

Who is who in the Spanish wind energy industry



Produced by:



With the support of:



Who is who in the Spanish wind energy industry



Produced by:



With the support of:



Design:

estudio jorge gil

Layout and printing:

Impression Artes Gráficas

Editing:

Spanish Wind Energy Association (AEE)

List of symbols



Developer



Wind Turbine Manufacturer



Component Manufacturer



Engineering and Civil Engineering



Operation and Maintenance



Consultancy



Finance and Insurance



Transportation & Logistics



Technology Centre



Training



Other

Index of Companies

A	_____	7
B	_____	27
C	_____	34
D	_____	37
E	_____	42
F	_____	56
G	_____	58
H	_____	73
I	_____	75
J	_____	90
K	_____	91
M	_____	93
N	_____	95
O	_____	100
P	_____	101
R	_____	105
S	_____	112
T	_____	124
V	_____	132
W	_____	133



AEE member

The Spanish wind energy sector is considered an example all over the world for its know-how and achievements. Among its ranks, it has world leading developers, top turbine manufacturers and a great number of medium and small companies that manufacture components and provide services all along the industry's value chain. In this business directory, the Spanish Wind Energy Association (AEE), with the support of ICEX España Exportación e Inversiones, offers information about over 100 companies that operate in Spain in different segments regarding wind energy.

AEE – Spanish Wind Energy Association



Serrano 143 28006 Madrid

T. +34 917 451 276

aeeolica@aeeolica.org

www.aeeolica.org



The Spanish Wind Energy Association (AEE) is the voice of the wind sector in Spain. It promotes the use of wind energy in Spain, Europe and worldwide. It represents and defends the interests of the sector.

With over 200 member companies, it represents 95% of the sector in Spain which includes promoters, wind generator and component manufacturers, national and regional associations, organizations connected with the sector, consultants, lawyers and financial entities, among others.

AEE coordinates research into the areas surrounding wind energy and provides services to its members, meeting their different needs. It contributes to the formulation of the normative framework with a view to the sector developing under the best possible conditions. It disseminates the reality of wind energy and endeavours to raise awareness in society. It sets in motion high-level events at which it brings together prominent national and international personalities. It publishes reports and studies which are a reference. Moreover, AEE exercises the secretariat of REOLTEC (Technological Platform for the Wind Sector), it coordinates with ICEX the presence of Spanish companies at fairs and congresses abroad and is a member of international associations such as EWEA, AWEA and GWEC.

Our vision

Wind energy is vital for energy Independence in Spain, the development of the economy and environmental sustainability.

Our mission

To promote the growth of wind energy by defending its interests, doing research, communication and education.

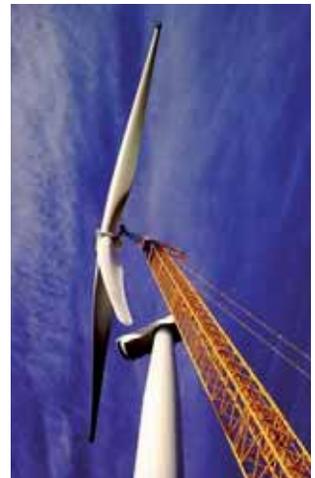




ABB Spain – Asea Brown Boveri S.A.

C/ San Romualdo, 13 28037 Madrid

T. +34 901 760 762

contact.center@es.abb.com

www.abb.es

ABB Power and productivity
for a better world™



With its 30 years of experience, in-depth know-how, global manufacturing footprint and thorough understanding of both wind turbine applications and power systems, ABB serves wind power customers at every stage of the process. ABB is the leading supplier to the wind power industry of electrical products and solutions. ABB stands for “Power and productivity for a better world”.



Wind Power Plant Solutions

Our transmission and distribution expertise guarantee the best possible value also for wind power customers. The offer includes everything from electrical design to substation construction up to project management and installation and commissioning.

Wind Power Products

Turbines are comprised of many subsystems working in unison so that the turbine efficiently and safely produces power. ABB products are used throughout these subsystems, from the emergency stop button to the generator.

Expertise

ABB’s wind industry expertise ensures our products are designed for long life cycles and changing industry regulations.

Service

ABB’s portfolio of life cycle services is designed to increase a customer’s return on investment and keep ABB products operating a highest efficiency levels throughout their individual product life cycles.



Abo Wind España S.A.U.



Embajador Vich 3, 3ºq 46007 Valencia

T. +34 902 198 937

global@abo-wind.es

www.abo-wind.es



Abo Wind Group is one of Europe's most successful developers of wind energy projects. We plan and build wind farms. We have a staff of more than 250 professionals who work on projects in Germany, Spain, France, Argentina, Belgium, Ireland, United Kingdom, Finland and Bulgaria. Wind Energy ABO Wind initiates wind farm projects, acquires site locations, organizes all technical and business planning, arranges international bank financing and delivers turnkey wind farms.

Bioenergy: In the bioenergy sector, biogas plants are being planned and built.

Operational Management (O&M): In addition to managing its own projects developed after commissioning, ABO Wind takes on the commercial and technical management of wind farms on behalf of international operators.

O&M Management Base Offer: Our O&M team has longstanding experience in the industry and our technicians monitor and evaluate all of the information about your wind farm quickly and professionally.

O&M Package Offer: Our engineers are constantly evaluating numerous innovations and technical improvements. Provided that innovations improve the efficiency of the turbines, we implement them after detailed review.

Service and Spare Parts Purchasing: ABO Wind installation engineers are regularly on site at the wind farms in order to monitor the turbines and ensure the work of the other service providers is of a high standard.

The independent control: We determine why your wind energy plant is not operating ideally and optimize it. Wind farms need to be monitored and maintained constantly. Common maintenance and service contracts often lag behind requirements and don't consider all opportunities of the latest technological progress.

Commercial O&M: Our commercial O&M is distinguished by farsightedness and assertiveness. In order to make the wind yields also pay off visionary financial planning and the assertion of the owners' interests are just as important as good organisation of the operation.



Acciona Energía S.A.

Ciudad de la Innovación, 5 31621 Sarriguren (Navarra)

T. +34 948 006 900

contact@acciona-energia.com

www.acciona-energia.es



ACCIONA Energía is a global operator in renewable energies with over 20 years' experience in the sector and a strong presence in five technologies. It has installed capacity of over 10,000 MW for electricity generation. It develops projects both for itself and other customers – 8,631 MW in operation in the field of wind power – and is present throughout the wind power value chain, from the design, manufacture and sale of wind turbines to the development, engineering, construction, assembly and exploitation of wind farms, their operation and maintenance and the marketing of the energy produced. As an owner, the company has 232 wind farms in operation totaling 7,159 MW, with a further 232 MW under construction, in 16 countries on the five continents. It has constructed another 1,472 MW for customers and is working on winning new EPC contracts in which it incorporates wind turbines of proprietary technology. Its subsidiary company ACCIONA Windpower designs, manufactures and markets those wind turbines, with 3 MW and 1.5 MW nominal capacity. The company has supplied wind turbines totaling 4,360 MW, and in the fourth trimester of 2013 it has news orders to take this figure above 5,400 MW.



ACM – Automated Computing Machinery S.L.



Playa de Lagoa, 1 28660 Boadilla del Monte (Madrid)

T. +34 916 323 812

support@acm-sl.com

www.acm-sl.com



Engineering company specialized in Industrial Instrumentation and Control, Industrial Software development, Simulators and Operator's Training Systems specialized for Wind Farms maintenance and operation.

Activities

- Industrial Hardware and Software development.
- Professional Design for Manufacturing from start conception to manufacturing reengineering of prototypes to preseries production to quality control to customers delivery.
- Controllers for Wind Turbines.
- Development of Simulator both software-only and with hardware-in-the-loop.

Products

- WindFarmSimulator: Training System for Maintenance personnel of Wind Turbines and SCADA operators of Wind Farms.
- GPTR: 3Phase Programmable Generator and Load Simulator.
- DL1300: Industrial plant dataloggers.
- Osciloscopio: Software for fast presentation of copious logged data.
- ECA: Condition Monitoring System for wind turbines.

Main projects

- Simulator with hardware-in-the-loop for Bonus 1300 KW, dual speed, variable pitch wind turbine.
- Controller for a 600Kw wind turbine.
- ECA (Equipo para Caracterización de Aerogeneradores (ECA): Condition Monitoring System (CMS) for wind turbines.

Calle Condado De Treviño, Nº71 Nave 1 09001 Burgos

T. +34 947 473 764

o.bustos@adventisolutions.com

www.adventisolutions.com



Emergency Solutions.
Preventive maintenance.
Lubrication of services moving parts of the turbine.

Other services

Lubrication analysis.
Rating and installation of automatic greasing.
Flanges torquing and tensioning:

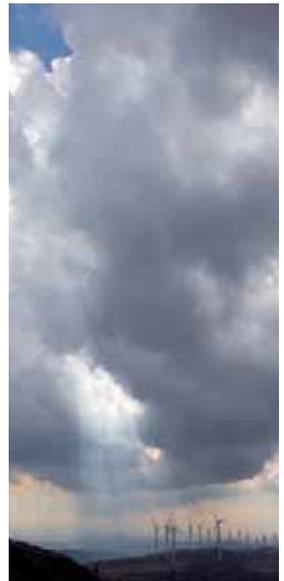
- Laser alignment.
- Boroscope.
- Ultrasonic Testing.
- Inspection and repair of life lines.

Status report of the principal turbine components.
Logistic Inventories and stock coding.
Mapping: Identification of the spare parts of each turbine.
Mapping: Identification of critical points.
Reduction of obsolete components.
Removal of duplicated spare parts.
Updating of commercial references.
Storage area studies.
Management of restocking with third parties.
Implementation of the 'repair kit' concept.
24-hour delivery service.

Training courses (english, spanish and portuguese)

Customized training, designed content according to specialization, defined duration by levels and attendees.

- Fire fighting.
- Workplace risks.
- Electrical risk RD 614.
- H&S 60H.
- Height Rescue and Evacuation (Theoretical-Practice).
- Lifting use and evacuation (Theoretical-Practice).
- Basic QSE training BST (Theoretical-Practice).



Aeroblade S.A.



Camino de Astondo, 614 48160 Derio (Vizcaya)

T. +34 944 868 096

commercial@aeroblade.com

www.aeroblade.com



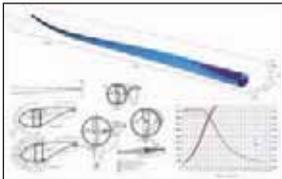
AEROBLADE is a society for the design, manufacture and supply of wind turbine blade at international level. It also provides technological transfer and blade licensing agreements. AEROBLADE, as a part of SYNERGY CORP., has more than 5.000 employees and more than 25 years of experience on the aeronautic field. This experience provides us with an unbeatable position for the fulfillment of our customers' requirements. Since its creation, the company has made a number of groundbreaking achievements like its own products development or the design of the biggest wind blade ever. AEROBLADE offers to its customers:

- Blades Development Engineering
- Manufacturing and Process Engineering
- Mould Design and Manufacturing
- Prototypes Manufacturing
- Product Certification
- Wind Blades Serial Manufacturing
- Internal and External logistic
- Post-Sale Service



AEROBLADE provides a wide variety of services ranging just from the very beginning of the blade design up to post-sale services. AEROBLADE provides the highest added value to make its customers succeed obtaining the minimum COE by using the optimum blade for a specific platform. AEROBLADE is expert in designing the longest blade as possible for each specific wind turbine model.

AEROBLADE also has the following wind turbine blade models within its brochure:



- AB37 for 1,5 MW Turbines CLASS IEC IIA
- AB43 for 1.5 MW Turbines CLASS IEC IIIA
- AB45 for 2.0 MW Turbines CLASS IEC IIA
- AB47 for 2.0 MW Turbines CLASS IEC IIIA
- AB49 for 2.0 MW Turbines CLASS IEC IIIA
- AB53 for 3.0 MW Turbines CLASS IEC IIA
- AB58 for 3.0 MW Turbines CLASS IEC IIIA
- AB68 for 5.5 MW Turbines CLASS IEC S
- AB75 for 6.0 MW Turbines CLASS IEC S
- AB80 for 7.0 MW Turbines CLASS IEC S



In addition, AEROBLADE offers engineering support for prototypes fabrication, blades certification, etc. Therefore, AEROBLADE customize its products and services in order to fulfill specific customers' requirements.

AIR windpower

Pol. Ind. Mutilva Alta – c/ Nueva 8 Oficina 6 31192 Mutilva Alta (Navarra)

T. +34 948 238 491

info@air.windpower.com

www.air-windpower.com



Air windpower is a company that develops and manufactures 100 kW wind turbine. Although newly created, Air-windpower combines the experience of BoreasNT – a group of companies that develops projects, products and installations with an outstanding technological content - with a young and highly qualified team of people committed to the project.



Products

The new 100 kW wind turbine developed by BoreasNT for AIR is a breakthrough in wind turbine technology for maximum robustness and cost efficiency, along the generating life of the machine with its two versions (19 meter and 22.5 meter diameter).

AIR wind turbine is designed to meet the strongest requirements of the Small Wind Industry. Our wind turbine can fit in any location: industrial and populated areas, either dry and hot location or cold and wet locations,...



What makes the AIR wind turbine innovative and competitive is:

- its extremely robust power train with direct load transmission to the tower without moving components,
- maintenance free nacelle,
- hybrid one shot made glass-carbon fiber blades for higher efficiency, robustness, with lower noise and weight,
- a leading edge direct drive machine with a specifically developed permanent magnet generator,
- full converter back to back power electronics; maximum electricity quality and potential for island use,
- maintenance provided by local technicians for maximum reliability and efficiency.



Aldesa Energías Renovables S.L.U.



Bahía De Pollensa, 13 28042 Madrid

T. +34 913 819 220

maria.borras@aldesa.es

www.aldesa.es



Aldesa Energías Renovables is a branch of Grupo Aldesa (9th construction group in Spain by turnover).

Supported by over 40 years of experience of the Group, Aldesa Energías Renovables operates adapting to the market's changing requirements and projects of any size and complexity, surpassing the highest requirements of quality, security, environmental respect, and going beyond standards.

Activities: Promotion, Design, Construction, Operation: O&M and management and EPC.

Projects: Wind Power, Photovoltaics, Mini hydroelectric, Biomass, Co-generation, Power lines and substations.



Alstom Renovables España S.L.

Roc Boronat, 78 08005 Barcelona

T. +34 932 257 600

www.alstom.com/spain

ALSTOM



With 30 years of experience in wind power, Alstom provides global energy solutions, from developing, designing and setting up wind farms to supplying and maintaining wind turbines. We offer a wide range of onshore turbines with power ratings spanning 1.67 MW to 3 MW. We are also active in the offshore wind market: we are currently building Haliade 150, the first new-generation offshore wind turbine, with an output of 6 MW. This turbine integrates proven ALSTOM PURE TORQUE® technology, which guarantees the reliability of the transmission line. Each Haliade 150 unit will be capable of supplying the equivalent of 5,000 homes with electricity. Characterised by its innovative technology, this direct-drive turbine is suitable for all sea conditions and will deliver offshore power at the best price.

