



**ESPE**  
Energy Expertise

COMPANY  
PROFILE

**ESPE** as experience in the service of an increasingly convenient, clean, easy-to-manage and easy-to-produce energy.

Experience, dependability, innovation: in a continued growth since 1974, at ESPE we specialize in the realization of highly efficient and innovative industrial electric systems, along with being among the main Energy System Integrators on a national level.

Industrial electric infrastructure, photovoltaic solutions for businesses and families, hydroelectric plants, small wind turbines and biomass systems: wherever energy is required, we are capable of producing and managing it with the right installation suitable for every need.

## Zero CO<sup>2</sup> emissions since 2010

Thanks to photovoltaic installations providing electricity and a geothermal system providing heating and cooling, our plant functions at maximum efficiency without releasing CO<sub>2</sub> into the environment. A result that also your company can achieve through our energy solutions.

# One innovative tradition.



# for several innovation stories.

- **1974** Born near Padua, we specialized in the realization of industrial electric systems and automation.

- **1994** Tecnoespe was born, an entity dedicated to automation and processing systems.

- **2009** We reached 100 MWp from photovoltaic systems we installed.

- **2013** We designed and put on the market a newly conceived biomass co-generator.

- **2017** We reached production and installation of 50 co-generators CHiP50 and of 170 wind turbines.

- **2020** We introduced the market to the latest generation of high efficiency wind turbines suitable for extreme conditions.

- **1982** We designed and realized our first hydroelectric plant.

- **2003** We installed our first turnkey photovoltaic system (17 kWp).

- **2011** We designed and realized our first series of state-of-the-art wind turbines.

- **2015** We began our expansion program abroad through strategic partnerships in the United Kingdom and Japan.

- **2019** We celebrated our first 45 years of history with an increasingly broader selection of services.





## **EFFICIENCY IS THE MOST SUSTAINABLE ENERGY.**

The challenge we set for ourselves is to realize the most performing system with respect to any and every energy need, offering the experience and technological quality to realize traditional solutions from renewable sources and capable of reducing energy costs and increasing the efficiency of production processes.

In practice, we supply the right innovations to guide and produce more and more sustainable energy on both the investment level and the environmental one.



## **COMPETENCE AS A BOUNDLESS SOURCE OF DEVELOPMENT.**

Although we own state of the art plants and cutting-edge technology, our most valuable asset are the competences we have matured over our almost fifty year-long history.

The people who compose our team and the experiences gathered in the fields of industrial electric plants and renewable energies are unique and represent the added value that ensures our continued growth on a global scale.



### **SUSTAINABLE INVESTMENTS**

Our clients are offered custom solutions that represent the best result over investment ratio and constantly aim at cost optimization.

### **PRODUCTION QUALITY**

Aside from being among the System Integrator leaders in the industrial plant and photovoltaic sectors, we also produce highly efficient and innovative systems and machines for the hydroelectric, wind and biomass markets.

### **GLOBAL RELIABILITY**

Project consultancy, operative capacity and continuous assistance: we are the global partner capable of attending the development of a plant or system from its conceptualization to its maintenance.

### **SCIENTIFIC RESEARCH**

Our engineering department collaborates with universities and research entities to create solutions which evolve the renewable energy market.







## Producers of cutting-edge solutions

Born as electric system installers, throughout the years we have accumulated a rich heritage of experiences, broadening our activities in the field of photovoltaic system installation and direct production of innovative technologies in the small wind, hydroelectric and biomass sectors.

Today, this development strategy allows us to offer our clients a greater quality and efficiency guarantee for our systems.





## BORN IN ITALY, DEVELOPED IN THE WORLD.

We were born close to Padua, but we operate in the whole world. We control the entire production chain and are able to realize energy infrastructures on a global scale.

Design, realization, management and monitoring for innovative and dependable systems that last in time: we use state of the art technology in service of privates, investors, public companies and businesses of any sector or dimension.

- **+300**  
Million kg/year of spared CO2 thanks to our renewable energy systems
- **+1000**  
Renewable energy systems realized in Italy and abroad
- **+500**  
MWp installed for the photovoltaic sector
- **+100**  
Collaborators between employed staff and sub-contracting
- **2**  
Places of business
- **2**  
Businesses part of the ESPE Group
- **2**  
Registered patents



# Our manufacturing process



## RESEARCH AND DEVELOPMENT

Our internal engineering department collaborates with the University of Padua, the Polytechnic of Milan, the University of Naples, the University of Trent and the University of Edinburgh to design highly efficient and innovative technologies and energy solutions.







## INDUSTRIAL PRODUCTION

Within our plants, furnished with state-of-the-art machinery, we produce technologically advanced solutions for different applications, such as: small wind turbines, turbines for hydroelectric plants, biomass co-generators.

## TESTING AND CONTROL

In order to ensure an energy experience of top performance and dependability on the long term, every one of our components undergoes a strict testing process in our inspection department. Working technologies are tested by simulating the most extreme conditions di be analyzed, evaluated and optimized.

## DELIVERY

When dealing with energy related technologies, large volumes and sizes are involved. An efficient logistics is therefore an essential aspect of an effective investment. We handle this phase directly by organizing and realizing the best type of delivery in order to optimize costs and shipping time.

