



Our goal is to share our experience, professionalism and commitment with our clients by providing them with excellent work in a punctual, personalised and tailored manner.

www.itecla.es





itecla
INGENIERIA

Córdoba-based engineering firm made up of multidisciplinary professionals with experience spanning over 20 years in the field of transportation and energy transformation and particularly in renewable energies.

We have a staff of engineers, architects and drafters which has now expanded to over 60 individuals and continues growing, as does our business volume and client portfolio. The fruits of our outstanding labours.

We currently have a signed framework agreement with Endesa for engineering work on electrical infrastructures in the regions of Andalusia, Badajoz, Castilla-La Mancha and Levante.

Our goal is to share our experience, professionalism and commitment with our clients by providing them with excellent work in a punctual, personalised and tailored manner.



OUR VALUES

“Let go of burdens, release stress,
don't worry and just enjoy it.
Your work is in great hands.”



COMMITMENT



PUNCTUALITY



EFFICIENCY



EMPATHY



RELIABILITY





INTERNATIONAL PRESENCE

ITECLA Ingeniería is currently undergoing an expansion and has its headquarters in Spain. In addition, it has been carrying out work in other countries including Portugal, Italy, Colombia, Mexico, the USA, Panama, Chile and Peru in recent years.

SPAIN:

1 *Córdoba*
Avda. Cañete de las
Torres, 35. 14850, Baena.

2 *Madrid*
Puerta de Atocha Building, C/ Méndez Álvaro 20,
Oficinas 410 y 445. 28045, Madrid

COUNTRIES IN WHICH WE HAVE WORKED:

● Portugal, Italy, France, Colombia, Mexico, USA (California, New Mexico, Florida, Philadelphia, New York), Dominican Republic, Uruguay, Panama, Chile, Peru and Puerto Rico.

#1

Outsourcing Engineering Work

We provide support for any type of basic, administrative, detailed construction and as-built project.

Design
Simulation
Calculation
Project Management
Technical Direction

#2

Renewable Energies

Our history and relationships with our clients allow us to stand out and remain well positioned and established within this ever-growing sector.

Our designs optimise the available surface and are always at the leading edge of new technology and equipment within the sector.



#3

Substations

With its wealth of experience and expertise, Itecla Ingeniería can offer you comprehensive electrical substation engineering services – from previous studies (environment, topography, etc.) to project development and execution of the necessary procedures for correct permitting, supervision and site management.

#4

High Voltage Lines

The development of projects for the transportation and distribution of electrical energy has been one of the fundamental pillars in Itecla's growth as a business within the engineering sector, thereby consolidating itself as a benchmark company within this field.



itecla.
INGENIERIA

*The energy that moves us will earn us your trust, but for now please let us borrow it.
Put your trust in Itecla!*



OUR SERVICES



- HV and MV lines
- Substations
- Solar farms
- Wind farms
- BESS.
- Specialised technical studies.
- Grid Code.
- Support services and site supervision.
- Property engineering.
- Project management.

FIELDS WE COVER

01

02

OUR SERVICES

- Preliminary engineering.
- Administrative projects.
- Executive projects.
- Detail engineering projects.

- SOLARIA.
- STATKRAFT.
- REPSOL.
- TOTAL ENERGIES.
- EDP
- ELECNOR.
- ENGIE.
- ENEL.
- FCC.
- FERROVIAL.

OUR CLIENTS

03

04

SPECIFIC JOBS WE DO

- Resource and solar yield reports.
- Technical-economic feasibility reports and HV line trace alternatives conditions.
- Account of rights and assets.
- Affected. Permanent and temporary. (RBDA in Spain).
- Gradient studies for implementations.
- Grid Code Studies Code Compliance Reports.
- Studies: protection coordination, load flow analysis, short-circuit studies, transient stability, and earthing studies.
- Property audits and supervision.
- Protection and control schemes.
- Magnetic fields calculation.
- Technical assistance.

OUR RECENT PROJECTS



Substations

Detail project design, technical direction of execution, and as-built project of a 20 MVA 132/15 kV exterior transformer substation.

- Voltage: 132 kV.
- Location: Pozoblanco (Córdoba).

Detail project design for a mixed shielded transformer substation (business type) for 50 MVA 66/20 kV.

- Voltage: 66 kV.
- Location: Antequera (Málaga)

Detail engineering for the adjustment of the CHDM electrical substation of Indorama.

- Developer: Technip Energies.
- Voltage/output: 6.6/0.4 kV. 1.6 MVA.
- Location: San Roque (Cádiz).

Technical administrative project of substation of the Lagerung-La Farga BESS plant.

- Voltage: 220kV.
- Location: Girona (Catalonia).

Detail engineering for the Imperial Sun substation.

- Voltage: 34.5/92kV.
- Location: California (USA).

Detail engineering for Bonesteele substation.

- Voltage: 92kV.
- Location: California (USA).



Substations

Detail engineering project for modification of the Trumansburg substation.

- Voltage: 34.5/4.8 kV.
- Location: Ithaca (USA).

Design of a project for a collector substation for three solar farms of 125 MW each, at 220 kV.