We deliver higher yields in wind energy thanks to our market leading technologies, enhanced by years of operations and management experience, complemented with a state-of-the-art control and monitoring system called WindAccess™. Our “globally local” strategy – combining global experience with local strong presence and expertise – prioritises production wherever the client is. This encourages local economic growth, creates new direct and indirect employment opportunities and introduces new regional expertise thanks to our cross-training experience. Manufacturing and assembly of the wind towers and turbines is spread across specialist production sites in Europe, North and South America. Alstom Wind is supported by a global sales organisation which gives a global reach and the ability to serve customers wherever the wind blows.



Altius S.A.



Paseo de la Castellana, 8 3ª Dcha 28046 Madrid

T. +34 914 323 189

erodriguez@altius.es

www.altius.es



Altius is one of the freight forwarding leaders in the Spanish project market

Altius has its own in-house engineering and freight forwarding departments dedicated to the design and execution of the transport of industrial projects such as oil & gas, power plants, mining, civil constructions, yachts' transport, Eolic projects and solar projects.

Altius projects has its own offices in Madrid, Bilbao, Vigo, Buenos Aires and Santa Cruz-Bolivia.



C/ Diego De León Nº 31 - 1º C 28006 Madrid

T. +34 917 450 513

anetva@anetva.org

www.anetva.org



ANETVA is a national association of companies, who represents an important number of companies which has as a main activity, the rope access and positioning techniques at height know in Spain as, rope access.

The main goal of the association is to act on behalf of their associates and to work on the defense of those associates and at the same time, for the own activity. ANETVA must promote and to make widely known, the activity of the rope access work as a kind of work at height, safety, fast and effective.

ANETVA recently has extended its work to Europe, founding, together with the German association (FISAT), Norway association (SOFT) and a French organization, the European Committee of Rope Access (ECRA). ANETVA, through its training centres, imparts rope access training courses, fulfilling the requirements established in the Spanish Law RD 2177/2004, about the use of work equipment as to work in the development for temporary rope access work.



Applus+ Norcontrol



Carretera Nacional VI Km.582 15168 Sada (La Coruña)

T. +34 981 014 500

info@applusnorcontrol.com

www.applusnorcontrol.com



Applus+ Norcontrol is a leading company in comprehensive solutions for technical assistance, supervision, inspection, testing and consultancy. We offer industrial and environmental inspection and technical assistance services for all kinds of industries. We support private organizations and public administration in achieving its objectives by providing methodologies, our technology and information systems, our experiences, etc., in short, all our knowledge.

Our main services

Supervision, technical assistance, inspection and testing of new projects and plants/networks in operation:

- Industrial mechanical
- Electricity networks
- Telecommunications

Authorized Control Body (OCA)

Project design and construction supervision, inspection, technical assistance, monitoring and testing:

- Infrastructure
- Building

Energy efficiency

Inspection and environmental control

Health and safety coordination task



Lascaray, 9 - Of.3 01008 Vitoria (Álava)

T. +34 945 000 978

argolabe @argolabe.es

www.argolabe.es



Argolabe Ingeniería S.L. is a small company of engineering services established in 2005. We have currently over 25 employees, with several technical experts with over 19 years of consolidated experience in engineering. Our philosophy is founded on the basis of experience, continuous training, technical research and quality.

Our main activity is focused on product life cycle management on the fields of aeronautics, renewable energies, automotive and architecture using Catia V5 as main tool.

Our I+D is focused on renewable energy. We have worked in different fields of wind energy like component and control systems development, static and fatigue calculation, aeroelastic simulation, advanced surfaces and composite design and manufacturing. All of them resumed in our own I+D product which is the integral development of a 100kW wind turbine for distributed generation.

Besides this wind turbine, Argolabe can offer several other services and projects like an intelligent energy managing system to save power energy limiting the use of the power grid, thermal and solar installations, geothermic installations, hydroelectric power stations and cogeneration systems.

100kW Wind Turbine

The 100kW wind turbine holds a concept providing high reliability and elevated performance. It has been designed according to IEC 61400-1 and GL standards. The wind turbine connects to low voltage power supply grids so it can be installed on site, close to the electric power consumption point.

-Design class: IEC IIIA. 7,5m/s of mean annual wind speed, according to the IEC 61400-1 standard.

- Cut-in wind speed: 3 m/s - Rated wind speed: 10.5 m/s

- Cut-out wind speed: 20 m/s

- Survival wind speed: 52.5 m/s

- Power control: Variable speed – variable pitch.

- Life: \geq 20 years.

Its main components are made by local companies under Argolabe supervision and standard components are provided by domestic or European suppliers. This wind turbine has been assembled in Vitoria (Spain).



Aries Ingeniería y Sistemas S.A.



Paseo de la Castellana, 130 28046 Madrid

T. +34 915 702 737

info@aries.com.es

www.aries.com.es



Founded in 1985, Aries Ingeniería y Sistemas is an independent, global, and diversified engineering company that develops efficient, high value added solutions that integrate the best qualified team of professionals with the most advanced technology. The company, with a presence in over 22 countries, applies a strategy directed towards specialized markets which allows for strong, stable, and profitable growth. With offices in Madrid (Spain), Miami (USA), and Shanghai (China), we offer engineering services that include feasibility studies, basic to detailed engineering, construction, start-up, and operation projects in the renewable energies sector. Our highly qualified team is characterized by its strong desire for providing the best possible solutions and for having a collaborative and committed spirit.

Range of engineering services

- Feasibility studies and technical/economic consulting.
- Basic and detailed engineering.
- Plant engineering.
- Site and turbine selection.
- Wind farm power performance assessments.
- Comprehensive plant management.
- Systems integration.
- Project direction, planning, construction, and start-up.
- Turn-key projects, EPCM, EPC.

Our main references are:

- Eólica Guatemala: 12 MW wind plant; wind resource evaluation, basic engineering.
- Iberdrola: wind resource evaluation/construction projects.
- Endesa: wind generator characterization.
- Gamesa: wind generator studies.
- GE: wind generator engineering.
- NEO: wind resource evaluation/construction projects.
- Other clients: wind resource evaluation.
- Banks: technical and economical due diligences.

atten2 Advanced Monitoring Technologies

Ľñaki Goenaga, 5 20600 Eibar (Guipúzcoa)

T. +34 943 206 744

info@atten2.com

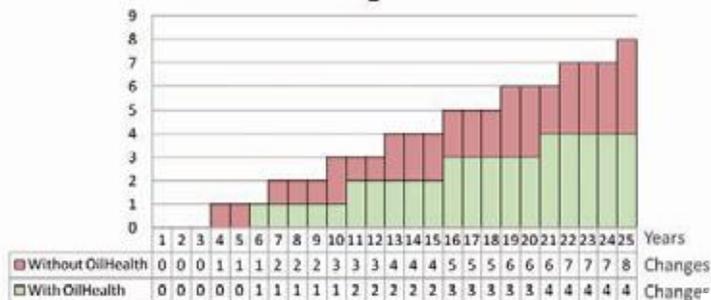
www.atten2.com



The atten2 business model is based on the research, development, manufacturing and sale of sensors to monitor different fluids and on the provision of associated services. Its vision is to become a leader in the area of real-time (online) fluid monitoring both nationally and internationally. atten2 already has its first product, OilHealth[®], an online optical sensor that measures the degradation status of lubricating oil. The value proposal of OilHealth[®] consists of monitoring the degradation of the oil, allowing the prediction of the optimal moment for the oil change. This improvement of maintenance procedures offers significant profits and environmental and operational benefits.



Number of oil changes in a machine life



Availon Iberia S.L.



Ayala 7, 1º izq. 28001 Madrid

T. +34 917 812 640

ana.sanchez@availon.eu

www.availon.eu



Availon Iberia, the new name for SSB Servicios Eólicos is the branch of Availon group in Spain, with central offices at Rheine (Germany) and delegations in USA, Italy & Spain. Availon is an independent service provider for wind turbines with 30 years of wind-energy-related experience and with a strong growing commitment in the international WTG servicing business. Consistently extending its global strategic position.

Availon is uniquely equipped to help you make the most of wind farm owners investment and to achieve maximum availability over the life span of the turbines. Our full-service turbine technicians and engineers are ready to provide a complete range on maintenance and engineering services.

Product Lines / Services

- Operation & maintenance.
- Inspections.
- Spare parts supply and management.
- Individual optimization solutions.
- Upgrades.
- Dependable field services.
- Remote monitoring.
- Timely, expert advice.
- Repair and troubleshooting services.
- Rotor blade inspection, service and logistics.
- Frame inspection and service.
- Detailed and certified documentation of all work performed.

In addition, the Competence Center for Wind Energy in Hamburg, Germany, already opened at the beginning of 2009, has provided Availon with extensive detailed know-how as regards the maintenance and servicing of different turbines technologies, working to extend the company's maintenance portfolio to include further types of WTGs.

Spare Parts

We only take on maintenance work for a certain type of WTG once we are fully familiar with the turbine. In order to achieve this, we obtain a considerable amount of technical know-how and constantly train our employees. We have also introduced standardized maintenance processes, allowing us to respond more quickly and efficiently. As an independent service provider, we must also be able to implement decisive improvements that have a verifiable positive effect on the yield of a WTG. An optimum availability can, in our opinion, only be achieved by continuously optimizing WTGs and thus providing economically sensible upgrades.

Avanti Wind Systems S.L.

Pol. Ind. Centrovia Calle Los Angeles nº88 Nave 1 50198 La Muela (Zaragoza)

T. +34 976 149 524

jmn@avanti-online.com

www.avanti-online.com



AVANTI wishes to contribute to a safe working environment in wind turbine towers.

AVANTI products have been developed to improve the working environment.

AVANTI wishes to contribute to our customers' effectiveness, as the use of AVANTI products for ascent and descent helps to save time and is very reliable.

As worldwide market leader, AVANTI develops products that focus on improving the profitability of the turbine. Today, the core business for Avanti Wind Systems is Innovation, development, production and installation of safety systems in wind turbines. Avanti has developed a complete product range for safe and quick ascent and descent in wind turbine towers such as service lifts, ladder systems with built-in safety rail, climb assistance and other personal safety equipment.

Avanti also produces entire tower internals sets for wind turbines being all internal mechanical and electrical parts in the wind turbine tower – from the big platforms to brackets and other smaller parts in aluminum or galvanized steel as well as electric cables, lighting and other electrics.

Avanti offers one-stop shopping for tower manufacturers across the world as the production is carried out in our own factories.



AWS Truepower S.L.



Calle Baldiri Reixac, 10 08028 Barcelona

T. +34 934 487 265

spares@awstruepower.com

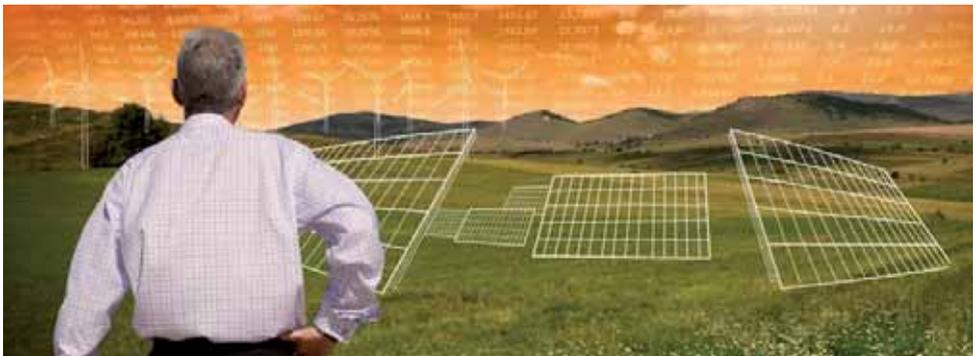
www.awstruepower.com



Approaching three decades of service in the industry, AWS Truepower (AWST) continues to be a leader and innovator in renewable energy consulting. Our skilled team of approximately 100 meteorologists, engineers, and environmental specialists are field-oriented and fully conversant with large commercial projects, utility electrical systems, remote field measurements, and distributed applications. AWST's core leadership team, consisting of the founding principals, directors and senior staff, drives the company to constantly examine processes and establish best practices. This commitment to making energy smarter is how we ensure science is delivering the performance our clients need.

Mission

The long-term success of renewable energy depends on the availability of independent and unbiased expert advice. As one of the world's leading providers of renewable energy solutions to developers, investors, utilities, and governments, our mission is to use the best science and technology to produce results that perform. Our passion for innovation, along with our promise to maintain the highest levels of integrity in our client and colleague relations and a fulfilling working environment for our staff, enables us to consistently uphold our mission.



Axpo Iberia S.L.

Paseo de la Castellana, 66 6ª planta 28046 Madrid

T. +34 915 947 170

info.es@axpo.com

www.axpo.com



Since it entered the Iberian market in 2002, Axpo Iberia has gradually expanded its lines of business in Spain and Portugal. It currently covers a wide range of services: electricity and gas sales; energy management for special system producers; the Operation and Control Power Generation Center (CECOGEL); structured products and electricity, biomass and CO₂ trading.

Business activities in the wind industry

Axpo manages the largest portfolio of special regime plants in Spain, with an installed capacity of over 7,000 MW and with a technological and geographical diversification which enables optimum management of cost overruns from deviations. The plants included in the Axpo portfolio form, as a whole, the fourth electricity producer in Spain and the largest with regards to renewable energies.

The main activity of Axpo as a sales agent consists of the representing of special regime plants before OMIE, REE and CNMC (Spanish market and competition commission), managing the sale of production programs in OMIE and excess energy liquidation before REE with screening for overruns from deviations.

The large volume of power managed, its wide geographical distribution, the state-of-the-art computer applications developed for plant management and the advantage of being able to render all services at competitive prices and to the highest quality standards, are factors which position Axpo as one of the best alternatives to mitigate the volatility of final electricity costs and resulting overruns from deviations.

In order to reduce the volatility of market prices and guarantee stability in revenue for Producers, Axpo offers diverse alternatives to guarantee revenue, which range from a basic charge for electricity to different hedging arrangements through options and a period of up to 10 years.

Products

Operation and Control Power Generation Center (CECOGEL)

Axpo offers generation facilities a new service of real-time control, monitoring and optimisation, in order to more efficiently see to customers' needs throughout Spain, spread over a large number of facilities (wind farms and hydroelectric power plants, solar thermal power plants, photovoltaic farms, cogeneration and biomass plants) and transformer substations.

The control Center gathers all signals sent by affiliated facilities, offering real-time information on the main operation and production signals, enabling them to be monitored and optimised.

This is a technological commitment which positions Axpo at the cutting edge of innovation of these types of services and as a clear benchmark within the energy sector in Spain and Portugal.



Azul Construcción



Pq. Comercial S. Jeronimo, C/A N.11 41015 Sevilla

T. +34 954 907 965

info@azulconstruccion.com

www.azulconstruccion.com



Azul is a company with more than 25 years of experience in the field of repair and strengthening of concrete and steel structures. We're applying our experience in new and old wind farms. These services can be classified as following:

- For new WF:

- Grouting between foundation and tower flange.
- Postensioning of foundations (embbeded ring).