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## CERTIFICATION

**ISO 9001 certification.** Our high-quality productive system was awarded the ISO 9001:2015 certification by CSQ.

**UNI EN ISO 14001 certification.** Our productive process is designed to guarantee high sustainability standards and maximum attention to the environmental impact of each activity.

**European Directives Conformity.** Our technologies are in conformity with the European directives 2006/95/CE (LVD), 2004/108/CE (EMC) and 2006/42/CE.

**European Standards.** The solutions realized within our laboratories conform to European standards CEI EN 61400, CEI EN 62305, UNI EN 14122.



# ESPE SMALL WIND TURBINES

## The wind of innovation



Engaged in the wind industry since 2011, in just 18 months we gave birth to the FX Series, a line of wind turbines entirely developed and produced in our workshops. Since then, we have not stopped investing in productive competencies and technologies to broaden this selection of wind turbines of the highest quality, revitalizing the market and becoming, in just a few years, a point of reference for the sector.

**FX line: great performances, small dimensions.**

The ESPE FX Series is the line of wind turbines from 20kW to 100kW that offers two exclusive advantages: above standard performance and high safety levels. FX wind turbines are designed to work in safety even in adverse weather.





# ESPE BIOMASS

## Wood energy in its most efficient forms

Throughout our technological development, we specialized in the production of woody biomass systems. We specifically produce and install the innovative co-generator ESPE CHiP50.

### **ESPE CHiP50: the biomass co-generator**

The gathered experience in designing and realizing electric plants and industrial automation, acquired since 1974, was of fundamental importance for the realization of CHiP50, our co-generator dedicated to small and medium size businesses which require thermal and electrical energy.

The thermochemical process was developed and refined in our Research and Development department with the precious collaboration of important international-level experts in the sector.





# ESPE HYDROELECTRIC

## Energy flows towards a sustainable future



### HYDROELECTRIC

For over 30 years we have designed and installed complete hydroelectric plants, while for over 15 years we have also handled the design and production of high efficiency turbines. Within the energy sector that has introduced the world to the great potentialities of renewable energy, our turbines are characterized by dependability over time and for our competence in realizing specific solutions for each individual application.

#### **Turnkey hydroelectric plants**

We oversee every phase of the development of modern and efficient hydroelectric plants, from design to turnkey delivery. Thanks to our Research and Development department, we realize also different components, such as the hydraulic turbines necessary to guarantee the highest levels of productivity and efficiency. Furthermore, we specialize in the makeover of existing plants and in the development of hydroelectric plants on drinking water aqueducts.





# ESPE PHOTOVOLTAIC

## |The Sun as a source of development

Since 2003 we have installed photovoltaic systems of every type and size: small domestic and artisanal plants, solutions for industrial factories and large ground-mounted plants for the transfer of produced energy to the grid. Our solutions are characterized by high performance and dependability over time, two essential factors in order to reduce energy costs and to optimize the investment.

### **Rooftop plants**

Depending on the size of the coverage, on the orientation and on specific needs, we design and install the optimal solution for businesses and private users. It is important for us that a rooftop plant respect some fundamental rules: guaranteeing a high performance, serving the activities taking place in the building and respecting the integrity of the building structure.

### **Ground-mounted plants**

We are specialists in the installation of high efficiency ground-mounted photovoltaic plants, supplying both turnkey solutions and targeted, personalized ones. In our role as EPC, we design and realize photovoltaic plants and are proud of a remarkable track record in successful plant realizations, that maintain high performances years after.



# INDUSTRIAL ELECTRIC PLANTS

## ESPE as experience

Our entrepreneurial history was born with the installation of industrial electric plants, an activity that represents a fundamental and pivotal aspect of our growth to this day. Since the first plant realized in 1974, technologies, competences and requirements have evolved, but our passion for our job and the attention we reserve to plant quality have stayed the same. Today, we are able to operate for businesses of all sizes and are proud of several success stories in almost the totality of productive sectors, such as food, textile, mechanical, plastic and paper industries, among others.

### **The tension towards high quality plants**

Utilization of selected, high quality materials, search for the highest level of safety for all personnel and high performances guaranteed over time: these are the three pillars upon which we base our realizations. Specifically, we specialize in interventions which regard low and medium tension electrical cabinets, electric distribution plants and on-board electric systems. Furthermore, thanks to the products and services provided by our partner company Tecnoespe, we can produce electrical panels and software to control processes.





# OFF-GRID SYSTEMS

## We bring energy wherever it is needed



We were among the first in Italy to believe in the potentiality of off-grid systems and since 2005 we have realized electric systems that work independently from a connection to power grids.

An optimal solution to bring energy to those places which are remote and hard to reach, such as high mountain locations or islands, off-grid plants prove to be very effective even in overcoming black-outs due to calamities and emergencies or to stabilize energy supplies to locations which are poorly served by the power grid.

### **The convenience of energy autonomy**

Off-grid plants represent a convenient and ecological alternative to other systems used in areas lacking a connection to the power grid or in emergency situations. Comprised of a renewable energy generator (wind power, photovoltaic or both), an accumulation system (battery) and often an emergency back-up system, the off-grid plant guarantees true energy autonomy: clean and limitless production thanks to renewable energy sources on the one hand, and cutting of purchasing and fuel transportation costs on the other, with remarkable savings in terms of money, time and effort.

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