

# Leading the green energy transition through data-driven digital solutions



# Why do we exist?

## We love renewable energy

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Our purpose is to provide data-driven solutions to maximize the performance of renewable energy assets, optimize efficiency in the management of renewable energy portfolios and contribute to have the **greenest** energy mix in the grid.

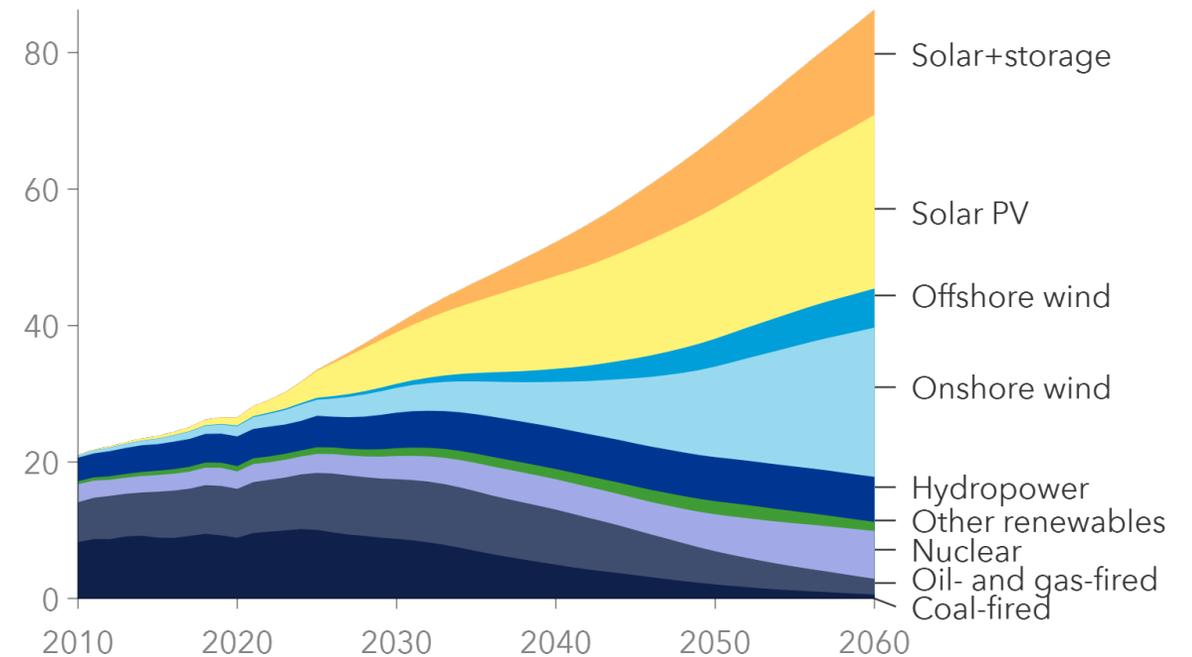


# Electricity and renewables key findings

- Global electricity share in final energy demand doubles from 21% to 43% in 2060
- In 2060 solar and wind will generate most electricity in all regions, with global shares of 47% and 32% respectively
- Grid infrastructure needs significant improvements - with storage, and flexibility-enabling technologies key to integrate variable renewables effectively

## World electricity generation (PWh/yr)

DNV Energy Transition Outlook 2025

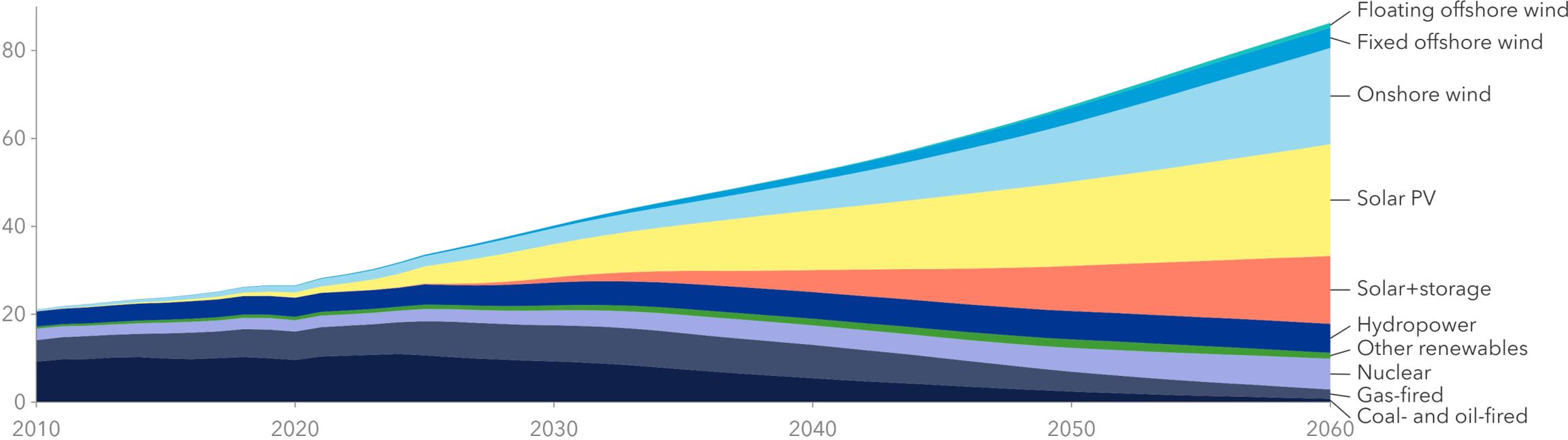


Historical data source: IEA WEB (2025), GlobalData (2025)

# 79% of global electricity will come from solar and wind in 2060

## World electricity generation by power source (PWh/yr)

DNV Energy Transition Outlook 2025



Historical data source: GlobalData (2025)

# Our history: From scale to global trusted data partner in renewables

## **2000-2006. First steps**

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The first monitoring systems built on telecom infrastructure. Launch of GPM Portal, a web-based performance monitoring solution.

## **2009-2015. Global growth**

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Global growth with presence in APAC, Europe, IBLAM, IMEA and North America.

## **2020. Market Leaders**

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Over 40 GW under management, organically grown and leading in data-driven digital services worldwide

## **2024. Data Ecosystem**

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Green Data Product team established to support the full asset lifecycle—from development and financing to construction, commissioning, and O&M.

## **2008. GPM's foundation**

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GreenPowerMonitor, a monitoring, control and asset management solutions company is founded in Barcelona, Spain.

## **2016. DNV**

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GPM joins DNV, the world's largest resource of independent energy experts.

## **2021. Advanced Analytics**

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New Domain Knowledge team established. Acquisition of Alteso's PV analytics platform.

## **2025. Horizon for Multi-tech portfolios**

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Launch of GPM Horizon for multi-tech portfolios and GPM Energy Management System and Hybrid EMS.

## **2009. GPM Plus**

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GPM launched GPM Plus a real-time monitoring and asset management solution for PV portfolios.

## **2018. GPM Horizon**

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Launch of GPM Horizon, expanding from PV to multi-technology monitoring of Solar, Wind and BESS power plants. New offices opened in Australia.

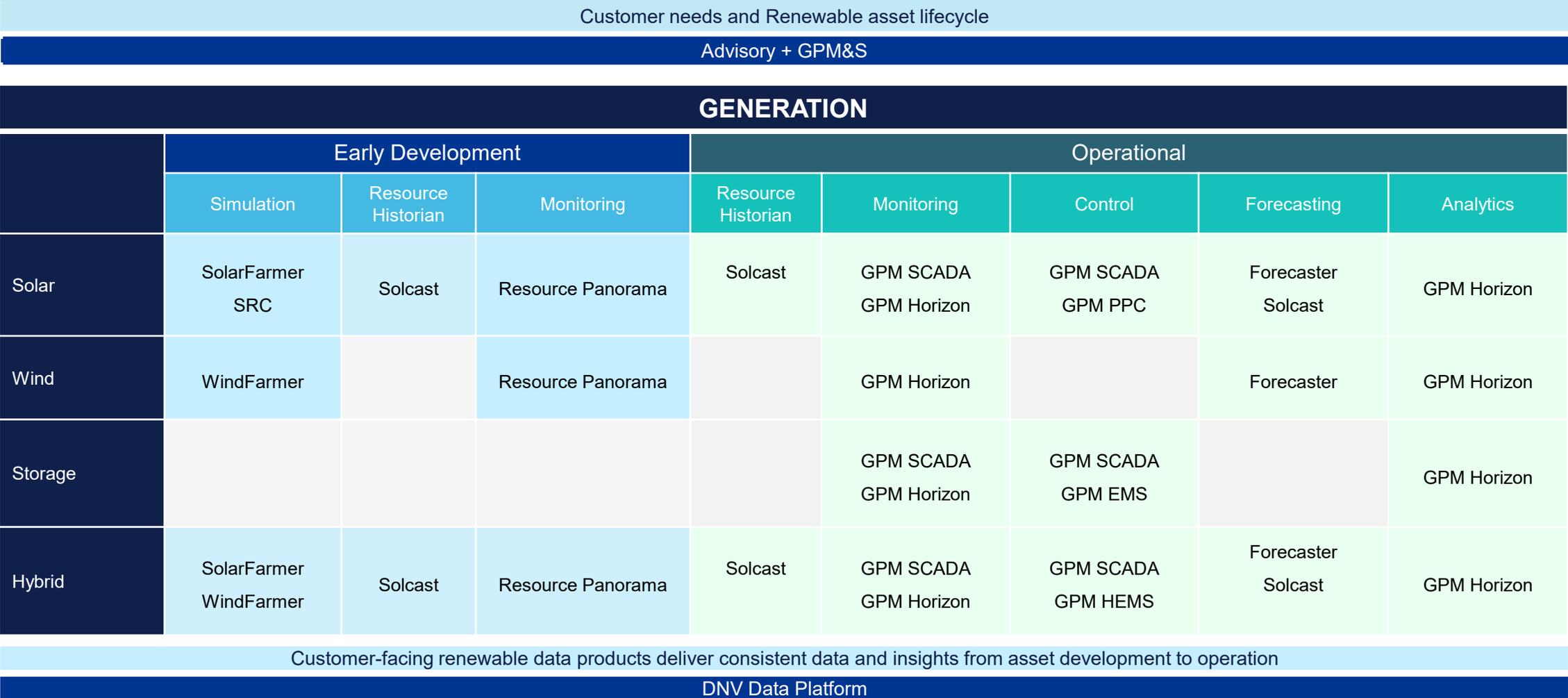
## **2023. M&A**

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66 GW under management with 200+ employees worldwide. Acquisition of Proxima Solutions and Solcast to enhance service scope.

