SOFTWARE FOR DESIGN OF PHOTOVOLTAIC SYSTEMS

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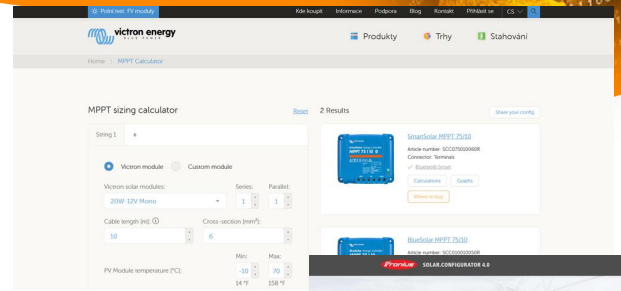
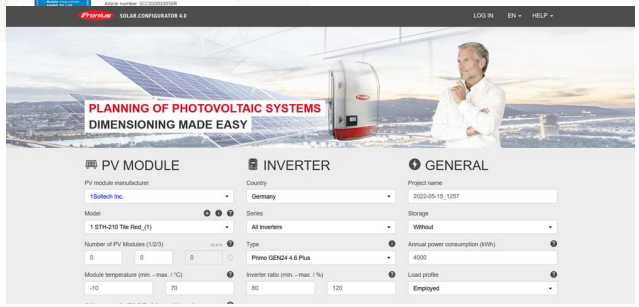
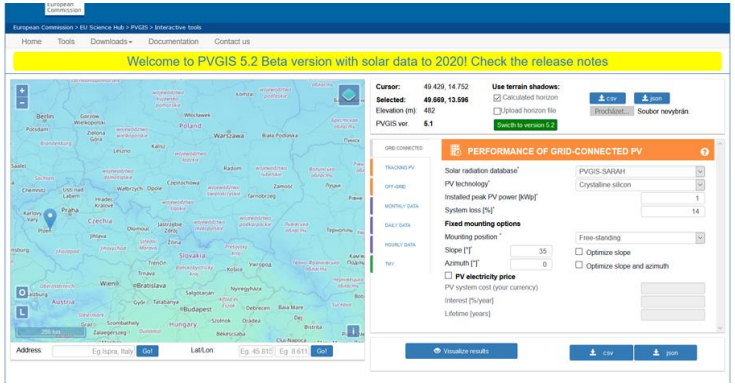
PV software overview