- Voltage: 220 kV.
- Location: Guillena (Seville).

Detail engineering project for modification of the Cayuga Heights substation.

- Voltage: 34.5/12.5 kV.
- Location: Ithaca (USA).

Detail engineering project for modification of the West Hill substation.

- Voltage: 34.5/12.5 kV.
- Location: Ithaca (USA).

Detail engineering project for Aurora, P&M and AG-IG substations.

- Voltage: 12.5 kV.
- Location: Auburn (USA).

Detail engineering project for O&M building for Tordesillas substation.

- Location: Valladolid (Castile and León).

Detail engineering project CS Pedregal

- Voltage: 15 kV.
- Location: Huelva (Andalusia).



Substations

Detail engineering project substation 127, P&C.

- Voltage: 115/34.5 kV.
- Location: New York (USA).

Detail engineering project for substation Dingle Ridge, P&C.

- Voltage: 46/13.2 kV.
- Location: New York (USA).

Detail engineering project for the Huerta Sevilla electrical substation.

- Developer: Omexom.
- Voltage: 400/220/30 kV.
- Location: Fuente de Cantos (Badajoz).

Detail engineering project for the Carmona transformer substation.

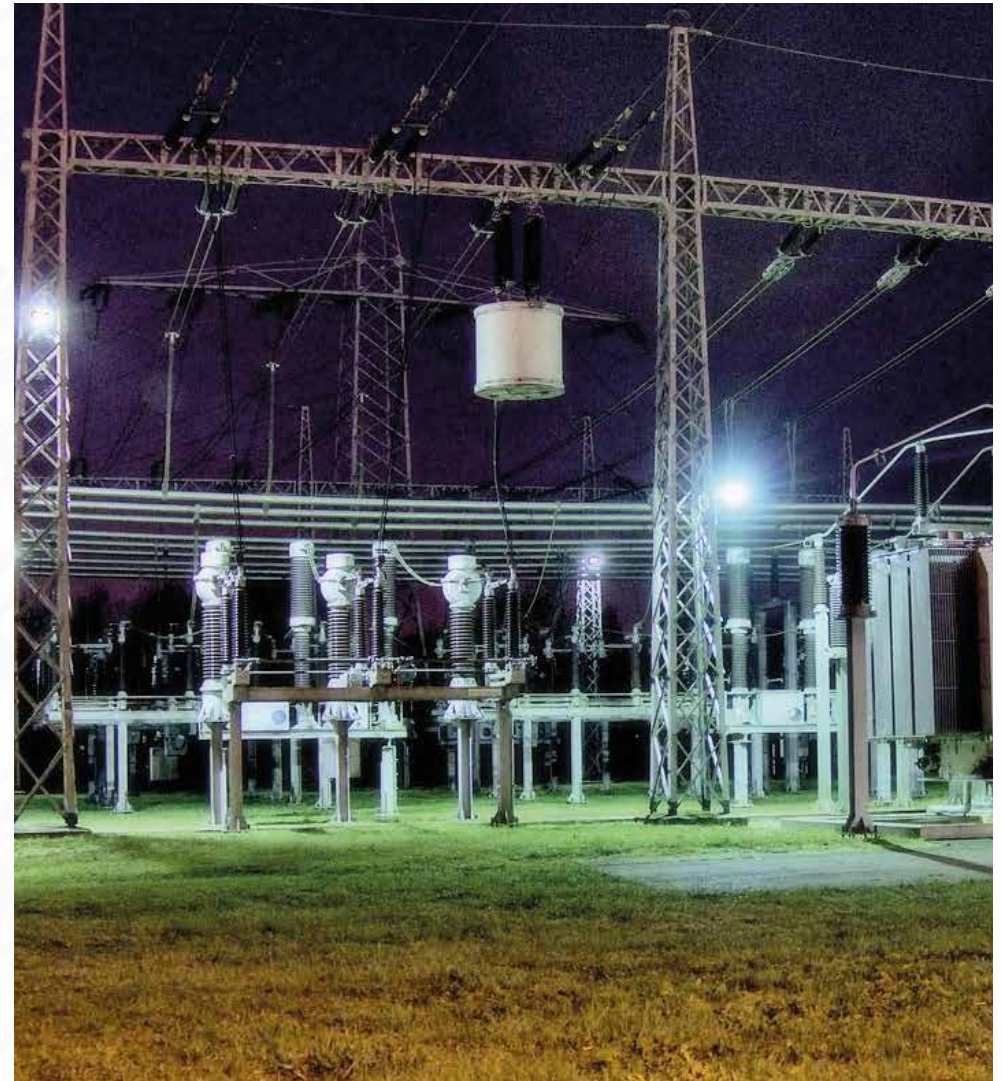
- Developer: Omexom.
- Voltage: 220/400 kV.
- Location: Carmona (Seville).

Project for the GIS Fuencarral substation.

- Developer: Greenfield.
- Voltage/output: 400/220 kV 300 MVA.
- Location: Madrid.

Basic and Conceptual Engineering Project for two Electrical Substations. Transformer Substations and High Voltage Overhead Lines for Aeroash Wind Farm.

