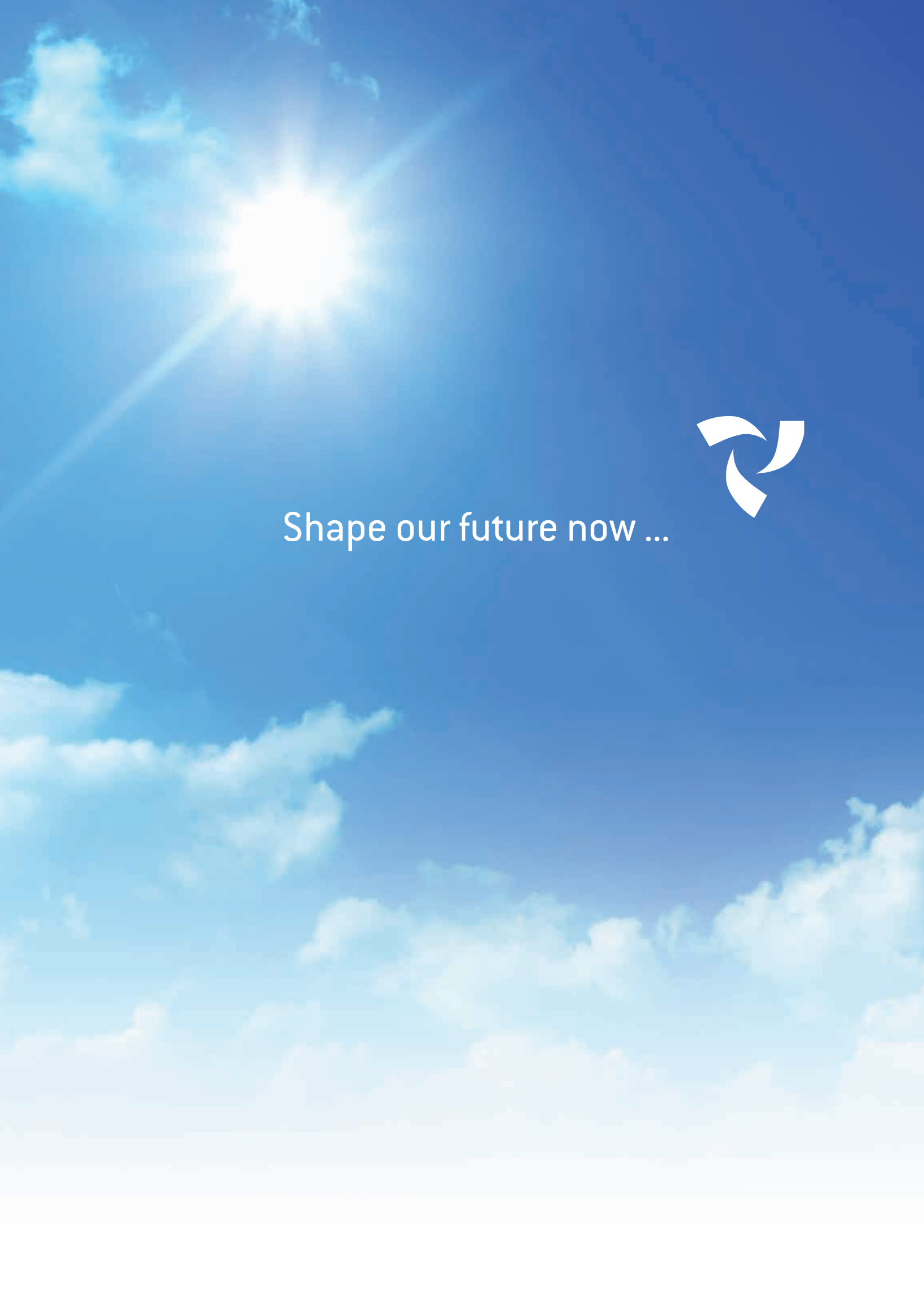


Our company



Shape our future now ...



