



14 Novembre 2024

Centro Congressi

Nuova Fiera del Levante, Bari

LA DIRETTIVA EUROPEA CASE GREEN

LA DOPPIA
TRANSIZIONE DIGITALE
ED ENERGETICA DEL
PATRIMONIO EDILIZIO
ITALIANO

Seminario a cura di

Provider autorizzato

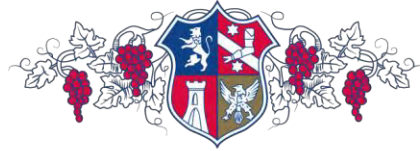
MIBA
MILAN INTERNATIONAL BUILDING ALLIANCE



La Rivoluzione nel Fotovoltaico

Idilio Ciuffarella, Bari 14/11/2024

Filotimo



Energy & Digitization is our Mission



Chi siamo

Consulenza

System Integration

Prodotti e Soluzioni

Vino

Contattaci

Ita -

Prodotti e Soluzioni

BEMS (Building Energy Management System), Energie Rinnovabili e Fotovoltaico

Scopri di più →

About Filotimo



"Filotimo", fondata nel 2017 dall'ing. Idilio Ciuffarella, già Amministratore Delegato e Direttore Generale di Delta Electronics per oltre 11 anni, nonché General Manager a livello EMEA per gli Smart Buildings.

Idilio è stato l'uomo di transizione capace di entrare nel mondo dell'Efficienza Energetica trasformando una grande multinazionale focalizzata sul business OEM (Original Equipment Manufacturer) in un Provider di Soluzioni Energetiche e di Smart Building noto a livello mondiale (Fotovoltaico, Storage, LED, Sistemi di Alimentazione, Video Sorveglianza, BEMS, ecc.)

Key Opinion Leader sul tema Energia, promotore e leader sin dalle prime Smart Building Expo, Professore al master MAGER della Bocconi (numero 1 in Corporate Social Responsibility a livello mondiale) e a quello di Facility Management della Sapienza.

www.filotimosrl.com



Energy & Digitization is our Mission

I numeri

- Gennaio-Agosto 2024 impianti <12kw: 985 MW
29% Quota totale
- A Marzo 2024: **1,6 M** impianti totali **(+360k)**
- Distribuzione: Roma +15k, Brescia +12k, Padova +11k, Milano e Torino +9k, Bergamo, Udine, Bari +8k
- Edifici ad uso residenziale: **12 Milioni**
- Famiglie italiane: **26 Milioni**
- **5% famiglie italiane** utilizza FV (Olanda, Belgio, Svizzera, Austria, Polonia, Germania, UK, Italia, Portogallo, Svezia, Francia, Spagna e Norvegia), Italia al nono posto
- Crescita FV: **1/3** rispetto agli obiettivi 2030 *Dati Elmec Solar 2024, Ecosun*

Il superamento dei confini

- Intermittenza fonte rinnovabile
- Efficienza
- Digitalizzazione Energia
- Stand-alone vs Ecosistema Smart Building
- Incentivo vs Stile di Vita
- Riciclabilità
- Ruolo Industria italiana

Le Evoluzioni

Tecnologia/Modelli di Business:

Innovazioni materiali Moduli FV

(Prezzi moduli crollati del 48% in 1 anno,
Pannelli in Perovskite (>33% efficienza), Biossido di Titanio di Calcio),
moduli bifacciali

Sistemi di Accumulo

(Prezzo batterie -90% dal 2010. Entro 2027 <100\$/kwh)
Ioni di Sodio, Alluminio, Magnesio, Nitruro di Gallio)

Inverter FV

Capacità FV, efficienza (98%), Grado protezione, ecc.