# Our trusted data ecosystem across renewable asset lifecycle

Shaping the digital backbone of the energy transition



# Delivering Impact. Empowering the Future

Shaping the digital backbone of the energy transition

Customer Needs & Renewable Asset Lifecycle

Early-Stage Development

100GW

Solar Feasibility

Market Impact

>1300

Customers

Power Forecasting

300GW

Solar Irradiance Forecast

Asset Management

95.5GW

Under management

>4 TB

Processed daily across  
GPM + GDP

2000

Million metric tons of CO2  
saved

150GW

Wind and Solar Power  
Forecast

+90

Countries

# Our footprint today



Total figures

95.5GW

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+8000

Successfully  
Delivered projects



Solar

79GW

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2.3GW

Largest plant



Wind

16.5GW

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600MW

Largest plant



Storage

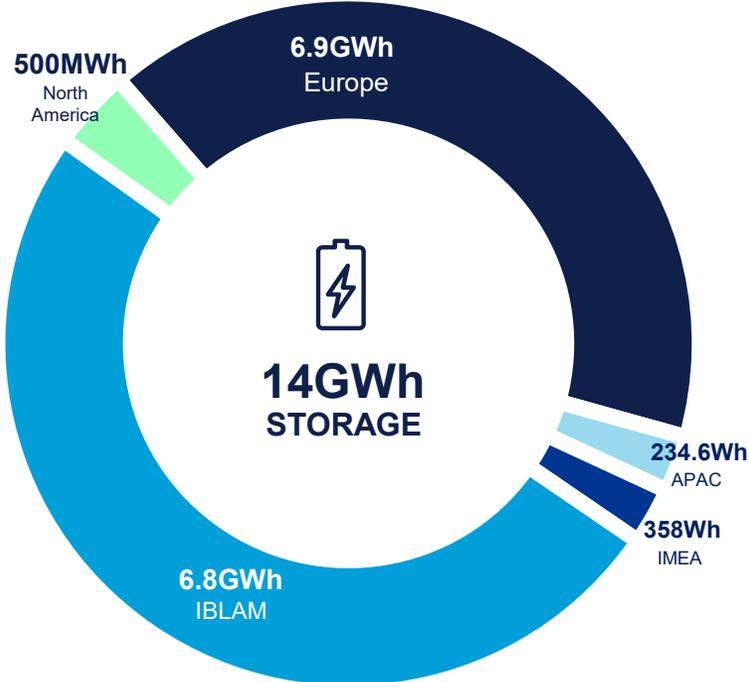
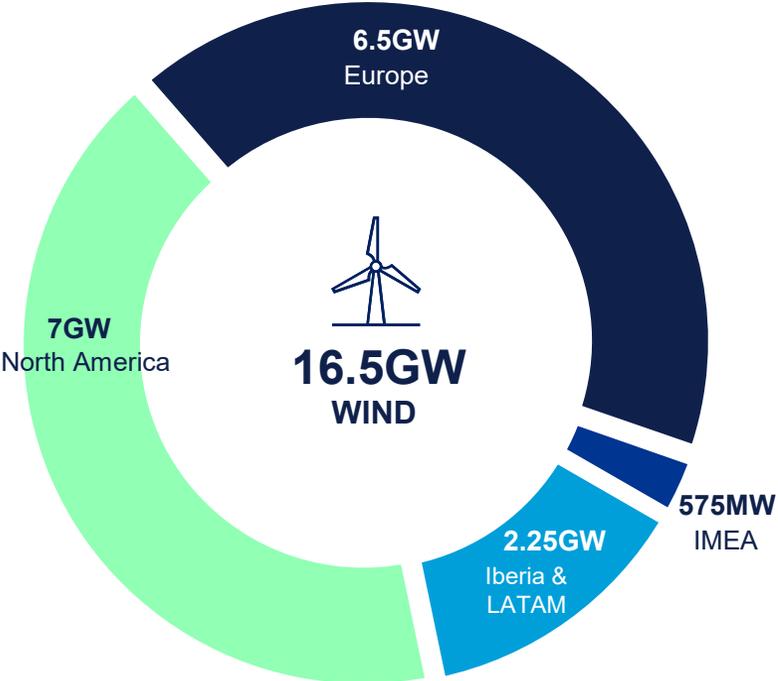
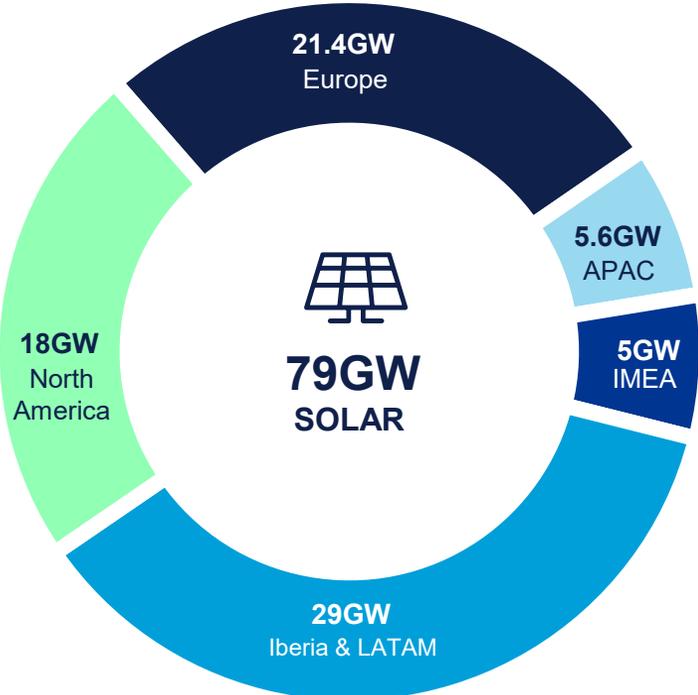
14GWh