- Promoter: Contourglobal.
- Voltage: 500 kV.
- Location: Baja California (México).



High-voltage electrical lines

Construction engineering for overhead and underground evacuation line.

- Developer: Prosolia.
- Voltage: 30 kV.
- Length: 8.7 km.
- Location: Monforte del Cid (Valencian Community).

Construction engineering for evacuation line project.

- Developer: Prosolia
- Voltage: 200 kV.
- Length: 0.17 km.
- Location: Monforte del Cid (Valencian Community).

Execution and detailed construction project for an overhead and underground high-voltage line for power evacuation on a solar farm.

- Voltage: 220 kV.
- Location: Aranjuez (Madrid).
- Length 14 km.

Execution project for the overhead line for the power evacuation of various wind farms.

- Voltage: 400 kV.
- Location: province of Toledo and Madrid.
- Length 80 km.



High-voltage electrical lines

Administrative project for the construction of a 220 kV single-circuit underground/overhead line "Yepes".

- Voltage: 220 kV -length 15 km.
- Location: Yepes and Añover del Tajo (Toledo).

Administrative project for the construction of a 220 kV double-circuit underground/overhead line "Cedillo".

- Voltage: 220 kV -length 34 km.
- Location: province of Toledo and Madrid.

Administrative project for the construction of a 220 kV double-circuit underground/overhead line "Fuencarral".

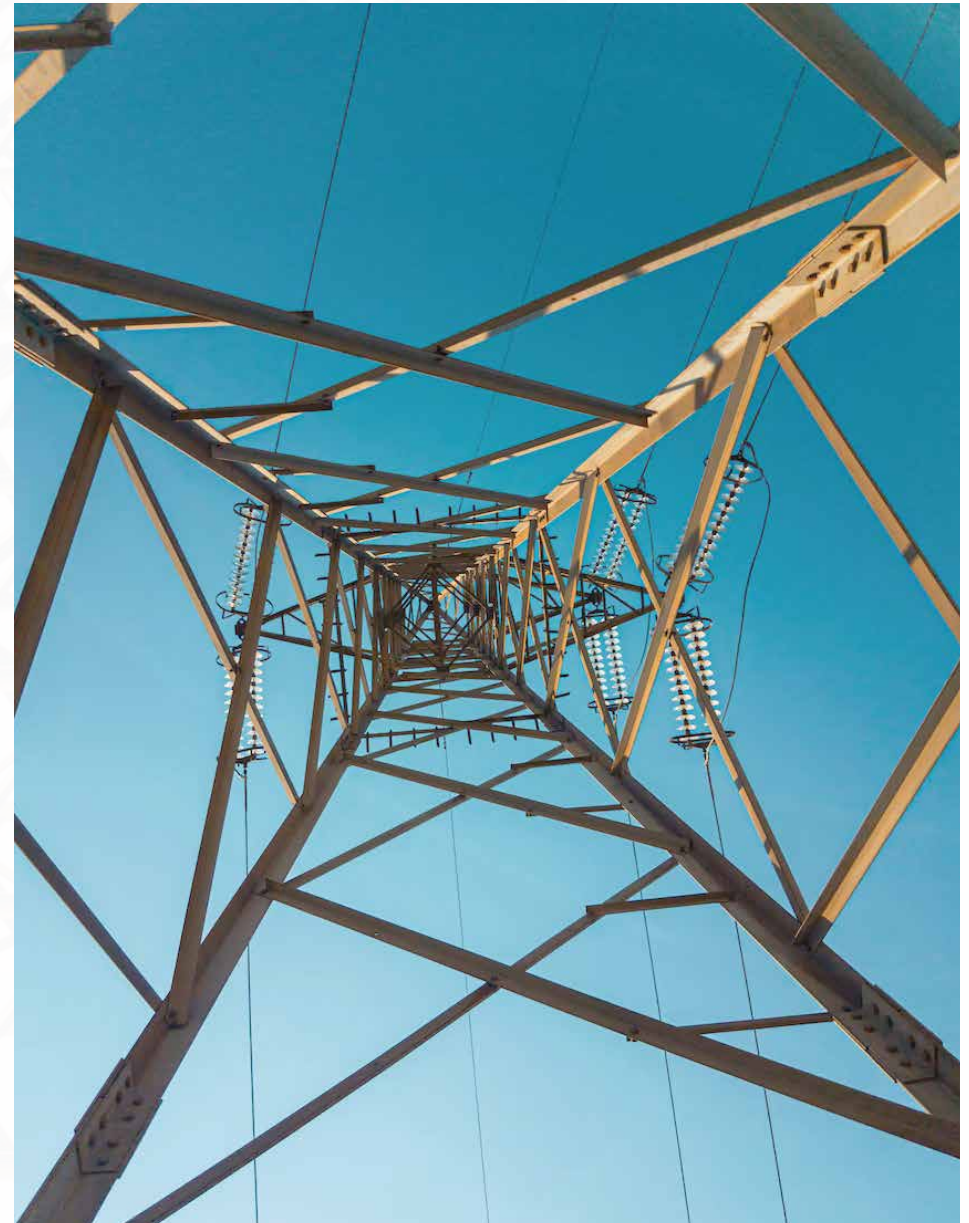
- Voltage: 220 kV.
- Length 101 km.
- Location: province of Toledo and Madrid.

