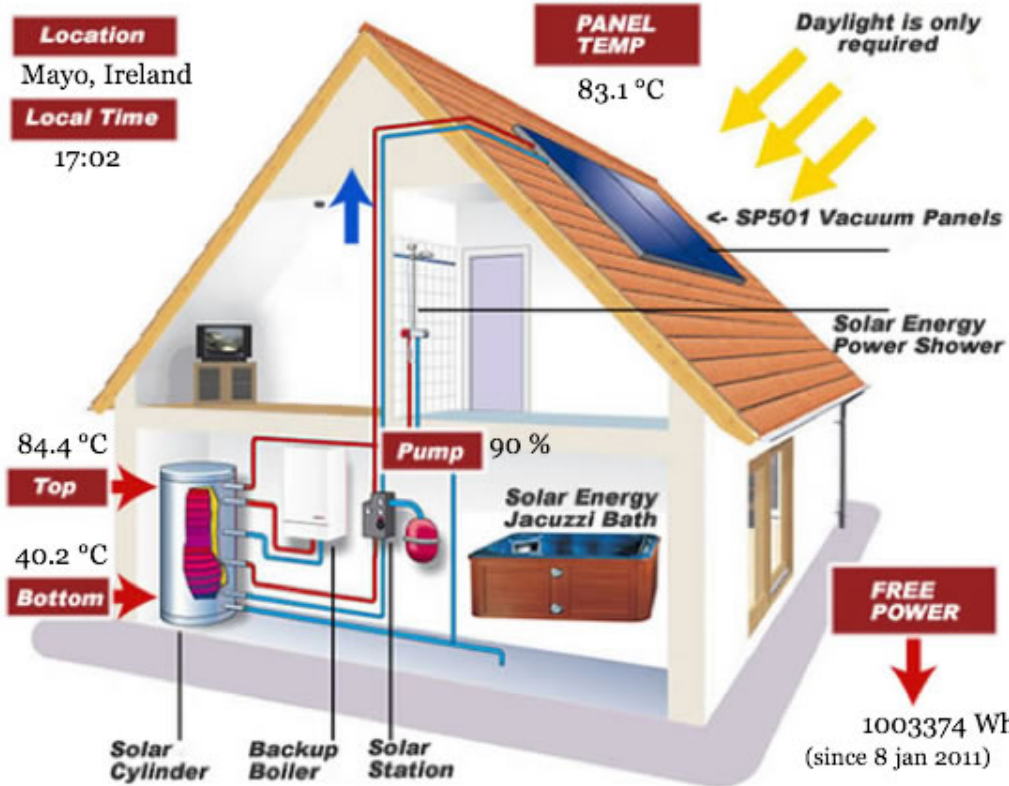
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- ❑ At 5pm, there is a major use of the water in the hot water cylinder (300L)
- ❑ The solar system goes into “boiler mode” using MPPTt to recover the cylinder as quickly as possible
- ❑ The next slides show 3 screenshots of the system taken from the SMART grid control centre
- ❑ The resultant power is displayed on the last slide



**Location**  
Mayo, Ireland

**Local Time**  
17:02



SOLAR CONTROL DASHBOARD

Solar Hot Water	Installed
Solar Central Heating	Installed
Solar Air Conditioning	NOT Installed
Solar Refrigeration	NOT Installed

Local Time	17:02	Pump Speed	90 %
Hot Water Temp	84.4 °C	PPT	Auto
Collector Temp	83.1 °C	TTY	deqiqoiz2
Cylinder Bottom	40.2 °C	Date	20110520
Solar Flow Temp	83.1 °C	Comms	Online
Solar Return Temp	47.4 °C	IP Address	Hidden
		Version	ver 3.11.5

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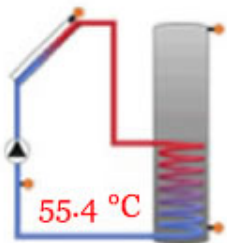
TIME

17:02

SERVICE

Pump run-time 1954404 s

Heating Temp



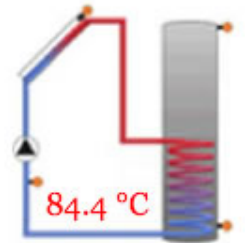
SOLAR CENTRAL HEATING

Version	ver 3.heat
Heating Temp	55.4 °C
GGY1	Ok
DMX	Ok
Pump 2	Auto
Diagnostics	Ok