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1GWh

Largest plant

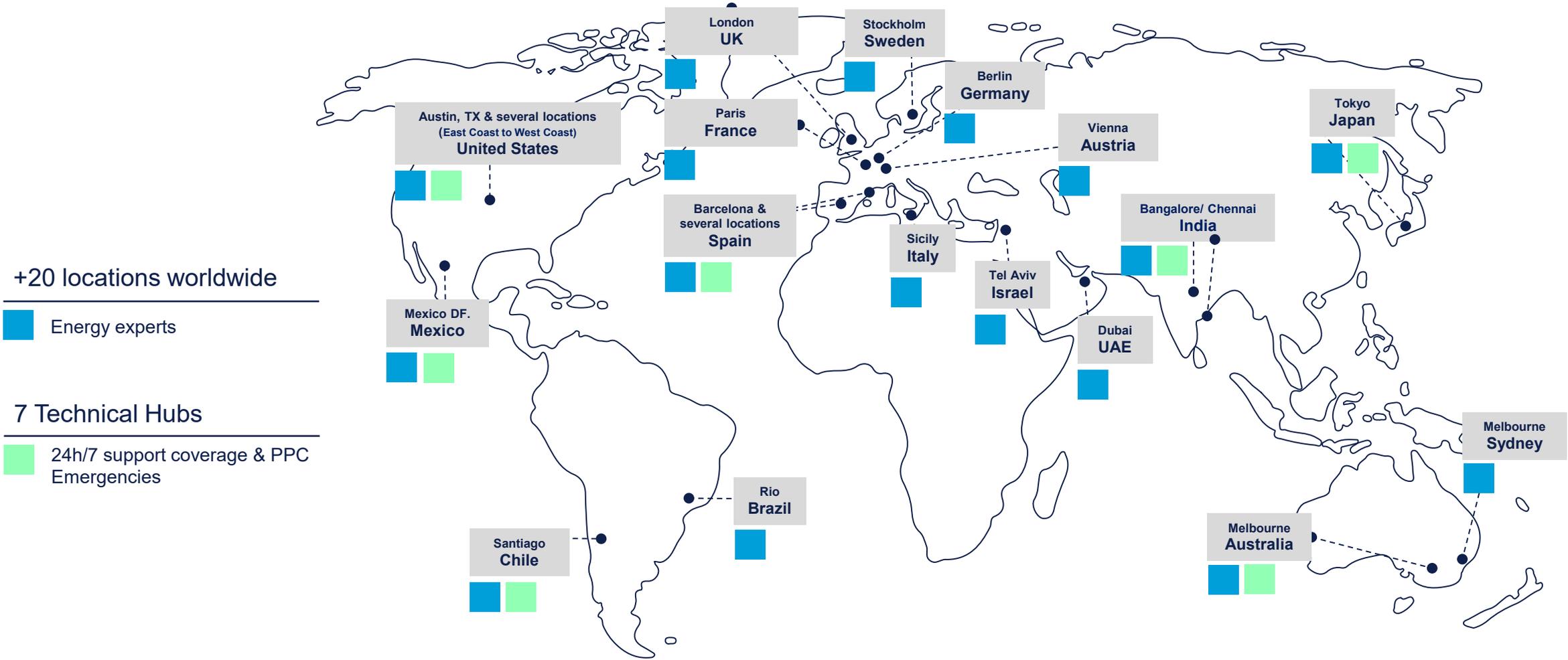
# Our footprint today



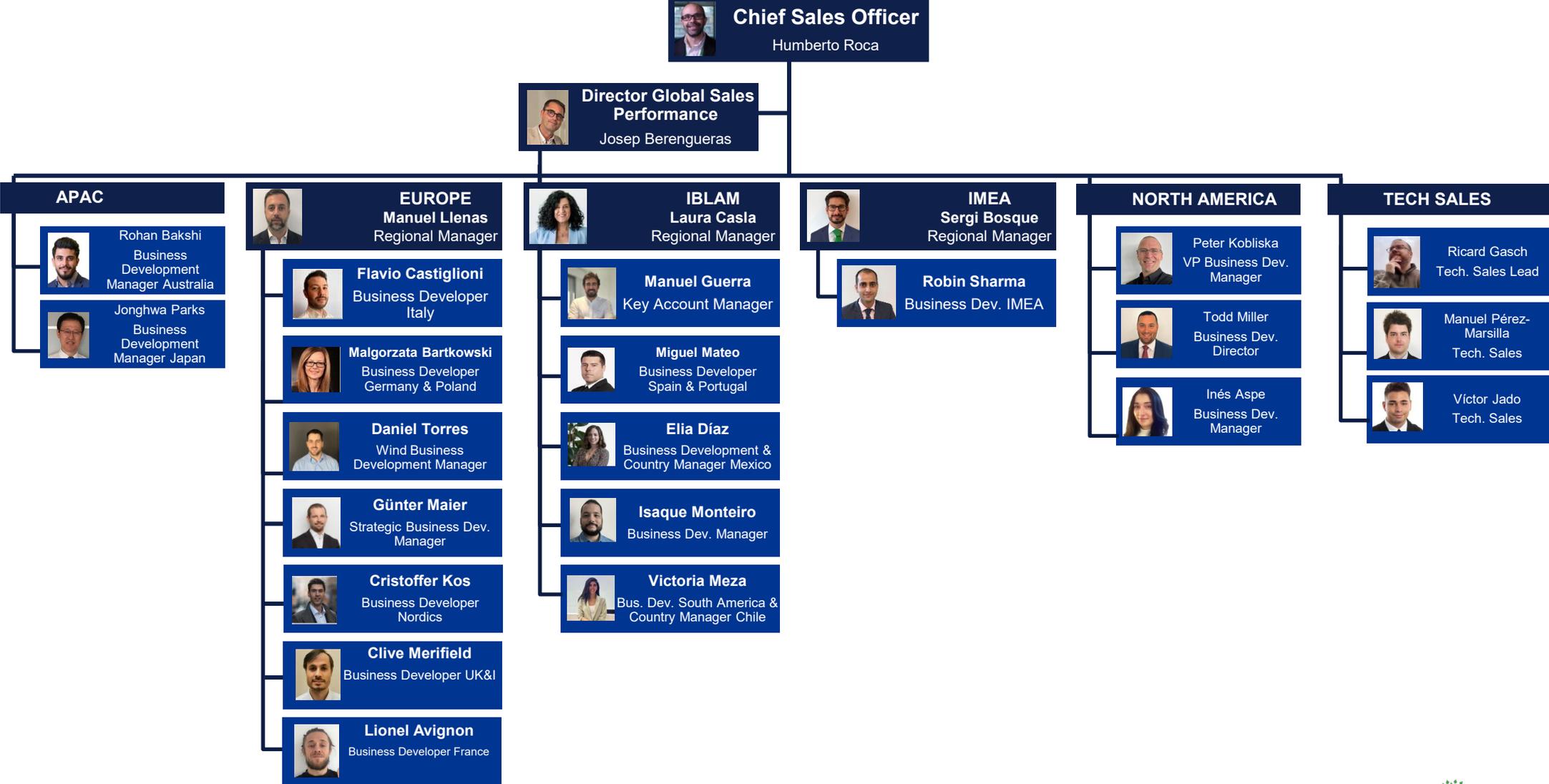
# Selected Customer List

Owners							
							
							
EPCs							
O&M							
OEM							

# Global Unit with local support



# Customer Relationships and Sales



# APAC



# Footprint in Australia

3.3GW

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Currently  
under management

139

---

Successfully  
delivered projects

333MW

---

Maximum Size Plant



GreenPowerMonitor

a DNV company

# Footprint in Japan

1.4GW

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Currently  
under management

132

---

Successfully  
delivered projects

70MW

---

Maximum Size Plant



GreenPowerMonitor

a DNV company

# Europe



# Footprint in Europe

19GW

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Currently  
under management

+3,700

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Successfully  
Delivered projects

300MW

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Maximum Size Plant



GreenPowerMonitor

a DNV company

A white line-art outline map of South America and the Iberian Peninsula is centered on a dark blue background. The text 'Iberia & LATAM' is overlaid on the map.