O&M

(retrofit, revamping, manutenzione intelligente)

PPA

Power Purchasing Agreement

Battery Prices Are Falling Again

Lithium-ion battery pack prices

Volume-weighted average in real 2023 dollars



Source: BloombergNEF 2023 Lithium-ion Battery Price Survey

Le Evoluzioni

Riciclabilità:

Batterie al Litio

(Dopo 6000 cicli ancora 80% di capacità)

Moduli FV

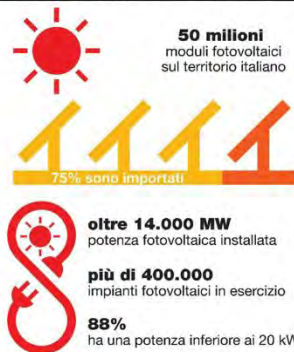
(Rame, Argento, Alluminio, Vetro, Silicio)

Progetti Europei

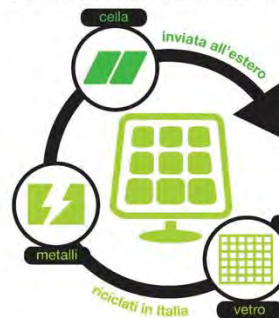
(Horizon Europe, REPowerEU)



PANNELLI FOTOVOLTAICI, LA FILIERA PER LO SMALTIMENTO Fonte: Cobat, IRI



La filiera di raccolta, smaltimento e riciclo



9-Tech

Le Evoluzioni

SW/Intelligenza Artificiale:

Diagnostica impianti FV (doctor)

(Manutenzione predittiva, producibilità, ispezioni con droni)

Digital imaging

(Quick design impianto, immagini da Satellite)

Piattaforme sw

(Comunità energetiche, Interconnessione utilizzatori, produttori, installatori, ecc)

Ecosistema

(Dialogo dispositivi)



≡COFLOW

L'innovazione nel Residenziale

A modern, two-story house with a dark tiled roof and light-colored walls. The house features large windows and a glass door leading to a courtyard. In the courtyard, there is a grey EcoFlow power station. The scene is set at dusk, with warm interior lights and a dark sky. The text "POWER A NEW WORLD" is overlaid on the left side of the image.

POWER A NEW WORLD

ECOFLOW

83%+

Portable Power Stations
E.U. Market Shares

1.6M+

EcoFlow E.U. Users

100+

Countries & regions

4M+

Global Users

\$1B+

Revenue in 2022

450%+

YoY Growth

EcoFlow founded in

2017

Innovation Keeps Us Running.



