

HELIOS **VOLT**<sup>®</sup>

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HELIOS VOLT<sup>®</sup><sub>FS</sub>

HELIOS VOLT<sup>®</sup><sub>MSR</sub>

HELIOS VOLT<sup>®</sup><sub>PF</sub>

# HELIOS VOLT®

**An easily installed modular bifacial PV system for commercial properties to self-generate green and sustainable energy.**

Helios Volt® is a solar PV power system that has been specifically designed to integrate easily into existing urban surface parking assets. The customer simply purchases our technology from us allowing them to generate their own electricity.



**SHOPPING CENTRES**



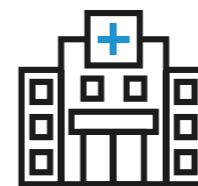
**SUPERMARKETS**



**CARPARKS**



**FACTORIES**



**HEALTHCARE FACILITIES**



**HOSPITALITY AND ENTERTAINMENT VENUES**



**AVIATION HUBS**



# How Helios Volt® Works

 **Drop-in Self Ballasted Canopy Framework**

 **Factory assembled Bi-facial PV cassettes**

 **Microgrid Controller with state-of-the-art Lithium-Ion battery storage**

 **EV Charging Consoles**

 **Digital Advertising Displays for targeted marketing**

## DEVELOPED AND DESIGNED IN THE UK

Helios Volt® is a UK based success story in the making, with our first factory in the UK and another planned in 2024 located in Galbravo Bulgaria covering Southern and Eastern Europe. We assemble modular Bifacial PV arrays using leading edge PV Technology, transported to site assembled and tested, ready to bolt on to the canopy structure as a plug and play device.

CrowdHouse Energy has a combined 60+ years of expertise in the construction and energy sectors, having identified a gap in the renewables marketplace for megawatt scale onsite renewable energy generation (OREG).

With a particular emphasis on non-subsidised, business case adoption, we set about our 3 year development journey.

Using past experiences, we knew improving project delivery times is a key component to cost reduction, added to our commitment to “power up” power up is simply utilising leading edge technology to provide the most powerful outcome for our clients.

Helios Volt® was conceived with three unique variants.