- Victron MPPT Calculator
- Fronius Solar Configurator

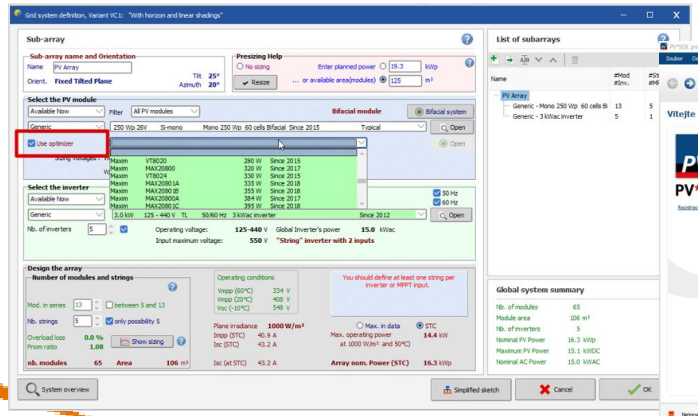


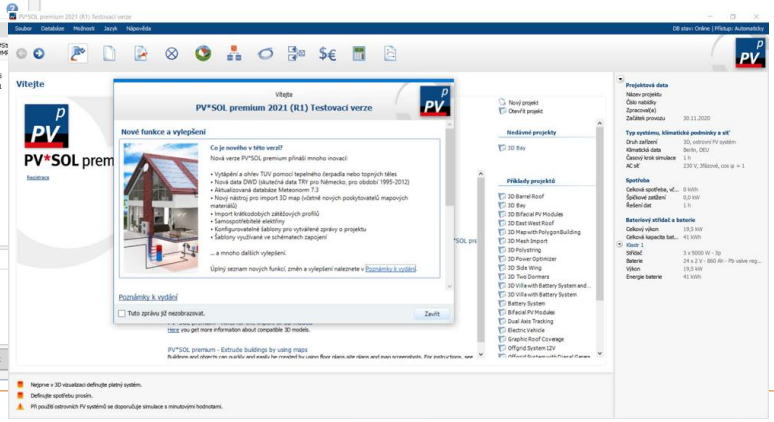


