



Energie ist dezentral

The team

For product development and complex problem solving

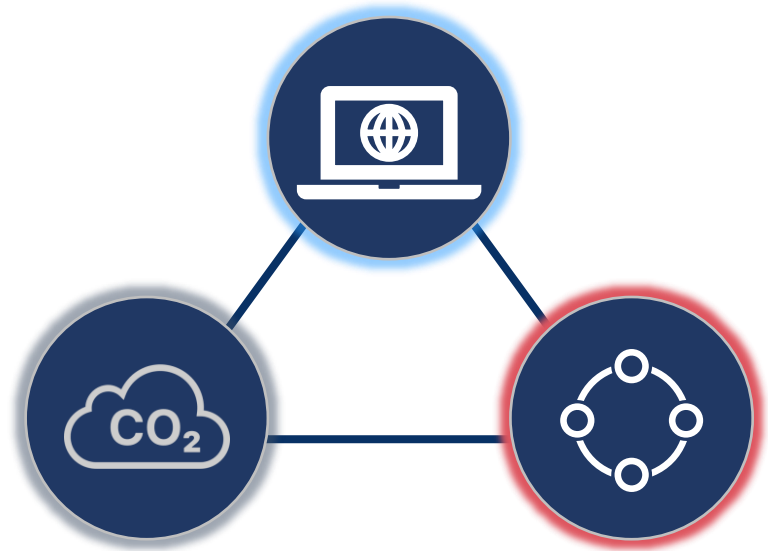


Why we do, what we do



Vision

Energy networks planned with resource flexibility and climate responsibility



Mission

To accelerate the world's energy transition via digital tools and sustainable integration

Challenges our customers face

Energy transition in the digitalization context bring the following challenges

Complexity



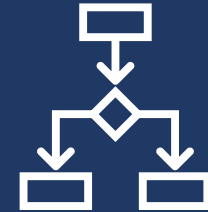
Integrated planning of diverse energy domains like sector-coupling, PtX & PtG

High cost



Failing to provide optimal solutions for complex problem leads to poor investment decisions and high cost

Work flows



Existing old tools and non digital workflows, hinder the energy transition from bottom up

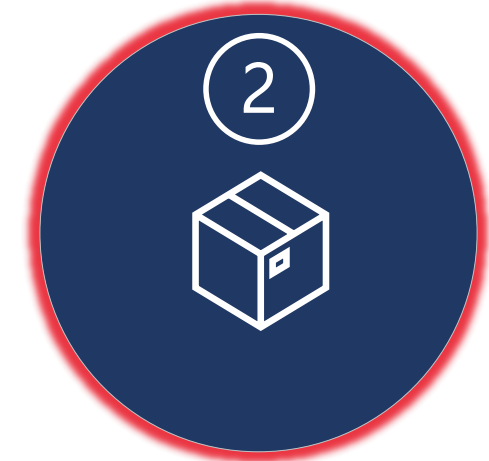
We propose a innovative web-platform as a one-stop solution

Complex problems answered within 3 service points



Software as a service

Planning and business intelligence solutions for Municipal-utilities and Energy consultants (subscription model)



Energy consulting

Consulting services to gain a deeper look into complex energy planning, optimization and investment decisions



Open innovation

Offering custom made web solutions for both energy planning and management applications

Added values

Customers benefit from our solutions by

Time saving

With digital processes, engineers can now acquire faster results and spend valuable time on other activities



Training/ Hiring personals

Easy to use UI/UX accompanied by user support, eliminates the need for experienced professionals



Investment safety & work flow

Our enterprise software solutions integrate within your existing workflows offering optimal investment decisions



Challenges

Encountered during planning

Dimensioning

Identifying the optimal installation size of energy resources, loads and storages