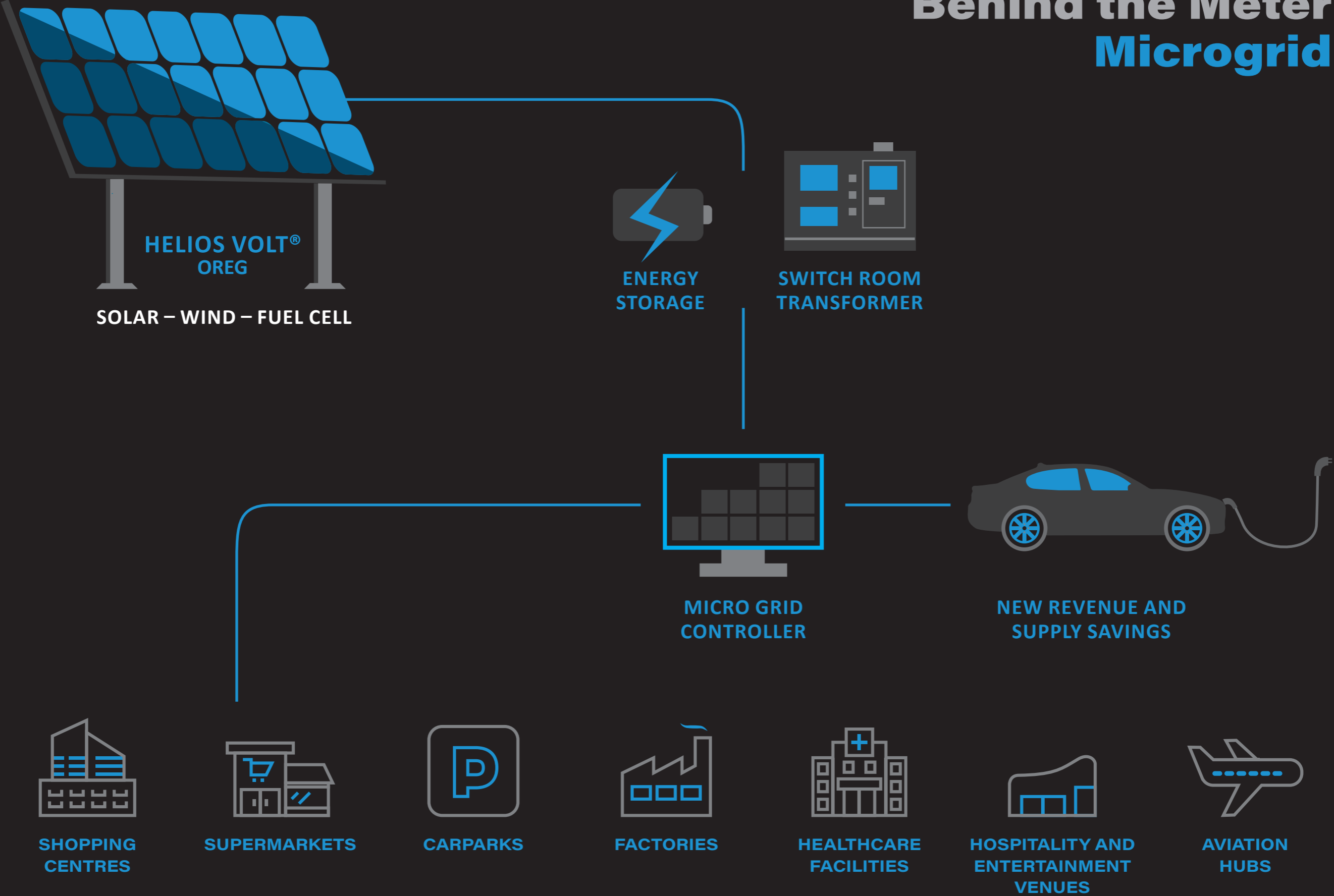




"fast track to grid connected OREG"  
POWERING A NET ZERO FUTURE



# Behind the Meter Microgrid





The Helios Volt FS<sup>®</sup> (freestanding) is a demountable mono pitch canopy structure that is partially assembled offsite and landed into position. The main structural elements are formed of steel with a self-ballasted concrete base and adorned with cassettes (Volt) of high output bifacial solar PV panels

Key Features:

- » High Output
- » 30 year + lifespan
- » Fast Deployment
- » Demountable and Re-usable Structure
- » Minimal Civils Works Reduces Disruption to Existing Infrastructure

**HELIOS VOLT<sup>®</sup> Single Bay Technical Data – 4 Parking Bays Mono Tilt**

PV Panel Size	2384 x 1303 x 35 mm
Panel Arrangement Landscape	2 rows of 8
Number of Panels	16
Angle of Tilt	15°
Pass Height	(Low) 2.4m (High) 3.4m
Canopy Area Footprint	10.8m x 4.9m (52.8m <sup>2</sup> )
Parking Space Width	2.5m
Structure Colour	Steel Galvanised Unpainted Top of Canopy RAL 9011 Graphite Black Under Canopy RAL 7036 Light Grey

**HELIOS VOLT<sup>®</sup> Energy Output Bifacial PV Cassettes**

Single 4 Bay Canopy	11.36 kW
Bifaciality at 20%	Energy output 13.96 MWh
Scope 2 emissions avoided	2.69 t/co <sub>2</sub> e

**Warranties**

Performance	30 Year Linear Power Warranty <sup>1</sup>
Product	30 Year Workmanship Warranty

**HELIOS VOLT<sup>®</sup> Double Bay Technical Data – 8 Parking Bays Mono Tilt**

PV Panel Size	2384 x 1303 x 35 mm
Panel Arrangement Landscape	4 rows of 8
Number of Panels	32
Angle of Tilt	10°
Pass Height (Low) 2.4m	(Low) 2.4m (High) 3.4m
Canopy Area Footprint	10.9m x 10m (108.9m <sup>2</sup> )
Parking Space Width	2.5m
Structure Colour	Steel Galvanised Unpainted Top of Canopy RAL 9011 Graphite Black Under Canopy RAL 7036 Light Grey

**HELIOS VOLT<sup>®</sup> Energy Output Bifacial PV Cassettes**

Double 4 Bay Canopy	22.72 kW
Bifaciality at 20%	Energy output 27.68MWh
Scope 2 emissions avoided	5.35 t/co <sub>2</sub> e

**Warranties**

Performance	30 Year Linear Power Warranty <sup>1</sup>
Product	30 Year Workmanship Warranty





The Helios Volt MSR<sup>®</sup> is a canopy structure that can be bolted on to your existing multi-storey parking facility or using our bespoke design service can be fully integrated into your new multi-storey parking schemes.

