

ORGANIZATION / INITIATIVE LEAD

Over Easy Solar AS — Norwegian company specialised in pre-manufactured vertical solar units, with the mission of enabling more solar installations on flat and green roofs.

TECHNICAL SOLUTION NAME

VPV Unit — Prefabricated Vertical Photovoltaic System for Flat and Green Roofs

HIGHLIGHT TITLE

The world's first fully prefabricated vertical solar unit, bringing clean energy to flat and green roofs that conventional panels cannot serve.

SHORT DESCRIPTION

Over Easy Solar develops the world's first fully prefabricated vertical solar solution: the VPV Unit, a lightweight bifacial solar panel system with no ballast and ultra-fast installation, specifically designed for flat roofs and green roofs. Its proposal allows solar energy to be installed on buildings where conventional systems are not viable due to structural, wind or maintenance limitations.

EXTENDED DESCRIPTION

Solar is the cheapest source of new electricity, yet many flat and green roofs cannot host conventional panels. Ballast-based systems can be too heavy for existing buildings, roof penetrations can create leakage and warranty risks, and standard arrays are often incompatible with vegetated or reflective surfaces. As a result, large areas of urban rooftop remain unavailable for renewable generation.

Over Easy Solar addresses this with the VPV Unit: a prefabricated module with bifacial panels installed vertically. Each unit arrives fully assembled, with the panel, mounting structure and cabling integrated, and is simply placed on the roof. It requires no ballast or roof penetration, weighs about 12 kg/m², roughly half a conventional system, and can be installed in around 15 minutes per kWp, up to 10× faster than traditional rooftop solar.

The vertical bifacial configuration captures light on both sides and produces a different daily and seasonal profile, with stronger morning, evening and winter output. The structure is certified to withstand wind speeds up to 47 m/s, while independent testing has shown significantly reduced fire spread compared with conventional PV. Fully prefabricated units also simplify transport and logistics. Because installation is plug-and-play and non-permanent, systems can be dismantled and redeployed while keeping the roof accessible for maintenance. Over Easy Solar works with installers, EPCs and green-roof partners, including a European distribution partnership with Sempergreen, across Europe, North America and Asia-Pacific.

By unlocking rooftops previously excluded from solar, the VPV Unit expands distributed renewable generation without structural reinforcement and can combine particularly well with green roofs. With a product roadmap targeting up to 50% lower production costs by 2028, Over Easy Solar aims to move the solution from a niche application towards a mainstream rooftop option.



DEMONSTRATED METRICS

- Installation up to 10× faster than conventional systems (≈ 15 min/kWp)
- Ultralight weight: ≈ 12 kg/m², suitable for roofs with structural limitations (Tromsøterminalen measured ≈ 11 kg/m²)
- No ballast or fixings required, thanks to its wind-resistant design
- Certified resistance up to 47 m/s in wind-tunnel testing
- Fully prefabricated units, with pre-assembled panels, structure and wiring
- 27–33 units per pallet, optimising logistics and transport
- World record: largest vertical solar installation on a roof — Tromsøterminalen, Tromsø, Norway (1,600 VPV units / 6,400 panels / 320 kWp / 2,670 m², Sept 2025)

REAL IMPACT

The VPV Unit allows solar energy to be installed on buildings that previously could not accommodate panels, increases winter production thanks to the vertical bifacial orientation, and reduces impact on green roofs by maintaining the vegetation and stormwater retention. It minimises maintenance and avoids typical problems of inclined panels (dirt, weeds, snow accumulation), accelerating the urban energy transition through a plug-and-play solution.

Co-benefits span the environmental (green-roof integration, lower structural impact, higher winter yield), economic (fast installation, lower construction cost, capacity expansion without changing inverters), social (improved energy self-sufficiency of public and private buildings) and technological (patented design, advanced prefabrication, integrated wiring) dimensions.

Trade-off: lower output in summer versus tilted panels, and a vertical aesthetic that may not suit every project.

IMPLEMENTATION LOCATION & DATE

Over 50 installations deployed internationally (over 1.4 MW across 13 countries), including Tromsøterminalen (Tromsø, Norway) — current world record for the largest vertical rooftop solar installation — and Ullevaal Stadion (Oslo) — previous record (Aug 2024). Vertical rooftop PV also debuted in the U.S. in 2026. The company has operated since the early 2020s, scaling across Europe, North America and Asia-Pacific.

TECH LEVEL High Tech

COST OF THE SOLUTION

MEDIUM. Much of the cost shifts into manufacturing, while installation is substantially cheaper.

MITIGATION / ADAPTATION

Mitigation

MAIN CATEGORY

Primary: Energy & Environment
Secondary: Infrastructure & Building

BASE INFORMATION SOURCES

- [Over Easy Solar \(official\)](#)