RIVER

2017

EcoFlow's 1st Portable Power Station



DELTA

2019

1st Portable Power Station with X-Stream



DELTA Pro

2021

1st portable home battery with an expandable ecosystem



Power Kits

2022

EcoFlow's 1st modular power solutions



PowerOcean Series

2023

DC Fit is the one and only PV-coupled residential retrofit storage solution

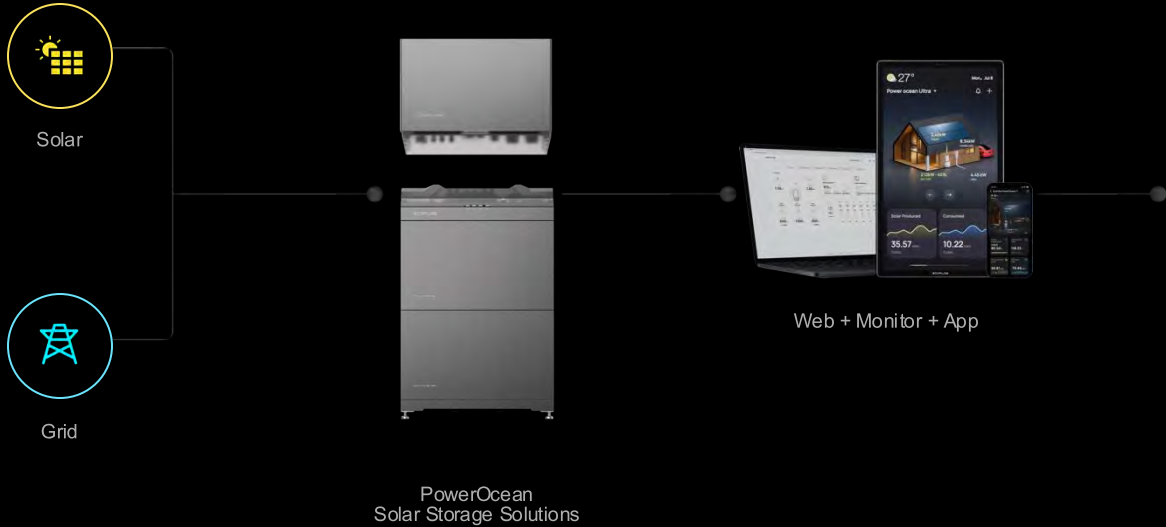


Home Energy Ecosystem Solutions

2024

Home Energy Ecosystem Solutions

Empower Net Zero Lifestyle and Power Independence



Heating Solutions

This section displays three heating solutions. On the left is a 'Smart radiator thermostat' with a circular display showing the number '56'. In the middle is a 'PowerGlow Immersion heater', which is a long, thin metal rod. On the right is a 'PowerHeat ATW heat pump', a rectangular white unit with a circular fan grille.

EV Charging Solution

This section shows an 'EV Charging Solution'. On the left is a 'PowerPulse' EV charging station, a tall, white, rectangular unit. To its right are three green dots, and further right is a sleek, silver electric car.

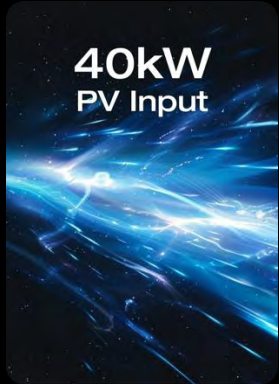
Smart Life Solutions

This section features 'Smart Life Solutions'. It starts with icons for 'WiFi', a Bluetooth symbol, and a signal strength icon. These are connected by a line to a 'Smart plug', a small black cylindrical device. Another line connects the smart plug to 'Appliances', represented by icons of a washing machine, a dryer, and a microwave.

4X PV
Input
Strings



40kW
PV Input



29.9kW
AC Output



10ms Switchover



Aluminum
Chassis



15
YEAR WARRANTY
ECOFLOW



IP65-rated



800V High Voltage

800V

LFP Battery



Up to
60kWh
Battery Capacity



Auto-heating
Pad



Fire-prevention
Module



Advanced
parallel
connection



BMS



Our Foundation. Your Peace of Mind.

LFP BATTERY

5kWh Expandable pack

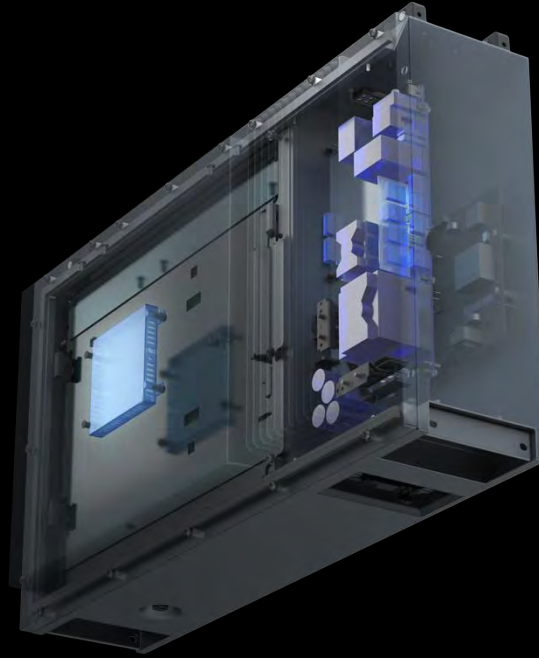
6000+ Charge Cycles

800V Ultra-high voltage

LFP battery

IP65 Weather Proof

95% DOD



Fully Integrated BMS in Every Battery Pack

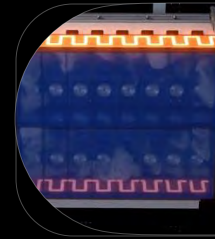
Parallel connections avoid the mutual influence of batteries.

The new battery is perfectly compatible with the old one.



