

# Unlock the value of your distributed energy resources

with Distributed Energy Optimization (DEOP)

[siemens.com/deop](https://siemens.com/deop)

## Maximize the value of your distributed energy resources

Manage your distributed energy resources (DER) effectively: With Distributed Energy Optimization (DEOP) you benefit from our expert knowledge in the energy domain without having to master a complex energy management system. Gain a comprehensive overview of all your assets worldwide and get forecast and online optimization of your assets without having to invest in a complex software or additional manpower. Real-time performance data helps you achieve increased transparency across facilities, as well as getting an edge up on potential problems and avoid downtime. Our intuitive and flexible software allows you to completely monitor, optimize and sell the energy generation and consumption of your DER.



## Everyone benefits from having all data in one place

DEOP is a cloud-based software helping Energy Service Companies (ESCO), Aggregators, Campuses & Real Estate, Industrial companies, Utilities and EPCs and IPPs to improve performance and increase profitability. Being a Software-as-a-Service (SaaS) offering, DEOP can be implemented effortlessly and fast at low entry cost. It has never been so easy to get an overall view of your energy production and consumption regardless of energy type!

Gain transparency and monitor your DER in an easy-to-use application with standard or customizable dashboards. Optimize on the costs of your assets, generate reports to document this optimization and generate revenue by participating in markets.

### Operation Managers



- Get information for critical operational decisions
- Improve maintenance schedules and thus save OPEX
- Real time alarms and anomaly detection and stream analytics

### Asset Managers



- Performance monitoring of assets (historical & forecast)
- Standardized reporting including cost and revenues on hand

### Energy Managers



- Leverage return on invest by participating in energy markets
- Energy transparency and KPI
- benchmarking against business plan
- Automated optimization

### All user groups



- Efficiency actions and benchmarking
- Predict changes in performance profiles

# Usecases & Flexibility



## Monitoring & Transparency

When operating your own microgrid, you want to get transparency of your assets. Monitor their performance by collecting data in real time and react flexibly for optimal asset utilization.



## Cost optimization

Improve your energy production and savings based on data and generate reports that document your success. Route cause analyses for longer-term deviations is included as well. DEOP analyzes your energy production, storage and consumption, allowing you to optimize your energy demand. Algorithms forecasting and optimized dispatch help to reduce your energy cost and CO<sub>2</sub> emissions.



## Revenue generation

Depending your DER and your location, participating in energy markets or e.g. in demand response programs can be very attractive. Integrate your assets in aggregators' pools by using DEOP's flexible interfaces to maximize the revenue of your assets.

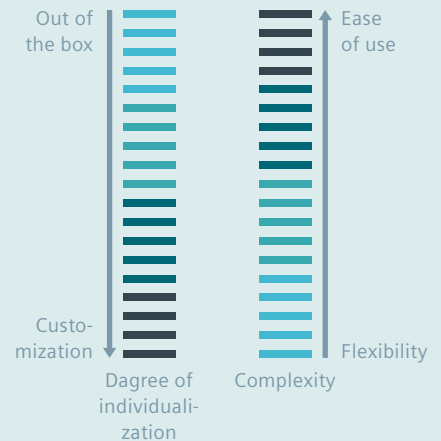
### A flexible solution:

#### Make it yours and integrate seamlessly with your ecosystem

Often with SaaS-products you must forgo certain amenities for the sake of standardization. Not with DEOP! Its interfaces and gateways help you integrate DEOP in your IT landscape and individualize the standard offering to your needs. Flexible interfaces and standard protocols connect your devices in the field. Based on the MQTT, the wide-spread IoT Protocol, and gateways for protocols like IEC 60850-5-104, IEC 61850, Modbus TCP etc. so you can integrate all the assets you want to be covered by DEOP. Additionally, DEOP provides proven API integrations to DESIGO CC & E-Car OC [include links here].

For integration in your existing IT systems, the software provides a set of API interfaces and file importers as well as exporters for exchange of bulk data.

The rules engine lets you configure the rules from the user interface that may depend on the mode-scenario and are made up by triggers and actions. The Formula editor enables you to create formula templates and formulas depending on your individual needs. And there's even more individualization possible as you can run your own algorithms with gRPC or develop new algorithms and use the JavaScript plugin.



Your software – your choice:  
Take the readily available configuration for ease of use or customize to your needs and get more flexibility in your DEOP.

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