Administrative project for the construction of a 220 kV double-circuit underground/overhead line "Prado".

- Voltage: 220 kV.
- Length 20 km.
- Location: province of Toledo and Madrid.

Administrative project for the construction of a 66 kV single-circuit underground line "Poris".

- Voltage: 66 kV.
- Length 27 km.
- Location: Santa Cruz de Tenerife (Canary Islands).



High-voltage electrical lines

Detail engineering project for the Cruz de los Caminos high voltage line.

- Developer: Elmya.
- Voltage: 132 kV.
- Length: 5,902 m.
- Location: Cuenca (Castile-La Mancha).

Project for double circuit administrative construction permit for Rociana photovoltaic plant.

- Developer: Coagener.
- Voltage: 66 kV.
- Length: 5 km.
- Location: Rociana del Condado (Andalusia).

Execution project Yepes.

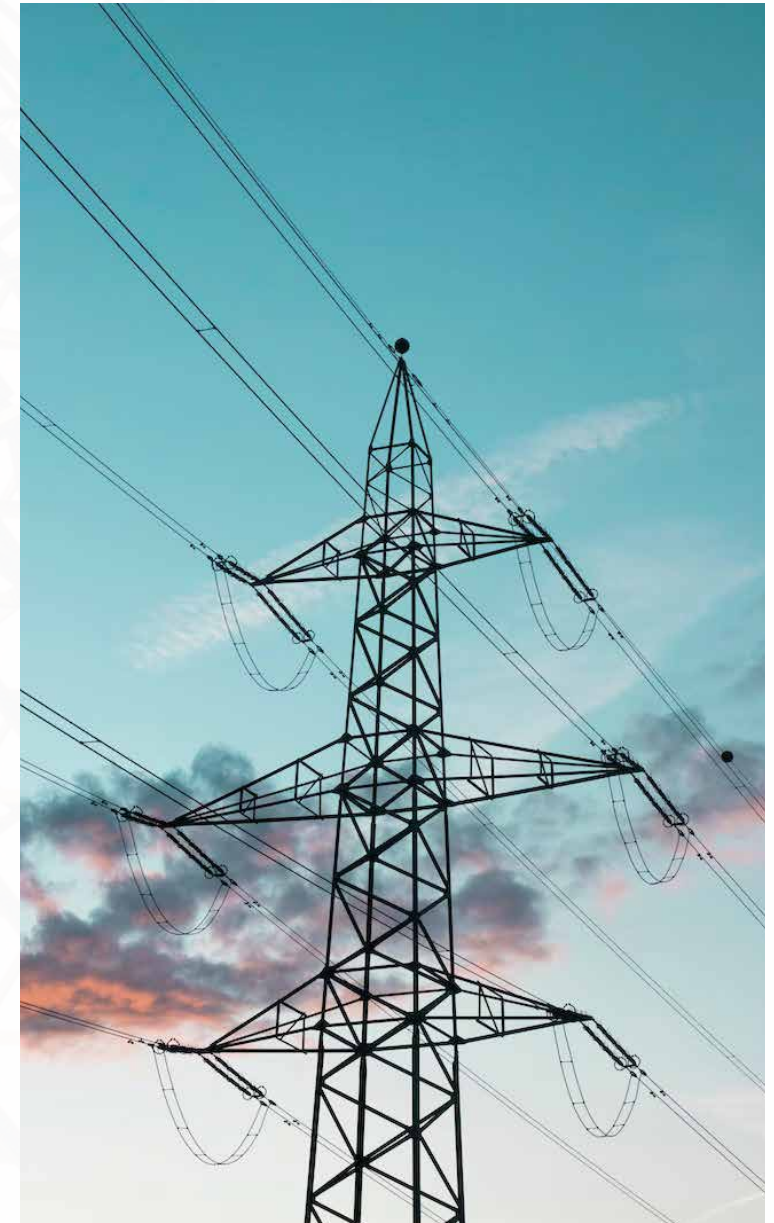
- Developer: Greenfield.
- Voltage: 220 kV.
- Length approx.: 3 km
- Location: Toledo - Madrid.

Project for a 220 kV high-voltage double-circuit line for the power evacuation of several solar farms.

- Developer: Greenfield.
- Voltage: 220 kV.
- Location: Cedillo (Toledo) to Leganés (Madrid).

220 kV high-voltage electrical line for the evacuation infrastructures of the Fuencarral junction photovoltaic solar farms.

- Developer: Greenfield.
- Voltage: 220 kV.
- Length approx.: 101 km.
- Location: Toledo - Madrid.



High-voltage electrical lines

Three (03) high-voltage lines: Ric 1 – Pas, HVOL transformer substation Ric 1 - electrical substation Ric 2 and HVUL transformer substation Ric 1 – REE.

- Developer: Edp Renovables.
- Voltage: 220 kV.
- Length approx.: 5 km
- Location: Castile and León.

