

SIMULATION TECHNOLOGY
GROUP



ESTONIAN SOCIETY
OF HEATING AND
VENTILATION ENGINEERS

PV Simulation options

An IDA ICE 5 demo



17 December 2024

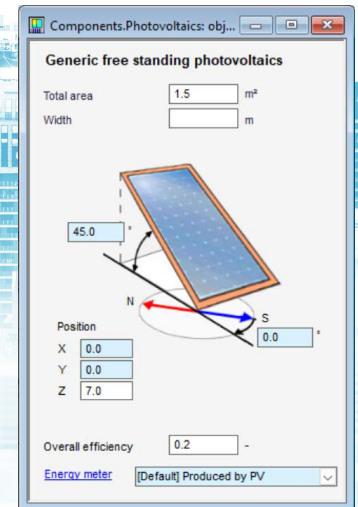
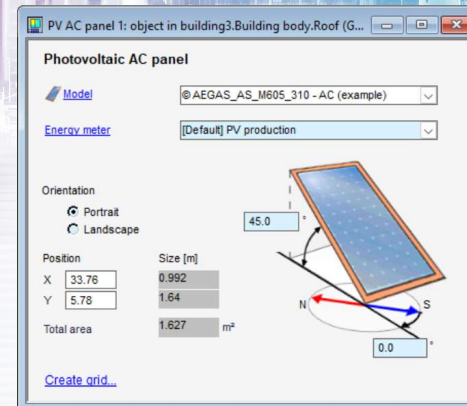
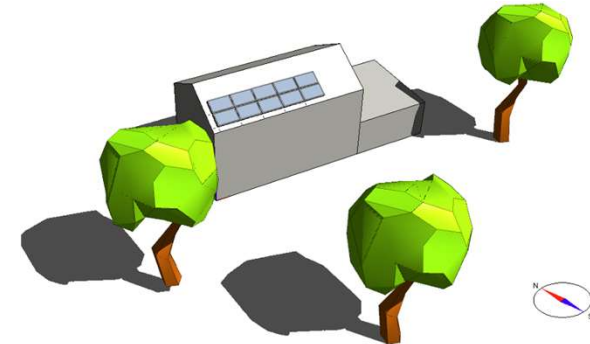
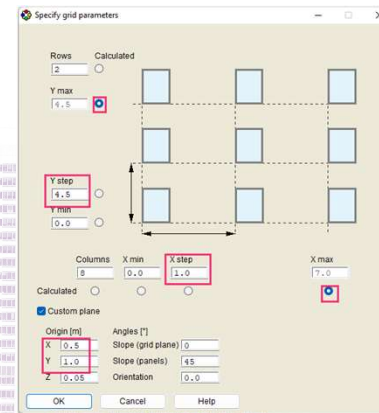
Tallinn, TalTech

Toni Pölönen

EQUA Simulation Finland Oy

PV Simulation options

1. Generic free standing photovoltaics
2. AC PV free standing panel (with inverter)
3. PV AC Panel
4. PV DC Panel
 - Strings, string inverters and MPPT “optimizer”
- PV dimensioning and analysis:
 - Results from simulation
 - Insolation (5.1.1 Beta)
 - Realized electricity consumption



$$\text{power kW} = \text{efficiency} \cdot \text{area m}^2$$
$$0.3 \text{ kW} = 0.2 \cdot 1.5 \text{ m}^2$$