# Iberia & LATAM



# Footprint in Iberia & LATAM

Spain

9.5GW

---

+1,300

Successfully  
Delivered projects

---

660MW

Largest plant

Mexico

3.5GW

---

133

Successfully  
Delivered projects

---

375MW

Largest plant

Chile

7.3GW

---

361

Successfully  
Delivered projects

---

400MW

Largest plant

# Footprint in Iberia & LATAM

Brazil

1.45GW

---

12

Successfully  
Delivered projects

---

254MW

Largest plant

Argentina

365MW

---

15

Successfully  
Delivered projects

---

110MW

Largest plant

Colombia

1.9GW

---

49

Successfully  
Delivered projects

---

492MW

Largest plant



# IMEA

# Footprint in IMEA

Middle East

5.09GW

---

86

Successfully  
Delivered projects

---

2.3GW

Largest plant

India

208MW

---

19

Successfully  
Delivered projects

---

120MW

Largest plant

Africa

995MW

---

47

Successfully  
Delivered projects

---

80MW

Largest plant



GreenPowerMonitor

a DNV company



# North America

# Footprint in North America



Total figures

25GW

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+2,500

Successfully  
Delivered projects



Solar

18GW

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1.2GW

Largest plant



Wind

7GW

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600MW

Largest plant



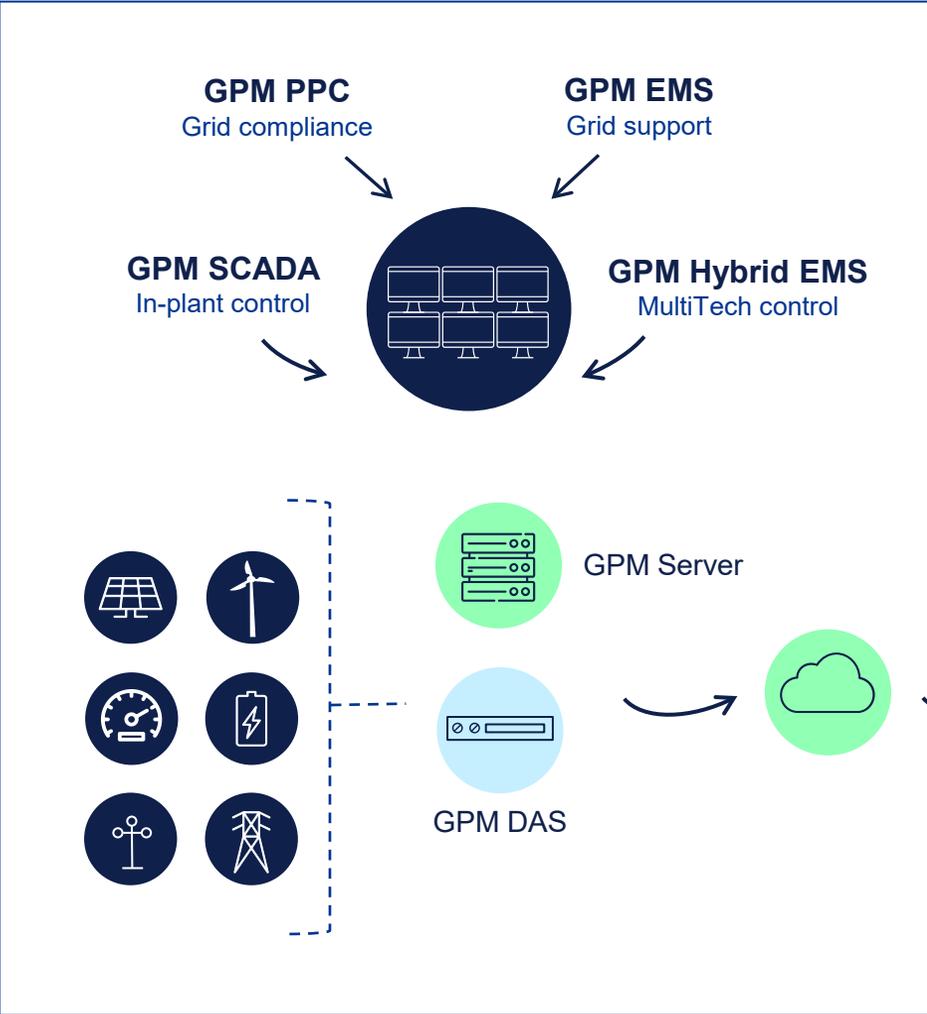
GreenPowerMonitor

a DNV company

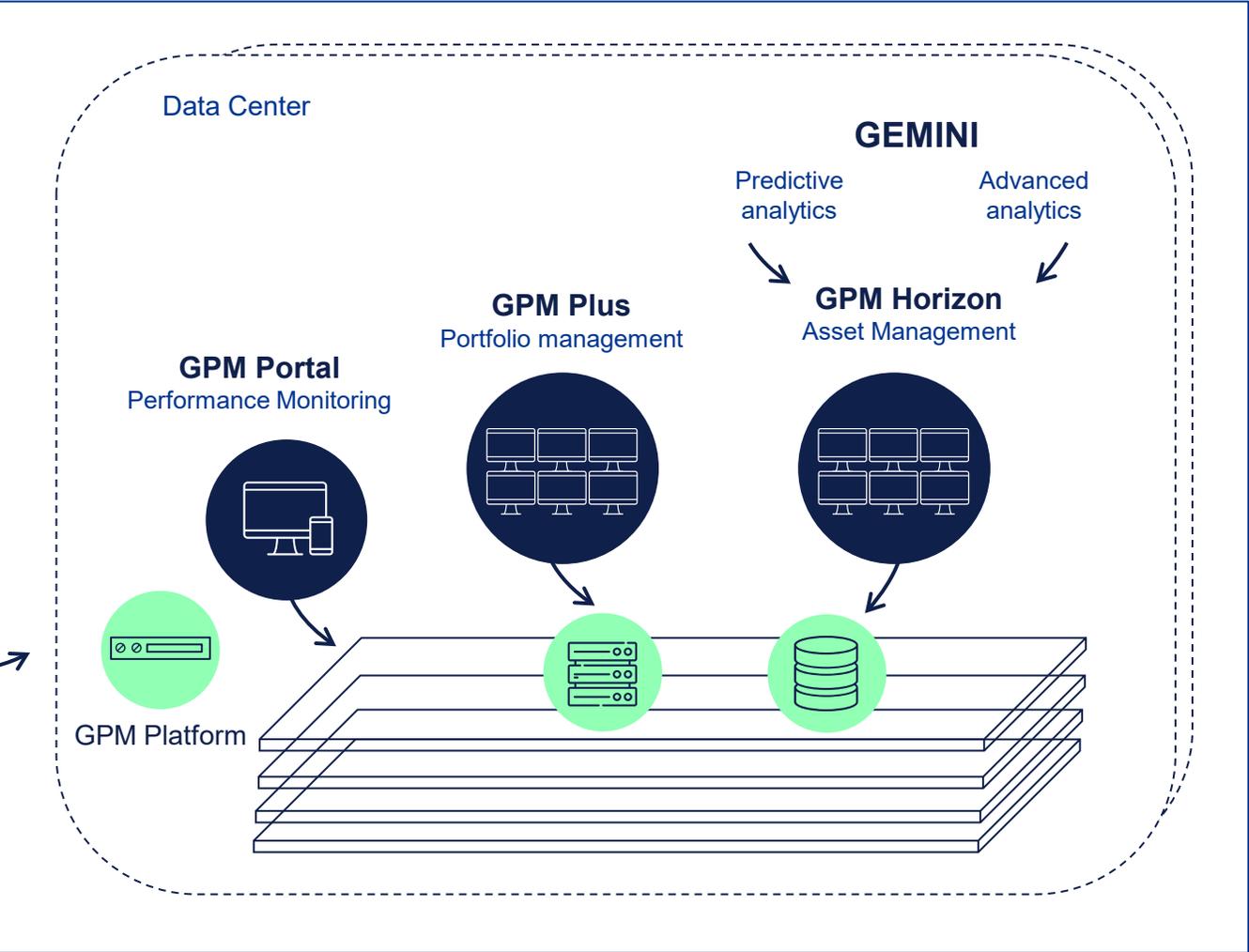
# How we support you

# Architecture overview

## On-site solutions

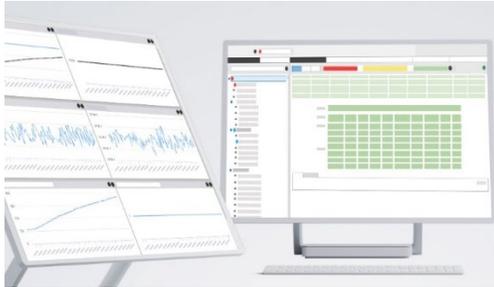


## Cloud Solutions



# GPM Onsite Solutions

Seamlessly integrate renewable sources, storage, and power generation for efficient and intelligent energy management.



## GPM SCADA

In-Plant Controller for utility-scale facilities capable of managing projects with over 1 million variables.



## GPM PPC

Control system to efficiently manage both real and reactive power from solar, wind, and hybrid plants.



## GPM Energy Management System

Control system to enhance storage and ensure grid code compliance of your Battery Energy Storage System (BESS) power plant.

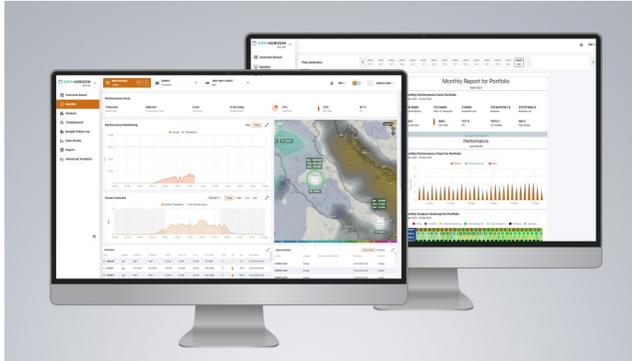


## GPM Hybrid Energy Management System

Control system to optimize operations, ensure grid code compliance, and efficiently control PV solar and BESS technologies at your power plant.

# GPM Cloud Solutions

Our data-centric digital solutions ensure the security of your renewable energy performance data, making it easily accessible in real time from anywhere in the world.



## GPM Horizon

Multi-Technology portfolio management platform for mixed renewable portfolios that includes Solar, Storage and Wind capabilities.



## GPM Plus

Web-based solution that provides comprehensive resources for managing renewable asset portfolios, including automated reporting, forecasting, maintenance, financial and asset management.



## GPM Portal

A web-based renewable asset monitoring solution for seamless plant management anywhere, anytime.

# GPM Solutions

	In Plant Control <b>GPM SCADA</b>	Asset Management & B.I. <b>GPM Plus – GPM Horizon</b>	Monitoring <b>GPM Portal</b>
Real-Time Monitoring	●	●	●
Historical Analysis	●	●	●
Five Minute Data	●	●	●
Scalable from 2kW to 1.3GW	●	●	●
Customizable Alerts and Notifications	●	●	●
Customizable Automated Reports	●	●	●
Live Support and Quarterly Updates	●	●	●
Easily Export Data/Charts	●	●	●
Fully Configurable and Customizable	●	●	
O&M Management	●	●	
Ticketing and Event Tracking	●	●	
Tracking Financial Status	●	●	
Control Room Display	●	●	
Advanced Business Intelligence Analytics	●	●	
Remote Command and Controls	●	●	
Asset Management		●	
Portfolio and Fleet Management		●	
Invoicing		●	
On-Site Control Room	●		
Power Plant Controller (PPC) & Energy Management System (EMS)	●		
Local SCADA Servers	●		
One Second Data	●		
Advanced Analytics (WindGEMINI & SolarGEMINI) - OPTIONAL		○	

# GPM SCADA

In-Plant Controller for utility-scale facilities capable of managing projects with over 1 million variables.



# GPM SCADA

A local SCADA management solution that provides control over devices, full plant commands, and real-time data for all parameters, paired with the GPM Power Plant Controller for specific control requirements.