SOLAR HOT WATER

Version	ver 3.11.5
Pressure	Ok
TPPT	Auto
Frost	Auto
Pump 1	Auto
Diagnostics	Ok

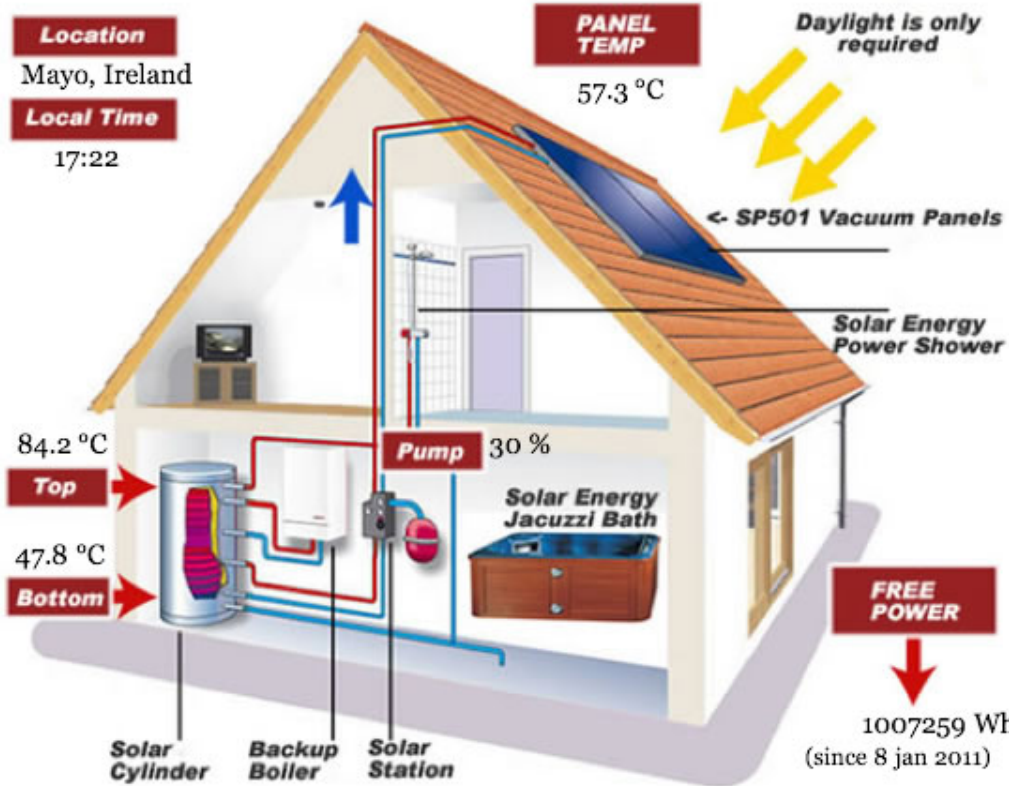
Water Temp





**Location**  
Mayo, Ireland

**Local Time**  
17:22



SOLAR CONTROL DASHBOARD

Solar Hot Water	Installed
Solar Central Heating	Installed
Solar Air Conditioning	NOT Installed
Solar Refrigeration	NOT Installed

Local Time	17:22	Pump Speed	30 %
Hot Water Temp	84.2 °C	PPT	Auto
Collector Temp	57.3 °C	TTY	deqiqoiziz
Cylinder Bottom	47.8 °C	Date	20110520
Solar Flow Temp	57.3 °C	Comms	Online
Solar Return Temp	46.2 °C	IP Address	Hidden
		Version	ver 3.11.5

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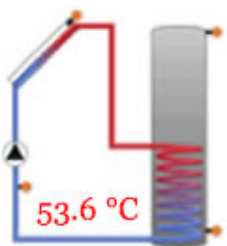
TIME

17:22

SERVICE

Pump run-time 1955592 s

Heating Temp



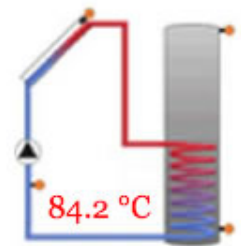
SOLAR CENTRAL HEATING

Version	ver 3.heat
Heating Temp	53.6 °C
GGY1	Ok
DMX	Ok
Pump 2	Auto
Diagnostics	Ok