Fire Prevention Module in Every Pack

Actively detect battery temperature, and will be immediately activated when it reaches 170°C.



Smart Auto-heating module

Each pack is equipped with heating modules to work smoothly in winter.

Installation time

↓ **50**Mins



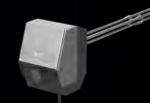
Comprehensive smart solar-to-heat solution portfolio like no other



Compatible with 3rd party smart radiator thermostat




EcoFlow PowerGlow Smart Immersion heater



EcoFlow PowerHeat R290 Air-To-Water heat pump



EcoFlow Home Energy Ecosystem



Solar Storage
Solutions

Heating Solutions

EV Charging
Solution



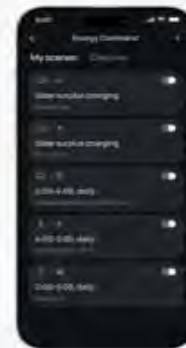
Home Energy Space

The Home Energy Space provides a holistic view of your home's energy ecosystem. It offers immersive, intuitive controls and real-time monitoring, making it accessible even without extensive technical knowledge. You can seamlessly view and manage the connections and energy status between PowerOcean and other EcoFlow devices, such as PowerHeat Heat Pump and PowerPulse EV charger.



Solar Energy Predictor

EcoFlow app provides a comprehensive forecast and visualization of real-time solar energy generation. This empowers you to strategically manage their consumption and storage behaviors for optimal utilization of solar power.



Energy Command

You can configure their PowerOcean systems and EcoFlow products through customizable, rule-based settings to automatically respond to various energy-related conditions, such as solar energy production and grid energy pricing. For instance, if solar production exceeds a certain threshold, PowerOcean can divert the excess solar power to the PowerPulse EV charger, charge the PowerOcean battery, and other controllable appliances.

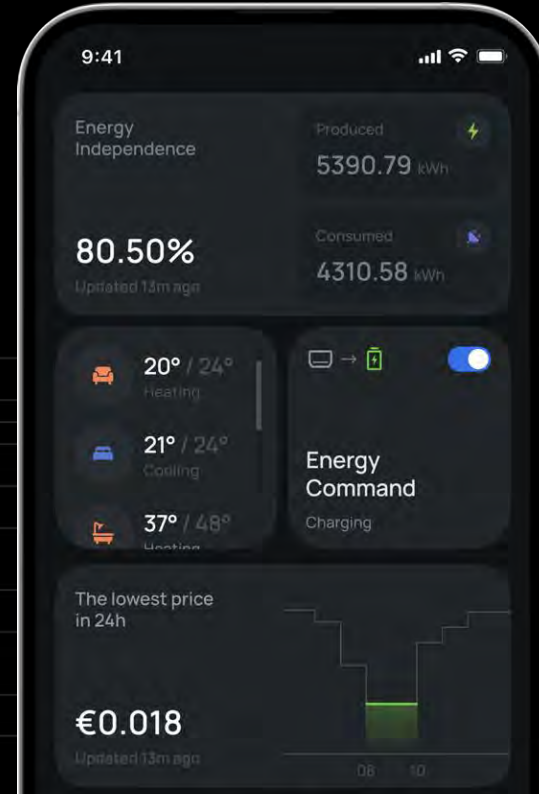
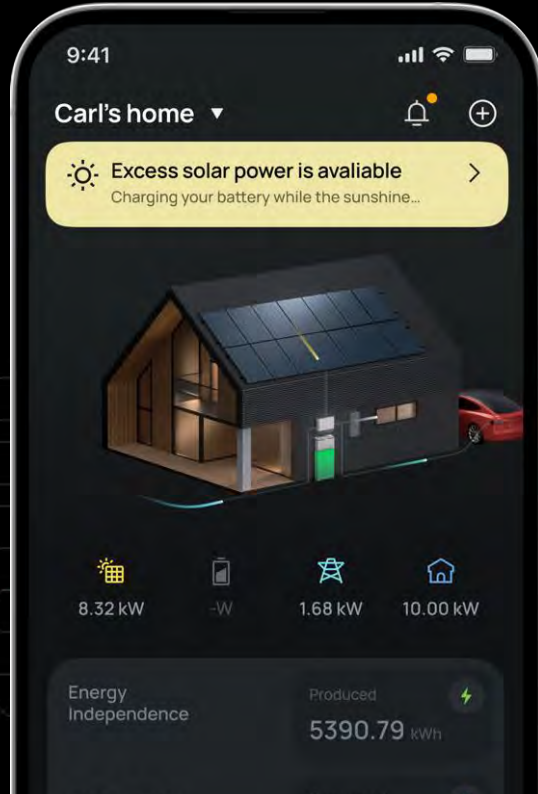