Project for a 220 kV high-voltage double-circuit line for the power evacuation of several solar farms.

- Developer: Greenfield.
- Voltage: 220 kV.
- Length approx.: 36 km
- Location: Castile-La Mancha – Madrid.

220 kV high-voltage overhead line project for power evacuation of solar farm Villanueva Del Rey.

- Developer: Naturgy/Segade Saleco.
- Voltage: 220 kV.
- Length approx.: 6 km
- Location: Seville.

Detail Engineering Project for the Fargue High Voltage Line.

- Voltage: 132 kV.
- Length: 1.75 km.
- Location: Vízcar and Granada (Granada).

Detail Engineering Project for the Cacín High Voltage Line.

- Voltage: 132 kV.
- Length: 1.13 km.
- Location: Almolita (Almería).



Photovoltaic installations

Solar farms / utility scale

Property engineering project of Las Majas solar farm.

- Developer: Repsol.
- Power: 47 MW.
- Location: Puebla de Albortón (Zaragoza).

Property engineering project of Las Canteras 2 solar farm.

- Developer: Repsol.
- Power: 37 MW.
- Location: Puebla de Albortón (Zaragoza).

Property engineering project of Cantadal solar farm.

- Developer: Repsol.
- Power: 15 MW.
- Location: Ciguñuela (Valladolid).

Property engineering project of La Serna solar farm.

- Developer: Repsol.
- Power: 15 MW.
- Location: Ciguñuela (Valladolid).

Detail engineering for the Balsicas photovoltaic plant.

- Developer: Ferrovial.
- Power: 95 MW.
- Location: Murcia.

Detail engineering for the Fuente Álamo 1 photovoltaic plant.

- Developer: Ferrovial.
- Power: 11 MW.
- Location: Fuente Álamo (Murcia).

Detail engineering for the Fuente Álamo 2 photovoltaic plant.

- Developer: Ferrovial.
- Power: 10 MW.
- Location: Fuente Álamo (Murcia).

Detail engineering project for the Delta photovoltaic plant.

- Developer: Solaria.
- Power: 125 MW.
- Location: Garoña (Castile and León).



Photovoltaic installations

Solar farms / utility scale

Detail engineering project for the Los Jovillos & Las Barias photovoltaic plant

- Developer: Elecnor.
- Power: 25 MW.
- Location: Dominican Republic.

Detail engineering project for the Beta photovoltaic plant.

- Developer: Solaria.
- Power: 150 MW.
- Location: Garoña (Castile and León).

Detail engineering for the calculation of foundations for the Macao photovoltaic plant.

- Developer: Elecnor.
- Power: 15 MW.
- Location: Punta Cana.

Portfolio property engineering for a total of 64 MW across various solar farms between 3 and 10 MW.

- Developer: Alida.
- Location: the states of California, New Mexico and Florida.

Detail engineering project for the Myrtea solar farm.

- Developer: Eiffage.
- Output: 50 MWp.
- Location: Murcia.

Detail engineering project for the Boidobra solar farm.

- Developer: Lantania.
- Output: 42.87 MWp.
- Location: Castelo Branco (Portugal).

Detail engineering project for the Centaurus Solar solar farm.

- Developer: Solaria.
- Output: 55 MWp.
- Location: Villaumbrales (Palencia).

Detail engineering project for the Poleo solar farm.

- Developer: Ges.
- Output: 50 MWp.
- Location: Guillena (Seville).

Detail engineering and executive project for the Espliego solar farm.

- Developer: Ges.
- Output: 45 MWp.
- Location: Guillena (Seville).

Detail engineering project for the Cornicabra solar farm.

- Developer: Ges.
- Output: 50 MWp.
- Location: Guillena (Seville).

Construction engineering project for the Monforte 1 and 2 photovoltaic plant.

- Developer: Prosolia.
- Power: 50 MW.
- Location: Monforte de Cid (Valencia).



Photovoltaic installations

Solar farms / utility scale

Detail engineering project for the Bermejales hybrid photovoltaic plant.

- Developer: Cuerva.
- Power: 2.1 MW.
- Location: Granada.

Detail engineering project for the La Peña photovoltaic plant.

- Developer: Cuerva.
- Power: 2.5 MW.
- Location: Córdoba.

Detail engineering project for the Valdecabañas photovoltaic plant.

- Developer: Opengy.
- Power: 3.9 MW.
- Location: Colmenar de Oreja (Madrid).

Detail engineering project for the Neosol photovoltaic plant.

- Developer: Opengy.
- Power: 10 MW.
- Location: Villanueva del Pardillo (Madrid).

Detail engineering for the Calera photovoltaic plant.

- Developer: Opengy.
- Power: 4.9 MW.
- Location: Madrid.

Detail engineering for the Vallejón photovoltaic plant.

- Developer: Opengy.
- Power: 5.6 MW.
- Location: Madrid.

Executive projects for the solar farms Guadame II, III, IV, Marmolejo Solar I, II, Zumajo I and Zumajo II.

- Developer: Greenalia.
- Total output: 348.20 MWp.
- Location: Andalusia.