- PV GIS

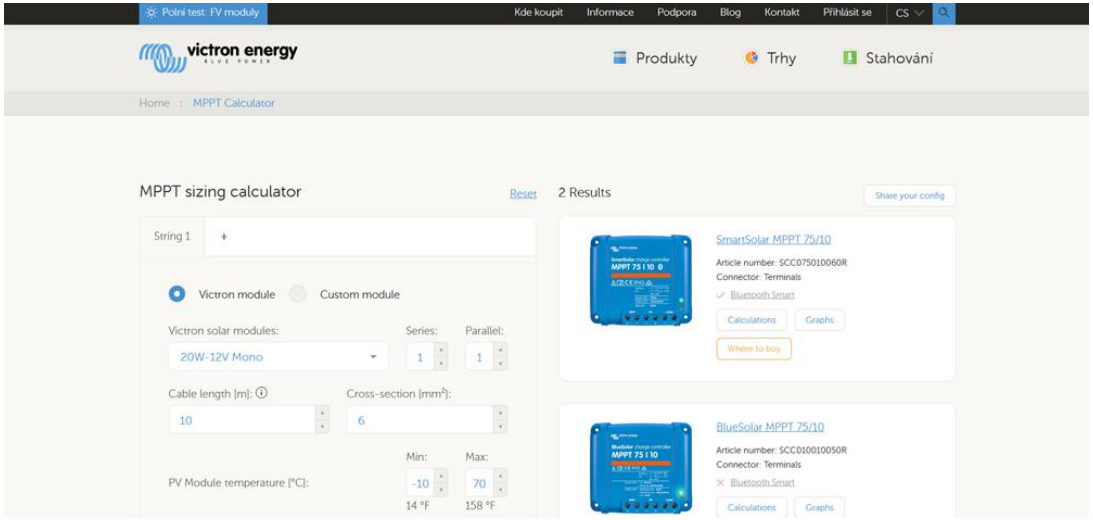


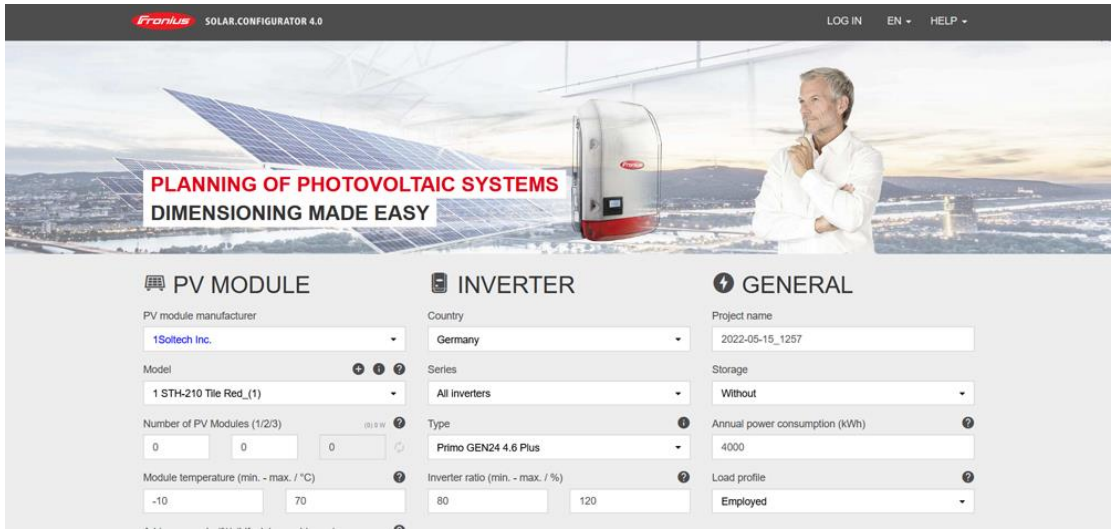
- PV Syst
- PV Sol