Pioneers in renewable energy for Southwest Germany

GAIA – This abbreviation takes its name from GAIA, Mother Earth of Greek mythology, and bears the company philosophy of the Gesellschaft für Alternative Ingenieurtechnische Anwendungen (Association for Alternative Engineering Applications): we have been actively helping convert the energy system in South West Germany into renewable energy since 1999. Our Core competency consists of expertise in wind power and solar energy systems as well as custom designed substantiable energy solutions for corporate and municipal facilities (e.g. distribution facilities, water treatment plants), and also for private investors. Founded by CEOs Torsten Szielasko and Michael Wahl as a planning office, today GAIA boasts nearly 70 highly qualified employees who contribute daily to climate and environment protection to preserve our planet. Utilizing Wind Power and Solar energy reduces the damaging effects of fossil fuel emissions on the environment and helps free society from the danger of nuclear power generation and the high cost of imported energy sources.

Holistic, ecological, flexible

We provide comprehensive renewable energy project solutions for our customers, from project conception to a turn-key completion. We take care of the complete project, applying the full criteria of sustainable development. While doing so, we always observe given official norms and criteria for sustainability. After project execution, we also offer technical management of operational wind farms and photovoltaic systems in addition to a wide range of other services. These include site feasibility assessment studies, project design, project site and utility interconnection permitting, equipment and vendor selection, project construction management, commissioning, energy yield verification, and project operations and maintenance management to name a few. These apply to projects developed by other project planners as well.

We align our practice with our principles

We put our manpower into sustainable energy projects and work under environmentally and climate-friendly conditions: Our company has been based in an energy-generating historic building since August 2012. Our turn-of-the-century building produces more energy than we need in terms of electricity and heating. The remaining power is stored and used as required or fed into the public energy grid. Meeting the needs of tomorrow today. Our vision – to use 100 percent renewable energy to meet energy demand - has become reality.



GAIA company headquarters:
an energy-generating old building with exemplary character



CEOs:
Michael Wahl and Torsten Szielasko



This 4.2-megawatt (MW) class plant in Mainz-Hechtsheim generates clean energy for around 10,000 people.



Our wind energy projects generate electricity at the lowest cost

Every wind energy project presents its own special challenges. At GAIA we use sophisticated wind energy project modeling techniques using the sites actual cartography to site the individual turbines to maximize energy yield as well as to analyze and quantify the prospective noise, blade shadow flicker, and construction impacts on the project site and the projects neighboring properties. GAIA works with qualified surveyors, economists, wildlife, and environmental experts to perform the studies needed to maximize project economics and minimize the projects environmental impact.

GAIA stays with it's projects from start to finish, including the regulatory permitting process with the responsible authorities. Using in advance conducted studies and working with scientific experts we verify the final projects design meets all local and regional enviromental regulation for each regulatory jurisdiction.

Wind power projects: In professional hands from start to finish

1 Site audit and site planning

Our specialists prepare feasibility analyses and potential studies to identify appropriate sites for wind turbines, taking geographical, regional planning-related, meteorological, technical and commercial information into account.

After identifying a site, the next step is detailed site planning. Comprehensive, internal wind yield, turbulence and exposure forecasts are drawn up for the most efficient wind farm configuration. Visibility analyses and visualisations are implemented to check and demonstrate the impact on the landscape.

The department later coordinates, assigns and monitors all relevant external expert reports by renowned accredited surveyor companies.

2 Securing land

Once suitable land has been identified, we secure it by concluding lease contracts and licensing agreements with the land owners, as well as setting out agreements with local municipalities with regard to road use and cable installation.

3 Mains connection planning / Transport concept

We draw up the appropriate mains supply connection and transport concepts.

4 Approval procedure

We take care of all the necessary studies and surveys, put together the documentation and monitor the whole process right up to final approval.

