AMOS.

Renewable Intelligence®

Datasheet

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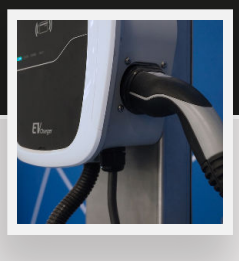
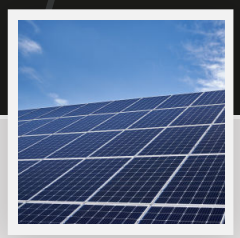
TESLA

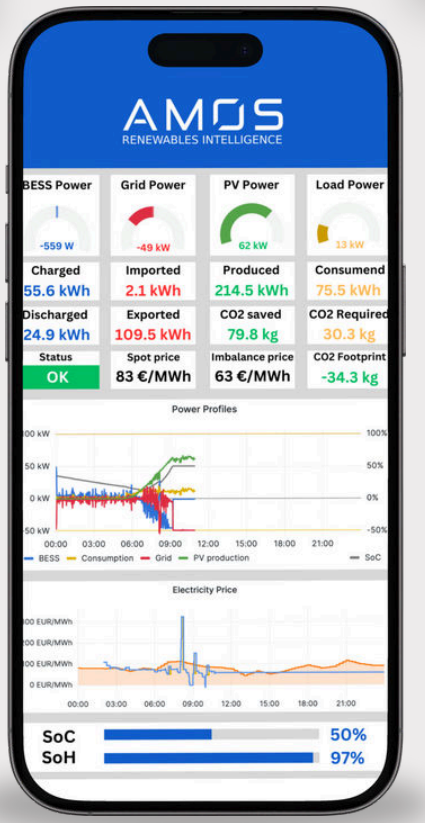
AMOS:
RENEWABLE INTELLIGENCE®



ENERGIQ:
INTELLIGENT PREDICTIVE OPTIMIZATION FOR SMART GRIDS



PROPHET:
THE FUTURE OF ENERGY FORECASTING



GRIDFUSION:
HYBRID POWER PLANT OPTIMIZER

AGGREGATE:
SMART ASSET AGGREGATION

BALANCER:
FOR BALANCE RESPONSIBLE PARTIES

AMOS

ENERGIQ: Intelligent predictive optimization for smart grids

AMOS EnergIQ introduces a paradigm shift in smart grid management, offering advanced predictive optimization features designed to enhance efficiency and sustainability.

PERFORMANCE SPECIFICATIONS:

SMART GRID ORCHESTRATION
Aggregates and manages data from smart grid assets (energy meters, renewables, consumption data, ...)

INTEGRATION WITH RENEWABLES
Coordinates charging and discharging operations with the fluctuating output of renewable energy sources

INVESTOR VIEW
Provides insights and analytics on economic performance and return of investment

PEAK SHAVING WITH SMART RECHARGE
Automatically discharges the BESS during high grid import to reduce peak demand and electricity costs

EXPORT LIMITATION
Regulates and restricts renewable energy export to ensure adherence to regulatory and contractual obligations

LOAD LEVELLING
Manages and smooths out fluctuations in electricity demand over time

TIME SHIFTING
Balances renewable energy usage by charging batteries during low demand and discharging them during peaks

PRICE ARBITRAGE
Capitalizes on fluctuating energy prices by intelligently charging and discharging energy at favorable market rates

EV CHARGING OPTIMISATION
Optimizes the charging schedule for electric vehicles to balance energy demand and minimize costs

HVAC AND HEAT PUMP OPTIMISATION
Efficiently manages the operation of HVACs and heat pumps for heating and cooling to optimize energy consumption

CARBON FOOTPRINT MINIMIZATION
Minimises the environmental impact by optimizing energy use with a focus on reducing the carbon trail

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PROPHET: The future of energy forecasting

AMOS Prophet stands at the forefront of energy forecasting, offering a suite of advanced functionalities poised to revolutionize the way we predict and manage energy resources.