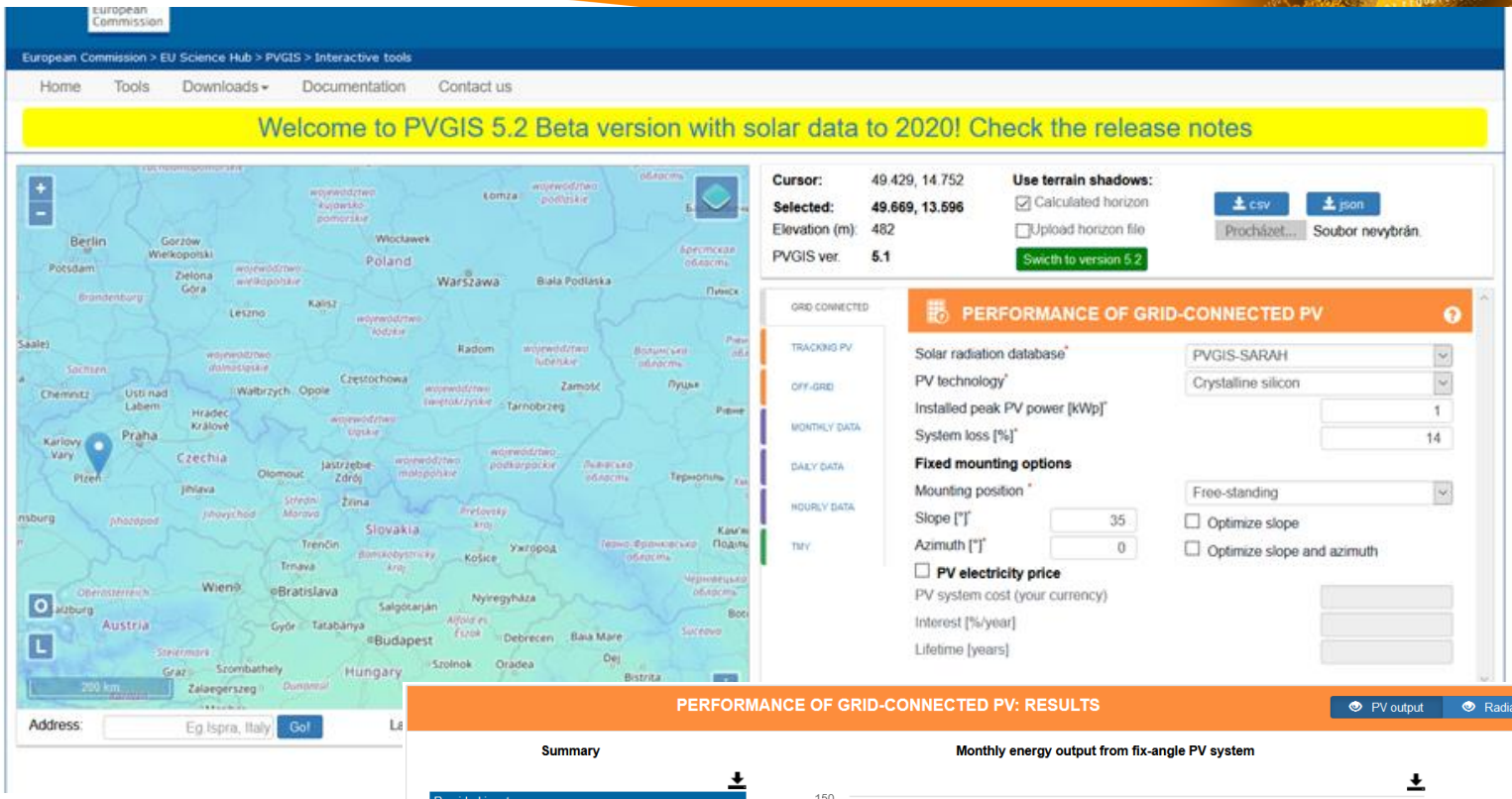


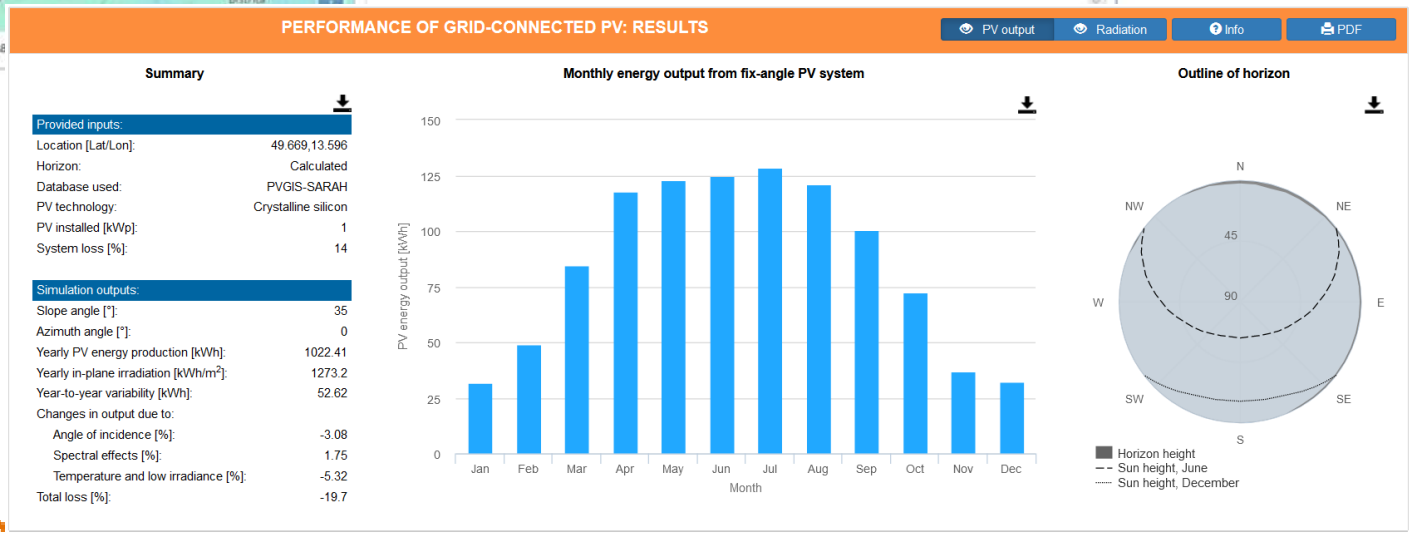
Victron MPPT Calculator
Fronius Solar Configurator