Detail engineering Guillena Cluster, comprising the Arbotante, Postigo, Pilastra, Noria and Carrascosa photovoltaic plants, including electrical studies, grid codes and self-protection plan.

- Developer: FCC.
- Power: 50 MW each.
- Location: Guillena (Seville).



Photovoltaic installations

Solar farms / utility scale

Detail Engineering Project for a 55.20 MWp Nisibon Photovoltaic Plant; including a Battery Energy Storage System (BESS) with 40 MWh and 40 MW of storage.

- Promoter: Elecnor.
- Location: Dominican Republic.

Detail Engineering Project for the 53.018 MWp Eresma Photovoltaic Plant.

- Developer: Elecnor.
- Location: Segovia.

Detail Engineering Project for the 170 MWp María Alpha Photovoltaic Plant.

- Developer: Solaria.
- Location: Grañona (Burgos).

Detail Engineering Project for the construction of the 10 MWp Sabaudia Photovoltaic Plant.

- Promoter: Enemek.
- Location: Lazio (Italy).

Detail Engineering Project Photovoltaic Plant Tucana Solar.

- Developer: Solaria.
- Power: 39.962 MWp.
- Location: Guardo (Palencia).

Project to obtain prior administrative authorisation from wind farm Lagunillas.

- Promoter: Statkraft.
- Power: 65.7 MW.
- Location: Antequera (Málaga).



Wind installations

Six wind farm projects with the following characteristics:

- Output: 49.50 MW.
- 9 wind turbines at 5.5 MW each.
- Location: Ejea de los Caballeros (Zaragoza).

Detail engineering project for the Virgen de las Angustias wind farm.

- Output: 15.00 MW.
- 5 wind turbines.
- Location: Albañuelas (Granada).

Detail engineering project for the Parapanda wind farm

- Output: 18.00 MW.
- 6 wind turbines.
- Location: Íllora (Granada).

Detail engineering project for the Acampo Sancho wind farm

- Output: 36.27 MW.
- 9 wind turbines.
- Location: Zaragoza.

Detail engineering and execution project for a wind farm.

- Output: 97 MW.
- Asynchronous machines at 2.3 MW and synchronous machines at 3.15 MW.
- Location: Republic of Peru.

Detail engineering and execution project for two wind farms.

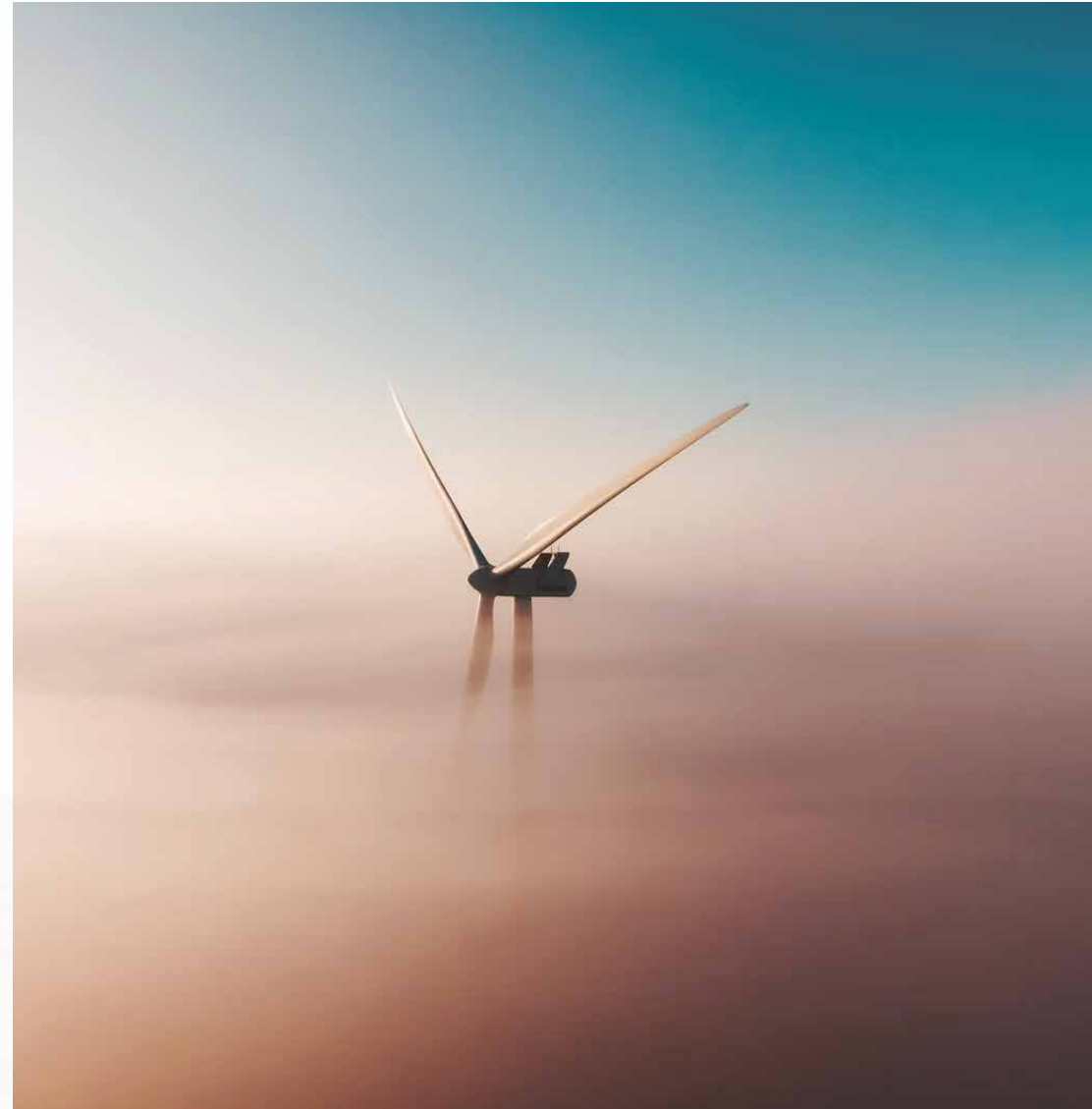
- Output: 50 MW.
- Gamesa machines (G90), substations and necessary electrical lines.
- Location: Oriental Republic of Uruguay.