EcoFlow App

Monitor and Manage EcoFlow PowerOcean and Ecosystem in
One Place

EcoFlow App

Monitor and Manage Your Home Energy Space



Power Market & Dynamic Tariff Integration

≡ COFLOW | ⚡ tibber

Nord

Pool

Epex

And more...

3rd Party Smart Home Integration

 matter

ecobee

Shelly

 Nest

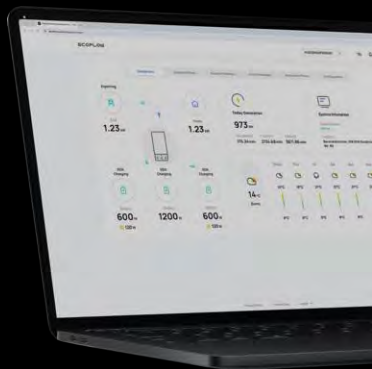
tapo

EcoFlow Web Portal

Web

App

EcoFlow App



Home Energy Monitor

EcoFlow PowerInsight

The unique PV-coupling technology

Retrofit Simply by Connecting Battery Storage with Solar Panels



No storage inverter is needed

Seamlessly adding battery storage to your existing solar system without installing an additional storage inverter.

No need to replace the existing solar inverter

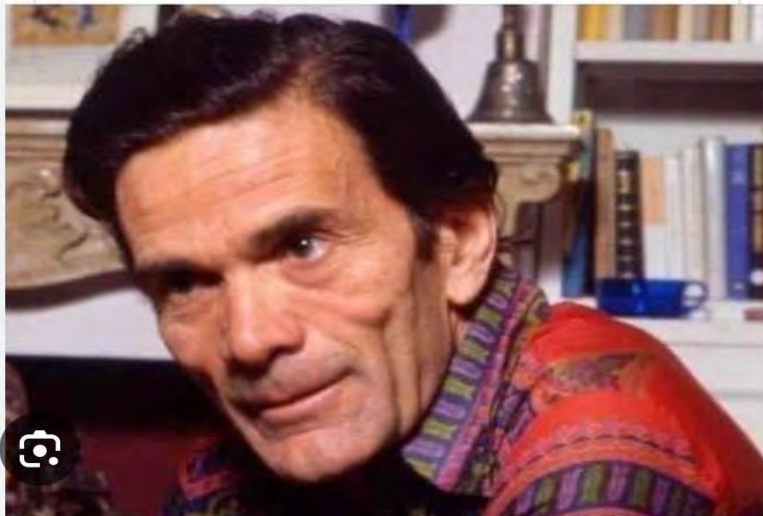
Investing less to store more solar power.

Ruolo Italia

- Progettazione
- Efficienza energetica
- Consulenza Energetica
- Service e System Integration
- Integrazione FV e Pompa di calore
- LED, BEMS e Smart Building
- Soluzioni Sw con AI
- Comunità energetiche
- Modelli dinamici PPA

"Quando il mondo classico sarà esaurito, quando saranno morti tutti i contadini e tutti gli artigiani, quando non ci saranno più le lucciole, le api, le farfalle, quando l'industria avrà reso inarrestabile il ciclo della produzione, allora la nostra storia sarà finita."

Pier Paolo Pasolini, 1962



Una Riflessione rivoluzionaria

Idilio Ciuffarella

Email: idilio@filotimo.cloud

Grazie per l'attenzione