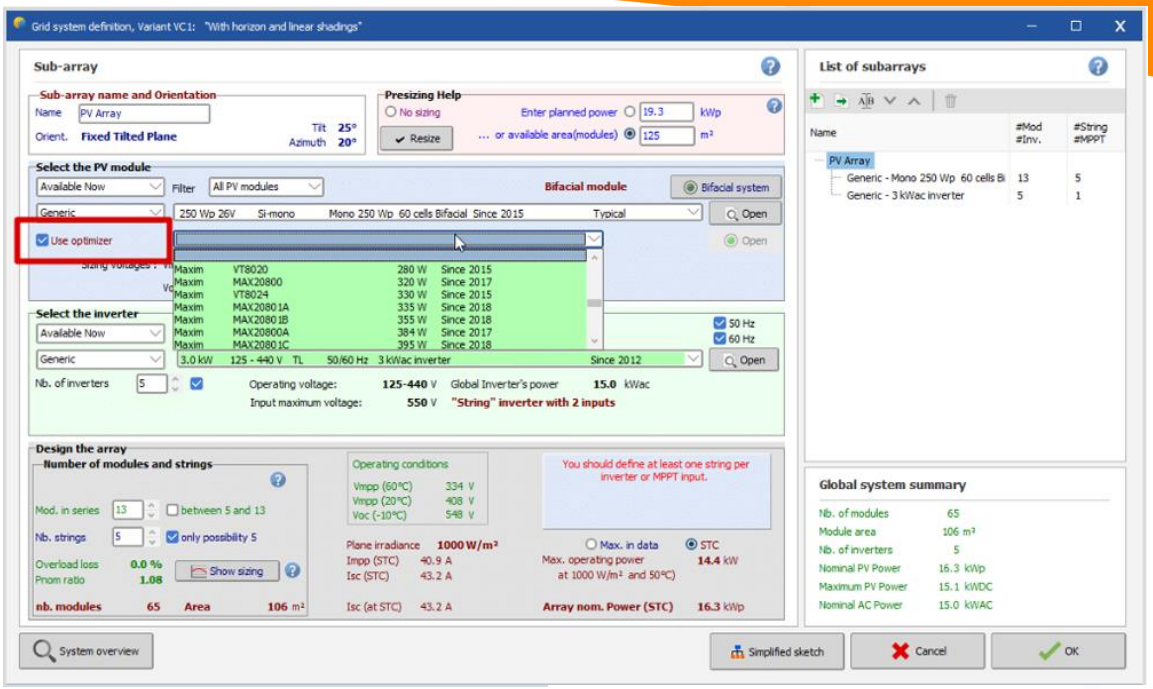


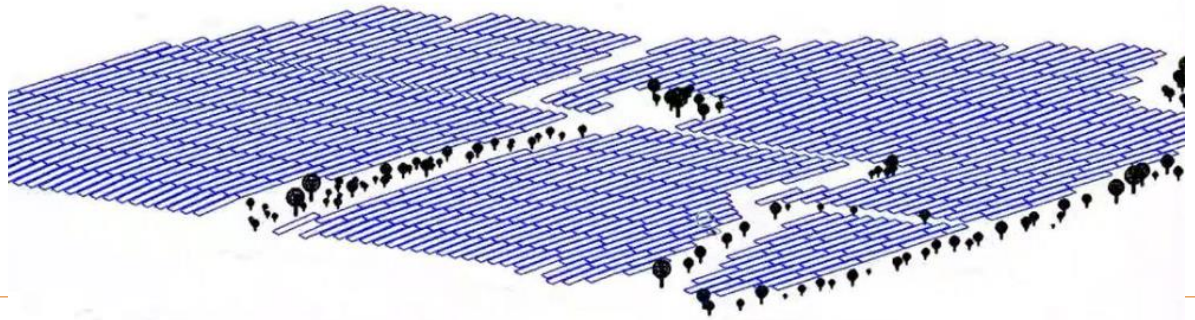
PV GIS online tool



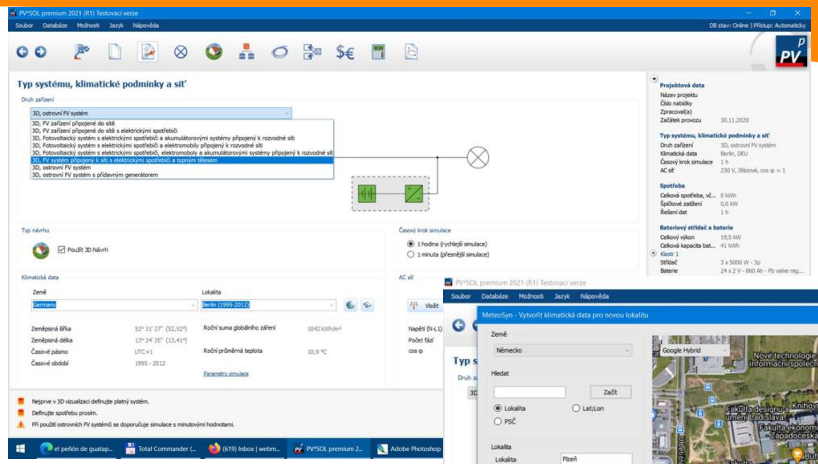


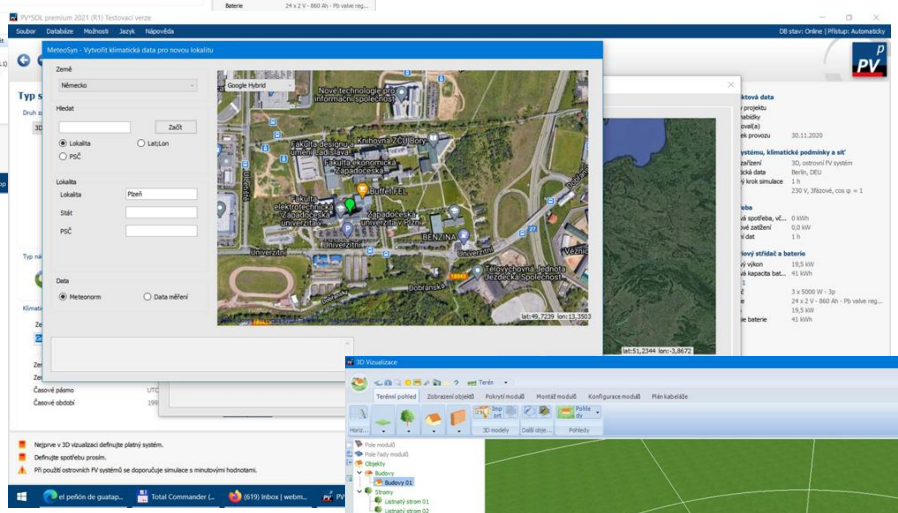
PV Syst designer

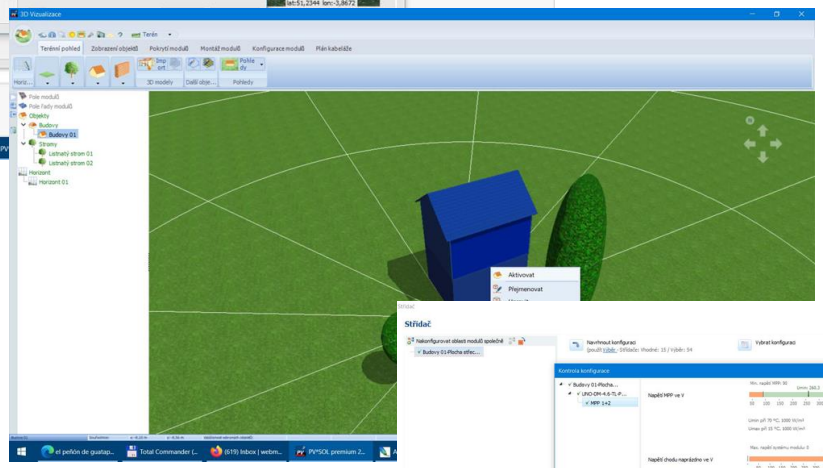


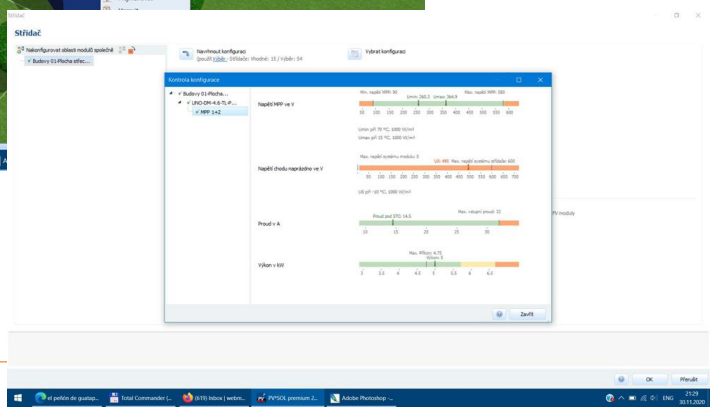


PV Sol Premium designer

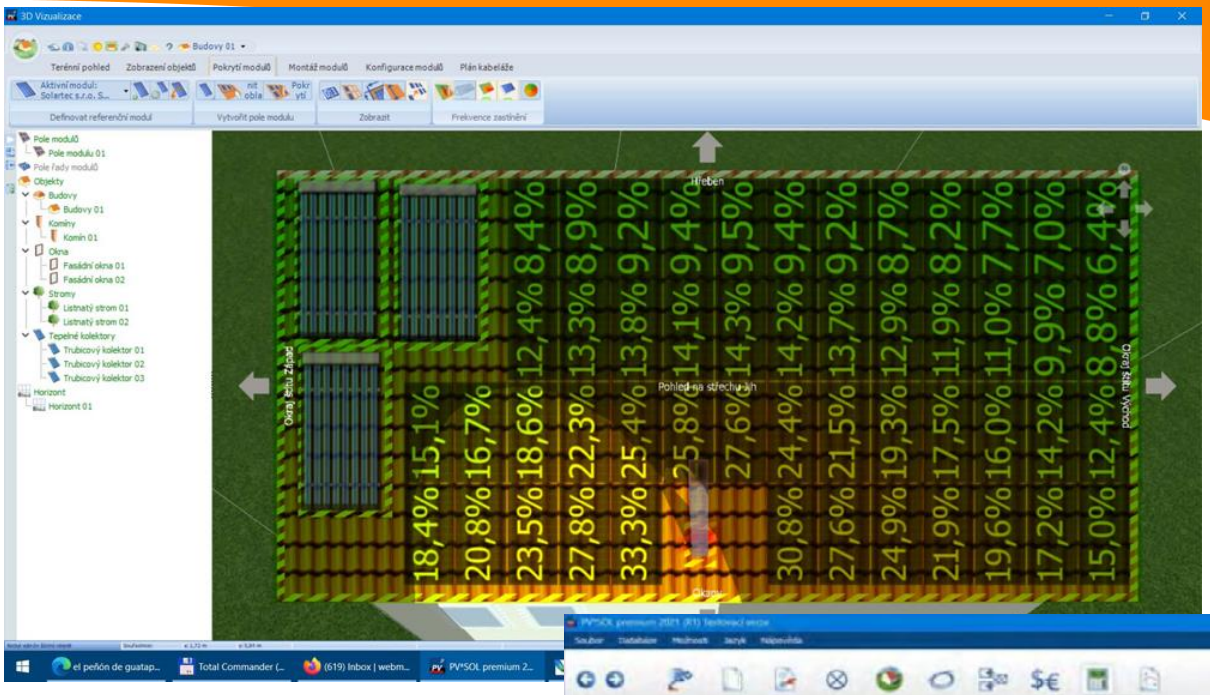


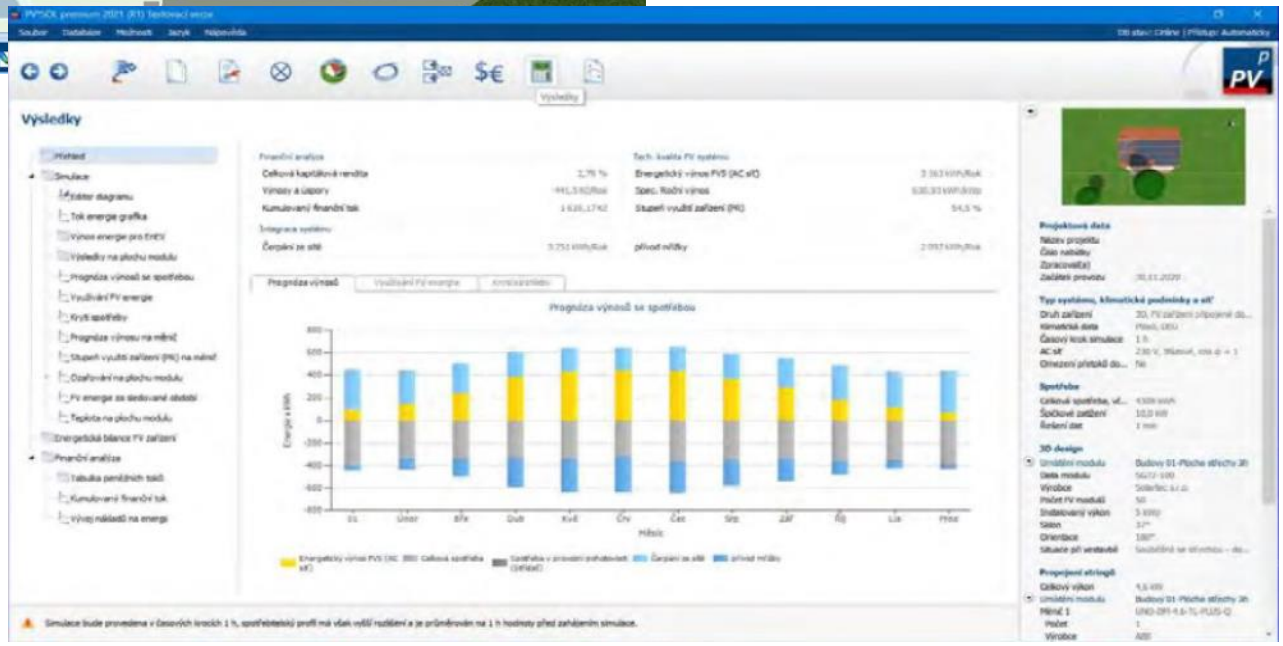