**Key Features:**

- » High Output
- » 30 year + lifespan
- » Bolt On or Integral structure options
- » Rapid Deployment

**HELIOS VOLT<sup>®</sup> Single Bay Technical Data – 4 Parking Bays Mono Tilt**

PV Panel Size	2384 x 1303 x 35 mm
Panel Arrangement Landscape	2 rows of 8
Number of Panels	16
Angle of Tilt	15°
Pass Height	(Low) 2.4m (High) 3.4m
Canopy Area Footprint	10.8m x 4.9m (52.8m <sup>2</sup> )
Parking Space Width	2.5m
Structure Colour	Steel Galvanised Unpainted Top of Canopy RAL 9011 Graphite Black Under Canopy RAL 7036 Light Grey

**HELIOS VOLT<sup>®</sup> Energy Output Bifacial PV Cassettes**

Single 4 Bay Canopy	11.36 kW
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**Warranties**

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Product	30 Year Workmanship Warranty

**HELIOS VOLT<sup>®</sup> Double Bay Technical Data – 8 Parking Bays Mono Tilt**

PV Panel Size	2384 x 1303 x 35 mm
Panel Arrangement Landscape	4 rows of 8
Number of Panels	32
Angle of Tilt	10°
Pass Height (Low) 2.4m	(Low) 2.4m (High) 3.4m
Canopy Area Footprint	10.9m x 10m (108.9m <sup>2</sup> )
Parking Space Width	2.5m
Structure Colour	Steel Galvanised Unpainted Top of Canopy RAL 9011 Graphite Black Under Canopy RAL 7036 Light Grey

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**Warranties**

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Product	30 Year Workmanship Warranty





The Helios Volt PF<sup>®</sup> is a canopy structure that is secured in place using helical or continuous flight auger foundation methods. The main structural elements are formed of steel and adorned with rows of high output bifacial solar PV panels held in place with and aluminium purling system.

Key Features:

- » High Output
- » 30 year + lifespan
- » Sturdy Permanent Structure
- » Compact Foundation Reduces Loss of Parking

#### HELIOS VOLT<sup>®</sup> Single Bay Technical Data – 4 Parking Bays Mono Tilt

PV Panel Size	2384 x 1303 x 35 mm
Panel Arrangement Landscape	2 rows of 8
Number of Panels	16
Angle of Tilt	15°
Pass Height	(Low) 2.4m (High) 3.4m
Canopy Area Footprint	10.8m x 4.9m (52.8m <sup>2</sup> )
Parking Space Width	2.5m
Structure Colour	Steel Galvanised Unpainted Top of Canopy RAL 9011 Graphite Black Under Canopy RAL 7036 Light Grey

#### HELIOS VOLT<sup>®</sup> Energy Output Bifacial PV Cassettes

Single 4 Bay Canopy	11.36 kW
Bifaciality at 20%	Energy output 13.96 MWh
Scope 2 emissions avoided	2.69 t/co <sub>2</sub> e

#### Warranties

Performance	30 Year Linear Power Warranty <sup>1</sup>
Product	30 Year Workmanship Warranty

#### HELIOS VOLT<sup>®</sup> 2m Wide Central Walkway – 4 Parking Bays Either Side Mono Tilt

PV Panel Size	2384 x 1303 x 35 mm
Panel Arrangement Landscape	5 rows of 8
Number of Panels	40
Angle of Tilt	10°
Pass Height (Low) 2.4m	(Low) 2.4m (High) 3.4m
Canopy Area Footprint	10.9m x 10m (108.9m <sup>2</sup> )
Parking Space Width	2.5m
Structure Colour	Steel Galvanised Unpainted Top of Canopy RAL 9011 Graphite Black Under Canopy RAL 7036 Light Grey

#### HELIOS VOLT<sup>®</sup> Energy Output Bifacial PV Cassettes

Double 4 Bay Canopy	22.72 kW
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#### Warranties

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Product	30 Year Workmanship Warranty

# Add Ons

## HELIOS HYPERDRIVE<sup>TM</sup>

The Helios Hyperdrive is a superfast Electric Vehicle Charging unit, capable of charging a PHEV or BEV at a rate of c.500 miles per hour. This sophisticated charging unit, seamlessly integrates with our intelligent energy management systems to ensure power properly directed and balanced, allowing multiple EV's to be charged simultaneously completely independent of the grid.