- For old WF:

- Repair and reinforcement of foundations (epoxi injection, cable/bar postensioning, high pressure water jetting for hydrodemolition, etc), sealing/waterproofing for foundations.

We are working worldwide using these special techniques, carrying our machines and people to jobsite always with a technical supervisor who records quality controls of each task. We've been in South America (Nicaragua, Mexico, Uruguay) and Europe (France, Poland) working for the most important turbine suppliers and owners of wind farms.





Banco Sabadell is at the head of Spain's fourth largest privately owned banking group. The group offers a full range of banking and financial services through its different financial institutions, brands, subsidiaries and associates. The Bank has a business model that fosters long-term customer relationships through constant efforts to promote customer loyalty and by adopting an initiative-based, proactive approach. Banco Sabadell offers Finance solutions for National and International projects that require flexibility, expert analysis and a specific structure: corporate finance, project finance, acquisitions, trade finance, with teams in Barcelona, Madrid, Miami and New York with a wide knowledge and more than 20 years of experience. Aptitude to lead operations, an in-depth knowledge of the market and management capacity, and an agile and dynamic decision-making process are the main hallmarks of Structured Finance in Banco Sabadell. Top ranked in energy project finance, with over 7.700 wind energy MW arranged and present in more than 13.500 MW. We also maintain representative offices in Mexico, Venezuela, Brazil and the Dominican Republic for the convenience of customers in the Americas region.



Barlovento Recursos Naturales S.L.



Pintor Sorolla 8, 1ª 26007 Logroño

T. +34 941 287 347

brn@barlovento-recursos.com

www.barlovento-recursos.com



We are a leader company in engineering, consultancy and testing of renewable energies. Our commitment is the highest technical quality and independence that allows us to act as adviser for utilities, promoters, manufacturers, financial entities, investors, civil service and governing bodies. Since 1998 the company develops its activity in the areas of wind and solar energy, integration of renewable energy in the electrical grid and meteorology and environment. Barlovento renders all kind of technical and consultancy services needed throughout the life-span of the installation, from the initial idea to the dismantling.

Barlovento set up the company Energy to Quality S.L. (E2Q), testing laboratory in electrical consultancy and electric tests for renewable energy. E2Q performs all kind of studies and tests on the grid codes for different countries, for the specialized services of integration of renewable energies in the grid.

Barlovento has been working in Latin America for many years now; in February 2009, Barlovento Renovables Latinoamérica S.A.C. was set up in Lima (Peru) to boost its activities in this region. In 2011, Barlovento Brazil was established in Rio de Janeiro (Brazil), they carry out all kind of engineering and consultancy works on renewable energies in the region. Barlovento is also present in Colombia through its representing Transferencia de Tecnologías y Representaciones Ltda.

In 2010 Barlovento has set up Barlovento Dacia S.R.L. in Bucharest (Romania), from where we work in Romania and neighbouring countries.

In 2012 E2Q de Mexico S.A. de C.V. was established in Guadalajara (Mexico), Barlovento Bolivia was established in Santa Cruz and Barlovento Chile Limitada was set up in Santiago (Chile). They carry out all kind of engineering and consultancy works on renewable energies in the region.

Basoinsa S.L.

Luis Bilbao Libano Nº 11 Entr. D 48940 Leioa (Vizcaya)

T. +34 944 807 073

basoinsa@basoinsa.com

www.basoinsa.com

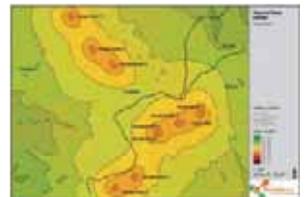


BASOINSA develops its expertise both in the private and public sector. Has undertaken numerous projects for National Government Bodies, the Spanish Autonomous Communities, Regional Councils, Town Councils, Public Companies, Development Companies and Technological Centres.



BASOINSA has a team of 30 technicians in the areas of biology, geology, aquatic ecotechnology, mountain and forest engineering, agronomic engineering, chemical engineering, environmental sciences, geography, computing, prevention of occupational risks, etc.,

Our main areas of activity are within the following fields: land management with particular emphasis on the management of natural resources and the determination of the acceptance of territory within the framework of land planning, Environmental Impact Assessment and Strategic Environmental Assessment, Integrated Environmental Authorisation, waste, polluted land and sediments, rehabilitation of impoverished areas, gardening and landscape architecture, restoration of rivers, green ways, application of biotechniques, phytoremediation, processes and risks, geology, development of GIS customised applications and tools, remote sensing, environmental legal consultancy, etc.



Bora Wind Energy Management S.L.



Paseo De La Castellana, 91 5º 28046 Madrid

T. +34 912 872 680

borawind@borawind.eu

www.borawind.eu



Borawind is a wind energy portfolio management company. After the acquisition of a set of eight wind farms and five electric substations in Castilla y León on May 2012, Borawind is one of the largest non-utility owned platforms of wind energy plants in Spain, with 330 MW of installed capacity under management. In 2012, the assets managed by Borawind produced 693.4 GWh, similar to the annual consumption of around 162,130 homes, saving 124,817 tonnes of oil equivalent (toe) and avoiding the emission of 228,832 tonnes of carbon dioxide (tCO₂) to the atmosphere. The wind farms managed by Borawind contribute to the development of the local communities where they are set through collective agreements. Also, Borawind cooperates with their sustainable development and environmental preservation. The Companies under management are members of the Fundación Patrimonio Natural de Castilla y León. Borawind is also a partner and a member of the AEE Board of Directors.



Bosch Rexroth S.L.

C/ Francisco Grandmontagne nº2, Parque Empresarial Zuatzu 20018 San Sebastián

T. +34 943 318 400

info@boschrexroth.es

www.boschrexroth.es



The drive system determines efficiency and reliability of a wind turbine. Bosch Rexroth offers a wide range of drive solutions – applicable to all types of wind turbines. For rotor blade adjustment, Bosch Rexroth provides complete electromechanical or hydraulic pitch drives. As the core component of a wind turbine drive train, REDULUS GPV gearboxes step up the slow speed of the rotor shaft into the high speed of the generator shaft.

As a world leader in industrial hydraulics, Bosch Rexroth offers a multitude of hydraulic solutions for wind turbines: Our standard program range includes modular power units and controls for main drive train and yaw drive braking systems. Reliable wind turbine operation requires condition monitoring systems. ACos the holistic condition monitoring system by Bosch Rexroth combines drive train and rotor blade monitoring in one system including drive train load, tower and gearbox oil condition monitoring completing the Rexroth product range for wind turbines.

Bosch Rexroth also provides its services to ensure the best performance: field service, repair and spare parts.



BP Oil España S.A.U.

IT'S MORE THAN JUST OIL
IT'S LIQUID ENGINEERING



Avd. de Barajas 30, Parque Empresarial Omega – Edificio D 28108 Alcobendas (Madrid)

T. +34 902 107 003

luis.blazquez@bp.com / pablo.garcia@bp.com

www.bp.com



Castrol Industrial, part of BP's Refining & Marketing division, is a leading global player in its own right, supplying the wind energy industry with a unique and diverse range of essential products and technical support services

Castrol Industrial products for the WIND MARKET HAVE THE TECHNOLOGY INSIDE.

We understand that advanced wind energy technology is placing far higher demands on turbine lubrication. That's why, at Castrol, we have focused on all lubrication areas of your wind turbine, using proven application expertise and highly advanced products to deliver economical and reliable solutions.



BTD Proyectos 12 S.A.

C/ Arturo Soria 99 28043 Madrid

T. +34 914 318 244

btd@btd.es

www.btd.es

btdproyectos
eduinter

BTD PROYECTOS 12, called before EDUINTER, design and execute Integral Projects for infrastructural development and also supply services to our institutional clients, mainly in the public sector, working to achieve their educational, productive and territorial development. Since 1997 we have gained wide experience in executing more than 50 projects in at least 20 countries in America, Asia and Africa.

We provide turnkey projects to our clients with services for all their needs: project design, management, infrastructure construction, equipment choice, logistics, installation and training. We work as an EPC Company (Engineering, Procurement and Construction Company).

We study the needs of energy and development to contribute suitable solutions, with the objective of a sustainable development and energy consumption optimization.

We execute energy generation projects, either by means of renewable energies, (wind farms, rural electrification using solar energy, etc.) or by means of traditional generation energies.

It is certified in executing development projects in Energy, education, technology & production, infrastructures and the environment in accordance with the ISO 9001:2008 standards.

WIND FARM ASSEMBLY ACTIVITY LINES

- Micro-sitting (Wind and Site)
- Projects
- Civil Works
- Electromechanical Work
- Transport
- Assembly
- Communications
- Commissioning
- Setting Up
- Operation and Maintenance
- Technical Training and Assistance
- Finance

Our Projects

URUGUAY - Supply, Installation and Implementation of an Industrial Power Wind Farm at 10 MW - 50 Hz (Turnkey basis)

COSTA RICA - Security spare parts for Tejona Wind Farm

URUGUAY - Supply, Installation and Implementation of Caracoles II Wind Farm at 10 MW - 50 Hz (Turnkey basis)

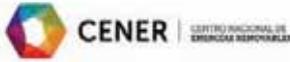
MOZAMBIQUE - Supply, Installation, Tests and Commissioning of photovoltaic systems for the electrification of Administrations Post in the Provinces of Nampula, Cabo Delgado and Niassa

DOMINICAN REPUBLIC - Provision of solar panels for schools included in the program PIM-APRENDE

KENIA - Design, supply, installation, test and commissioning of photovoltaic systems to 380 schools, health centers and dispensaries in the ASAL districts.



Fundación CENER-CIEMAT



Ciudad de la innovación, 7 31621 Sarriguren (Navarra)

T. +34 948 252 800

jsanmiguel@cener.com

www.cener.com



CENER focuses on applied research in Wind Energy, but also provides technical consultancy to all stakeholders in this sector, such as: Developers, manufacturers, financial entities, operators, public administrations and associations, both nationally and abroad.

There are three differentiated activity areas: Evaluation and Forecasting of Wind Resources, Analysis and Design, and Simulation and Testing of Wind Turbine Systems or Components.

The EVALUATION AND FORECASTING SERVICE offers technical assistance to develop international projects characterising wind resources from country to wind farm scales. High-resolution wind maps and generation of virtual stations are also available for areas without measurements. Wind anomaly and power density maps allow performance comparisons within a specific period and anywhere in the world.

Simulation of the wind field and turbulence with and calculation of wake effects allow for detailed simulation of the wind behaviour in scenarios that vary from complex terrain to wakes in offshore farm clusters. Bespoke training courses providing our knowledge and expertise to fulfill customer requirements.

The main objective of the ANALYSIS AND DESIGN SERVICE is focused on advanced design techniques for the development of wind turbine components. Proprietary analytical applications and advanced simulation tools are combined in order to obtain optimised designs. These activities are carried out in 4 main areas of expertise:

- Aerodynamics and Aeroelasticity.
- Structural design of components.
- Control algorithms and implementable controllers.
- Characterisation of compound materials and manufacturing processes.

Our Wind Turbine Test Laboratory (LEA) is an infrastructure engaged in performing tests and trials on wind turbines, ranging from tests on components to tests on complete wind turbines, according to international standards. All its facilities are open to international clients.

Fundación CIRCE

C / Mariano Esquillor Gómez nº15 50018 Zaragoza

T. +34 976 761 863

circe@fcirce.es

www.fcirce.es



CIRCE analyses the global behaviour of wind farms by carrying out studies on resources, operation, losses, power curve and supply quality among others.

Since 1998, researchers have performed over 600 wind resource assessments and verifications following IEC regulations for projects worldwide. Other tasks performed include feasibility analyses and auditing in development companies, repowering studies for wind farms with dated technology, studies on wind-solar interaction, or energy measuring and assessment. Thus, CIRCE is acknowledged as a standardising centre for wind power and micro-siting studies by the Aragon Regional Government.

CIRCE plays an important role in the preventive maintenance of wind farms; every month CIRCE studies the production of 200 national and international wind farms (equivalent to 5,500 MW and over 4,000 wind turbines). CIRCE's vast experience in the development of models and simulation of different technologies for wind turbines and farms, and of any electric/electronic systems, has made it directly responsible for the modelling (control and power system) of various series of wind turbines for international manufacturers.

In addition, it studies the network connection conditions for different renewable energy systems by means of verification in accordance with the international Grid Code requirements. CIRCE has undertaken over 1,000 dip tests on wind turbines all over the world since the creation of their mobile laboratories MEGHA and QuEST Lab, accredited to do so by ENAC (Spanish Accreditation Body). CIRCE also runs the LME laboratory, one of the few laboratories accredited by MEASNET to perform power curve tests on wind turbines.

Besides wind energy, CIRCE develops R&D&i and training activities on a wide range of fields in the energy sector: energy efficiency, sustainable mobility, solar power, natural resources and biomass, smart grids, energy storing, electric grids and substations, thermal and CCS systems or energy socioeconomics.





CONAPRO IS a Grupo Inerzia, company SPECIALISTS in solutions for prevention of occupational hazards.

Lines of activity

- Specialized protection equipments to do an insurance job.
- Training for your safety
- Inspection equipment protection

Products / Services

CONAPRO offers training qualified for working at height. It's a fruitful and basic training for all workers who are forced to perform tasks in height, as it can be working on roofs, facades, wind turbines or outdoors at your workplace.

- Approved for training in the use of protective equipment by leading manufacturers.
- Training centre equipped with the more innovators elements to work at height.
- Certified to teach the GWO training worldwide (in the near future).
- Work wear.
- Occupational Safety Management Solutions.

And inspections...

Inspection in accordance with the regulations

- Facilities:
 - Lifelines
 - Emergency descender devices
 - Helpers to the ascension
- Individual protection equipment:
 - Harness
 - Anchor ropes, shrink, absorvedores
 - Fall arrest

Inspection in accordance with the regulations ; Certified by the manufacturers for the technical inspection of the equipment in accordance with the legislation in force protection.

Some numbers

Trainings:

Over 1.000 Trainings Host and recycling in the wind sector

Over 5.000 Trainings Evacuation and Rescue Wind Turbine, Handling Elevators, Confined Spaces...

Lifelines:

Over 5.000 life lines installed.

Over 11.000 inspections.

Fall arrest devices:

Over 5.000 inspections.

PPE'S:

Over 15.000 Personal Protective Equipment inspections.

Over 5.000 Evacuation and Rescue Equipment inspections.

Danobatgroup S. Coop

Arriaga Kalea 2E 20870 Elgoibar (Guipúzcoa)

T. +34 943 748 300

danobatgroup@danobatgroup.com

www.danobatgroup.com



DANOBATGROUP –European leader in machine-tool manufacture– innovates and delivers turnkey solutions and stand-alone application oriented machine for high tech industries and customers demanding highest technological requirements.

DANOBATGROUP is the machine-tool division of MONDRAGON Corporation, one of the most important European industrial holdings.

Business lines

The DANOBATGROUP offer is commercialized under two product brands, i.e. DANOBAT, a reference in specialized solutions for: grinding, turning, sawing and drilling, punching, bending, laser cutting, automated production systems for composite structural components and turnkey solutions for the railway industry; and SORALUCE, leader in milling machines, milling-boring machines, milling centres and vertical turning centres.

