

PHOTOVOLTAIC EQUIPMENT FOR SMALL ARCHITECTURE

PHOTOVOLTAIC BUS STOP

Stops form integral units of the public transport system infrastructure, passenger waiting areas where buses stop to allow people to board or get off. Bus stops are good sites where photovoltaic panels can be installed as canopies and outer walls, the solar power generating surfaces sheltering the awaiting passengers from rain, snow and wind. Bus stops are built from a variety of materials: often aluminium or steel, as required by in-service and aesthetic demands. A perfect solution for bus stops is a system of no-frame glass-to-glass PV panels, either transparent or made with tinted glass.

SMART PARK BENCHES

Benches are small architectural objects designed for us to rest on. An innovative solution in their design are photovoltaic panels installed as bench canopies. Electricity is generated across the canopy top surface and can be used to heat the bench seat, power LED lamps, and feed the local surveillance cameras, mobile device chargers or WiFi hot spots. Hence park benches can run autonomously or can be powered from a 230 V grid. Benches are most often made of wood to harmonise with the environment; however, as

our civilization progresses and advancements encroach then other acceptable materials are used, including aluminium and steel. The bench canopies are built with no-frame glass-to-glass PV panels, either transparent or made with tinted glass.

BICYCLE PORTS

The hype this year in Europe are city bikes for hire, solving the problems of traffic jams for many. City bike rental stations have been popping up around cities: automated bike ports where bikes are collected and returned, and special bike stands have even appeared in many stores, malls, office buildings and schools. Photovoltaic bicycle ports protect the bikes from rain and snow, and generate power at the same time, hence contributing to environmental protection. The structural materials used for bicycle ports include aluminium, glass, steel, and wood. The port canopies can be built with no-frame glass-to-glass PV panels, either transparent or with tinted glass.

The power generated by the PV modules can support LED lamps, mobile phone chargers, WiFi hot spots, seat heating, or electric bike chargers.

System technical specifications

Unit power	max. 185 Wp/m ²
PV cell efficiency	max. 22.5%
Max. operating voltage	1000 V DC
Capacity	standalone operation
	mobile device recharging
	WiFi
	surveillance
Module types	Monocrystalline, incl. back-contact
	Polycrystalline
	Transparent
Optional	Seat heating
	NoFrost
	Side glazing heating
	Lighting

Width	as required
Height	as required
Length	as required
Glazing colours	Full RAL palette
Materials	Galvanized steel
	Stainless steel
	Aluminium
	Wood
Structure colour	See RAL palette
Module thickness	3 to 22 mm



Concept / PV bus stop



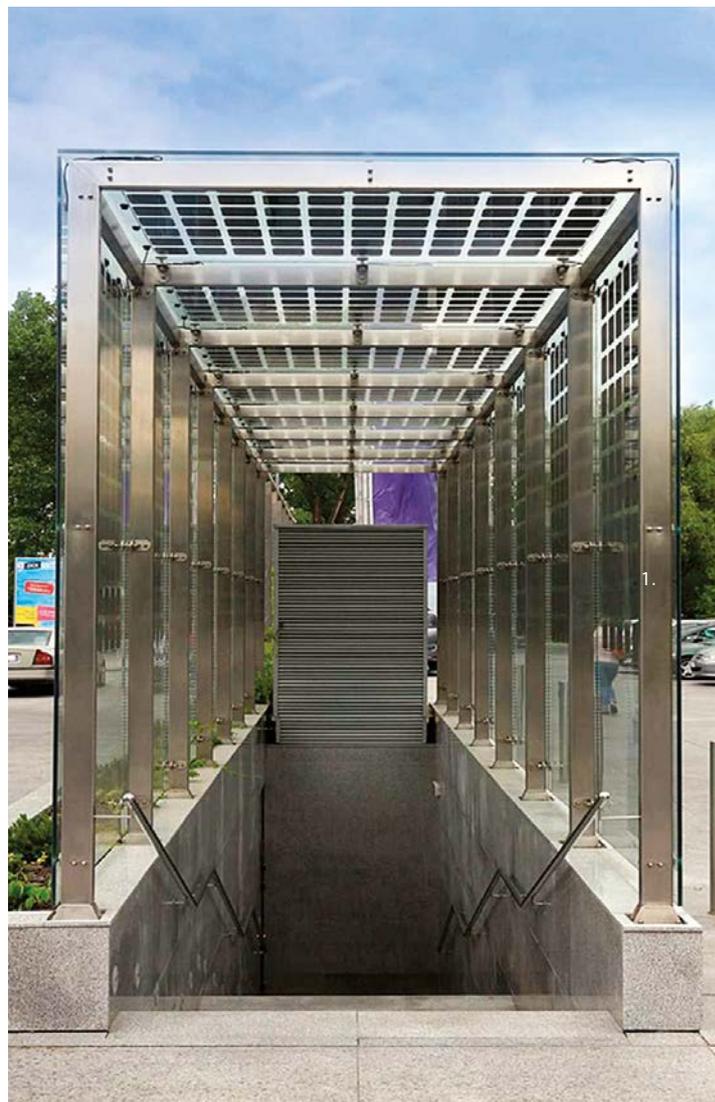
Concept / PV bus stop



Concept / PV Smart Bench with mobile device charger



Concept / Positive energy PV-enabled public convenience



Rzeszów / Rzeszów Philharmonic