

ENERGY POOL SOFTWARE PLATFORM FOR MICROGRID VPP & HYBRID POWER PLANT

Energy-Pool has developed an integrated platform that allows to manage local networks of Decentralized Energy Resources (conventional and renewable), storage systems, and industrial, commercial or domestic loads (flexible and non-flexible).

With our platform, achieve competitive and reliable energy supply and unlock the full potential of your microgrid, VPP, or hybrid power plant.

EMS SOLUTION FOR MICROGRID, VPP & HYBRID POWER PLANT

Real time monitoring

- Asset supervision
- Detection of anomalies, alerting, anticipation of problems
- Detection of grid failures / connection states

Tracing of Energy flows

- Trace Energy flows between producers and consumers for energy billing (i.e., in PPA or bilateral supply contract)
- Interact with P2P trading and Blockchain platforms

Forecasting: RE, consumption and prices

- Gain visibility on the next 24-48 hours
- Enable anticipation and proactive optimised decisions: charge/discharge batteries, maximise renewable power, start fossil fuel generators only when needed

Real time asset control

- Implement centrally optimised setpoints for consumption / generation / storage assets
- Absorb real-time variations to keep micro-grid stability
- Adjust setpoints in case of anomaly / limit violation
- Manage local spinning reserve
- Securely manage disconnection / reconnection / synchronisation to main-grid

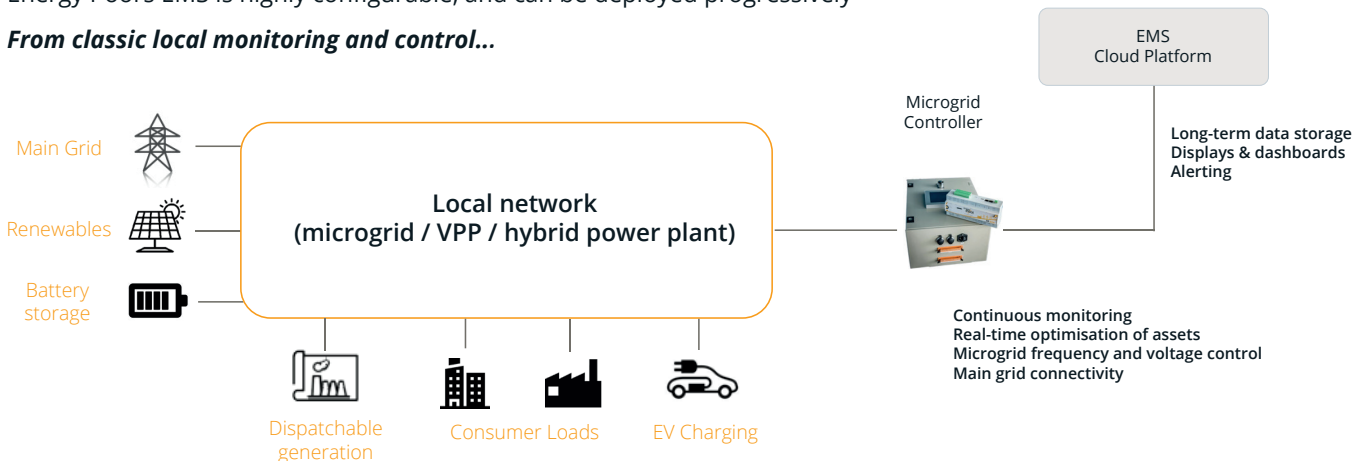
Forward-looking economic optimisation

- Compute optimised setpoint targets for consumption / generation / storage assets
- Minimise waste of renewable generation
- Reduce fuel consumption and maintenance costs
- Seize market price opportunities

