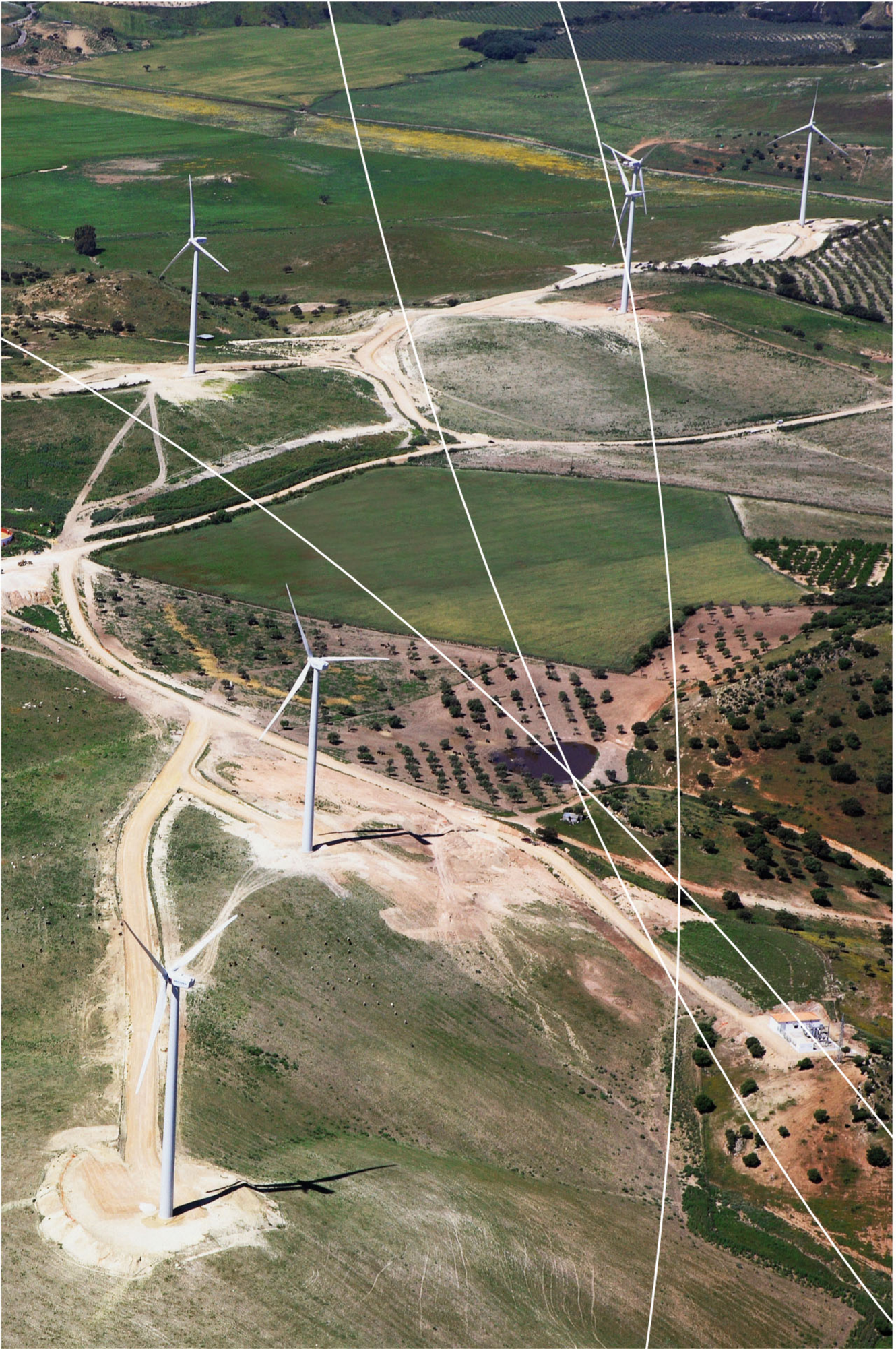
SDR ENERGY

Clean Generation



SDR Energy carries out electricity generation projects based on renewable sources.

We have been pioneers in Andalusia (Spain) in the renewable energies sector and we leverage our extensive experience in order to provide value in all the development stages, from locating the resource up to selling the generated energy to the grid.

With a share capital of over 10 million, we maintain the same principles of safety, commitment to the environment and efficiency so as to be able to compete globally in project design and development and management of plants in operation.