Our easy to use app and integrated payment systems allow for pre-determined charging fees, individual concessions and penalties.

### EV CHARGING

With systems capable of Delivering between 22 to 50 kW of power, we can find the perfect charger for fast charging at your locations. The secure and user-friendly designs make it suitable for most environments, electric vehicles and users. With full app and management software integration, we can ensure you are in full control of your charging network.

## HELIOS eco<sup>wall</sup><sup>TM</sup>

Eco Walls are currently available on the gable ends of our canopy structures and offer multiple benefits and more uniquely a way to reintroduce bio diversity in the urban built environment. Our Eco Walls offer great opportunities for insects and bird life alike, with integrated nesting boxes, bug boxes and bee hotels. The Eco Wall adds an additional wow factor to any Volt and are known increase the deposition rate of nitrogen dioxide and particulate matter by as much as 40% and 60% respectively in a dense urban setting.

## REDUCE CARBON

## MONETISE YOUR PARKING ASSET

## IMPROVE STAFF AND CUSTOMER EXPERIENCE

### BATTERY STORAGE

Battery Storage used with our fully scalable Volts allow Megawatt scale energy production retained and controlled through super-battery storage and intelligent energy management systems mean that your business or customers can benefit from a steady renewable energy supply 24/7 and completely independent of the grid. Battery types and sizes can be tailored to your specific system type, use or peak energy demand.

## HELIOS HELI<sup>AD</sup>

Heli Ad digital displays are available in a series of sizes and orientations that can be tailored to the setting or application. The system uses cameras and telemetry to identify an opportunity, saving energy when not in use. Heli Ads sophisticated algorithms help target your pre programmed marketing content to be specific to the user group and uses a series of courtesy messages to promote engagement with the Heli Ad system.

## HELIOS HIGH<sup>T</sup>

High Light uses a series in built cameras and telemetry to identify when a space is empty. It then uses a strip of colour changing LED's (the carriage lighting) to announce the empty space by changing colour to Green. Once occupied the strip will change colour to Red until dusk when the lights revert to a white light for background lighting when the bay is in use.



## HISTORY

Newly established but aged with an exceptionally well experienced team, CrowdHouse Energy brings years of knowledge in construction and renewable energy development together, offering clients new options for decarbonisation built on resilient business cases and sound ESG methodologies.

We have robustly challenged the old, distributed energy model and recognised their short comings, for businesses to thrive change must come now not later.

Welcome to Edge of Grid thinking, a new world of renewable energy where business owners control their own energy generation and price, with fixed minimum 30-year power guarantees and beyond as our technological innovation grows, we and our partners bring to you a more secure and sustainable energy future.

## EXPERIENCE

Our senior management team have over 50 years collective experience in renewable energy and over 8 years of experience in delivery of complex infrastructure projects, making us the perfect turnkey project partner.

In that time, CrowdHouse Energy has worked with numerous high profile clients and contractors to deliver renewable energy schemes across the UK, both directly and working with main contractors and consultants as part of a larger project delivery teams.

In 2022 CrowdHouse Energy designed and launched it's own patent applied for modular bifacial parking canopy system, Helios Volt<sup>®</sup>. Since it's launch Helios Volt<sup>®</sup> has amassed a pipeline with a value in excess of £150m and achieved a company valuation of £10.4m

 [crowdhouse\\_energy](#)  [CrowdHouse Energy](#)  [NetZeroTeam1](#)

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# ABOUT CROWD HOUSE ENERGY

## PARTNERS



## MEMBERSHIPS



## COMPLIANCE



CHE UK

 PV  EV  H<sub>2</sub>



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HELIOS VOLT<sup>®</sup>

#POWERFULL