SOLAR HOT WATER

Version	ver 3.11.5
Pressure	Ok
TPPT	Auto
Frost	Auto
Pump 1	Auto
Diagnostics	Ok

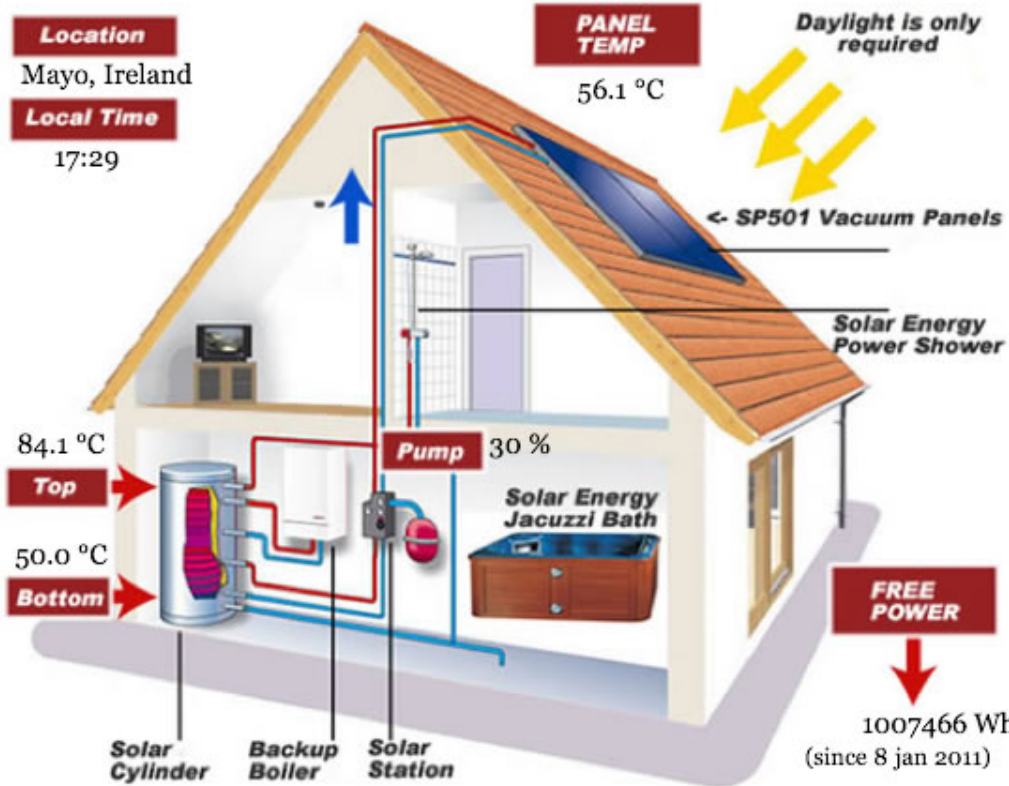
Water Temp





**Location**  
Mayo, Ireland

**Local Time**  
17:29



SOLAR CONTROL DASHBOARD

Solar Hot Water	Installed
Solar Central Heating	Installed
Solar Air Conditioning	NOT Installed
Solar Refrigeration	NOT Installed

Local Time	17:29	Pump Speed	30 %
Hot Water Temp	84.1 °C	PPT	Auto
Collector Temp	56.1 °C	TTY	deqiqoiziz
Cylinder Bottom	50.0 °C	Date	20110520
Solar Flow Temp	56.1 °C	Comms	Online
Solar Return Temp	46.6 °C	IP Address	Hidden
		Version	ver 3.11.5

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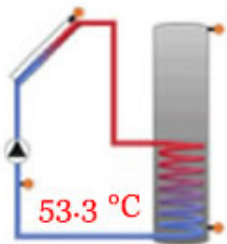
TIME

17:29

SERVICE

Pump run-time 1955986 s

Heating Temp



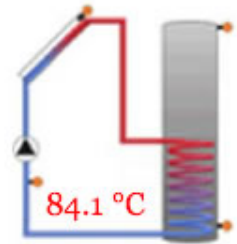
SOLAR CENTRAL HEATING

Version	ver 3.heat
Heating Temp	53.3 °C
GGY1	Ok
DMX	Ok
Pump 2	Auto
Diagnostics	Ok

SOLAR HOT WATER

Version	ver 3.11.5
Pressure	Ok
TPPT	Auto
Frost	Auto
Pump 1	Auto
Diagnostics	Ok

Water Temp



# The Maths

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- ❑ Starting 17:02 @ 1,003,374 Whrs
- ❑ Finishing 17:29 @ 1,007,466 Whrs
- ❑ **Total energy in 27 minutes @ 4,092 Whrs**
  
- ❑ **Solar System (domestic) operating at the equivalent power of a **18 KW** oil boiler\***
  
- ❑ This system is less than 4 flat plates in size and is a FULL YEAR system and assumes a boiler efficiency of 50%.

# Proof NOT Promises

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- Total energy in 27 minutes @ 4,092 Whrs**
- In this example, the above solar power was produced in 27 minutes.**
- Legacy domestic solar systems MAY NOT even produce that much energy in a whole day.**



**Data gathered from our SMART grid command centre and published with kind permission of the householder**