DANOBATGROUP owns sales & service facilities in 11 countries. A professional representation network and factories abroad complete an efficient presence worldwide.

Products

DANOBATGROUP offers a wealth of accumulated knowledge of different machining technologies to the market. Complete manufacturing processes or specific machining operations can be provided. DANOBATGROUP offers the wind energy sector customised solutions for the manufacturing of gearboxes, rings, towers hubs, nacelles and other components of an aerogenerator. The combination of different machining technologies such as sawing, turning, boring & milling and grinding allows to DANOBATGROUP to provide complete turnkey projects to our customers.



Danske Commodities A/S



Vaerkmestergade 3 8000 Aarhus C (Dinamarca)

T. + 45 88 338 181

info@danskecommodities.com

www.danskecommodities.com



Danske Commodities is an independent, international energy trading and value-adding services provider operating in over 30 countries. We are one of the most active participants in European cross-border and intraday trading. In Spain, we act as market representative, participating in the Spanish energy exchange as well as in France-Spain cross-border capacity, thereby maximizing the economic return for renewable producers.

Business Lines

We trade:

- Electrical power, gas, and climate certificates
- On 26 Exchanges, OTC and bilaterally
- Physical and financial product
- Along the entire curve, from intraday to long term

Products and Services

With a strong track record as service provider for renewables in Northern Europe, we provide a wide range of solutions allowing each of our customers to utilise services that best fit their technical and economic profile.

Our main products and services include:

- Balancing: Our main strengths are our expertise and renewables portfolio allowing customers to best compensate their deviations, thereby delivering savings to their imbalance costs
- Enhancing economic return via flexible and customized Power Purchase Agreements
- Price hedging: We offer a wide range of tailor-made price hedging solutions and weather derivatives

Furthermore, we take care of all administrative procedures (move-in, metering, settlements), legal and technical advice, forecast, scheduling and invoicing management, Control Centre Service, 24/7 call centre and real time web access, etc.



DiagnóstiQA Consultoría Técnica S.L.

Edificio América II – C/ Proción 7, 28023 Madrid

T. +34 917 081 650

info@diagnostiqa.com

www.diagnostiqa.com



DiagnóstiQA was born in June 2007, aiming to provide technical services of Consultancy, Technical Assistance, Supervision, Inspection and Diagnostic to the energy and industry sector, in the fields of Safety, Reliability and Efficiency of their facilities, equipments and processes.

The company's staff is made up of specialists with extensive experience and knowledge in trouble management relating materials, processes, equipment and industrial facilities.

DiagnóstiQA's vocation is to focus on those areas which require more specialized attention, incorporating the best professionals, to maximise the contribution to our clients' objectives.

DiagnóstiQA is not owned nor has any financial, commercial or operating interest in industrial companies, manufacturers, construction or engineering firms, that could put in question the independence and impartiality needed when issuing to apply technical judgments, inherent in DiagnóstiQA's activities.

Services

We collaborate with our clients throughout the whole life of an Industry or Energy plant, since the definition of the project, until assembly, start up and operation stages. To achieve the successful completion of industrial projects, we are focused in

- Time
- Cost
- Scope

in the following areas:

- Project Management
- Project quality Management
- Supervision during manufacturing & mounting
- Supervision during manufacturing & outages
- Technical assistance during purchasing & procurement
- Cathodic protection
- Energy efficiency
- Predictive maintenance
- Technical consultancy
- Training

References

DiagnóstiQA has already contributed to the progress of several of the most important companies in the Spanish industrial field, providing the experience and knowledge of their technicians. Among others, DiagnóstiQA has worked for:

Acciona Energía, Enel Green Power, EUFER, ECYR, Iberdrola Renovables, Gamesa, Vestas, Gas Natural Fenosa, Enagás, Endesa, Iberdrola, Red Eléctrica de España, Reganosa, Sener, Siemens, Socoin, Repsol, Nuclenor, Abener.



Diseño y Proyectos Reunidos S.A.



Fuencarral, 45 planta 5 Madrid 28004

T. +34 915 310 606

lbuenov@diseprosa.com; jjimenezg@diseprosa.com

www.diseprosa.com



Technical Consultancy & Due Diligence Services for Renewable Energy Projects. DISEÑOS Y PROYECTOS REUNIDOS, S.A. (DISEPROSA), is a private capital stock Spanish Engineering and Consulting Company. Established in 1986 in Madrid.

DISEPROSA's activities encompass all phases of a Project Cycle, from feasibility studies to project management and operational support.

Focussing on Technical Due Diligence DISEPROSA provide the following services:

Identification of technical risks and proposals for potential mitigating factors.

- Analysis and evaluation of technical, economic, contractual and administrative factors and the natural resource forecast and expectable energy production.
- The conclusions of a technical Due Diligence will influence the terms of financing and transaction (price, required coverage ratio leverage, loan duration, existence of corporate guarantees, ...).
- Involvement in the negotiation of the technical terms of construction EPC contracts and operation and maintenance O&M contracts.
- The technical Due Diligence process is based on the documentation analysis provided by the participating parties and on the information compiled by the technical advisor from his visit to the project site, the actual market standards and its experience working on similar projects.
- It is recommended, that the technical advisor participates in the planning as well as in the construction and operation processes of the project (time improvement).

(DTBird®) Liquen Consultoría Ambiental S.L.

C/ Mauricio Legender, 16 28046 Madrid

T. +34 913 449 086

administracion@liquen.es

www.dtbird.com



DTBird® is a self-working system developed to monitor and to reduce bird and bat mortality at wind farms. DTBird® detects flying birds in real time and takes programmed actions, as warning and dissuasion of birds flying in collision risk with wind turbines or wind turbine automatic stop. Independently, DTBird® Collision control registers avoidance behaviors or potential collisions. DTBird® detection capabilities are scientifically tested by NINA and overcome widely radar capabilities, more than 5 times better in 150 m radius to the wind turbine and 2.5 times better in 300 m radius. DTBird® data and bird flight videos are objective, transparent, easy to understand for everybody (without special skills required), and non-erasable, available Online for ornithologist and Environmental Agencies in DTBird Data Analysis Platform. DTBird® offers a complete solution with bat mortality mitigation measures. DTBird® is already operating in France, Greece, Italy, Norway, Poland and Spain, for on and offshore projects, and it is available worldwide with 2 years warranty. www.dtbird.com.



E.ON Renovables S.L.U.



Plaza Pablo Ruiz Picasso, s/n - Torre Picasso, planta 42 Madrid

T. +34 914 320 606

eonespana.gabinetedeprensa@eon.com

www.eon-espana.com



E.ON Renovables is part of E.ON Climate & Renewables, which is the market unit for

renewable energy of the E.ON Group, one of the largest privately owned energy groups in the world, with annual sales of 82,000 million Euros and 88,200 employees.

E.ON has a clear objective of reducing CO₂ emissions and support and develop cleaner sources, as renewable energies.

Business lines

E.ON Climate & Renewables has 3,568 MW in total. From those, 3,017 MW are onshore wind and 467 MW are offshore wind.

In Iberia, with a staff of about 80 professionals, E.ON Renovables has around 400 MW in operation of renewable energy, 360 MW wind capacity, and a large pipeline under development. E.ON is also present in the main tenders that have been launched in the

Spanish communities as a major player, providing financial strength and technical ability which makes E.ON a key competitor in the area of renewables.

Projects

Throughout 2010, E.ON España has consolidated its position as the nation's number four operator, gaining significance as one of the benchmark players in a sector in the throws of transformation not only in terms of energy mix but also market liberalization.

E.ON España invests in the three cornerstones of its innovation strategy:

- Conventional generation: E.ON España invests not only in combined cycle plants but also in environmental fitting and desulphurization works, extending the useful lives of its conventional fossil fuel power plants.
- Renewable energy: E.ON España aims to be one of the key players in the Iberian renewables market, and lately has achieved the following:
 - E.ON Renovables inaugurated in 2010 the largest wind farm in the south of Portugal, the Sao Joao de Barao windfarm.
 - In July 2010 the company was awarded 210 MW to develop in the Cantabrian Wind Power Tender.
 - During 2011, around 90 MW of wind will be put in operation, increasing E.ON's capacity to almost 500 MW operational.
 - Tapping the extraordinary solar conditions of southern Spain, E.ON is developing two 50 MW solar thermal plants in Écija, one of them will be inaugurated in 2011.

The company has set the foundations for tackling the group's new strategic priority, namely creating cleaner and better energy.

EDP Renováveis S.A.

C/ Serrano Galvache 56, Centro Empresarial Parque Norte, Ed. Olmo, 7th 28033 Madrid

T. +34 902 830 070

comunicacion.edpr@edpr.com

www.edpr.com



EDP Renewables (EDP Renováveis, Euronext: EDPR), is a leading renewable energy company that develops, manages and operates power plants that generate electricity using renewable energy sources, mainly wind and solar.

EDPR operates in the most attractive markets and is continuously expanding its business to new areas of the globe. Its expansion plan aims to increase its power capacity while considering the best investment opportunities. With headquarters in Madrid, EDPR was established in December 2007 and publicly listed in June 2008. It manages the operating assets through three platforms: EDPR EU, that manages the European; EDPR BR that manages the Brazilian assets; and EDPR NA which manages the assets from US and the projects in development in Canada.

EDPR is currently developing its activities in eleven countries: US, Spain, Portugal, France, Belgium, Italy, Poland, Romania, Brazil, Canada and UK.





Ctra. Bilbao-Galdakao 11-13 48004 Bilbao (Vizcaya)

T. +34 944 116 500

eldu@eldu.com

www.eldu.com



Eldu is able to perform all operations, both assembly and maintenance throughout the entire process.

Eldu has extensive experience in the renewable energy sector, where work for several clients in hydroelectric, solar, wind, biomass, cogeneration and other facilities.

Our services include:

- Preventive and predictive maintenance:

Regular reviews.

Regular Analysis:

- Tests
- Thermography
- Others

- Corrective maintenance:

Adaptation of facilities to the regulations or new operating conditions.

- Technical Service and breakdowns 24 hours 365 days a year.

- Conductive-operative Maintenance management :

With a presence in installation.

Through remote management.

Mixed (presence, remote management).

- Complementary services:

Repair, equipment rental.

Thermography to facilities and equipment.

Calibration of equipment.

Remote management of facilities and processes.

Electria Wind S.L.

Plaza De La Ciudad De Viena Nº6, 2º 28040 Madrid

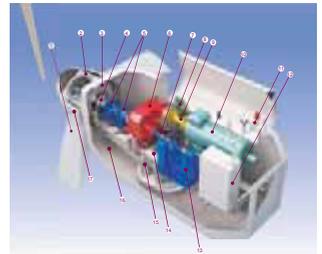
T. +34 915 670 789

info@electriawind.com

www.electriawind.com



Electria wind has developed two medium-power wind turbines of 100 and 200 kW, the GARBÍ 100/28 and the Garbí 200/28 model, in order to meet the needs of the wind power market. The machines incorporate state-of-the-art components and have the capacity to be connected directly to the distribution grids. These special features make them unique in the wind market. It is based on a multipole permanent synchronous generator, a variable blade pitch system, a yaw system and a full power converter. The power train is connected to a low ratio gearbox.



Elimco Soluciones Integrales S.A.



P. Tec. Aeros. Aerópolis C/ Hispano Aviación 7-9 41309 La Rinconada (Sevilla)

T. +34 954 367 870

jalonso@elimco.com

www.elimco.com



ELIMCO creates high added-valued technological solutions adapted to the needs and expectations of its customers through innovative projects, with the basic principle of excellence in management.

Its continued growth and commitment to diversification, enables ELIMCO to cover large projects, adapting to new market demands, anticipating customer needs and investing in technological innovation.

ELIMCO operates in engineering, information technology, maintenance and airport and industrial infrastructure development. The sectors of activity are: Aeronautics, Energy, Airports, Railway, Industrial, Security and Defence, Naval, Public Sector, being an international landmark.

After years of experience in the market, ELIMCO has consolidated its traditional business lines reaching new markets and investing in new lines of action that contribute to build wealth and employment.



Elinsa (Electrotécnica Industrial y Naval S.L.)

Polígono Industrial de A Grela s/n 15008 A Coruña

T. +34 981 285 699

info@elinsa.org

www.elinsa.org



ELINSA is a company dedicated to the carrying out and maintenance of electrical installations and to the design and manufacturing of electrical switchboards and power electronics.

The company was founded in 1968, with the firm decision of standing out in the sector for its quality, seriousness and efficiency. This is still so nowadays, in areas as demanding as energy, naval or industrial.

Its headquarters is situated in A Coruña, where the electrical switchboard factory is also located. It has branches in Vigo, Lugo, Algeciras, Bérgamo (Italy) and Macapá (Brasil), with a total area of about 10,000 m² in offices, factories and warehouses.

The factory has a capacity for carrying out all the construction process of an electrical board: The electrical and mechanical design, the making of the metallic casing, the incorporation of the switchgear and wiring and, finally, the performance of the final tests for factory acceptance.

ELINSA carries out installations and maintenance works and supplies electrical boards and power electronics at national and international level.

ELINSA has a Quality and Environmental Management System in accordance with the requirements of the International Standards UNE-EN-ISO 9001:2008 and UNE EN-ISO 14001:2004 and a R&D&I Management System adapted to the UNE 166002:2006 standard specifications.

Products and Services

- Electrical installations: design and installation of low and high tension power until 132 kV (excluding transport lines).
- Electrical and electro-mechanical maintenance.
- Design, production and installation of electrical switchboards and power electronics.

References

- Manufacture of switchboards: distribution cabinets, power cabinets, converters, rectifiers and inverters for renewable energies.
- Electrical installations and maintenance in different wind parks for the main Companies in the wind area: E-ON, Acciona Energy, Gamesa, Iberdrola, General Electric, EDP, etc.



Enel Green Power España



Ribera del Loira, 60 28042 Madrid

T. +34 912 131 000

comunicacion.egpe@enel.com

www.enelgreenpower.com



Enel Green Power operates on the Iberian Peninsula with total installed capacity of 1,908 MW*

This is the outcome of integration of the operations of Enel and Endesa in the renewable sector. Enel Green Power boasts significant involvement in the wind power sector and manages 97 plants for a total installed capacity of 1,778 MW. The company also operates hydro plants with 43 MW produced by 9 plants, with cogeneration accounting for 51 MW and 17 plants.

Three biomass plants that produce 23 MW and 6 photovoltaic plants with a total output of 13 MW complete the balanced mix of generation on the Iberian Peninsula.

Enel Green Power is a sector leader in terms of installed capacity and production in Spain and Portugal: in Portugal in particular, its total installed capacity is 163 MW from wind power and cogeneration.

