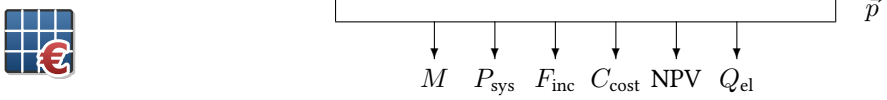
Block PVECON

The PVECON block calculates the cost annuity of a grid-connected PV generator.



Name	PVECON
Function	se0030
Inputs	9
Outputs	6
Parameters	19
Strings	0
Group	T

Inputs

1 Year
2 Month of the year
3 Produced electrical energy per month Q_{el} / kWh per month
4 Costs of installed modules / Euro
5 Costs of installed inverters / Euro
6 Costs of installed cables / Euro
7 Other system costs / Euro
8 Installation costs / Euro
9 Annual module degradation / percent

Outputs

1 Month of the year
2 Credit rest value P_{sys} / Euro
3 Monthly income F_{inc} / Euro per month
4 Monthly costs C_{cost} / Euro per month
5 Net present value NPV / Euro
6 Produced electrical energy per month Q_{el} / kWh per month
7 Total electricity price / Euro per kWh

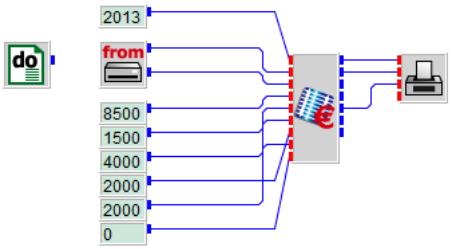
Parameters

1 Hourly rate of installer for inverter exchange $P_{\text{ex,inv}}$ / Euro per hour
2 Installation time inverter exchange $t_{\text{ex,inv}}$ / hours
3 Lifetime of inverters t_{life} /years
4 Mean time to repair module / hours
5 Hourly rate for maintenance $P_{\text{maint,h}}$ / Euro per hour
6 Mean time between module failures / years
7 Recycling costs for all installed inverters $P_{\text{recy,in}}$ / Euro
8 Recycling costs of the whole PV system including deinstallation $P_{\text{recy,PVSyst}}$ / Euro
9 Credit interest rate (lending rate) d / percent
10 Inflation rate d / percent
11 Feed in tarif F_1 / Euro per kWh
12 Lifetime of the PV modules N / years
13 Term of special feed in tariff t / years
14 Feed in tariff after term of special tariff F_2 / Euro per kWh
15 Market discount rate (account credit interest) / percent
16 Mean time to repair inverter / hours
17 Mean time between inverter failures / years
18 Maintenance time to repair inverter failure / hours
19 Maintenance time to repair module failure / hours

Strings

None

pvecon.vseit



A file named `pvecon.dat` located in the `examples/data` directory is read by a READ block. The file contains twelve monthly yield data of a simulated PV generator. A DO block ensures that the twelve values are read. All other inputs of the PVECON block are set constant.

A PLOT block displays twenty years of monthly data for the credit rest value and the net present value in Euro.