## Highlights

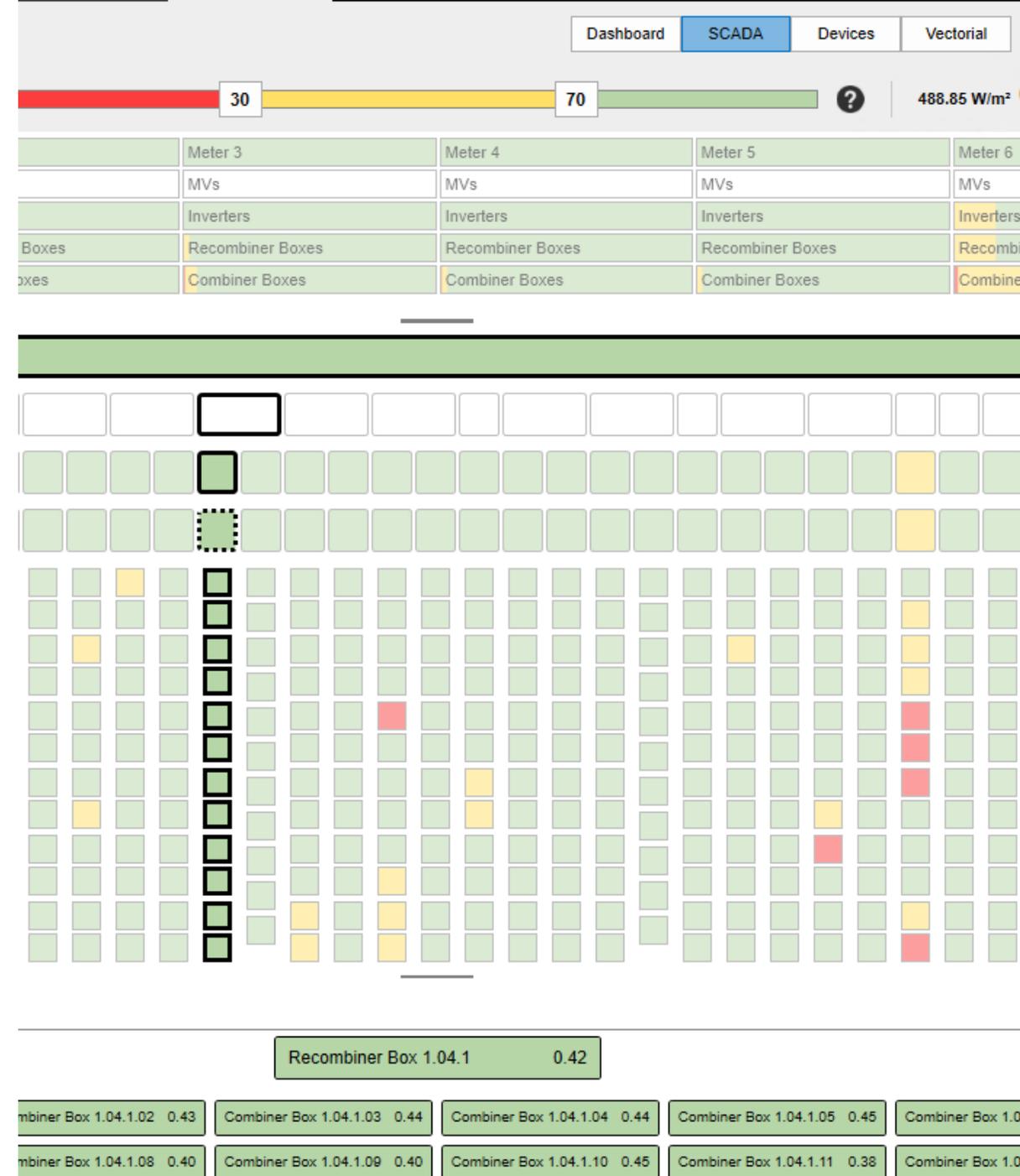
- Real time monitoring
- Configuration of alarms
- Customizable reports
- Remote control
- Fully customizable
- SCADA layout
- O&M management
- Control room display

## Specially designed for

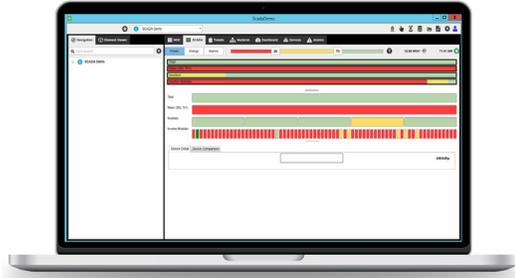
- Field Technicians
- Control Room Operators

## Available in

- English
- Spanish
- Italian
- French
- Japanese
- Thai
- Portuguese



# Unlock features



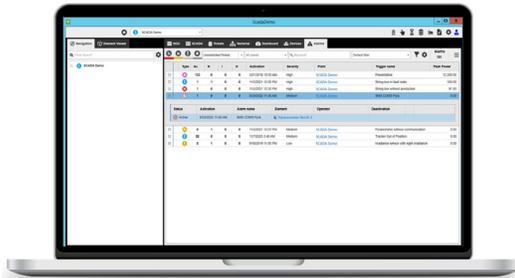
## Control room

- Interactive one-line diagram
- SCADA layout
- Main alert grid
- Detailed device information



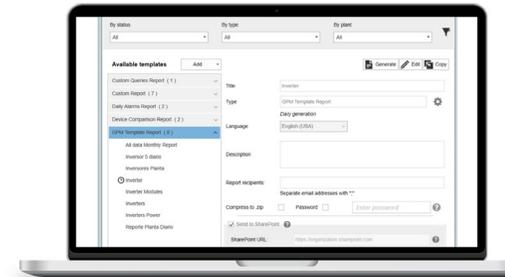
## Customize data

- Real-time monitoring
- Industry standard variables
- Custom variables
- Full integration



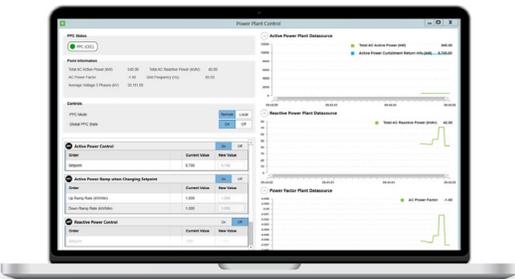
## O&M

- Custom advanced alarms
- Smart alarm evaluation
- Integrated ticketing workflow
- Preventive scheduling



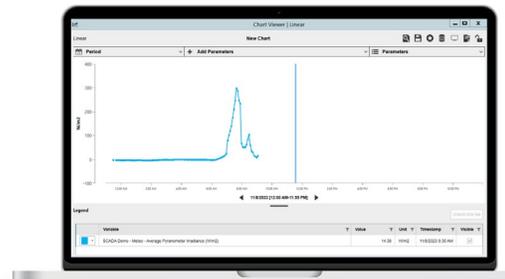
## Reporting

- Customize with your corporate branding
- Automatic generation & delivery
- Default and/or custom reports
- Reporting maintenance



## Remote control

- Power plant controller
- Manual remote command
- Launch of reactive commands
- Secure command control

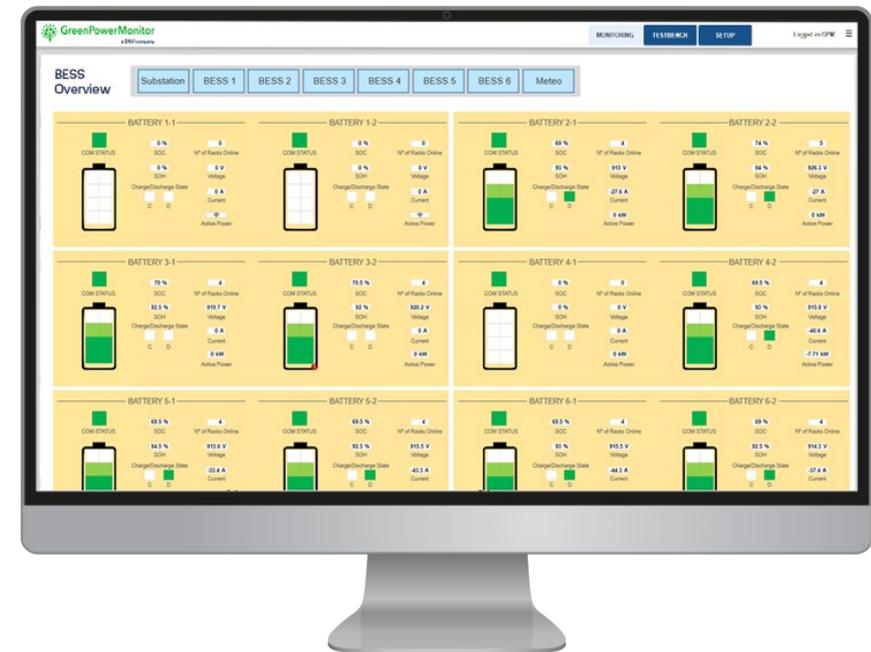


## Data

- Multiple visualization tools
- Manipulate data series as required
- Save and export your queries
- Compare KPIs

# GPM Energy Management System

Control system to enhance storage and ensure grid code compliance of your Battery Energy Storage System (BESS) power plant.



# GPM EMS

The EMS is an energy management platform responsible for controlling power absorption and injection, maintaining the operational efficiency of the BESS, and ensuring its ability to provide grid support services. The EMS plays a crucial role in monitoring system performance, optimizing energy dispatch, and ensuring maintenance and longevity of your BESS.

## Highlights

- Optimizes energy storage to enhance efficiency
- Ensures grid code compliance
- Advanced automation for power plant control
- Grid support functions and ancillary services
- Real-time adaptability and flexible integration

## GPM EMS: grid compliance

GPM's Energy Management System (EMS) controls power absorption and injection, maintaining the operational efficiency of the BESS, and offering customizable real-time control and seamless integration with GPM SCADA and GPM PPC systems as well as third-party systems.

## Specially designed for

- Plant technicians
- Asset Managers
- Asset owners
- Control Room Operators



# Unlock features

The GPM EMS integrates seamlessly with the GPM Power Plant Controller (PPC) to deliver precise active and reactive power control. It also includes EMS Logic for global grid code compliance to enhance operational efficiency and flexibility.

## EMS Logic

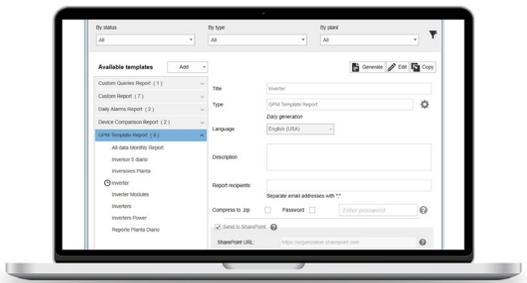
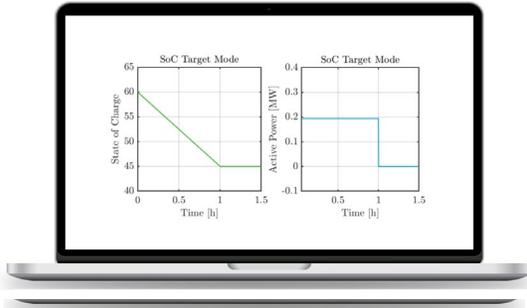
Manage energy production depending on the time of day, with versatile energy management with flexible control modes including:

- Regular **BESS Dispatch Mode**
- The **State of Charge (SoC) Droop Mode**
- The **State of Charge (SoC) Target Mode** value
- Compliance with different grid support requirements in different countries.