We make a significant effort to research new energy sources and we are committed to innovation and ongoing improvement in our different lines of business, with the aim of obtaining long-term sustainable development, supporting our diversification strategy and preparing ourselves to tackle new markets.

We currently have offices available in Spain, Panama and Mexico in order to serve the Central American and Caribbean areas respectively, always showing particular interest in markets with a high potential for growth where we can contribute our experience in the entire world.

Clean, silent, inexhaustible energy, with 0% emissions

Present throughout the value chain

Locating the resource

Identifying and evaluating the natural energy source is one of the most important phases being developed in a renewable energy project, as the information obtained determines its economic, administrative and technical viability. The variability of the resources, both in time and space, is very important in the design of these facilities that seek exploit them.

- Analysis and identification of the areas with greater potential for the resource.
- Supply and monitoring of meteorological stations.
- Analysis of the market, variability and technical observation.

Engineering

SDR Energy creates made to measure designs for achieving maximum exploitation of the resources, seeking high levels of security, reliability and efficiency. This link in the value chain is fundamental in the overall development of the projects. The economic and technical viability study is of great importance and is conducted through technological innovation and the experience of the professional and committed technical personnel specialising in the energy sector.

- Basic and detailed engineering of the renewable energy plants.
- Basic and detailed engineering of the energy evacuation infrastructure.
- Project management and quality control.
- Economic, administrative and technical viability studies.
- Due diligence of projects.

Preliminaries

Before starting the construction, and in order to authenticate the facilities, it is necessary to obtain all necessary licences and permissions from the relevant bodies and individuals affected. This is in order to obtain access to the electricity network, the environmental authorisations, the administrative and project authorisations and urban licences among other things that might be required depending on the site chosen and the type of technology developed.

- Negotiation with owners and electrical companies.
- Filing administrative records and obtaining licences.

Construction

We carry out the construction of your facilities and infrastructures, offering constructive solutions. We collaborate with first level manufactures and bear in mind the latest technological developments when constructing your facilities. We stick to our deadlines and offer guarantees for the facilities under a strict quality control, providing bankability for your project.

- Searching for finance.
- Project development by EPC.
- Recognised experience and guarantees for project bankability.

Asset management

- **Optimising production**

  Savings in management, insurance, finance and stock.

  Production with equipment functioning analysis and guarantee control.

  Speed, management system and incident resolution.

  SCADA control in control centre.

- **Commercial exploitation**

  Administrative management and invoicing.

  Integral management of O&M.

  Production control and real time alarm system.

  Security and surveillance control.

  Cleaning, clearing and herbicide application.

EPC Projects

With more than 500 MW in electrical energy generation projects from renewable sources, among which 223.24 MWp stand out in photovoltaic projects, 25.7 MW in cogeneration plants, 25.3 MW in drying plants, 8.14 MW in biomass plants, 189 MW in wind farms and 50 MW in thermoelectric solar plants, our experience supports us in project development by EPC which aims to contribute to an integral solution to the energy needs of the client.

We focus our effort on providing competitive solutions under strict standards of quality, sticking to deadlines and budgets, and with guarantees that help the projects' financing.

For end users, we offer this type of project that offers large savings on the electricity bill, as well as interesting advantages and attractive profitability in the short and medium term, and lead to a complete solution when carrying out the project.

Technologies developed

Co-generation

Improving the output of the installations, through the joint production and use of electrical energy and heat energy, obtains higher energy saving indices.

CO-GENERATION

25,7 MW

Drying

By means of drying processes we recover energy from sludge, ensuring correct waste management which is respectful with the environment and sustainable development.

DRYING

25,3 MW

Biomass

With no waste of Energy

The fuels derived from agriculture, livestock farming and the agri-food industry are used to produce electrical energy, which in turn becomes an efficient solution to problems of accumulation in the environment.

BIOMASS PLANT

8,14 MW

Photovoltaic:

The Sun, Energy Source

The sun is a universal energy source. Ongoing advances in technology increasingly allow us to harness that energy more efficiently.

We design the installations so as to optimize the area of each site, with an in-house design fur the structures which support the panels and direct access to the main international manufacturers for buying the equipment.