5 The finances

We partner with leading financial institutions to develop a solid financial concept.

6 Construction

Our construction managers coordinate all phases of the project right up to the completion of wind turbines or wind farms.

7 Commissioning

We organize and supervise the commissioning and connecting to the public mains supply.

8 Operational management

Our management specialists take care of the administration, maintenance and servicing of the plants for municipalities and operators.

9 Direct marketing

We market our GAIA power, according to local regulations.



This photovoltaic system with a capacity of 62.9 kWp is located on the roof of a commercial enterprise. 73% of the generated electricity is consumed on-site.



Clean, favourable, independent – the power of the sun

Solar energy is inexhaustible. Using it is CO₂-neutral and therefore climate-friendly. When it comes to photovoltaics, we are the point of contact for businesses, industry, agriculture, and municipalities. The GAIA photovoltaic team plans and realizes solar roof surfaces from around 100 kWp (approx. 500 m²). Storage systems for industrial and commercial applications are also installed. Additionally the team designs solar carports for customer and/or employee parking spaces, including electric charging options upon request. We use only high-quality components that meet German quality standards.

We carry out all necessary services from a single source. Based on a precise on-site analysis and detailed computer planning, we develop all the necessary key figures to find the optimal solar power solution for each specific location. We always take into account the individual framework conditions and specifications.

We install systems on roofs of commercial, agricultural, and publicly used buildings, carports, and open spaces. Upon request, we also provide remote monitoring and maintenance of photovoltaic systems and offer services such as system checks and module cleaning.

Renewable energy to the next level – our energy storage solutions

We are a specialist partner of well-known manufacturers of storage solutions. Our product portfolio includes energy storage systems from TESVOLT, SMA, BYD, and LG. Our TESVOLT battery storage solutions are specially designed for commercial use. They can be connected to all renewable energy sources (solar, wind, and water) as well as CHP systems at the low-voltage grid level.

In combination with intelligent energy management systems our energy storage solutions can make clean energy available day and night, optimize self-consumption of electricity, and heat buildings in a CO₂-neutral manner using a heat pump. We are happy to advise commercial enterprises, industries, farms, municipalities, and private households on photovoltaic systems and energy management.

References (projects)



Solar plant RT-Lasertechnik Bielefeld

Installed nominal power:
1240,25 kW
3.025 solar modules
Type: Longi (410 Wp)
Inverter: 10x SMA Core2



Solar plant Becker Winery Mommenheim

Installed nominal power:
328,56 kW
888 solar modules
Type: SolarFabrik S3 Mono (370 Wp)
Inverter: 3x SMA Core2
Storage: TESVOLT (134 kWh)



Solar plant Exco Frankenthal

Installed nominal power: 62.9 kW
168 solar modules
Type:
Axitec 370MH/120V (31.08 Wp)
Inverter:
1x SMA STP 50-40 (CORE1)



This PV ground-mounted system in Obrigheim, Rhineland-Palatinate, has a capacity of 1.55 MWp. This can supply approximately 500 households with clean electricity.

Climate-friendly energy generation with high regional value creation

Photovoltaic open-space installations make a valuable contribution to the security of supply and to cost-effective, climate-friendly energy supply. Municipalities and property owners can use arable land, fallow and conversion areas as well as gaps in buildings or areas in disadvantaged regions for the construction of a photovoltaic open-space installation and return these properties to the local or regional economic cycle in a meaningful way.

Moreover, municipalities and landowners benefit from long-term, secure income while simultaneously contributing to the achievement of climate protection goals. Investors also benefit doubly: They invest in a sustainable and secure investment and achieve long-term equity returns. On an annual basis, a photovoltaic open-space installation generates an average of 1 million kWh per installed megawatt peak (MWp). The service life of such an installation can exceed 30 years.

From the initial idea to the completion: Everything from one source

You want to build a photovoltaic open-space system and are looking for an experienced partner to implement it? GAIA is a reliable partner with many years of expertise in the implementation of such complex projects. We take care of the entire project planning and development, as well as the construction management, up to the commissioning of the solar park.