Enel Green Power is the Enel Group company fully dedicated to the development and management of renewable energy sources at the international level, with operations in Europe and the Americas. The company generated approximately 29,5 billion kWh in 2013 from water, sun, wind and the Earth's heat - enough to meet the energy needs of approx. 11 million households and avoid the emission of over 20 million tonnes of CO₂ into the atmosphere. Enel Green Power is a world leader in the sector thanks to its well-balanced generation mix, providing generation volumes well over the sector average. The company has an installed capacity of approximately 8,900 MW from a mix of sources including wind, solar, hydroelectric, geothermal, and biomass. Currently, the company has approximately 750 plants operating in 16 countries in Europe and the Americas**

*Updated at 30.09.2013

** Preliminary consolidated results 2013



R. de Auguste y Louis Lumière, 23 Edif. 21 A 46980 Paterna (Valencia)

T. +34 961 824 556

enercon.spain@enercon.de

www.enercon.de



In 1984, the foundation of ENERCON GmbH turned over a new leaf of the wind energy success story. Thanks to its extensive research and development activities, the company has been able from its very foundation to present a wealth of technological innovation that has increased the efficiency of power generation from wind energy. Today, ENERCON is one of the world's leading manufacturers of wind energy converters.



In the early years ENERCON systems still featured gearboxes. However, a systematic changeover was made in 1992 with the introduction of the first gearless turbine, the E-40 / 500 kW. This innovative drive system with few rotating components ensures nearly friction-free energy flow, providing outstanding performance and reliability. Compared to geared turbines mechanical stress is reduced, operating and maintenance costs are lower and service life is extended. Today, this tried and tested gearless concept is the distinguishing feature of all ENERCON wind energy converters.

Internationally, ENERCON has a high profile in key markets. ENERCON ensures optimal availability of all WEC components through its exceptional vertical integration.

At ENERCON, high product quality is linked to financial stability. This is underlined by the A+ rating result.

ENERCON Overview

Production area: 820,500 m² (as of March 2013).

Production facilities Germany: Aurich (Head office), Emden, Haren, Magdeburg.

Production facilities International: Sweden, Brazil, Turkey, Portugal, Canada, France, Austria.

Serially produced WEC types: E-44 / 900 kW, E-48 / 800 kW, E-53 / 800 kW, E-70 / 2,300 kW, E-82 / 2,000 kW, E-82 / 2,300 kW, E-82 / 3,000 kW, E92 / 2.350 kW, E-101 / 3,050 kW, E-115 / 2,500 kW, E-115 / 3,000 kW, E-126 / 7,580 kW.

Market share in Germany: 56.8% (Source: Deutsche WindGuard 2013).

Global market share: 7.9% (Source: BTM 2012).

Sales offices: domestic 8, international 25.

Worldwide maintenance service: more than 300 service stations.

Logistics: mobile cranes of up to 1,600 t, hundreds of service vehicles and numerous special transporters for towers and blades.

Installed capacity / WECs worldwide: approx. 33 GW / more than 22.100 WECs (as of December 2013).



Enerfín Sociedad de Energía S.L.



Paseo de la Castellana 141, Edificio Cuzco IV 28046 Madrid

T. +34 914 170 980

enerfin@elecnor.com

www.enerfin.es



Enerfin promotes, develops, constructs and operates investment projects in wind energy, both in Spain and abroad. Enerfin is involved in 1,003 MW of operating wind power located in Spain and Brazil, and produces 2,600 GWh/year, which is able to provide power to approximately 830,000 homes. Highlights include the 564 MW wind farm located in the state of Rio Grande do Sul (Brazil), which currently boasts 300 MW in operation and a further 75.4 MW under construction, as well as the L'Érable wind farm, 100 MW, in operation. Boasting a long-term outlook Enerfin designs unique projects which satisfy the needs and specifications of the places in which they are implemented. The company is especially committed to respecting the environment and integrating the area's historical, cultural and artistic values to its farms.



Enérgya VM Gestión de energía S.L.U.

C/ Ribera del Loira 6, 5ª pl. 28042 Madrid

T. +34 917 223 900

prensa@energyavm.es

www.energyavm.es



As the first independent producer of hydroelectric energy and one the largest industrial consumers of energy in Spain, we aim to offer our expertise in energy optimization to other companies.

We offer energy management for renewable generators and cogeneration. With a well-established energy management structure, we provide these producers with all type of services for the economic management of their electricity production.

We supply energy: both electricity and gas; and, since 2007, 100% of our electricity has been renewable at source according to the National Energy Commission, contributing to reaching the environmental objectives set by the Government and the EU. We also provide a wide range of energy efficiency services to meet all our clients' energy requirements.

Futhermore, we carry out energy trading and activities in wholesale markets. We are a very active agent in the wholesale trading of electricity and gas, negotiating all types of futures and hedging operations convenient for our clients. We also operate in the interconnection system throughout Europe.



Eptisa Servicios de Ingeniería S.L.



Emilio Muñoz 35-37 28050 Madrid

T. +34 915 949 500

lfrauca@eptisa.com

www.eptisa.com



EPTISA is an engineering and consultancy company working in 40 countries: Our areas of expertise include Water and Environment, Energy efficiency and RREE, Quality Control, IT Applications for Urban Services and Infrastructures, Transport infrastructures...Our extensive international networking allows us also to participate in international collaborative projects. EPTISA has also specialised in the following subsectors:

- Institutional strengthening and capacity building of relevant energy authorities
- Effective implementation of the energy strategies, policies, action plans and international standards
- Experience in energy audits and feasibility studies of large scale projects, as well as development of investment plans and promotion of investments on energy related resources
- Liberalization, reform and development of energy market and restructuring of energy sector to create further market opening
- Review of technical codes, market opening and tariff reforms, licensing compliance and monitoring
- Production of several studies including feasibility studies, Environmental Impact Assessments and Strategic Environmental Assessments
- Implementation of energy efficiency and renewable energy projects
- Networking and exchange of European and international best practices

Most recently we have increased our activity on the R&D applied to the optimisation of RREE Plants (Solar and Wind) as well as on the development of Smart IT Applications for Urban Services.



Paseo Marqués De Monistrol 7 28011 Madrid

T. +34 915 014 755

ereda_info@ereda.com

www.ereda.com



EREDA is an independent company created 10 years ago to provide engineering and consulting services, both national and international, particularly in wind and solar power. EREDA staff has a total of over 120 years of experience in renewable energy. EREDA has offices in Spain, Brazil and from them provides services in Europe, Africa and America.



In the area of SCADA data analysis, EREDA provides support for analyzing large volumes of data. For the development of these tasks has EREDA specific software of own development, ERE-DATA.

EREDA provides technical services to customers who require support in the conception, design, licensing, construction, evaluation, operation, performance improvement or operation of a facility.

The activities of EREDA are:

- Resource assessment
- Mesooscale and regional maps
- Offshore resource assessment
- Project engineering
- Construction
- Operation and maintenance





Avenida de Europa, 18 Parque Empresarial La Moraleja 28108 Madrid

T. +34 911 420 300

info@erom.es

www.erom.es



EROM is an international company specialized in operation and maintenance of renewable energy assets.

Founded in 2011 by Acciona (a world leader company in the field of clean energy sources with more than 15 years' experience) with the aim of gathering all the maintenance know-how within the company and their main maintenance providers.

EROM's main headquarter is located in Madrid (Spain) and is currently developing throughout Europe and America, where some operations have already been executed.

Facts and Figures

- Maintenance volume above 3.200 MW of wind assets, 62.699 kWp of PV and more than 80 substations.
- A highly competitive team with more than 500 employees
- Large presence in the Spanish market covering almost all the territory, international services offered.
- EROM is committed to the safety in the workplace, the quality of the services and the social and environmental corporate responsibility
- In 2012 EROM achieved the ENAC (Spanish official certification entity) certification in integrated system (ISO 9001, OHSAS 18001, ISO 14001)

EROM offers

- Corrective and Preventive Maintenance
- Predictive Maintenance (vibration and oil analysis, thermographies)
- Operation
- Blades and End-warranty Inspections
- Spare parts and auxiliary services (cranes, etc)
- Components repair
- Lifts and life-lines inspection
- Assembly and disassembly of assets
- Quality audits
- Improvement and design

In EROM we integrate as an essential variable of our activity the environment respect and its protection, as well as the security in the performance of our activities.

Ctra. De Cedeira Km 1,4 15570 Narón (A Coruña)

T. +34 981 397 090

evolventia@evolventia.es

www.evolventia.es



EVOLVENTIA was set up as an integral part of a business project aimed at the manufacture and retrofit to gearboxes; the company was established as a specified and specialized business unit for the manufacture of gearboxes, integrating all of the stages of its value chain.

EVOLVENTIA's corporate structure is the cornerstone of its knowledge and experience, which together with its technical and human resources, allows it to offer a differentiated service to the market. In addition to the wind energy sector which this business project is principally aimed at, EVOLVENTIA has the necessary capacity to offer its services to other sectors.

Convinced of the importance of innovation and the need to optimize the efficiency and efficacy of management, applying a decisive approach towards the customer and processes, EVOLVENTIA has developed and implemented a Management System integrating the three core aspects of our activity: quality, environment and the prevention of risk in the work place.

This system has been developed in terms of the UNE-EN ISO 9001, UNE-EN ISO 14001 and OHSAS18001 standards, certified by Det Norske Veritas, an accredited certifying body.

Technical Resources

Horizontal cylindrical grinding inside and outside: Ø ext. max. 455 mm / 2,000 mm long. max. between points / air weight 150 Kg and 1,000 kg weight between points

Inside vertical cylindrical grinding and shell: 1200 mm od max. / Max. 700 mm / weight max. 2,500 kg

Grinding tooth profile: Ext. max 920 mm long. toothed max. 600/module max. 20/max weight.1800Kg

Coordinate measuring up to 1600 x 2,400 x 1,400 mm with a maximum error Permitted nominal $3.5 + L / 250 \text{ um}$ (DIN-EN ISO 10360), with a standard actual calibration ± 1.0 .

Coordinate measuring ensuring gears level 5 DIN 3962 quality.

Barkhausen noise analysis for detecting burned in ground surfaces.

Contrast to attack by Nital.

Resource Planning (ERP) to support all processes and functions.

Trained human resources and specialized.



Fersa Energías Renovables S.A.



Ronda General Mitre 42 bajos 08017 Barcelona

T. +34 932 405 306

fersa@fersa.es

www.fersa.es



Fersa Energías Renovables was incorporated in 2000 as the first independent company listed on the Spanish stock exchange exclusively dedicated to developing renewable energy, mainly wind energy. The company's object is generating electricity using 100% renewable sources. FERSA began operating at an international level in 2007, when it launched the international diversification of its business.

The growth plan of Fersa Energías Renovables for the 2013-2016 period includes construction of three wind farms across Asia, America and Europe. The Bhakrani farm in India, with 20 MW, is planned to begin operation in the first quarter of 2014. Toabré in Panama, for which the building work will begin in 2014 and, in the first stage, it will have 102 MW and, in the second stage, this will be increased to 330 MW (in which FERSA has a holding of 30%). In the case of the Postolin farm in Poland, with 34 MW, this will be built in 2014. These three farms will imply an increase of 85 MW attributable to FERSA.

FERSA currently has installed wind capacity of 232.9 MW, developed in three countries: Spain, France and India.

In addition, the company has an already built wind farm of 20 MW in India, and 799.2 MW in farms in development in several countries throughout Europe, America and Asia.

However, FERSA will only exercise its option for the MW that can be built in the short-term for the farms in development in Spain, which imply 558.2 MW fully depreciated, due to the uncertain situation of the current regulatory framework, providing the conditions of such framework are in line with its business model.

The distribution of the portfolio of Fersa, to December, 2013, by geographic area is as follows:

MW	Exploitation	Construction	Prioritised	Promotion	Complete Portfolio	%
Spain	151,30	0,00	0,00	558,20	697,50	67%
France	0,00	0,00	0,00	0,00	12,00	1%
India	81,60	20,00	0,00	0,00	101,60	10%
Poland	0,00	0,00	34,00	0,00	34,00	3%
Panamá	0,00	0,00	30,60	68,40	99,00	9%
Others	0,00	0,00	0,00	108,00	108,00	10%
TOTAL	232,90	20,00	64,60	734,60	1.052,10	100%

Fuchs Lubricantes S.A.U.

c/ Ferralla nº 27. Pol. Ind. San Vicente. 08755 Castellbisbal (Barcelona)

T.+34 937 730 267

fuchs.solutions@fuchs-oil.com

www.fuchs.es



The FUCHS WINDPOWER DIVISION is one of the world's leading manufacturers of special lubricants and release agents. The range of products includes concrete release agents, adhesive lubricants, lubricating fluids and greases, pastes, lubricating varnishes, aerosols, glass processing media and metal forming lubricants – a total of over 1,000 special products that are precisely tailored to their respective applications.

The result of this focused and innovative approach is a product range that leaves nothing to be desired and no area of application uncovered.

The FUCHS WINDPOWER DIVISION has the expertise to solve all lubrication challenges posed by the wind turbine manufacturers, the makers of the drive components as well as the wind farm operators. A wide and high-performance range of special lubricants are thus available to customers in this sector.

Product Portfolio – Special Lubricants

The FUCHS WINDPOWER DIVISION offers a broad product portfolio of special lubricants for all wind power applications. Many approvals of turbine, gearbox and bearing manufacturers as well as suppliers of filtering systems prove the high performance and quality of our products.

Service And Added Values

- Minimization of lubricant references
- Optimization of lubrication routes
- Calculation of lubricant quantities for first fill and re-lubrication
- Oil and Greases Analysis
- Lifetime cycle studies
- Compatibility & Miscibility tests
- Field Assistance for flushing and inspections (Trained Sales Engineers)



Galp Energia España



distribuidor autorizado
en España de



C/ Anabel Segura 16. Edificio Vega Norte I 28108 Alcobendas (Madrid)

T. +34 901 101 108

Pedidos-lubricantes@galpenergia.com

www.galpenergia.es / www.aceitealtorendimiento.es



Galp Energia is an integrated energy operator with a diversified presence in 15 countries all around the world. Its activity is divided in three main business segments: Exploration & Production, Refining&Marketing and Gas& Power.

The Refining & Marketing business unit processes raw materials in two refineries at Porto and Sines. These refineries have a total refining capacity of 310 thousand barrels of crude oil a day, which means 20% of the Iberian Peninsula's refining capacity. In 2008, the acquisition of Agip's and ExxonMobil's operations in the Iberian market for oil products was completed. These transactions were part of Galp Energia's strategy for expanding its operations in the Iberian Peninsula, the Company's core market for distributing oil products. Galp Energia produces and distributes high level lubricants and it is the authorized distributor of Mobil brand lubricants in Spain.



Products

Mobil SHC synthetic lubricants and oils are specifically designed for use in wind farms and offer major advantages, such as longer useful life for machine components, increased intervals between oil changes and a potential reduction in machinery malfunctions and unscheduled shut downs. The manufacturer's recommendations for use are as follows:



Product	Description
Mobilgear SHC XMP 320	synthetic gear oil for the main gearbox, synthetic gear oils for yaw and pitch gear.
Mobilgear SHC XMP Series & Mobil SHC 600 Series	
Mobil SHC 524	synthetic oil for hydraulic systems, synthetic grease for both main shaft, bearing, pitch bearing and yaw bearing. synthetic grease for turbine bearings for generator.
Mobil SHC Grease 460 WT	
Mobilith SHC 100	

Technical Service

Galp Energia has a technical team that provides support and field assistance to its customers including a used oil analysis programme. The company also develops professional training in lubrication, products, flushing procedures, and also specific courses in efficient used oil analysis when requested.