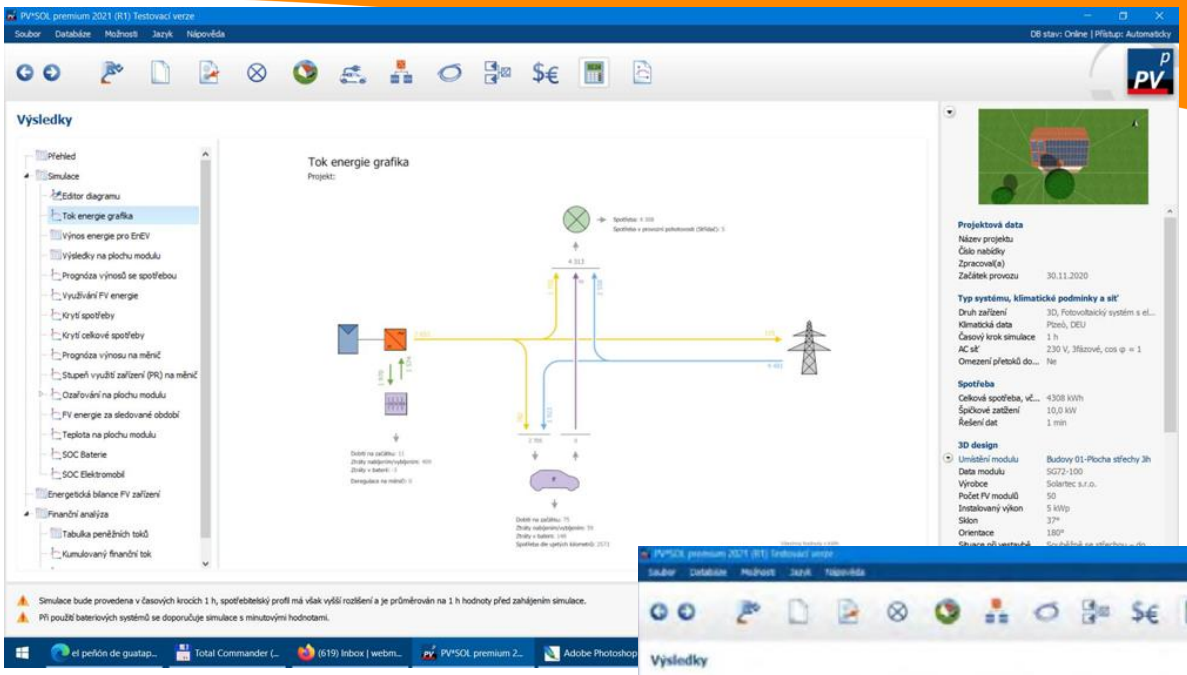


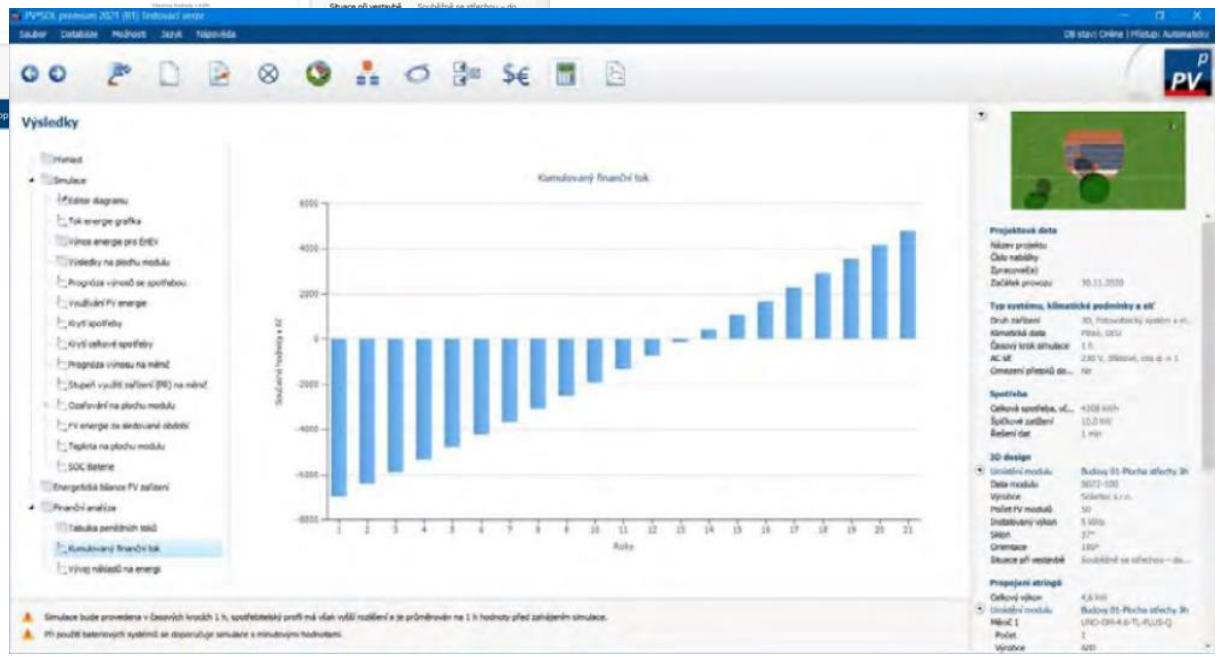
Shading, energy balance, ...





Energy chart, cash flow, ...





Conclusions

- Presented software for PV systems design give the accuracy around 6% if compared to real measured values in long term period as verified on measurements on experimental 20 kWp PV system installed on the UWB building in Pilsen.
- These results are for 2-3% better than results of similar simulations performed with software around 2010.

Energy [kWh/m$^{2/}$y]			Measured	PV Designer	PV GIS	PV Syst	PV Sol
2010	California 78,4 kW	I[kWh/m$^{2/}$y]	2178,6	1984,6	1981,2	1977,3	1911,8
		dI[%]	-	-8,91	-8,92	-9,22	-12,2
		E[kWhy]	123,1	118,5	119,9	119,8	114,7
		dE[%]	-	-3,7	-2,5	-2,6	-3,7
	California 481,5 kW	E[kWh/m$^{2/}$y]	2037,6	1918,3	1956,4	1944,1	1855,7
		dI[%]	-	-5,9	-4,0	-4,6	-8,9
		E[kWh$^{/}$y]	849,2	719,6	777,3	779,1	759,3
		dE[%]	-	-15,2	-8,5	-8,2	-10,8
2022	Czechia 20 kW	E[kWh/m$^{2/}$y]	1356,1		1299,2	1311,7	1317,4
		dI[%]	-	-	-4,2	-3,1	-3,2
		E[kWh/y]	681,3	-	631,2	644,5	649,2
		dE[%]	-	-	-7,3	-5,3	-5,1

Thank you for your attention!

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