E-mobility, Hydrogen

Integrating E-mobility, hydrogen and large fleets within energy system



Stakeholder-Management

Expectations of various energy stakeholders and communication



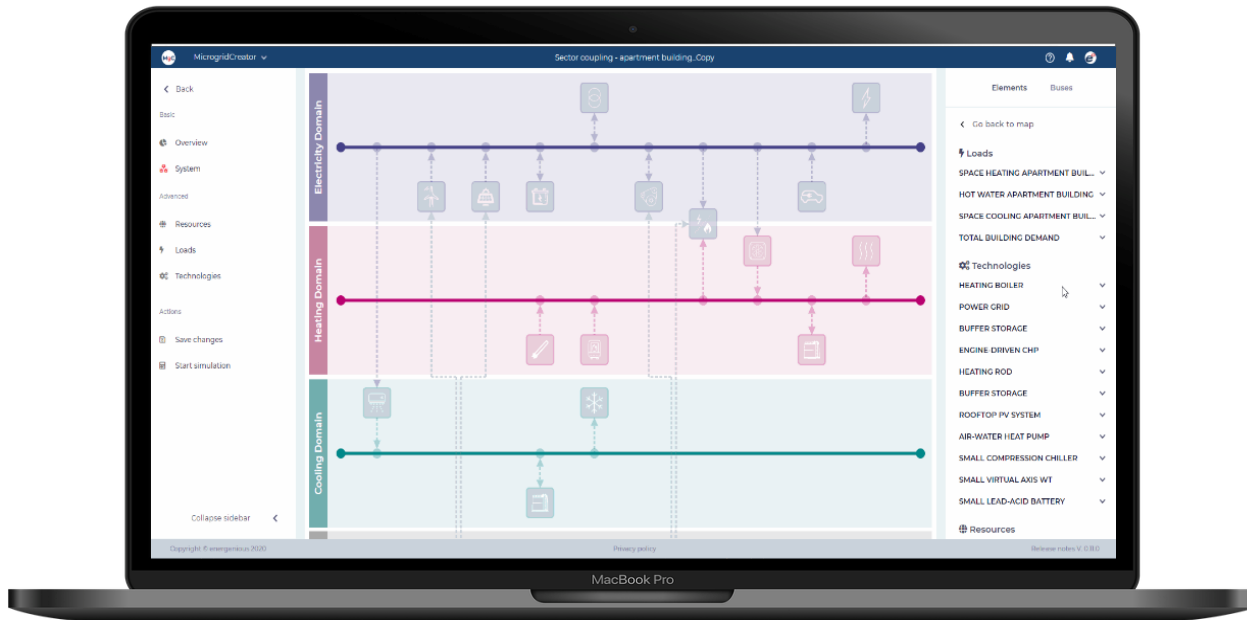
Norms and standards

Various applicable standards, energy tariffs, grants and regulations in-place



Our solution to fast and optimal planning

SaaS web-tool for complex energy system planning of districts and micro-grids



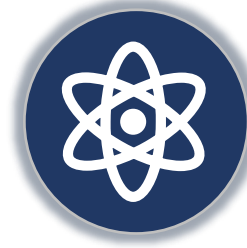
Optimal technology mix

Identifying the right technology mix and dimensions of energy units, storages and loads



Stakeholder-Management

Smoothly integrating diverse stakeholders within a complex energy system

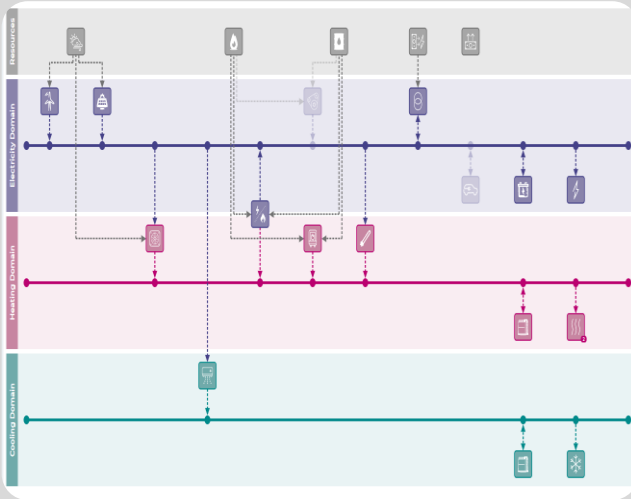


Norms and standards

Including various standards and norms applicable for building construction, city infrastructure and micro-grids