Gamesa Corporación Tecnológica S.A.

Parque Tecnológico de Bizkaia, Edificio 222 48170 Zamudio (Vizcaya)

T. +34 902 734 949

gamesa@gamesacorp.com

www.gamesacorp.com



Gamesa



With 19 years' experience and 27,000 MW installed in 42 countries, Gamesa is a global technological leader in the wind industry. Its comprehensive response includes wind turbine manufacturing and installation, and also the wind turbine's operation and maintenance services, that manages for more than 19,100 MW.



The company has production centres in the main wind markets: Spain and China, as the global production and supply hubs, while maintaining its local production capacity in India, US, and Brazil.

Gamesa is also a world leader in the development, construction and sale of wind farms, having installed close to 6,000 MW and having a portfolio of 18,000 MW in Europe, America and Asia.

The annual equivalent of its 27,000 MW installed amounts to more than 6 million tons of petroleum (TEP) per year and prevents the emission into the atmosphere of about 40 million tonnes of CO₂ per year.

Gamesa's business strategy for the next three years -Business Plan 2013-2015- will address the immediate situation while laying the foundation to emerge stronger, in a position of leadership in the wind industry, through the following strategies and actions:

- maintaining profitability, while maintaining the flexibility needed to continue growing
- strengthening the balance sheet by reducing debt; supported by a new model of managing the wind farm development and sale business, which will enable the company to continue operating this business without consuming equity
- focusing on key growth markets and segments: operation and maintenance (O&M) services
- responding to demand and continuing to offer competitive technology solutions (Cost of Energy): launch of two new platforms - 2.5 MW and 5 MW (onshore and offshore).



Gas Natural Fenosa Renovables



Avenida de San Luis, 77 28033 Madrid

T. +34 902 199 199

bescalera@gasnatural.com

www.gasnaturalfenosa.com



Gas Natural Fenosa Renovables is an international company that develops and manages activities focused on the contribution to social welfare and sustainable development in the field of renewable energy. It is present in all major markets in the sector and owned 100% to the Gas Natural Group.

Gas Natural Fenosa Renovables innovation and research serves as a strategic area of its business and has always been a pioneer in new markets and production techniques. The result of this idea involved in the different technologies in the renewables sector, highlighting the wind sector is one of the main references.

Gas Natural's goal is to reach Fenosa Renovables a generation mix that will address future challenges with sufficient efficiency. The activity of the company up to 1000 MW in operation and about 1500 MW in development.



GE Wind Energy S.L.

Ctra. N-400, km. 57 45350 Noblejas (Toledo)

T. +34 915 870 461

susana.santamaria@ge.com

www.ge-energy.com/wind



GE Energy

For more than 100 years GE has been investing in growing its presence across Europe. Today we employ over 90,000 people in Europe and have a footprint that covers every corner of the continent. For more information, visit the company's website at <http://www.ge.com/europe/>



GE (NYSE: GE) works on things that matter. The best people and the best technologies taking on the toughest challenges. Finding solutions in energy, health and home, transportation and finance. Building, powering, moving and curing the world. Not just imagining. Doing. GE works.

For more information, visit the company's website at www.ge.com.



GES – Global Energy Services Siemsa S.A.



Ctra. Bilbao – Asua Pol. Fatima Edif. Enekurimendi 48950 Erandio (Vizcaya)

T. +34 944 712 131

ges@services-ges.com

www.services-ges.com



With more than 30 years of experience, an unmatched record of renewable projects around the world, a global presence and over 4,000 employees and presents in 20 countries with local staff and execution capacity, GES is proud to be a trusted partner for many of the world's leading utilities, wind turbine and solar manufacturers as well as investors and developers.

GES is the global market leader in construction and services for the wind and solar industry. We are also a leading services provider for the electricity and process industry in Spain and Portugal.

GES offers a full-scale service in the onshore wind sector, from BoP to Assembly to O&M. Our main clients include Acciona, Alstom, Areva, Clipper, Dewind, Gamesa, Nordex, Repower, Siemens, Suzlon, and Vestas.

GES carries out full BoP projects, including engineering, procurement, civil works, electrical installation and substations. Provides a complete solution for wind assembly, including transport and logistics, cranes and manpower. GES, also offers a broad range of O&M services to the wind sector across three main areas: wind turbines, blade repair and electrical infrastructure.

GES supplies many related services, including maintenance.



Gestamp Eólica S.L.

Ombu 3, 28045 Madrid

T. +34 916 361 994

info@gestampren.com

www.gestampwind.com



Gestamp
Wind

Gestamp Wind is the wind energy division of Gestamp Renewables, is focused on developing, constructing, and operating its own wind farms throughout the world, with the goal of becoming a significant player of the wind energy sector over the next few years.

We rely on a workforce of highly skilled professionals throughout different countries: Spain, Poland, Romania, Bulgaria, Turkey, Belgium, South Africa, U.S.A., Puerto Rico and Brazil,

Gestamp Wind is one of the referents in the wind energy business, vertically integrating promotion, construction and operation.

Gestamp Wind already owns 460MW in operation, and a portfolio of over 2.000MW in different markets where the activity is developed.

At Gestamp Wind, we strive to grow as a strong and responsible company. As an organization dedicated to fulfilling client goals and expectations, we are always at the forefront with cutting-edge technology and the highest quality standards, whilst staying committed to the environment, society and sustainable growth.



GHENOVA Ingeniería S.L.U.



Carretera de la Esclusa 11, edif. Galia Puerto 2ª planta 41011 Sevilla

T. +34 954 990 200

ghenova@ghenova.com

www.ghenova.com



GHENOVA is an international company which provides multidisciplinary engineering and consultancy solutions in a wide range of sectors, such as industry and energy, shipbuilding, offshore, oil & gas, aeronautics, civil or agro-industry.

Over the years, we have shared our knowledge and activity with those sectors that require a comprehensive engineering response. We work using a solid project management methodology by adding experienced specialists to our team. In addition, we apply the most effective practices from each sector.

Our industrial engineering division participates in outstanding renewable energy sources plants projects around the world, also in different industrial facilities.

- Feasibility and preliminary studies.
- Basic and detailed project.
- Preliminary design and construction project.
- Administrative procedures.
- Procurement Support: technical specification, technical analysis.
- Technical assistance for construction.
- Quality, Environment and Safety Control. Energy efficiency.
- Commissioning and start-up.
- Operation & Maintenance manuals.



GL Garrad Hassan Ibérica S.L.

Calle Sanclemente 20, 1ª planta 50001 Zaragoza

T. +34 976 435 155

www.gl-garradhassan.com



Independent technical and engineering services, products, and training to the wind, wave, tidal and solar sectors. Our expert teams works on all aspects of renewable energy; we provide flexible solutions to our client´s needs over the full life cycle of their projects, from conception to decommissioning, wherever they are. With experience gained over almost three decades, GL Garrad Hassan has an unsurpassed technical understanding of renewable energy technologies, projects and markets, and its Client list includes the majority of all major turbine manufacturers, developers, lenders, investors and owners.



Elevadores Goian S.L.



Polígono Zubierreka, 31-34 20210 Lazkao (Guipúzcoa)

T. +34 943 804 001

goian@goian.com

www.goian.com



Our company is dedicated to the design, manufacture, set up and overall management of elevation machinery. We offer customized solutions worldwide for every industrial sectors. We develop personalized and taylor made projects with our engineering and service departments jointly with our clients to fit their needs, with the best quality and in the appropriate times.

We offer service from our headquarters in Spain and branches in North America, Peru and Malaysia.

In the Wind Sector we are worldwide leaders in rack-and-pinion service lifts, and we also have our own rope patented technology. Our range of products satisfies all the needs that arise in wind farms:

- Rack and Pinion.
- Cable Technology.
- Assistants.
- Internal kits.



Always looking for security during the installation, design the elevator by optimizing the possible interaction between the machine operator and the system: departure, incorporation, stops, start up... we have all the different technologies to be adapted to any installation, and the capacity to deliver all the different internal kits of the tower.

Some examples:

+4000 units worldwide.

Installations in 4 continents and + than 25 countries.

All elevation technologies.



GRI - Gonvarri Eólica S.L.

Ombú 3, planta 12 28045 Madrid

T. +34 911 770 010

info@gestamprenind.com

www.gestamprenind.com



Gestamp Renewable Industries offers a wide variety of products and services. First of all we have Gestamp Wind Steel, which has become an important player in the supply of renewable wind energy components, among which we could highlight: Steel treatments (cutting & beveling); Surface treatments (metalizing, blasting, painting etc); Electrical components (wiring, trays etc); Internals (platforms, ladders, doors etc); Tower manufacture (bending & welding); Flanges manufacture (forging, bending, mechanizing & drilling). We also have GRI Services which offers ExWorks transportation, wind farm installation & maintenance. Furthermore GRI has a relatively new product/service called Gestamp Hybrid Towers, which consists in towers of steel & concrete in order to solve the weakness that steel by itself is unable to do. Regarding GHT we offer different services such as: Foundations; Constructing the foundation; Hybrid tower supply; Transport of the sections & tower assembly.



Grupo Cobra (Eyra)



Cardenal Marcelo Spinola 6 28016 Madrid

T. +34 914 569 500

oscar.gomez@grupocobra.com

www.grupocobra.com



COBRA is large company that provides EPC and O&M services within the international wind energy sector.

Our expertise allow us to perform: selection and analysis of business opportunities; technological, financial and economic evaluation of projects; design and basic engineering; permitting; development of contracts with strategic partners and 3rd Party clients (PPAs, Tenders Process); development of financial models and financial solutions for each project; equity holders; integrated project engineering; procurement of capital equipment and services; EPC Full wrap guarantees; and, O&M for wind power plants.



Polígono Industrial Mutilva Baja C/I N.7 31192 Mutilva Baja (Navarra)

T. +34 948 321 630

Info@grupo-inerzia.com

www.grupo-inerzia.com



GRUPO INERZIA

es la vida es pura Inerzia

www.grupo-inerzia.com

INERZIA GROUP is an international company that works in Europe and America into one of the fastest growing of the renewable energy sectors.

We also work for the industrial sector and services in everything related to security and the protection of workers.

Activity Lines

Composed of companies INERZIA GROUP: NEM, SERENA and CONAPRO aims give a Global Security solution adapted to the peculiarities of each company.

Products and Services

NEM:

NEM develops lifting, assembly and performance optimization equipment and applications to be used on wind turbines and wind farms.

- Design Works
- Service and Maintenance Works
- Manufacturing Works
- Approved Works

CONAPRO:

- Specialized protection equipments to do an insurance job.
- Training for your safety
- Inspection equipment protection

SERENA:

Serena is a company specialized in services within the wind sector, that helps customers get the most out of renewable energy.

Serena is divided into 4 lines of business: SERENA GEARBOX.

SERENAQUALITY, SERENA "SAFETY BY CONAPRO" and SERENA SERVICES.

In mounting...

Serena offers its clients a global service, participating with them in all phases of the life projects.

In operation...

Serena makes troubleshooting and replacement of different elements of the turbine in the corrective maintenance.



Grupo Isastur



Polígono de Silvota, P 63. 33192 Llanera (Asturias)

T. +34 985 980 104

info@grupoisastur.com

www.grupoisastur.com



Grupo ISASTUR takes its name from ISASTUR, the parent company established in 1978 by a team of businessmen and professionals from Asturias. Time and expertise have resulted in our development and expansion in Spain and in several countries in Europe, Africa, Asia and America. A company that was basically a family enterprise in the late seventies now specialises in building infrastructure, mainly in the energy sector. The main activities of the ISASTUR Group in the wind sector are:

Wind farms: EPC projects including engineering, civil works, substations, high voltage line construction and commissioning.

Substations: Supplying equipment, installation and commissioning all different types of both internal and external electrical substations up to 400 kV (conventional, GIS, hybrid, etc).

Transmission electric lines: High and low voltage transmission lines.

Solar Plants: EPC Projects, from the engineering to the commissioning of the plant.



Inzamac Asistencias Tecnicas S.A.U.

P.I. La Hiniesta, C/ Alto Albillera, Parcelas 7 y 8 49025 Zamora

T. +34 980 557 080

inzamac@inzamac.es

www.inzamac.es



GROUP INZAMAC is composed by several national and international companies with a wide range of activities such as engineering projects, technical assistance, construction quality control, quality and geometric geotechnical surveying, software development, town planning, Quality Systems Prevention and safety and remote sensing. Inzamac has been offering all these activities during 30 years, and they are reinforced guaranteed thanks to a training policy consisting on internal and external training transferring knowledge and accumulated experience. R&D is also present in the Holding Activities. R&D Activities are constantly carried out in all the activities. Its business cartography covers the main Spanish communities, Europe, Africa and South America.



Areas of experience

- Construction laboratories
- Geotechnics
- Technical assistance in transport infrastructures, hydraulic

Works, town planning edification, etc.

- Energy services company
- Health and safety services
- Food Health Laboratories
- Consultancy, certification, agrifood consultancy, integral consultancy and sociology consultancy
- Training
- Renewable Energy

Guascor Servicios S.A.

DRESSER-RAND

Avda. Cardenal Herrera Oria 63, 4º 28034 Madrid

T. +34 913 340 910

madrid@guascor.com

www.guascor.com



For over 10 years GS has offered all kinds of services for the wind energy market, according to client requirements, with a broad experience in retrofits, corrective maintenance, erection and commissioning of wind-driven power plants.

Nowadays, GS is operating and maintaining, with presence on site, 651 wind turbines of 607 MW of total installed power with high availability.

GS is also specialized in offering special services, such as technical project management or repairing wind turbine rotor blades.

These services have been carried out in Spain and other countries including USA, Greece, China, Portugal, Italy, Dominican Republic, Egypt, France, Mexico and Morocco.

Wind energy department consist of 102 workers focused on different areas.



Pol. Ind. Európolis-C/Praga, 12 28232 Las Rozas (Madrid)

T. +34 916 360 097

hidrafilter@hidrafilter.com

www.hidrafilter.com



Hidrafilter is a company born in 1992 dedicated to the manufacturing of Filtration Units for decontamination of hydraulic oils, improving hydraulic and lubrication systems in the wide spectrum of the industry.

Its first contact with wind generators manufacturers comes in the 90ths.

The profile of its clients is, mainly, manufacturers.

Hidrafilter operates in several markets: wind generator, termosolar, cogeneration, metallurgical, naval, aeronautical, machine tool, railway equipment, etc.

Hidrafilter offers filters for lubrication systems, air filters for wind generator´s gear boxes and flushing equipments for gear boxes´s test bench. Moreover Hidrafilter has its own laboratory to offer its customers a service of analysis of hydraulic fluids (laser particle counter, microscope...), being this service one of the tools that helps Hidrafilter to win its customers confidence.

Hidrafilter works under ISO 9001-2008 certification, looking for better efficiency in all its services and products.



Hine Renovables S.L.



Pol. Ind. Altune 6010 20212 Olaberria Apdo. 84 Beasain (Guipúzcoa)

T. +34 943 162 020

hinerenovables@hine.es

www.hine.es



HINE has 37 years of experience providing hydraulic solutions to all type of industries and 19 years, in particular, to renewable energies.