PERFORMANCE SPECIFICATIONS:

RENEWABLE PRODUCTION FORECASTS
Estimates energy generation from PV systems and wind turbines

CONSUMPTION FORECASTS
Forecasts consumption of conventional loads, HVACs, and heat pumps

FORECASTING FOR EV CHARGERS
Anticipates the utilization and energy demand for Electric Vehicle (EV) charging stations

ENERGY MARKETS FORECASTS
Forecasts of prices at day-ahead, intraday, and balancing markets

SYSTEM IMBALANCE FORECASTS
Predicts volumes of balancing energy supply and demand

CARBON INTENSITY FORECASTS
Predicts the carbon intensity of energy production, providing insights into environmental impact

COUNTRY-LEVEL ENERGY MIX FORECASTS
Projects the future composition of a country's energy sources, considering various factors

FORECAST VALIDATION
Validates the accuracy of energy forecasts through systematic testing against historical data

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GRIDFUSION:
Hybrid power plant optimizer

AMOS Guardian sets a new standard in Battery Energy Storage System optimization, offering a range of advanced functionalities to ensure performance, reliability, and longevity.

PERFORMANCE SPECIFICATIONS:

RENEWABLE FIRMING AND SHAPING
Utilizes batteries to stabilize and optimize the output of variable renewable energy sources, ensuring consistent power supply

GENSETS SUPPORT
Integrates and controls gensets (CHPs, diesel & biomass generators) in a hybrid power plant

DYNAMIC POWER BOOST
Enhances the slow ramp-up and ramp-down speeds of conventional generators by injecting additional power from a battery

HYBRID OPERATION OPTIMIZATION
Optimizes the technical operation of hybrid power plants to maximize reliability and economic performance

REMOTE MONITORING AND CONTROL
Provides remote monitoring and control capabilities for hybrid power plant assets

PERFORMANCE ANALYSIS AND REPORTING
Analyzes the performance of hybrid power plant assets and generates reports for stakeholders and regulatory compliance

SCENARIO SIMULATION AND ANALYSIS
Conducts scenario analysis to assess the impact of operating conditions on hybrid power plant performance and profitability

BILATERAL CONTRACT FULFILLMENT
Ensures the technical fulfillment of bilateral contractual arrangements by coordinating energy delivery and exchange

CONTRACT PARAMETER OPTIMIZATION
Recommends optimal parameters for new or existing bilateral agreements, maximizing profitability and performance

AGGREGATE:
Smart asset aggregation

AMOS AggreGate introduces a pioneering solution for smart asset aggregation, empowering energy asset owners to optimize performance, enhance revenue opportunities, and streamline operations.

PERFORMANCE SPECIFICATIONS:

ASSET AGGREGATION
Aggregates energy assets into a joint pool to create a larger virtual resource capable of participating in energy markets

MARKET PARTICIPATION
Enables participation in energy markets, including wholesale markets, ancillary services markets, and capacity markets

DEMAND RESPONSE OPTIMIZATION
Aggregates flexible loads to participate in demand-side management programs, enhancing revenue opportunities

VIRTUAL POWER PLANT MANAGEMENT
Manages the operation and dispatch of the aggregated assets as a virtual power plant

REAL-TIME MONITORING AND CONTROL
Provides real-time monitoring and control of aggregated assets, allowing to optimize performance and respond to market signals

SETTLEMENT AND BILLING MANAGEMENT
Manages settlement processes and billing for energy transactions, ensuring accurate revenue allocation and compliance

PORTFOLIO OPTIMIZATION
Optimizes the composition and utilization of the aggregated asset portfolio to maximize revenue and minimize operational costs

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BalanceMaster: For balance responsible parties

AMOS BalanceMaster introduces a comprehensive solution tailored for balance responsible parties, offering a range of advanced functionalities to optimize energy management and ensure regulatory compliance.

PERFORMANCE SPECIFICATIONS:

IMBALANCE MANAGEMENT
Minimizes the discrepancies between day-ahead forecasts and actual energy consumption or production

DAY-AHEAD DIAGRAMS
Calculates and optimizes energy flow schedules for the following day, ensuring resilience against forecast variability

PORTFOLIO OPTIMIZATION
Aggregates a pool of assets and optimizes their utilization to maximize efficiency, profitability, and resource allocation

SETTLEMENT MANAGEMENT
Manages the settlement process by reconciling energy transactions, ensuring compliance with regulatory and market rules

RISK MANAGEMENT
Identifies and mitigates risks associated with energy trading and imbalance positions to minimize financial exposure

SCENARIO ANALYSIS
Simulates different scenarios and assesses the impact on energy trading strategies, profitability, and risk exposure

PERFORMANCE ANALYTICS
Provides insights into the performance of energy portfolios

AUDITING AND VALIDATION
Conducts audits and validations of energy data to ensure compliance with regulatory standards and market regulations

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