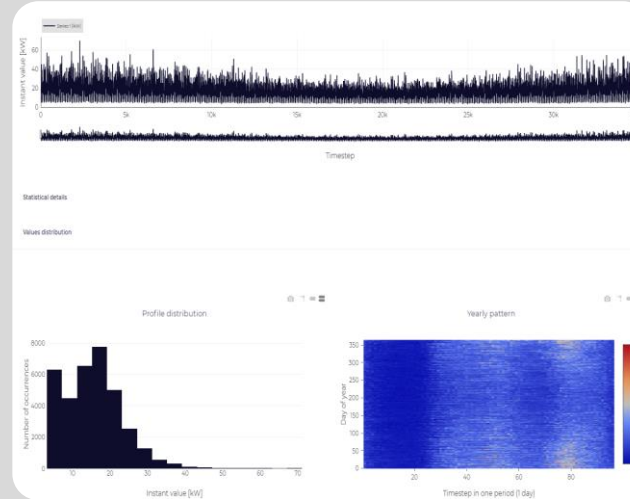
Our innovation

What differentiates us?



Sector coupling

- Integrated system analysis in the planning phase
- All relevant energy sources and technologies
- Timely optimization of configuration and operation



Load Profiling

- Linking bottom-up and top-down approaches
- Detailed thermal building simulations
- Forecasting / prediction
- Consideration of individual devices



Load Management

- Flexible consumer loads, storage, and processes
- Central and decentralised control principles
- Balancing already at the lower level (grid cell)

Your added value

With our solutions you can

Create better economic opportunities

Energy system investment decisions



Expand customer portfolios

Integrating diverse energy domains
for best return on investments



Save time in planning processes

Reduced resources spent on
simulation iterations in planning



Handle complexity of systems

Building flexible systems that
interact within for financial benefits



Our references

From the field of energy agency, engineering offices and innovative digital SMEs



Magnus Jennerholm

Project Manager,
Gotland Energy Center

In addition to energenious having a very solid knowledge in simulation and optimization, they also have a broad knowledge of smart solutions in renewable energy systems.



Marvin Albrecht

CTO , Es-geht!-
Energiesysteme GmbH

energenious MicrogridCreator is a very helpful tool to optimally advise municipal utilities and operators of decentralized energy infrastructure on efficient energy solutions based on fewer data and assumptions.



Ilaria di Panfilo

Marketing
Manager, Tecnojest srl

As a strong digital partner, with energenious we found a team of trusted developers, providing great value to our products through their proven knowledge in the energy and software domain.

Haßfurt, Germany

Optimization of an area network with renewables and commercial loads

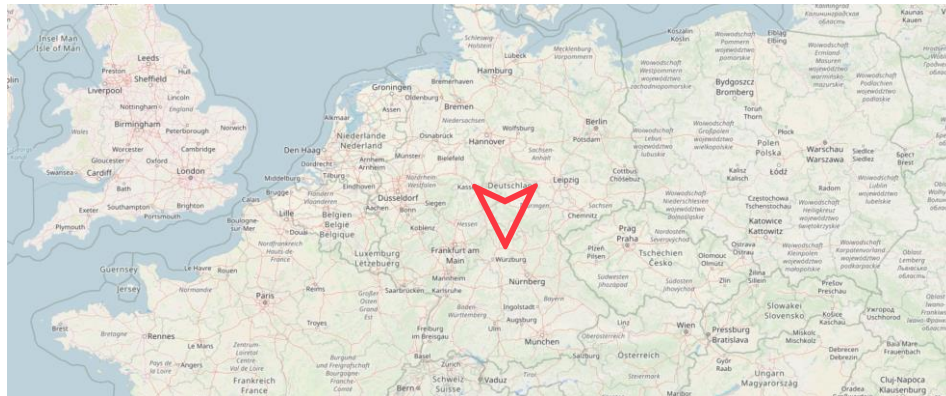


Municipal utility Stadtwerk Haßfurt

- District town in Bavaria, 15,000 inhabitants
- Planning of a microgrid with PV + 2MW battery
- Evaluation different tech + network services
- Optimization of design and operation



Foto: Digital Energy Solutions



Open Streetmap

Main results

- Expansion of renewable + storage technologies
- Total costs decrease (CapEx +, OpEx -)
- LCoE reduced by up to 18%
- Provision of network services can be worthwhile