HINE RENOVBLES develops, designs, manufactures and commercializes hydraulic systems and components to wind, solar and other renewable energies.

Actually HINE RENOVBLES has its own offices and manufacturing workshop in Spain (Europe), Langfang (China), Pennsylvania (USA), Sao Paulo (Brasil), Chennai (India) and in Godalming (UK) with an aim to become more accessible and to be able to directly respond to the worldwide customer's needs.

HINE RENOVBLES R&D team, thanks to its own qualified people and sophisticated laboratory and facilities, provides the adequate oil – hydraulic solutions to the customers. In the close collaboration with the client, HINE RENOVBLES invests time and know-how developing prototypes and carrying out all tests and quality control measures to guarantee the best performance at real conditions.

Main products:

- Hydraulic power units
- Hydraulic pitch manifolds
- Hydraulic cylinders
- Power units for rotor & yaw brakes
- Cooling systems
- Filtration
- Fluid connectors



Tomás Redondo, 1 28033 Madrid

T. +34 915 776 500

comunicacion@iberdrola.com

www.iberdrola.es



IBERDROLA is the top wind energy company in the world by installed capacity, output and project portfolio, thanks to a rigorous management model, which is primarily based on three cornerstones: foresight, performance, and a workforce that is young, professional and deeply committed.



The Company's aim since inception, of becoming a long-term industrial business, has also led it to develop a strategy based on sustained growth, operational efficiency and financial soundness.

Present in over twenty countries and with operating assets in the most important markets worldwide, IBERDROLA has consolidated its position as the leading wind energy company in the world in capacity and is now an international benchmark within the sector.

Onshore wind energy

IBERDROLA consolidates its global leadership in the wind energy business with a total capacity, at the end of 2013, of 13.776 MW. The geographical breakdown follows: 5.753 MW in Spain, 5,443 MW in the US, 1419 MW in the UK and Republic of Ireland and 1.162 MW in other countries worldwide.

Offshore wind energy

IBERDROLA also leads in offshore development with more than 5.104 MW under development in the UK (74%), Germany (16%) and France (10%). Salient projects include projects at West of Duddon Sands, (North Sea, 390 MW) with 114 installed MWs at the end of 2013; East Anglia (North Sea, 7.200 MW); Wikinger (Baltic Sea, 350 MW); and Saint Brieuç (Côtes D'Armor, 500 MW installed capacity), in consortium with EOLE/RES.

Ibereólica Group



Pº Marqués de Zafra nº5 28028 Madrid

T. +34 915 570 566

info@grupoibereolica.com

www.grupoibereolica.com



Ibereólica Group is an independent, pioneering company with a clear vision for renewable energy sources.

Our involvement in sustainable development for the planet and our unceasing search for more efficient technologies to transform natural energy sources into electrical power has placed us among the top twenty companies in the world for renewable energy projects.

Our teams are experts in making our investments profitable through skill, the experience of our human assets and the implementation of tried and tested innovations.

We execute our projects from start to finish: we select the location, we create the project, we do the paperwork, we construct the facilities and we maintain them to ensure their optimum operation.

Ibereólica Group development has matched the pace of increased production efficiency achieved by the different technologies. We started out by harnessing the power of water in our hydroelectric plants, at that time the greenest electrical power generation source around.

However, our most significant growth has been brought about by harnessing wind power. We have a large number of facilities operating at full yield today, which have made us one of the largest producers worldwide.

Ibereólica Group is one of the world's largest producers of electricity using wind as a natural power source. Our knowledge and experience in this area has enabled us continuously to improve the efficiency of our facilities.

A key factor which sets us apart in our sector is the fact that we have our own facilities maintenance teams. This means that we can address any incident extremely quickly, so wind turbine stoppage times are lower and our production capacity is higher.



Investigación y Desarrollo de Nuevas Alternativas S.L.

Calle del Agua, 8 3400 Villena (Alicante)

T. +34 966 119 201

info@idna.es

www.idna.es



Investigación y Desarrollo de Nuevas Alternativas, S.L. (IDNA) (Research and Development of New Alternatives, in English language) is an independent private company of entirely Spanish capital that was founded in Villena, Alicante, in October 2008, and whose recurring theme is innovation on energy systems.



IDNA offers high-value engineering services, mainly specialized in the complete development and integration of custom-made energy solutions, which are tailored to the specific needs of each client whilst ensuring a reduction of the total Life Cycle Cost / Cost of Energy, besides complying with the highest quality standards.

Our maxim in daily operations is to achieve full satisfaction of our customers through a total commitment in every project, in addition to the pursuit of continuous improvement in all aspects (technical, quality and management).

IDNA has a multidisciplinary and skilled team with more than 20 years of specialization in the Design & Development, Construction & Integration, and Commissioning & Start Up of off-grid and on-grid micro-generation plants that combine smartly PV solar, small-wind, diesel gensets and storage batteries.





C/ Peña Oroel, Parcela 10C3d, Naves 3-4-5 50410 Cuarte de Huerva (Zaragoza)

T. +34 976 504 912

info@idnamic.com

www.idnamic.com



Supply and installation of towers for wind and solar measurements, as well as associated equipment and sensors for prospecting solar and wind resource (anemometers, wind vanes, thermo hygrometers, pressure sensors, data loggers, rain sensors, pyranometers, communication systems with satellite and GSM/GPRS modems, powering systems with batteries and solar panels, etc).

Corrective and preventive maintenance of guyed towers and self-supporting (lattice and tubular).

Engineering construction projects, including turnkey, for renewable energies (solar, wind, hydro), data analysis, assessments, etc.

Unique projects and special studies of loads, design of foundations, earthworks, measurement towers, project management, etc...



Polígono Industrial Plazaola Manzana E Nave 6 31195 Aizoain (Navarra)

T. +34 948 351 399

info@iedgreenpower.com

www.iedgreenpower.com



IED greenpower is a company that designs and manufactures LED lighting solutions targeted at the wind industry. We provide and combine extensive experience on electronics and reliability as wind industry supplier.

We develop our solutions strictly under wind industry specifications, working closely to our customers and tailoring the solutions. IED greenpower team is formed of people highly qualified and committed to the company project.

Our goal is to increase our presence, solid and stable in the renewable energy market.

Products

IED greenpower has developed a waterproof LED lamp, LVD series, for wind turbines indoor lighting that meets wind industry requirements. Our LED solution offers a number of improvements which makes it innovative and competitive as:

- ... its cutting edge LEDs with 50.000 hrs of working life
- ... its emergency kit (optional) that can be controlled electronically
- ... its mechanical design made of anodized alluminium and polycarbonate
- ... its special fixation for high vibration sites

LVD series has been designed to work in either onshore, offshore or cold climate windturbines conditions.



Universidad Pontificia Comillas (ITT)



Calle de Alberto Aguilera, 23 28015 Madrid

T. +34 915 422 800

director@iit.upcomillas.es

www.upcomillas.es



IIT (<http://www.iit.upcomillas.es>) is a research center of ICAI School of Engineering, which belongs to the Comillas Pontifical University, Madrid, Spain. Its main objective is to promote research and post-graduate studies in different technological fields, by means of developing research projects of interest for the Industry and Administration.

IIT is a non-profit Institute, flexible and pragmatic in the way it works. It is essentially financed by projects contracted by companies, and thus responds to a clear social demand. These projects results are: computer science applications, following client specifications and used by an increasing number of companies; analyses, studies, and consultancy developed for companies and institutions in different countries; doctoral theses and publications at international conferences or in international journals.

IIT offers research, consultancy and courses among others on:

- Intelligent and Sustainable Networks (Distribution networks; Smart Grids; Green energy integration).
- Power systems modeling, analysis and control (Steady state; Automatic generation control; Stability; Electromagnetic transients; Quality).
- Power-economics regulation (Energy markets design and regulation; Analysis of sustainable energy policies; Regulation of energy network infrastructures).
- Decision support systems (Strategic analysis; Medium-term planning; Short-term operation and market bidding).
- Electronics and automatics (Automation, communication and industrial computing; Power electronics and ; Control Systems; Electronic instrumentation, Electromagnetic compatibility).
- Intelligent systems (Forecasting and data mining, Modeling, AI applied to diagnosis, Mobile robots, computer vision, RAMS analysis compliance).
- Engineering design (Mechanical systems; Electrical systems; Energy systems).
- Railway systems.

IMFuture Renewables S.L.

C/Pedregal, 4 bajo 15220 Bertamiran-Ames (A Coruña)

T. +34 981 104 028

pgarde@ifuture.es

www.imfuture.es



We offer high quality services in the fields of Preventive, Predictive, Corrective and Major Corrective maintenance. We control the operation of your wind farms; analyzing processes and proposing solutions based on our qualifications and experience. This management is completed by the tasks performed by our Control Centre, working 24 hours a day, 365 days year, allowing us to offer an immediate response.



We audit virtually all the types of wind turbine technology installed in Europe. Our Technical Audits focus on finding potential weaknesses via thorough inspections and on improving the efficiency of our customers' facilities.

We are also certified in Safety, Environment and Quality with DNV, and constantly looking for processes that allow us to implement the continuous improvement of the services we offer.



Indar Electric S.L.

Indar
Una Marca **Ingeteam**

Bº Altamira - Polígono Txara s/n. 20200 Beasain (Guipúzcoa)

T. +34 943 028 200

indar@indar.com

www.indar.net



Indar Electric, a company founded in 1940, has a vast experience in the design, manufacture and technical assistance of ELECTRIC GENERATORS

Our products provide the maximum robustness level and quality guarantee required to meet our clients' demands. Our 50.000 m² premises are equipped with the most advanced technical resources required to design and develop the most reliable type of machines.

In the Wind Power Business we manufacture generators with powers ranging from 660 kW to 8 MW and voltages ranging from 690 V to 12 kV for variable pitch turbines, doubly fed induction generators or synchronous with permanent magnets, and the xDFIG patented and innovating technology, Clean Power Series. Refrigeration air or water cooled, protection degrees ranging from IP-23 to IP-56. Horizontal construction. Up to H insulation, As per international standards IEC, NEMA, etc.

Customer Service: technical assistance, customised maintenance, repairs and replacement of construction elements.



Indra Sistemas S.A.

Avda. de Bruselas, 35 28108 Alcobendas (Madrid)

T. +34 914 805 000

indra@indra.es

www.indracompany.es



indra



Indra is the number 1 information technology multinational in Spain and one of the main companies in Europe and Latam. It employs 42,000 professionals and has clients in over 128 countries. In 2013 international sales are expected to reach 60%. Indra is the second European company in its sector by investment in R+D, with nearly €500bn invested in the last three years. The company's commitment to innovation translates into an investment of 8% of the sales figure.



Business Lines

- SCADA's integration, WTG Control Systems, control systems for electrical substations.
- Renewable Energy Control Centre (BRISA).
- Engineering & Repair services for WTG electronics and electro-mechanics: maintenance, upgrades and Life Cycle Support (Processor cards, Analog/Digital Interface, Power Electronics, Communication, Displays, ...).
- Maintenance & Logistics engineering.
- Data integration, condition monitoring, predictive monitoring, Monitoring Centers for an integrated monitoring strategy.
- BCM Systems for power drive (AeroGIDAS) and blades (R&D).
- Forecast and optimization models. Advanced analytics.
- O&M management solutions.
- Surveillance, physical & logical security.

Products

BRISA: allows remote operation and control of renewable farms from a control centre. Includes data integration, monitoring and remote control for any supplier and supports integration with the electric network operator.

AeroGIDAS is a BCM System for the WTG power Drive. It is a main purpose product, able to work with any gearbox, even of unknown configuration. It measures vibration in different points of the Power Drive and process the obtained data. A SW, based on artificial intelligence establishes the normal behaviour model, detects deviations and provides alarms and reports about the system condition.

InGEN is an integrated, modular and complete product that supports the generation plants O&M processes.

MARKETS: Europe (Rumania, UK, Italy, France, Germany), Latam (Mexico, Panama, Brazil) and USA.

Ingeteam Service

Ingeteam

Parque Empresarial Campollano - C/D, 1 02007 Albacete

T. +34 967 245 504

service@ingeteam.com

www.ingeteam.com



Ingeteam Service is the company within the Ingeteam Group focused on providing O&M services to renewable energy plants. Ingeteam Service works with OEM's and asset owners involved in projects covering areas such as Scheduled/Unscheduled Maintenance programmes, Big Components Replacements, Balance of Plant, Blades Services, Operational Services, Retrofits, among others. Since 2009, Ingeteam Service is immersed in a globalization process, supporting our spanish customers in their transit abroad and helping new players from upcoming countries.



Inneo Torres S.L.

C/ Orense, 12, 1º 28020 Madrid

T. +34 914 179 898

inneo@inneo.es

www.inneo.es



Inneo Torres is a company partnered by independent professionals with solid experience in the fields of advanced engineering, heavy civil works, prefabrication, and logistics, transport and erection of large elements. It offers turnkey supply of certified Precast Concrete Towers using a fully tested and industrially developed tower concept, capable of carrying any turbine to 140m plus hub heights.

With a track record of 421 towers since the first built prototype in 2006, Inneo is one of the main two technologies worldwide that have been used in industrial production of precast concrete wind towers for large scale projects.

With a long background experience delivering very large precast elements for the heavy precast civil and bridge construction industry, Inneo Torres concept uses few large precast elements, in the form of long narrow panels. This is meant to reduce the number of operations on the site.

Despite the fact that concrete tower levels are heavier than the steel tubes of an equivalent steel tower, this does not imply the need for more powerful or expensive cranes, since the crane requirements are driven in any case by the erection of the nacelle. All towers are pre-designed considering this condition.

The company's business model is based on the production of precast concrete panels inside the wind farm. Thanks to its patented Mobile Factory concept (Wanderer®), Inneo is capable of getting rid of all the logistics problems related to other solutions. This concept, besides presenting benefits in terms of transport, is also a really good advantage in countries where local content requirements are set.

Inneo Torres has manufactured Precast Concrete Towers in four different countries; Brazil (571 MW), Spain (215 MW), Poland (33 MW) and United States (3 MW), with three different hub height towers; 80 m (166 towers), 100m (203 towers) and 120m (52 towers). All towers are delivered adequately certified by Germanischer & Lloyd.





INTAF has its origin in 1941, founded as the first company of a group specialized in industrial metal mechanic; the company carry out activities in process engineering, steel work (oxycutting and cutting with CNC plasma, Mechanical cutting and punching, shape, fitting, multiproces welding, building-up and special welding), machining (lathing, milling, rolling, boring, grinding...), manufacture and assembly of industrial equipments (included industrial repairs) and surface treatment. INTAF has over 14,500 square metres of industrial surface, 8.000 of which are covered, for developing its activities.

Technical resources / Capacities

Horizontal Lathe- CNC: Ø máx. 1.500 mm x 10.000 mm long.

Vertical Lathe-CNC: Ø máx. 5.000 mm x 1.700 mm high..

Milling: máx. 12.000 mm horizontal x 4.000 mm vertical x 2.000 mm section.

Calibration and measurement equipment.