## Adaptive BESS control modes

The BMS independently modifies active power commands for various functions and offers three distinct control options:

- **Automatic Mode**
- **Manual Mode**
- **BESS OFF Mode**



# GPM Hybrid Energy Management System

Control system to optimize operations, ensure grid code compliance, and efficiently control PV solar and BESS technologies at your power plant.



# GPM HEMS

Ensure optimal operation, maintain grid code compliance, and efficiently coordinate and control both PV solar and BESS technologies through our Hybrid Energy Management System (HEMS).

## Highlights

- Ensures optimal operation and seamless grid code compliance
- Performs accurate active and reactive power control
- Maintains flexible operations during peak demands and grid disturbances
- Balances the State of Charge (SoC)
- Automates site control through system integrations
- Creates a production schedule based on generation forecasts

## GPM HEMS: grid compliance

It ensures grid-friendly control for PV solar +BESS hybrid plants, offering customizable real-time control and seamless integration with GPM SCADA and GPM PPC systems as well as third-party systems.

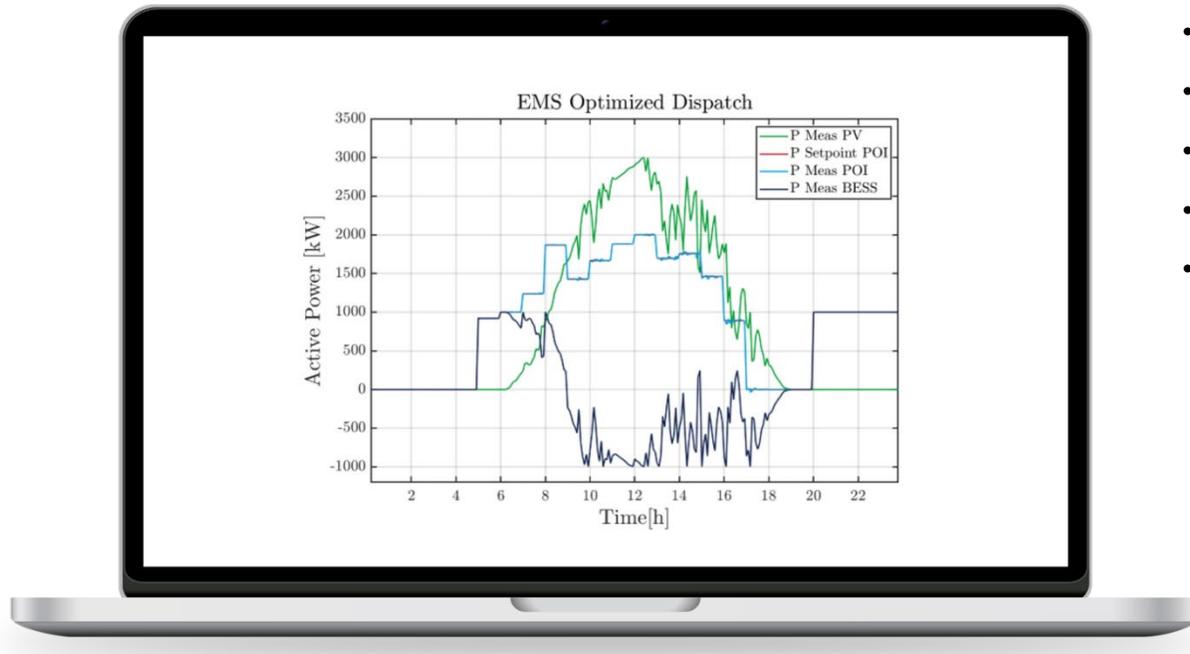
## Specially designed for

- Field technicians
- Control Room Operators



# Unlock features

Once GPM's PPC sets the active power point at the Point of Interconnection (POI), HEMS distributes the setpoint between BESS and PV inverters, allowing operators to choose between modes including BESS Priority Control, and PV-BESS Coordinated Control for flexible power management.



- BESS-PV coordinated control
- BESS priority control
- Fast Frequency Response
- Irradiance ramp mode
- BMS

# Scheduler, Dispatcher and Optimizer

## Scheduler

Simplifies plant automation by executing predefined commands from a CSV file at scheduled times, ensuring seamless operation. Configures up to 20 commands in advance for efficient control.

## Dispatcher

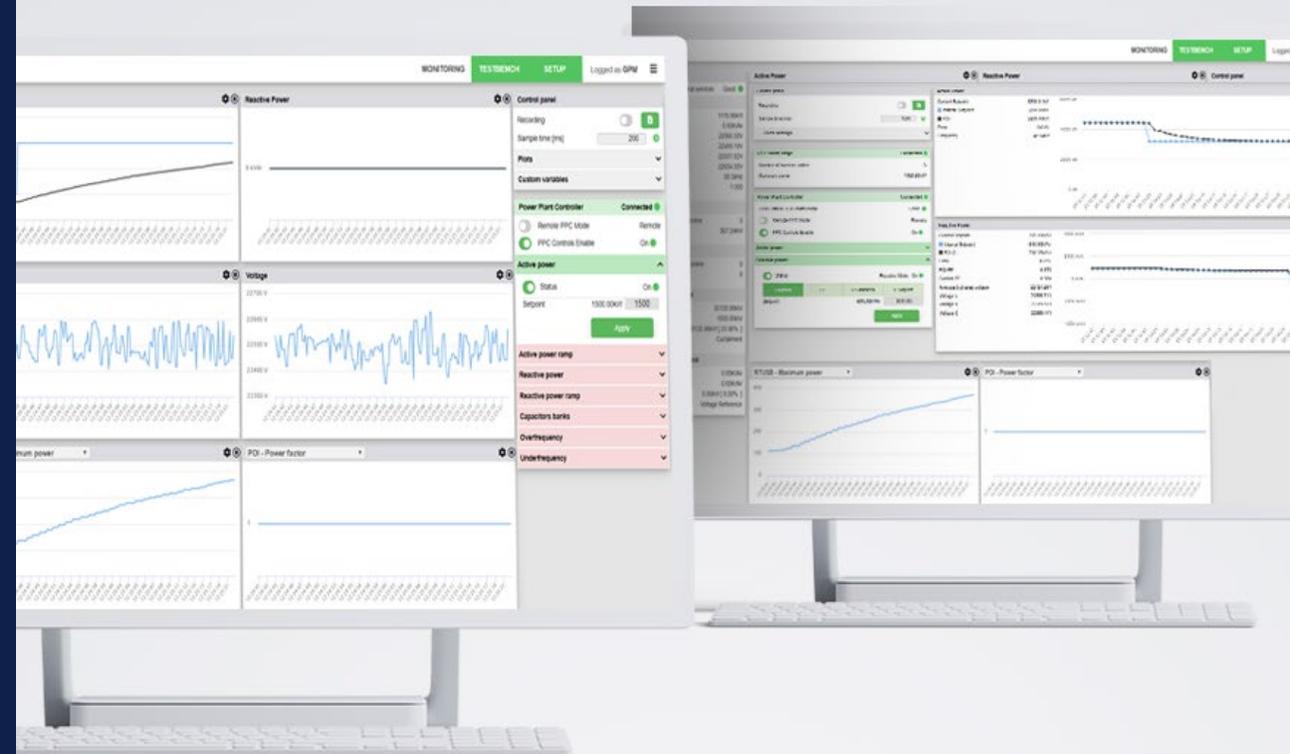
Maximizes efficiency by optimizing renewable energy use and managing BESS storage. Dispatcher adapts to changing conditions based on **generation forecasts**, and ensures reliable, autonomous plant operations with flexible controls.

## Optimizer

Boosts hybrid plant efficiency and profitability by generating active power schedules that reduce energy waste and optimize power flows. With data-driven automation and market price integration, PV generation forecasts, and energy market price predictions it empowers operators to manage stored energy strategically.

# GPM Power Plant Controller

Control system to efficiently manage both real and reactive power from solar, wind, and diesel-hybrid plants.



# GPM Power Plant Controller

Control system to efficiently manage both real and reactive power from solar, wind, and diesel-hybrid plants.

The GPM PPC is designed to facilitate the integration of power plants into both present and future power systems. It can establish communication with inverters, wind turbines, and other equipment of any manufacturer.

## Highlights

- Act as a main governor and can be configured as a master controller for isolated power systems.
- Act as the interface with the grid's system operator when configured for grid-connected power plant integration.
- Manage real power compensation using Energy Storage Systems and provide the necessary VAR support for the new generation of flexible grid-connected plants.