The GAIA team of project planning identifies suitable locations for your open-space systems in the form of feasibility and potential studies, both within the framework of the Renewable Energy Sources Act (EEG) and as a PPA. After completion of the photovoltaic open-space system, we are also happy to take over the technical and commercial management of the system to ensure optimal yields.

We also search for areas to lease in order to construct and operate our own renewable energy systems.



Green lights all the way

Service – Maintenance – Operational Management

Do you operate a solar power or wind energy system? We provide service, maintenance, and operation management for systems from various manufacturers, including for municipalities.

Service and Maintenance for Photovoltaic Systems

In general a photovoltaic system is a low-maintenance system. Throughout its lifespan, exposure to the environment can take its toll. This can cause malfunctions, which can lead to a sudden or gradual reduction in performance and earning capacity, even with high-quality systems. Having your system checked regularly and monitored helps prevent disruptions in your solar power system.

We identify weak spots in good time and rectify any faults. This way you maximize the lifespan of your system, maintain its value and optimize its performance and earning capacity.

Operational management

A wind turbine is a complex system that consists of different components such as monitoring, control and regulating systems and grid supply technology. The smooth interaction of the individual components and subsystems ensures optimal earning capacities and therefore the best rate of return.

Our operational management team ensures the smooth running of wind turbines by means of computer-aided remote monitoring, regular inspections and servicing. We also communicate with surveyors and service providers, sort out insurance claims, manage accounting and keep you up to date regularly. We can also take care of the surroundings, e.g. any repair work on access roads, and green waste, upon request.

Additionally we also provide services for municipalities within the framework of the whole project process, such as the administration, maintenance and servicing of systems from different manufacturers.





Increase regional added value in your area with local energy concepts

“The money of the village to the village”, said Friedrich Wilhelm Raiffeisen, father of the cooperative idea. Your community can also benefit from renewable energy projects, the implementation of which promotes added value, and also maintains this value in the region as local businesses become involved and jobs are created, generates business tax and lease income, improves infrastructure, and much more.

GAIA employs experts who analyse the regions in detail to identify the advantages and disadvantages of each site. Special energy concepts can be developed based on these results and by calling upon external data. Alongside wind and sun, the focus of planning covers almost the entire spectrum of biomass use, local heating networks and geothermal energy. We show communities how they can increasingly generate 100 percent of their electricity from renewable energies, and at the same time increase regional added value by involving the citizens themselves.

We are happy to advise municipalities and citizens who would like to be involved actively or financially in a renewable energy project.

Profitable renewable energy solutions for companies and plants

Would you as a company or plant like to invest profitably in renewable energy systems of the future and be able to use the electricity produced for your company? We have the solution for this too.

You can use the roof of your company buildings, warehouses and production halls, of property used agriculturally or suitable open space to produce electricity. GAIA is happy to take on the planning, construction and/or the management or maintenance of the photovoltaic system or – depending on suitability – of wind turbines.

Or GAIA uses the space on your roof to construct and operate renewable energy systems. Environmentally friendly electricity produced in this way is considerably cheaper for your company than power from a conventional supplier. We can also take care of the maintenance, servicing and running of the system, if required.

As the construction and running of a wind turbine normally means a large initial investment, it is advisable to form interest groups to raise the necessary capital together. In your business park, it could be the joint investment of several companies which enables the construction and setting up of a wind turbine on an open space nearby. In this way, the combination of photovoltaics and wind power could mean that industrial estates will be able to operate their own electricity and local heating networks in the future.



www.gaia-mbh.de



GAIA mbH Jahnstraße 28, 67245 Lamsheim
Phone +49 (0) 6233 30 44-0, Fax +49 (0) 6233 30 44-901
E-Mail info@gaia-mbh.de, www.gaia-mbh.de