Optimized design and operation of a grid-connected energy cell with PV systems and battery storage while providing grid services

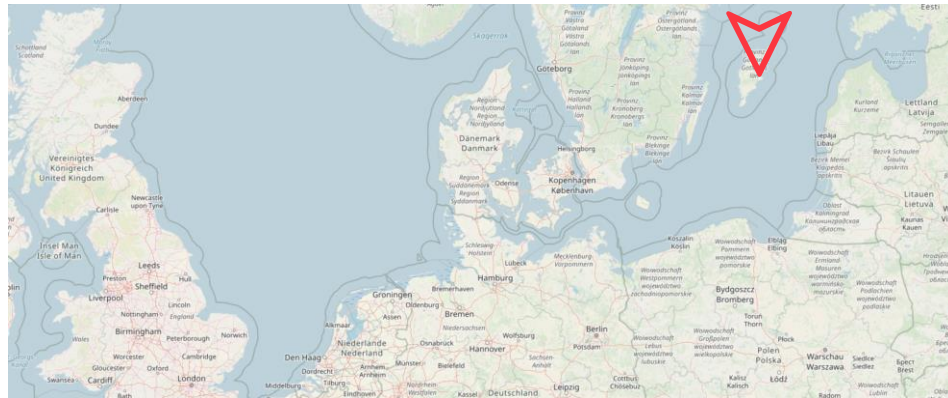
Gotland, Sweden

Climate neutrality & increasing self-sufficiency with sector coupling



Energy agency **Energiecentrum Gotland**

- Largest island in Sweden, 60,000 inhabitants
- Unstable energy supply, mainland link out of date
- Goal: carbon-neutral supply by 2025
- Strengthen self-sufficiency & energy communities
- Optimization with sector coupling



Open Streetmap



Foto: Region Gotland

Main results

- Decentralized storage prevents network failures
- High self-sufficiency rate can be implemented
- Integration of heat and e-mobility
- Heat supply with heat pumps
- Seasonal heat storage is a possible option

Maximizing self-sufficiency and renewable energies with decentralized storage and sector coupling strategies to increase grid stability and reduce CO2 emissions

Allensbach, Deutschland

Validation of smart grid technology to control flexible loads

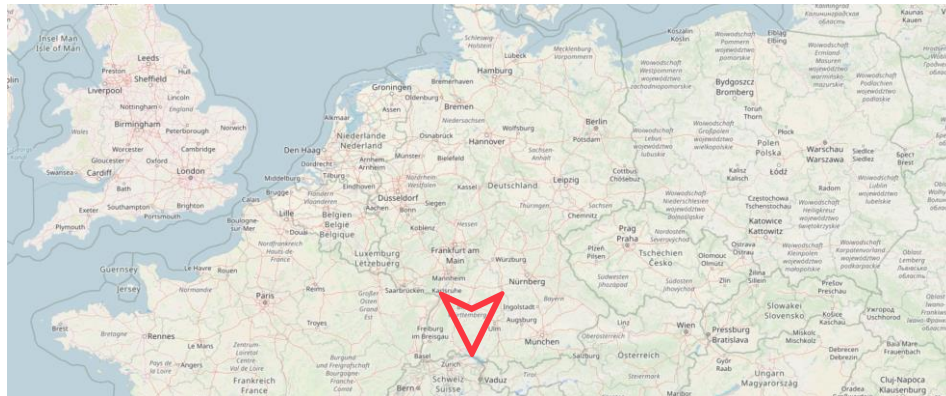


Community **Gemeinde Allensbach**

- At Lake Constance, 7,000 inhabitants
- Validation of Smart Grid w/o load measurement
- Technology for controlling flexible end devices
- Creation of benchmarks for tech evaluation
- Optimization of reference design and operation



Gemeinde Allensbach



Open Streetmap

Main results

- Flexible loads facilitate the integration of renewable energies
- Sector coupling increases flexibility and efficiency
- Agent-based decentralized control makes sense
- Sufficient number of participants required

Intelligent agent-based control of flexible loads enables a high proportion of renewable energies and stabilizes grid cells



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Register for a demo

<https://accounts.energenious.net/signup>



Learn more

<https://energenious.eu/index.php/mgc/>



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