

# GEMALOGIC®

## FLEXIBILITY



The GemaLogic Energy Flexibility platform provides innovative control of flexible loads and distributed energy resources which can adapt their electricity production or consumption.

The GemaLogic Flexibility platform provides Demand Side Management functionalities as modular solution of Energy Monitoring and Energy Efficiency modules. It helps to establish new business models or increase revenue through participation in the ancillary service markets, balancing markets or wholesale energy markets.

- Modular Demand Side Management functionalities
- Automated or manual control of Flexible loads and DER
- Virtual power plants
- DER renewable and conventional sources
- Flexible storages, industries, commercial and residential users
- Enabled participation in the ancillary service markets
- Enabled participation in balancing markets
- Enabled participation in wholesale energy markets

## MARKET OPPORTUNITY

The GemaLogic Flexibility platform provides advanced software solutions for energy actors which can benefit from ancillary energy services at competitive prices or sell flexible energy on the wholesale market. It provides Demand Side Management functionality to control and optimise DER, internal production, balance flexible energy loads and integrate diverse energy sources – all with one software solution. The GemaLogic Flexibility platform combines functions of monitoring, forecasting, optimisation and controlling of distributed energy resources or flexible loads in commercial or residential buildings, industries, renewable sources, cogeneration of heat and power (CHP), diesel electric generators (DEG), battery management systems (BMS), heat storage, etc. with modern communications and information technology.

## SOLUTIONS

Depending to the segments of usage the GemaLogic Flexibility platform provides three different segments, such as GemaLogic Flexibility for Virtual power plants, industry, commercial and residential buildings where all could be aggregated to Virtual power plant. According to these segments, rules are agreed among the energy actors for providing the energy services to the market. The GemaLogic Flexibility platform provides reliable data from all included units where it is important to provide online aggregation of intense data flows in near real-time demand response.

## SCALABILITY

Capability of a GemaLogic Flexibility platform provides a system, network and process to handle a growing amount of work. Energy actors allow easily to operate with the platform, add new flexible loads and distributed energy resources through ComBox.M, ComBox.L or other IoT devices, adding new business revenues (products) and use it in any type of environments.

## INCREASE REVENUE OR REDUCE ENERGY COST

The GemaLogic Flexibility platform aggregates and optimizes energy potential from flexible loads and distributed energy resources into Virtual Power Plant. Energy actors could provide demand power and energy as a service or buy or sell energy according to price signals from wholesale energy markets. With schedule optimization for Day-Ahead and Intra-Day optimization, based on weather and production data, state of technological path or other boundary condition, GemaLogic Flexibility platform provides balance between energy supply and demand and helps energy actors to reduce energy cost.

## FUNCTIONALITIES

- Demand Side Management
- Demand Response
- Energy Efficiency
- Asset monitoring and visualisation
- Energy balancing
- Asset schedule optimisation
- Interoperability

## MODULES

- GUI flexibility modules
- Data acquisition setup
- Calculation and aggregation setup
- Account, object and variable parametrisation
- User role and system job administration

## API MODULES

- Data import (REST, MQ)
- Data export (REST, MQ)
- Weather data import (Measurements, Forecast)
- Production data import (REST, MQ)
- SCADA data import/export (OPC, ICCP-TASE.2)
- Wholesale energy market data (REST, MQ)
- Electricity consumption forecast (REST, MQ, .csv)
- Electricity production forecast (REST, MQ, .csv)
- Alarms and Events (SMS, e-mail, REST, MQ)

## SUPPORTED STANDARDS AND PROTOCOLS

- Modbus, DI, AI/AO, Relays
- OPC (UA, DA)
- IEC 60870-5-101
- IEC 60870-5-104
- IEC 61850 (Power Utility Automation)
- IEC 61968 (CIM / Distribution Management)
- IEC 61970 (CIM / Energy Management)
- ICCP-TASE.2
- OpenADR

## SERVICES

- Consulting
- Solution integration
- 24/7 Maintenance
- Tailor made on premises
- Platform-as-a-Service (PaaS)