PHOTOVOLTAIC INSTALLATIONS
220,33 MW

Make a profit out of your space

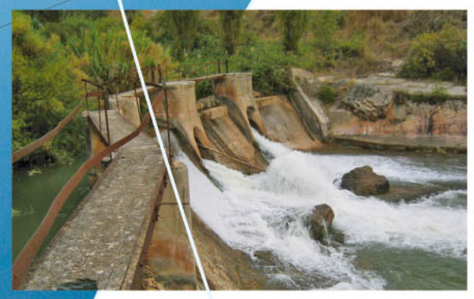
Make a profit out of your available space such as coverings, car parks, pergolas and floors among other things where promoting photovoltaic facilities.
SDR Energy carries out the engineering projects, as well as all the paperwork with public bodies.

We carry out a full study, looking for the aptitude of your space, searching for the best orientation and optimum layout for the installation, selecting the most suitable structures, panels and equipment for each case.

Once we have obtained the necessary permits, we build, operate and maintain the photovoltaic installations.

PHOTOVOLTAIC ROOFS
2,91 MW

Minihydraulic Energy:
Water, vital resource



Hydraulic energy is that which is obtained from the kinetic and potential exploitation of energy from river currents or slopes of water either natural or artificial, which help the hurried falling of water. Mini-hydraulic energy is a hydraulic plant with a potential lower than 10 MW.

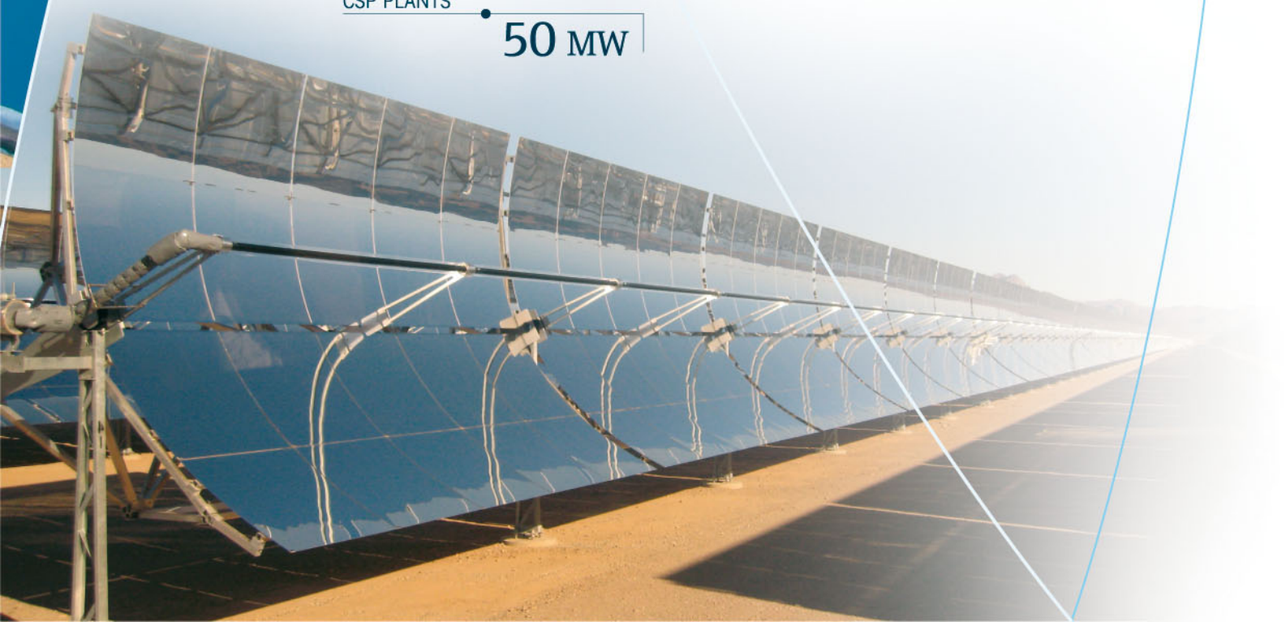
In areas with a raised hydroelectric potential, with the use of this technology the existing demand for electricity could be met in rural areas in completely clean way and integrated in the natural environment.

CSP Plants:
Manageable high-temperature energy

The Concentrated Solar Power (CSP) makes use of the sun's energy to produce thermal energy on a large scale, which is subsequently turned into electricity.

According to statistics on direct and overall solar irradiation, Spain is an ideal place for these installations. They have great development potential as they combine the advantages of renewable energies with the high energy efficiency and manageability of conventional thermal plants.

CSP PLANTS
50 MW



Wind:
The Impulse of the Wind

Wind energy is one of the energy sources which is most developed nowadays. We study the sites which justify the installation of wind turbines and install measuring equipment in order to obtain wind data.

