

Photovoltaics

New energy
in safe hands





The sun:
An energy source with
infinite potential

Introduction

The energy consumed by just about seven billion people worldwide is generated by the sun in a little more than 30 minutes. Photovoltaics stands for the vision of using the almost inexhaustible and, at the same time, clean energy source of the sun. Photovoltaic plants are a significant component of the future infrastructure of electricity generation. Today, hundreds of thousands photovoltaic plants already feed electricity into the public power grid all over Europe and provide end consumers with the possibility to use solar electricity.

RENERCO's aim is to harmonise technical and economic requirements for each new project. Our many years of experience and technical expertise ensure high quality. We see to it that photovoltaic plants satisfy the highest standards and generate sustained income.

From project development and construction to the operation of large photovoltaic plants, RENERCO offers a wide range of services in Germany and in the rest of Europe.

Our focus is on project development and the construction of ground-mounted solar power plants and large, roof-mounted solar installations. Our activities are supported by our internationally experienced team with qualified local staff.

RENERCO maintains numerous project development cooperations in Europe. France, Italy, and the Eastern European EU countries are of particular importance to us. The sites' high energy potential contributes to the special attractiveness of these locations.

Project Development

Our core competencies include site assessment, land securement, and obtaining approvals for the construction and operation of solar installations. Performing detailed analyses of a site's solar energy potential and selecting suitable systems on the basis of such analyses are an integral part of our project development services. Within the scope of preparing and supporting approval procedures and planning grid connections, the special, country-specific competency of our employees ensures the success of our project development activities.

RENERCO also acts as a partner for local project developers, irrespective of a solar project's development status. We offer financial support to our cooperation partners and use our long-standing planning experience in projects.



Systems Integration

RENERCO constructs turnkey, ground-mounted solar parks and roof-mounted solar installations in the megawatt category. RENERCO provides all required services from one source. Here, systems integration plays a crucial role. This means: We specify individual system components – such as the supporting structure – ourselves. We cooperate with renowned manufacturers with regard to the photovoltaic modules and inverters. Mechanical and electric systems engineering activities carried out by our project engineers ensure the optimised coordination of photovoltaic modules, inverters, wiring, and the supporting structure in the overall system.

During planning, our aim is to take the sites' special characteristics into account in order to enable the best possible use of available space and ensure high quality plant engineering. These are necessary prerequisites for a sustained high plant output.

Ground-Mounted Installations

RENERCO has comprehensive and long-standing experience in the development and construction of ground-mounted photovoltaic plants.

When selecting areas for solar parks, we prefer environmentally impacted land that was formerly used for industrial, infrastructural or military purposes, since unused land areas can thus again be put to practical use. Specific site conditions, such as special subsoil properties, demanding terrain, or the time-consuming installation of cable trays leading to the grid connection are taken into consideration in our planning right from the outset.

Roof-Mounted Installations

RENERCO also designs and installs photovoltaic plants on the rooftops of large private, commercial and public buildings. We prefer to combine several projects into rooftop-mounted installation pools with outputs of 1 MWp or more with a view to achieving an attractive investment structure.



We develop turnkey photovoltaic projects. Europe-wide and out of one hand.

Operations Management

RENERCO's Operations Management ensures optimum operation of photovoltaic and wind power plants. Numerous clients from various business sectors have benefited from our services.

Based on our extensive experience with photovoltaic plants in the megawatt category, we offer the following services:

- Monitoring plant operations, including 24-hour on-call availability
- Maintenance and repair as well as improvement activities carried out in cooperation with our local partners
- Management, monitoring, and follow-up of maintenance and repair activities
- Recording and analysis of operating data
- Data and information management
- Technical reporting
- Settlement of warranty claims, insurance cases and damage events

Our work is supported by efficient operations management software which registers, analyses, and assesses the collected operating data. All relevant documents are recorded electronically. The maintenance history of your plants can be traced at all times and is fully documented.

Each project is headed by a project manager from our team of highly qualified engineers. A service staff member is present at each project site and monitors the activities at the solar park. Our local service partners ensure that possible plant failures are corrected immediately.

