Parameter description

Parameter	Unit	Description
hq_imp	kW	Imported power from the grid
hq_exp	kW	Exported power to the grid
cons	kW	Total electricity consumption: cns = prod + hq_imp – hq_exp
prod	kW	Electricity production from roof-top PV panels
net	kW	Net imported power (net = cons - prod)
T_slab	C	Average concrete slab temperature
heating_total	kW	Total heating (thermal) energy
cooling_total	kW	Total cooling (thermal) energy
T_ext	C	Outside temperature
T_int	C	Setpoint for indoor air temperature
T_int	C	Average indoor air temperature
T_diff	C	Temperature difference (T_diff = T_in - T_ext)
cons_noheating	kW	Plug loads electricity without heating load.
DNI	W/m2	Direct normal irradiance
GHI	W/m2	Global horizontal irradiance
DHI	W/m2	Diffused horizontal irradiance
light_cons	kW	Electric power used by lighting

Notes:

- hq_imp kW and hq_exp: During most 15 min period, one of the two quantities is zero. For some periods, however, both import and export can occur.
- heating_total and cooling_total: Heating and cooling are provided through heat pumps. The heat pumps employ water from geothermal boreholes for heating or cooling the supply air (fan coils) and the water in the hydronic system. The average COP is 4.0 for heating and 5.0 for cooling.
- There are some data points missing (unavailable) in the summer data file. These missing data points are presented as, if the csv file is opened in Excel, empty cells.

How to use interactive plot.

Download the compressed file “Varennes library data - plot.zip” and uncompress the zip file. Open the HTML file to view and interact with the plot.

Floating toolbar

Very useful toolbar. Hover mouse pointer over any icon to show its functions. The last but second icon allows you to display values of all lines while you move mouse in the plot area.

Select parameter by legends

- Click a legend to toggle visibility of the correspond line in plot area. (Click once to hide, click on it again to show)

- Double click (requires really fast clicking) a legend to toggle linve visibility of all the otehr lines. For example, if all lines are shown, double click a legend with hide all lines except the one being double clicked on.

Zoom and pan by mouse in the plot area and by range selectors

- While clicking down on the mouse within the plot area, and drag the mouse outline zoom area, release mouse to *zoom in*. You may need to click on the Zoom icon on the top right plot menu bar.

- Click mouse down and move mouse horizontally to zoom in on X-axis, vertically for Y-axis.

- Hold down [Shift] button, then click down left mouse button and move mouse to *pan*.

- Change X-axis range by click the x-axis range selectors, above left side of plot area, look like small button with '1d', '3d', '1m', etc. written on them.

Zoom and pan at X and Y axis

- Mouse point just outside the X or Y axis, hover mouse on slight below or to left of axis till mouse pointer becomes <->

-- Hold down mouse, at one end of the axis, move mouse to change axis range

-- Holve down left mouse button, at middle of on axis, move moust to *Pan* plot

-- Double click (must be really fast) left mouse button to zoom axis to full extend

-- Pan and zoom by hovering mouse at four corner of the plot area, press down and move mouse.