Constructive adaptation project Sikitita wind farm.

- Developer: Forestalia.
- Output: 50.00 MW.
- Location: Zaragoza.

Constructive adaptation project Arbequina wind farm.

- Developer: Forestalia.
- Output: 49.00 MW.
- Location: Zaragoza.



Wind installations

Constructive adaptation project Erla wind farm.

- Developer: Forestalia.
- Output: 4.3 MW.
- Location: Zaragoza.

Constructive adaptation project Micromuela wind farm.

- Developer: Forestalia.
- Output: 5 MW.
- Location: Zaragoza.

Project for the Lanjarón II farm.

- Developer: Geolisol.
- Output: 18 MW.
- Location: Lanjarón (Granada).

Project to obtain AAP from PE Lagunillas.

- Developer: Statkraft.
- Power: 65.7 MW.
- Location: Antequera (Málaga).

Detail project for the Barranco del Agua I and II wind farm.

- Developer: Cuerva Energía.
- Power: 30 MW.
- Location: Cozviljar (Granada).

Detail project for the photovoltaic Mudarra 1 hybrid wind farm.

- Developer: Abei Energy.
- Power: 45 MW.
- Location: Cigales (Valladolid).

Detail project for the photovoltaic Mudarra 2 hybrid wind farm.

- Developer: Abei Energy.
- Power: 45 MW.
- Location: Cigales (Valladolid).

Repowering project La Unión wind farm.

- Developer: Sydis.
- Power: 7 MW.
- Location: La Unión (Murcia).



BESS Storage Facilities

Detail engineering for the construction of the storage plant "Quartucciu" - 74.5 MW/298.16 MWh.

- Promoter: Enel Green Power.
- Location: Sardinia (Italy).

Detail construction engineering for the "Codronguianos 2" storage plant - 137.8 MW/551.6 MWh.

- Developer: Enel Green Power.
- Location: Sardinia (Italy).

Detail construction engineering for the "Sulcis" storage plant - 126.71 MW - 507 MWh.

- Developer: Enel Green Power.
- Location: Sardinia (Italy).

Technical administrative project for plant and access to BESS Laregun-La Farga plant - 101 MW/407.37 MWh.

- Developer: Matrix.
- Location: Catalonia.

Technical administrative project feasibility study for BESS Solanetas project and its rendering - 84 MW.

- Developer: Matrix.
- Location: Aragon.

Technical administrative project for administrative construction permit of BESS El Rocio - 45 MW.

- Developer: Hyren Hidrorenovable.
- Location: Andalusia.

Detail engineering project for the BESS storage system of the Hércules Solar photovoltaic plant - 11 MW/44 MWh.

- Developer: Solaria.
- Location: Castile and León.

Detail engineering for the Pegaso BESS plant - 31 MW

- Developer: Solaria.
- Location: Castile and León.

Detail engineering for PV Marte, 14.99 MWp, hybridised with a 7.6 MW BESS storage system.

- Developer: Solaria.
- Location: Castile and León.

Detail engineering for PV Palacios II, 5.99 MWp, hybridised with a 4.6 MW BESS storage system.

- Developer: Solaria.
- Location: Castile and León.

Detail engineering for the Garoña Cluster, comprising the Beta, Alpha, Gamma and Delta BESS plants - 50 MW, respectively.

- Developer: Solaria.
- Location: Castile and León.

Preliminary design for the Florens BESS plant tender, for connection to the Lancha SET - 200 MW.

- Developer: Progressum
- Location: Córdoba.



Hibridaciones BESS con Fotovoltaica

Detail engineering project for the BESS storage system at the Hércules Solar photovoltaic plant - 11 MW/44 MWh.

- Developer: Solaria.
- Location: Toro (Zamora).

Technical administrative project for administrative construction permit hybridisation of the Hinojosa Solar BESS plant - 11MW/84MWh.

- Developer: Biwo Renewables.
- Location: Badajoz.