We also offer commercial operations management. This ensures complete technical and commercial support for your plants.

Technical Consulting

RENERCO offers comprehensive and independent technical consulting services in Germany and abroad. Among the clients who use these services are: German and international banks, renowned investment and leasing companies as well as institutional investors. A well-coordinated team comprised of engineers and technicians from various backgrounds is made available to clients during all project phases.

During the project appraisal and structuring phase, we provide our clients with technical analyses, assess the technologies employed, and render support in designing significant project agreements (due diligence).

RENERCO performs technical controlling, monitors construction activities and carries out the technical acceptance test with the aid of modern technical tools, such as radiation monitoring devices, thermographic cameras and equipment for recording electrical key indicators.

We verify performance and operating data during plant operation at regular intervals in order to ensure optimum performance. Together with institutions and specialised firms, we conduct our own test and trial programs, and inform our clients about the outcome of these tests.

In addition to strictly technical issues, the economic analysis of technical solutions is also a significant component of our consultancy services.

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References

Photovoltaic plant Landsberg

Bavaria, Germany

Output: 1.1 MWp

Modules: Yingli, polycrystalline

Inverter: Kaco

Commissioned: 2010

RENERCO's contribution:

– **Turnkey construction**



Photovoltaic plant Leiwen

Rhineland-palatinate, Germany

Output: 3.6 MWp

Modules: First Solar, Thin-film

Inverter: SMA

Commissioned: 2009

RENERCO's contribution:

– **Project development**

– **Turnkey construction**

– **Operations management**



Roof-top plant "SunnyM"

Bavaria, Germany

Output: 0.3 MWp

Modules: Sharp monocrystalline/amorphous-microcrystalline, Solon polycrystalline

Inverter: SMA, Sunways

Commissioned: 2006

RENERCO's contribution:

– **Electricity generation**



Photovoltaic plant Sévignacq

Pyrénées-Atlantiques, France

Output: 3.8 MWp

Modules: Yingli, polycrystalline

Inverter: SMA

Commissioned: –

RENERCO's contribution:

– **Project development**



Photovoltaic plant Lieberose

Brandenburg, Germany

Output: 52.8 MWp

Modules: First Solar, Thin-film

Inverter: SMA

Commissioned: 2009

RENERCO's contribution:

– **Technical consulting**



Photovoltaic plant Hostovice

Czech Republic

Output: 4.8 MWp

Modules: First Solar, Thin-film

Inverter: SMA

Commissioned: 2010

RENERCO's contribution:

– **Technical consulting**



Solarpark Finsterwalde

Brandenburg, Germany

Output: 39.6 MWp

Modules: Q-Cells, polycrystalline

Inverter: Schneider Electric

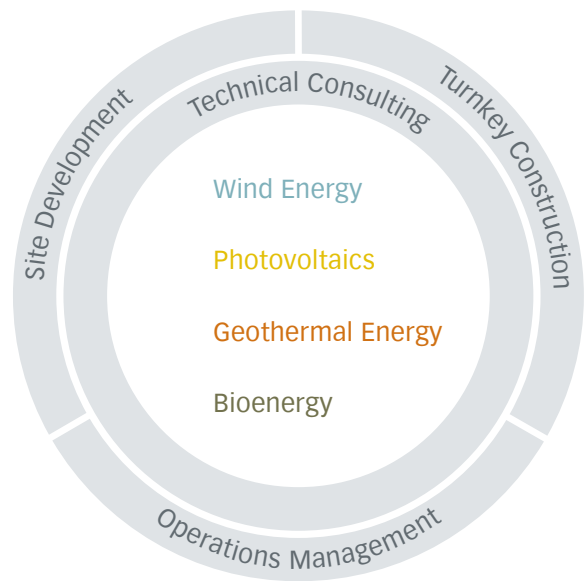
Commissioned: 2010

RENERCO's contribution:

– **Technical consulting**



We advise, develop, construct.
Competent and reliable.
With new energy.
Efficient, safe, sustainable.



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