THE SOFTWARE ARCHITECTURE

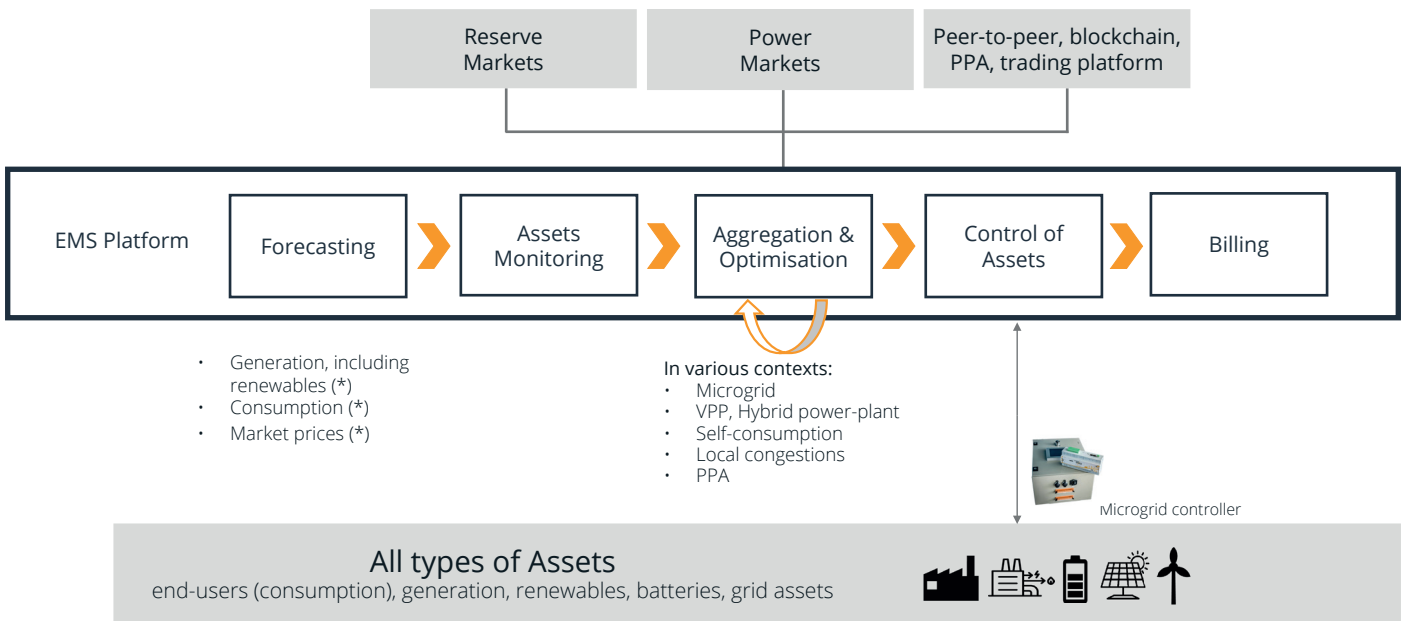
Energy Pool's EMS is highly configurable, and can be deployed progressively

From classic local monitoring and control...



In this configuration, the EMS' local controllers continuously monitor the state of the network (power, voltage, frequency) and control assets in real-time to maintain grid stability and security while maximising renewable penetration and implementing grid operating rules and equipment operating ranges. Where it is available, controllers can also monitor connections to the main-grid and automatically manage power exchange limits. Monitored data is transmitted to Energy Pool's EMS cloud platform for long-term storage, supervision, alerting and a range of other user interfaces.

...To full cloud based forward-looking optimisation



(*) or bring your own forecasts , our platform will integrate them

This advanced configuration leverages Energy Pool's EMS cloud-based forecasting and forward-looking optimisation services to anticipate the foreseeable future and thus better optimise the grid's operations. It also provides access to markets.

The flexibility of the EMS platform and its modular design allow a progressive deployment of the different features and modules.

WHY CHOOSE ENERGY POOL'S EMS ?

State of the art technology	Industrialised solution	Proven
Optimisers (IBM CPLEX) IoT secured infrastructure	<ul style="list-style-type: none"> • Scalable • Robust infrastructure (AWS based) • Embedded cybersecurity • High availability 	<ul style="list-style-type: none"> • 10+ years of R&D • 10+ years of commercial operations • 10+ countries • 1000+ assets managed
Cloud (AWS) Edge computing Machine learning		

Beyond the software platform, Energy Pool can assist you through a full range of services: consulting, integration of the EMS into your IT system landscape, assets connectivity, operations...

ABOUT ENERGY POOL

At the heart of the smart grid development, Energy Pool manages and optimises complex electricity systems (distributed generation, renewables, storage assets and consumers), for a smarter and more sustainable energy management. These services facilitate the integration of renewable energies, help reduce CO₂ emissions and improve overall efficiency.

Energy Pool has been one of the pioneers in the French flexibility market since 2009. In addition, we are also present in Japan and Turkey since 2015 and in the Netherlands since 2018, and are conducting developments in around 10 countries, including Germany, Malaysia, Saudi Arabia, Thailand...



Benefit from Energy Pool mutualised operating center secured infrastructure and 24/7 team.



Tailor-made and evolutive services.



Experienced staff to assist you at each step of your project deployment and operations.

CONTACT

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