## Specially designed for

- Plant technicians
- Asset owners
- Control Room operators



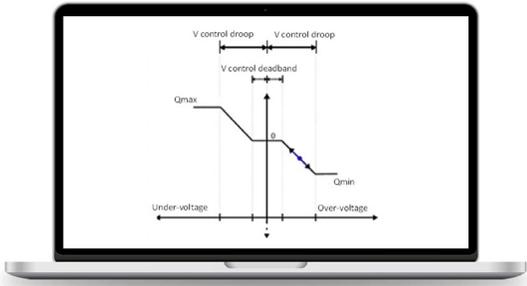
# Unlock features

Ensure reliable operation, and adjust to changing grid conditions and varying energy sources



## Powerful, flexible and compatible

- Quick interaction with multiple generation units
- Flexibility and grid-code friendly
- Grid compliant



## GPM Power Plant Controller allows you to regulate a lot of parameters:

- Absolute active power control
- Frequency control
- Reactive power control
- Power factor control
- Voltage control
- Ramp control (Active and Reactive power, if needed)
- SVC or STATCOMS control

# GPM Plus

Fleet & Portfolio management  
for renewable portfolios



# GPM Plus

GPM Plus is a real-time monitoring and management program that gives you the tools you need to manage every level of your extensive portfolio of plants.

## Highlights

- Real-time monitoring
- Alarms configuration
- Automatic reports
- Business analytics
- Completely scalable
- Customizable tools
- Asset management
- Tracking financial status
- O&M management
- Control room display

## Specially designed for

- Plant technicians
- Asset managers
- Asset owners
- Control Room operators

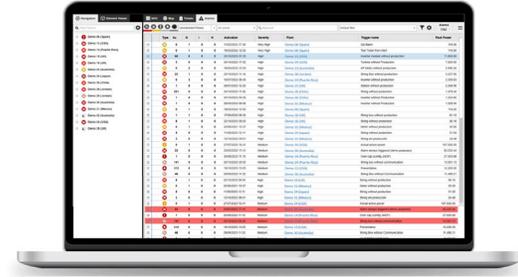


# Unlock features



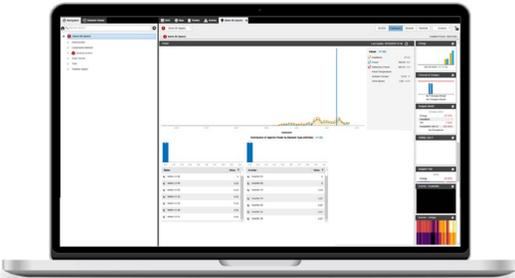
## Control room

- Portfolio overviews
- Plant dashboards & layout
- Portfolio alert manager
- Detailed device information



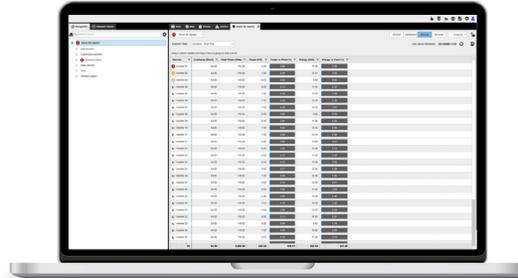
## O&M manager

- Custom alarms
- Intelligent alarm evaluation
- Integrated ticketing system
- Preventive maintenance planning



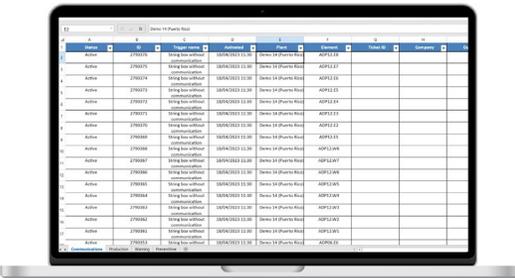
## Asset management

- Custom business variables
- Calculation of losses
- Lens control panel
- Contractual calculations



## Data analysis

- Multiple visualization tools
- Customize the series as required
- Save and export your queries
- Compare KPIs



## Automated reporting

- Customize the look and feel
- Send automated reports via email
- Default and/or custom reports
- Reporting maintenance

# GPM Horizon

Elevate your renewable energy portfolio with our cutting-edge platform, offering multi-technology monitoring and advanced analytics for wind, solar and energy storage.

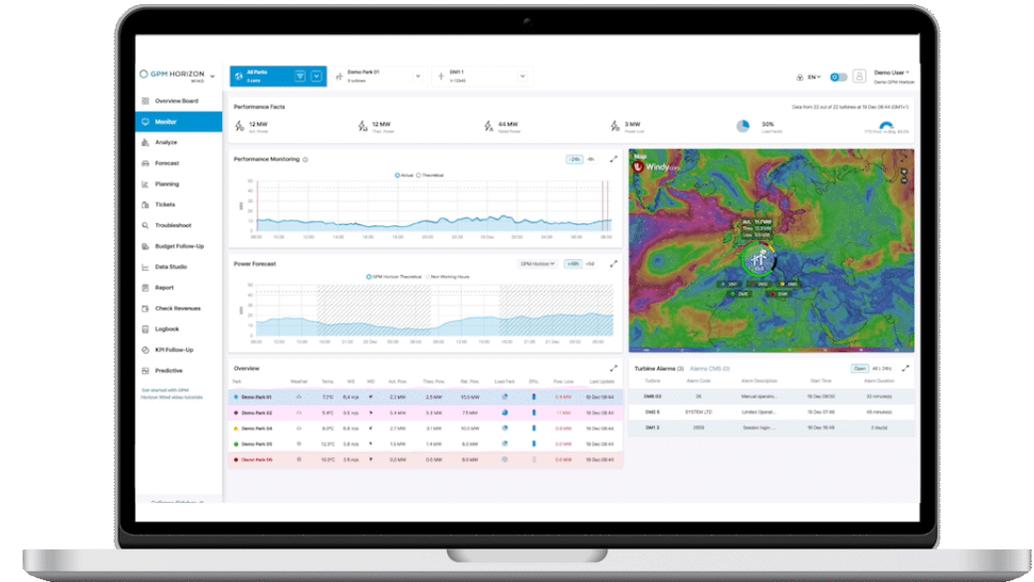


# GPM Horizon Wind features

Realize the full potential of your wind assets with GPM Horizon Wind. GPM Horizon Wind delivers real-time insights and advanced analytics to help operators maximize turbine performance, reduce downtime, and streamline operations across wind farms.

## Highlights:

- **Real-time monitoring:** Track turbine output, rotor speed, and environmental conditions with precision.
- **Predictive analytics:** Anticipate issues and optimize service schedules using data-driven analytics.
- **Automatically track revenues:** Monitor production and revenue and refine budget planning with weather-adjusted insights. Automatically track revenues using live operational data.
- **Establish KPIs:** Establish, manage, define and monitor key performance indicators, ensuring clear visibility of their performance.

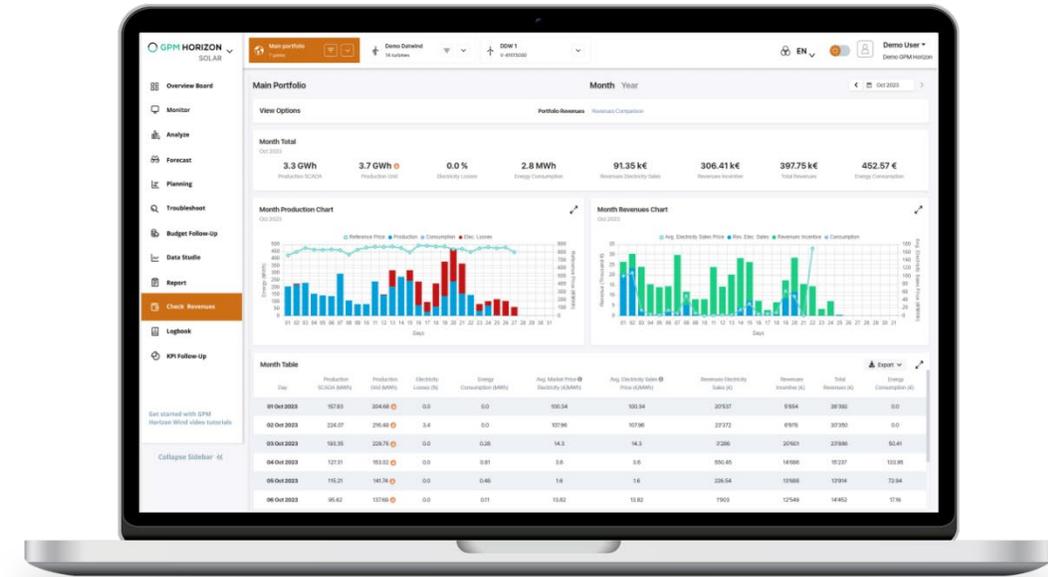


# GPM Horizon Solar features

Boost your solar operations with GPM Horizon Solar. Designed for comprehensive tracking and monitoring of solar asset performance, GPM Horizon Solar offers centralized visibility, automated tracking, and performance analytics to drive efficiency and uptime.

## Highlights:

- **Portfolio-wide visibility:** Monitor multiple solar assets from a single, intuitive interface including real-time monitoring and predictive analytics.
- **Establish KPIs:** Establish, manage, define, and monitor key performance indicators, ensuring clear visibility of its performance.
- **Performance assessment:** Automatic evaluation of the performance of your plant down to string level, and automatic detection of production losses, including tracker and soiling losses.
- **Automatically track revenues:** Monitor production and revenue and refine budget planning with weather-adjusted insights.