Technical administrative project for prior administrative authorization and administrative construction permit of Solajero BESS plant - 7 MW/4h.

- Developer: Despro Renovables España, S.L.
- Location: Canary Islands.

Technical administrative project for access and connection for BESS hybridisation in REE - 30 MW.

- Developer: Enerparc Energía Solar.
- Location: Malaga.

Technical Administrative Project for prior administrative authorization of the Astillero BESS plant, 164 MW, 30/220 kV Elevator substation and 220 kV high voltage underground line 30/220 kV Elevator substation – 220 kV Astillero substation. Hydrological Study for the Astillero BESS project.

- Developer: Biwo Renewables.
- Location: Cantabria.

Technical administrative project for BESS installation - 166 MW.

- Developer: Biwo Renewables.
- Location: Alcocero de la Mora (Burgos).

Basic project for El Lanchar photovoltaic plant and BESS - 49.99 MW/2.10.

- Developer: Galenergy.
- Location: Conil de la Frontera (Cadiz).

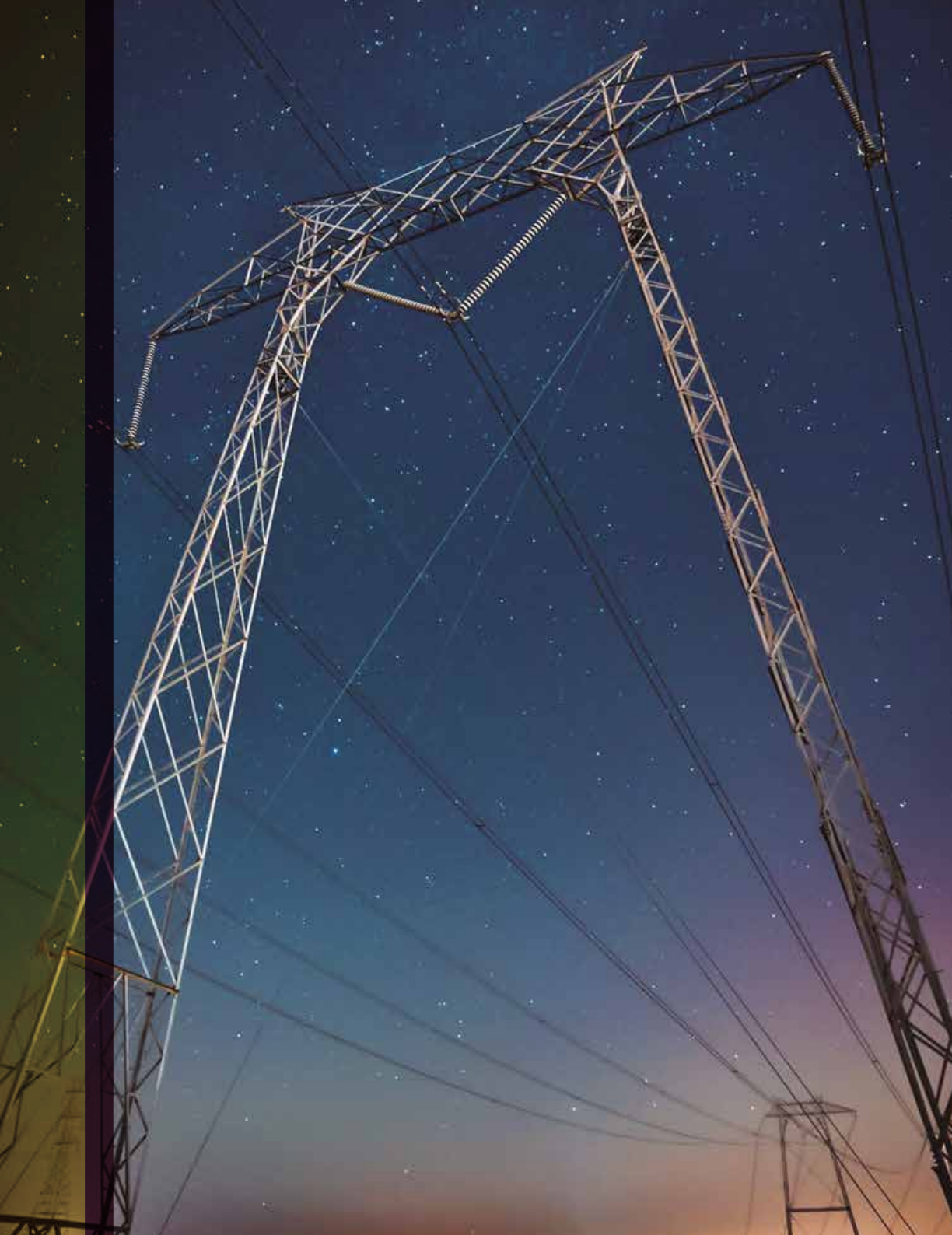
Basic projects for photovoltaic plants and BESS, including the Columba, Aquila, Ursa, Corvus, Cygnus, Linx and Cetus facilities - 49.99 MW/2.10.

- Developer: Galenergy.
- Location: Fuente del Maestre (Badajoz).



OUR CLIENTS VOUCH FOR OUR WORK





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