In this way, we actively participate in developing and building new wind farms which avoid the emission of polluting gases.

WIND FARM
189 MW

Operation and Maintenance

In SDR Energy we have extremely advanced production monitoring and control system with which we continuously supervise the operation of the installations and their output, as well as managing the invoicing and sale of energy to the grid.

We perform rigorous preventive and corrective operation and maintenance of the generation plans using specific equipment and highly qualified personnel.

This ensures the installation's maximum efficiency, and ensures that we export more energy to the grid, thereby increasing the project's profitability.

Experience

PROJECT	LOCATION	SITUATION	POWER (MW)	INVESTMENT	START OF OPERATION
COGENERATION			**25,7**	**16.400.000**	
Dos Hermanas	Sevilla	Operation	5,20	3.900.000	1997
La Luisiana	Sevilla	Operation	7,20	4.500.000	2000
Mengíbar	Jaén	Operation	3,60	2.000.000	1999
La Roda	Sevilla	Operation	9,70	6.000.000	2002
DRYING PLANTS			**25,3**	**17.700.000**	
Fuente de Piedra	Málaga	Operation	14,40	10.600.000	2003
Morón	Sevilla	Operation	10,90	7.100.000	2002
PHOTOVOLTAIC ROOFS			**2,91**	**10.776.200**	
Sevilla	Sevilla	Operation	0,02	112.000	2004
La Rinconada	Sevilla	Operation	0,12	619.200	2007
Sevilla	Sevilla	Operation	0,33	1.320.000	2010
Aznalcóllar	Sevilla	Operation	0,13	520.000	2010
Montellano	Sevilla	Development	0,12	480.000	*2014
Lora del Río	Sevilla	Operation	0,12	480.000	2010
Dos Hermanas	Sevilla	Development	0,71	2.485.000	*2014
Aznalcóllar	Sevilla	Development	0,69	2.415.000	*2014
Punta Umbría	Huelva	Development	0,67	2.345.000	*2014
BIOMASS			**8,14**	**15.800.000**	
Fuente de Piedra	Málaga	Operation	8,14	12.300.000	2005
Fábrica Pellets	Almería	Operation	20000 Tm	3.500.000	2011
WIND			**189**	**217.350.000**	
Alíjar	Cádiz	Operation	24,00	27.600.000	2005
Valdivia	Sevilla	Operation	28,50	32.775.000	2007
Olivillo	Cádiz	Operation	25,50	29.325.000	2008
Roalabota	Cádiz	Operation	28,00	32.200.000	2008
Palomarejo	Sevilla	Operation	30,00	34.500.000	2012
La Zorrilla	Cádiz	Development	21,00	24.150.000	*2014
Alijar II	Cádiz	Development	32,00	36.800.000	*2014
PHOTOVOLTAIC GROUND			**220,33**	**510.723.200**	
Hinojos	Sevilla	Operation	2,26	12.656.000	2006
Aznalcázar	Huelva	Operation	9,20	51.520.000	2007
Dos Hermanas	Sevilla	Operation	2,50	12.900.000	2008
La Rinconada	Sevilla	Operation	5,50	28.380.000	2008
Lepe	Sevilla	Operation	2,20	11.352.000	2008
Carmona	Huelva	Operation	7,56	39.009.600	2008
Ayamonte	Sevilla	Operation	0,92	4.747.200	2008
Écija	Huelva	Operation	11,34	58.514.400	2008
Salteras	Sevilla	Operation	7,90	40.764.000	2008
Marchena	Sevilla	Operation	1,10	5.676.000	2008
La Peña	Sevilla	Operation	0,70	3.612.000	2008
Los Llanos	Panamá	Operation	0,25	392.000	2014
Progreso	Panamá	Development	14,90	21.900.000	*2015
Zona Caribe	Panamá	Development	74,30	111.450.000	*2016
Boquerón	Zona Caribe	Development	50,00	75.000.000	*2016
	Panamá	Development	29,70	32.850.000	*2017
CSP PLANTS			**50**	**235.000.000**	
El Reboso I, La Puebla del Río	Sevilla	Operation	50,00	235.000.000	2014

PROJECT SUMMARY	POWER (MW)	TOTAL INVESTMENT Euros
Total in Operation	247,29	475.374.400
Total in Development	274,09	548.375.000
TOTAL PROJECTS	521,38	1.023.749.400

*Forecast

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