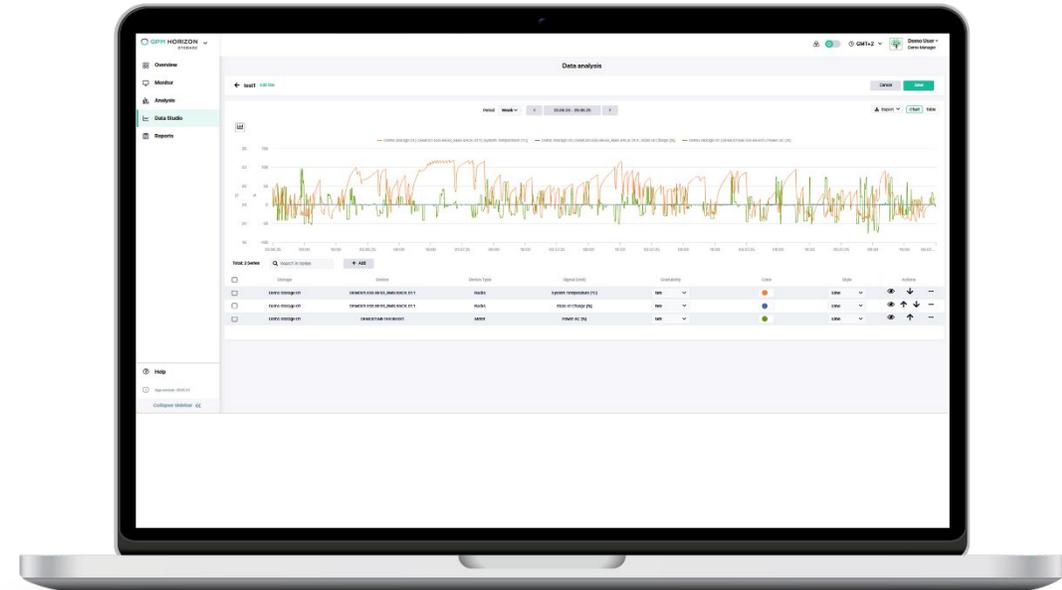


# GPM Horizon Storage features

Optimize your energy storage strategy with GPM Horizon Storage. GPM Horizon Storage enables operators to manage battery systems intelligently, respond to grid signals, and maximize financial returns through real-time control and forecasting.

## Highlights:

- **Advanced BESS management:** Monitor battery status, charge/discharge cycles, and operational limits.
- **Performance dashboards:** Assess site performance and visualize charging metrics and power levels.
- **Real-time data monitoring:** Track key metrics, analyze performance, and detect anomalies to help protect system integrity and improve returns.
- **Storage dashboard:** See overviews of a site's performance, including system temperature, alarms, and an overview of the short-term energy status of a site.



# GPM Horizon tiers

## GPM Horizon Core

			Overview
			Monitor
			Alarms
			Data Studio

## GPM Horizon Pro

			Overview
			Monitor
			Alarms
			Data Studio
			Analysis
			Budgets
			Reports
			Revenues
			Tickets

## GPM Horizon Elite

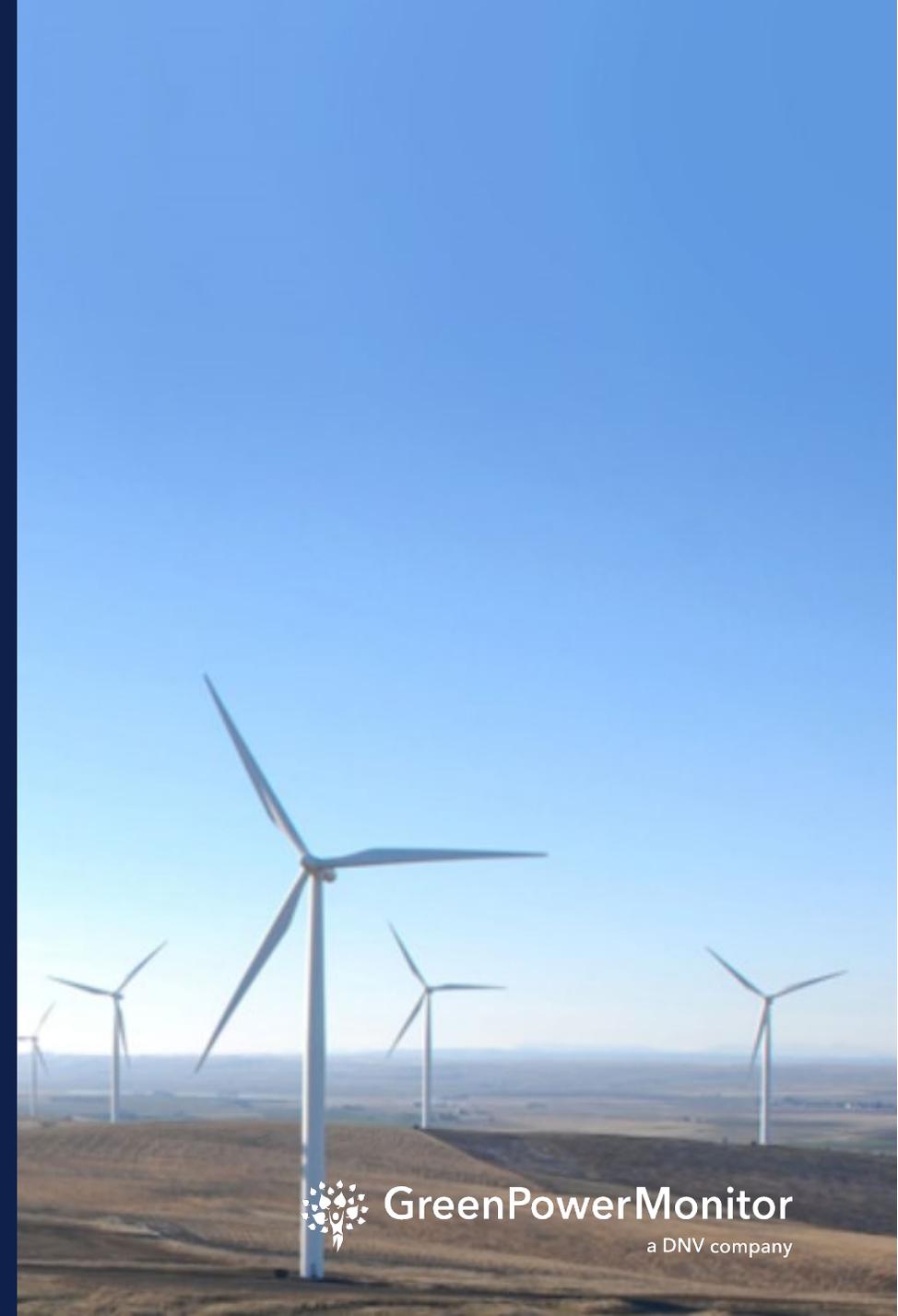
			Overview
			Monitor
			Alarms
			Data Studio
			Analysis
			Budgets
			Reports
			Revenues
			Tickets
			Logbook
			KPIs
			Forecast
			Planning
			Gemini (Predictive)
			Mobile-App

# Success Stories

# Wind portfolio in the US

## Capacity: 1.7GW Wind portfolio

- Solutions: GPM Horizon
- GPM Horizon is the online multi-technology monitoring asset manager platform for mixed renewable portfolios that includes Solar, Storage and Wind.
- It offers technical monitoring, customized KPIs & reports, and financial performance analytics.
- Combined with DNV's WindGEMINI capabilities of drivetrain failure prediction, pitch misalignment, performance watchdog and turbine fatigue life, the GPM Horizon capabilities are unmatched.



GreenPowerMonitor

a DNV company

# Hybrid project in the US

## Capacity: 460 MW Solar + Storage

- Solutions: GPM Horizon and GPM Plus
- Number of solar panels to be installed: 1,300,000
- Projected daily output capacity: 420MWac, able to deliver power to 100,000 US homes.
- Battery storage facility capacity: 40MWac, 1-hour



GreenPowerMonitor

a DNV company

# Europe's largest solar power plant under construction

Capacity: 500MW

- Solution: GPM SCADA, which allows to control each device of the solar plant individually, execute every type of command and extract energy production data in real-time.
- It will supply clean energy to 250.000 people.
- It will prevent the emission of 215 000 tons of CO<sub>2</sub>/year.



GreenPowerMonitor

a DNV company

# UK largest and most advanced hybrid solar farm

Capacity: 37 MW of PV + 27MVA of Storage

- York (UK) Hybrid Solar Farm (Solar + Storage)
- Solutions: GPM SCADA & GPM Power Plant Controller.
- The plant can control energy flows thanks to GPM Power Plant Controller (PPC) and it introduces new grid connection Engineering Recommendation G99.



GreenPowerMonitor

a DNV company

# Japan: off-shore floating PV projects

Capacity: 10MW

- 6 off-shore floating PV plants are managed by GPM Solutions: GPM Portal and GPM Plus
- GPM Solutions are easy to adapt to any configuration needed. Scalable from low to high power generation



GreenPowerMonitor

a DNV company

# Bahrain: Solar + Wind project

Capacity: 5MW (3MW Solar & 2MW wind)

- Solutions: GPM Power Plant Controller and redundant GPM SCADA
- 2 VESTAS turbines
- 2 INGETEAM inverters
- Electric communication
- Capacitors



GreenPowerMonitor

a DNV company

# Bolivia: PV-diesel Hybrid power plant

Capacity:

5.2MW PV power

2.2MW Battery power

15.2MW Diesel generators

Solution: GPM SCADA monitors the SMA inverters and SMA Fuel Save Controller.



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# India's first of its kind hybrid solar and storage powered town

- 6MWp Solar PV + 15MWh BESS
- 3<sup>rd</sup> party integration:
  - 271 x 1kW Rooftop Solar Systems on residential buildings with API
  - 1610 smart energy meters
  - Electric Vehicle charging Stations

## Solution:

- GPM SCADA
- GPM Power Plant Controller (GPM PPC)
- GPM Energy Management System (EMS)



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# Thanks!

It's time to take action. The future is now!

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