Cut up to 300 mm en carbon steel, up to 25 mm en carbon steel and up to 12 mm in aluminum.

Plicate: 4 m long., weight up to 315 t.

Plate forming: AC: 2,5 m wide y 22 mm thick.

Rolling forming: UPN, IPN, HEB, angles, pipes.

Welding capacities: electrode, semi-automatic, TIG, SAW.

Sandblasting/Painting: 14 m. length x 4 m wide x 4,4 m high. Max. weighth 25 t.

Enterprises Resource Planning

Trained and specialized human resources.

INTAF has developed and implemented a Management System integrating the three core aspects of our activity: quality, environment and the prevention of risk in the work place. This system has been developed in terms of the UNE-EN ISO 9001, UNE-EN ISO 14001 and OHSAS18001 standards, certified by Det Norske Veritas, an accredited certifying body.



Iplan Gestión Integral S.L.U.

Calle Llacuna 161, Planta 2ª, Oficina 3 08018 Barcelona

T. +34 933 091 337

info@iplangestion.com

www.iplangestion.com



IPLAN GESTION INTEGRAL S.L.U is a company linked to the services of MANAGEMENT OF PROJECTS developed fundamentally in two sectors:

Energetic and Civil sector, in a national and international level. We form a multidisciplinary group of professional specialists in the different areas of Engineering, Management of Projects and Construction, with the highest degree of specialization, professionalism, analytical capacity and experience, capable of developing own ideas contributing value to the Projects, offering different and alternative points of view, which allows to offer quality services, assuring with reliability the good end of the works that can entrust us.

We study the totality of the needs of every Client and it offers made-to-measure solutions, analyzing every particular case and proposing the alternatives that better adjust in every situation.

Our experience in the management of works allows us to support the capacity for the integral management of any type of installation from his initial phase of processings before the beginning of the works, as in his phase of construction and putting in march.





Avda. Isaac Newton, 3 4ª Planta 41092 Sevilla

T. +34 955 036 800

www.isotrol.com



ISOTROL is specialized in the information and communications technology lending services to the Energy Sector. With over 250 employees and a breadth of experience, ISOTROL offers to its clients the most innovative solutions in Energy monitoring and management. Their systems are currently running in more than 400 renewable energy facilities, operating over 8 GW around the world.

Generation

Control systems. Local and remote monitoring. Control Centres connected to the Transport System Operator and Operating & Maintenance of all kind of Energy plants: Wind farms, Photovoltaic, Hydropower, Biomass, etc.

24x7 Operation & Maintenance of the system in renewables energy plant (with their own Monitoring Centre)

Additional Services: Instrumentation and measurement, Communications, Reporting and Data Anaysis...

Transport and Distribution

Electrical Distribution Networks Control & Management.

Electrotechnical Consultancy, Remote management of meters, smartgrids simulation algorithms.

Additional Services: Communication network monitoring, Technologic Outsourcing, Design and development of customized applications.

Energy Trading

Simulation system to evaluate and optimize the different bid and offer strategies in the European electricity market.

Production Prediction.

Secondary Concentrator Systems.

Energy Consumption

Energy monitoring in buildings and industries.

Additional Services: Energy Saving and efficiency advising.



Instituto Tecnológico de la Energía

Av. Juan de la Cierva 24, Parque Tecnológico, Paterna 46980 (Valencia)

T. +34 961 366 670

ite@ite.es

www.ite.es



The Energy Technological Institute, ITE, is an international, private, non-profit association, created by business initiatives and supported by the Valencian Government through the IVACE and by Valencia's Polytechnic University (UPV). ITE directs its projects and services towards companies and public bodies that belong to different areas of the energy sector: Smart Grids, Electric Car, Energy Storage, Renewable Energies, Green Building, Industry Efficiency, Smart Metering.

Our 15 years of experience speaks for itself. We collaborate with companies, making them more competitive, supporting them in process and product innovation, stimulating their modernization and diversification, always looking for the best ways to position them internationally. ITE is a founding partner of REDIT (Network of Technological Institutes of the Valencian Community), a member of FEDIT (Spanish Federation of Technological Institutes) and a Technological Centre, registered by the Ministry of Economy and Competitiveness (Nº CT 74). Mission :To actively contribute to the companies' development, stimulating and facilitating technological innovation and development, providing solutions through the integration of technology, based on projects and R&D&I (Research, Development and Innovation) services, tests, technological consultancy, technology training and diffusion.



Services and Products

- Solutions that generate business in the energy sector.
- Consultancy and assessment services.
- Testing and certification services.
- Training.

R&D&I

- Energy Storage and New Materials.
- Capital Equipment for Low and Medium Voltage Electrical Infrastructures.
- High Energy Electric Arcs.
- Smartgrids.
- Mobility and Electrical Transport.
- Interoperability.
- Energy Intelligence and Social Perception.

JCM Bluenergy S.L.



C/Zazuar, 6 28031 Madrid

T. +34 619 330 125

info@jcmbluenergy.com

www.jcmbluenergy.com



JCM Bluenergy, S.L. is an Energy Consulting firm born at the Renewable Energy Department at Physics School of Universidad Complutense de Madrid (UCM). We are a green energy company with the aim to integrate all the renewable energy technologies as a real solution to all the challenges faced during years developing energy projects at university.

By applying a holistic, scientifically-based studies to the sites and/or facilities, our energy management consultants can help you to understand the best technical solution related with renewable energy systems, all working with, and dependent upon each other.

We are also EOLI FPS manufacturers, a vertical axis wind turbine which has been developed to harness the wind energy using a different design concept than traditional wind turbines (both vertical and horizontal axis).

The aim has been to achieve the best possible performance for any wind condition, both laminar and turbulent, and in turn provide security, integration and respect for the environment.

EOLI FPS is a new Spanish technology which provides new features and possibilities not cover yet by the current technology wind market. Our wind turbine is able to achieve the most performance ratio at any weather conditions, because of it can work with laminar and/or turbulence flows, due to his innovative and simple design.



Avda. Anselmo Clavé Nº 37-45 Local 50004 Zaragoza

T. +34 976 221 789

info@kintech-engineering.com

www.kintech-engineering.com



Kintech Engineering has been involved in wind assessment since 1999, manufacturing high quality equipment (incl. wind data loggers, remote communication modules, sensors etc.) for wind assessment campaigns. Our user friendly, reliable data loggers are applied by wind developers, wind farm operators and research institutes worldwide.

The EOL Zenith is the 3rd generation data logger from Kintech Engineering. The EOL Zenith features 1Hz sampling rate (complying with IEC 61400-12), extended turbulence calculation (T130), standard deviation, MAX and MIN for all input channels and advanced sensor error diagnosis (e.g. wind vane std. dev.). Real time data together with the Tower Management Tool (TMT) makes it much easier for you to keep track of all your wind assessment sites.

The EOL Zenith includes a GPS module, providing perfect timing, accurate positioning of the met mast for micro siting as well as simplifying site management and supervision. The perfect combination of data logger technology together with the most advanced software for modern wind assessment.

• Input channels and standard features

Wind speed (anemometers):	10
Wind direction (5 analogues and 2 digital):	7
Analog in total (temperature, pressure etc.):	15
Data sampling rate	1Hz
Recording intervals (time stamped):	10 min.
GPS positioning (digital signature):	YES
GPS internal clock:	YES
EOL Manager (advanced graphics):	YES

• Data storage and transfer

Memory capacity (SD/MMC) 5 years of data:	1GB
Web browser access (Internet Explorer):	YES
Remote settings modification:	YES
GPRS telemetry and real time data:	YES
Satellite telemetry and real time data (option):	YES
All input channels are compatible with all class 1 anemometers without the use of interface cards.	

• Optional add on modules:

- Modbus Communications Module
- Ultrasonic Communications Module
- 1 Hz Data Storage Module
- Satellite Communication Module

The better the quality of the components for a wind assessment campaign, the better the results. "Keep in mind that a variation of 0,1 m/s in the average wind speed can be almost 100 equivalent hours of nominal power per year".

Kintech Engineering also offers to manage the daily/weekly data transmissions from the towers (e.g. towers equipped with Iridium satellite communication).

Kliux Energies S.L.



Los Almendros 14. Polígono Industrial Cantabria II 26009 Logroño

T. +34 941 102 410

info@kliux.com

www.kliux.com



Kliux Energies specializes in Distributed Energy Solutions based on renewable sources. Kliux has worldwide exclusivity rights to manufacture and sell the KLIUX ZEBRA Vertical Axis Wind Turbine, developed by Geolica Innovations which also integrate into hybrid system with solar photovoltaic technology. Its unique aerodynamic design results in a noiseless, energy generating turbine that also performs extremely good in architectural integration and visual impact. The Truly Urban Wind Turbine.

Created in 2009, Kliux Energies has invested over 2 million euros in R&D and accounts with strategic partners such as Bayer MaterialScience and Technology centers throughout Europe. Its VAWT is already providing intelligent access to energy in 20 sites including golf courses, sport marinas, wineries, hotels and technology centers. In 2013 initiated the internationalization process in Mexico and USA. The Kliux VAWT was shown in internations shows such as Chicago Wind Power Expo 2013 and Genera in Madrid.



Maeco Eólica S.L.

Calle del Cerro 49, Las Navas del Marqués 5230 Ávila

T. +34 918 970 616

info@maecoeolica.com

www.maecoeolica.com



MAECO Eolica is one of the leading wind farm maintenance companies. Since its beginnings, more than 12 years ago, has been active as a global supplier of operation and maintenance of wind farms.

We are one of the first Spanish companies belonging to the wind energy market. We have grown technologically, providing engineering and industrial experience.

We are a strong team of highly skilled and continuously trained, structured in teamwork, unity of effort and unity of benefits.

Some of our activities are mechanical and electrical installation, commissioning, maintenance of wind turbines, design modifications, corrective, blade inspection, quality inspections or final warranty audits.

We focus our work adapting it to the changing needs of our customers, integrating the R & D, providing high quality service and expertise.

MAECO has developed and manufactured some tools, allowing us to undertake certain tasks, in a fast and safe way, reducing downtime.

Maintenance management, providing traceability, automation, standardization and scalability of the work we do.

One of the activities that our customers are increasingly demanding, involves the inspection and registration of torque. The quality, commitment and technical and engineering are fundamental premise of our activity with which we guarantee our customers a high standard service.

We are a strong team of highly skilled and continuously trained, vertebrate in teamwork, unity of effort and unity of benefits, respect for people and the promotion of growth, motivation and personal development within the company.



MS Enertech



Avenida Castilla y León, 48 09003 Burgos

T. +34 947 041 052

imoreno@ms-enertech.com

www.ms-enertech.com



MS Enertech provides high quality engineering services at a competitive cost and with a very high degree of flexibility. MS Enertech is a subsidiary of MS Techno, an engineering consultancy specialized in electromechanical systems, aeronautical and civil engineering. Our main services are:

- Civil Engineering projects for wind farms, solar photovoltaic plants, or concentrated solar plants
- Wind Resource Assessment
- Electromechanical Engineering projects related to wind turbines and its components

Some data in wind energy:

- 150 projects of Civil Engineering for wind farms in 24 countries in the 5 continents
- 50 GW of wind resource assessment in the last 6 years
- 40 engineers in Spain and China

Business Lines

- Civil Engineering for wind farms

Projects all around the world, under different regulatory environments, terrain or seismic conditions, for manufacturers and developers in a variety of areas:

- Wind turbine foundations: design, anchoring, fatigue. . .
- Geotechnical Engineering: survey campaigns, geotechnical analysis, soil characterization
- Civil infrastructure for wind farms: roads and access, platforms, bridges. . .
- Analysis of Structural Pathologies: analysis, diagnosis, solution and monitoring
- Test engineering: test definition, execution and analysis for foundations, materials or components
- Assembly methodologies and tooling

- Wind Resource Assessment

Evaluation of the wind resource for wind farms, site suitability, micro-siting, wind farm energy production estimate.

Met mast management: data downloading and processing, supervision of the operation of the equipment.

- R&D

Foundation-tower connection, new foundation for wind turbines, methodology and tools for calculation and design of complex concrete structures for wind turbines, fatigue study of construction material, analysis by Markov matrix of fatigue of wind turbine foundations.

- Electromechanical Engineering Projects

Engineering projects related to the Wind Energy field: develop sophisticated tooling for assembly and testing of wind turbine components, including high level test benches, such as back-to-back gearbox testing installation.

Natura Medio Ambiente

Conde de Aranda 136 3º 50003 Zaragoza

T. +34 976 405 337

administracion@naturamedioambiente.es

www.naturamedioambiente.com



Founded in Spain in 1997, the company has since spread both throughout internationally (Spain, Eastern Europe and Latin America). Today, Natura Medio Ambiente is a pioneer in the field of environmental engineering and consulting.



Through comprehensive training and the use of state-of-the-art technology, we have formed a multidisciplinary team that provides highly specialized environmental services. The highest quality standards, based on an in-depth understanding of environmental impact, the work we provide our customers meets the highest quality standards for environmental decision making. We also carry out document processing with regional and local governments.

We dedicate a major part of our time and resources to the use of new technologies that allow us to obtain accurate data from each one of our studies, as well as for the investigation of environmental impacts that every civil works project involves. New technologies are a great help in detecting and assessing the scope of existing environmental problems. Remote sensing systems, image processing, Global Positioning Systems (GPS), telematics systems supported by remote sensing and Geographic Information Systems (GIS) are some of the tools that Natura Medio Ambiente use for Land-Use Analysis, Risk Analysis, Natural Resource Management and Monitoring, among others, for which the management and implementation of these technologies is essential.



Natura carries out Environmental Studies on all types of infrastructures, including power lines, wind farms, solar farms, roads, airports, railways, ports, mines, irrigation systems, land consolidations and residential or business development projects, among others.

Our internal operations provide an analysis of the project determinants (inventories of vegetation and fauna, acoustic, archeological, topographical and hydrological factors, among others). Our team also processes documents with Regional or State governments, answering and resolving any type of issue they have about studies.



Nuevas empresas de Melida S.L. (NEM SL.)

NEM

GRUPO INERZIA NUEVAS EMPRESAS DE MELIDA SL.

Polígono Industrial Mendikur N14 31 160 Orkoien (Navarra)

T. +34 948 321 630

nemsl@nemsl.com

www.nemsl.com



The value of technology is found in innovation, in increasing our capacity and making advances true. We are pursuing to ease the wind farms implementation and improving their performance by applying engineering solutions that can be carried out all around the world.

Links between NEM and wind power are huge. Its most important applications are oriented to optimize the setting up process of wind turbines and their components, ease their maintenance once installed and improve their performance in general.

Business lines

NEM develops lifting, assembly and performance optimization equipment and applications to be used on wind turbines and wind farms.

• Design Works

We design tools, applications and improvements for wind energy generating elements. Our work goes from concept creation to construction drawings.

ISO 9001 SGS ISO 14001 SGS OHSAS 18001 SGS

• Approved Works

We adapt our procedures appropriately in order to meet the country specific certification requirements and testing for turbine installation (EU, USA, Australia, Japan, New Zealand).

• Manufacturing Works

We manufacture and test the units that we develop for each application required by the client (based on their supply needs), making them operational wherever needed.

• Service and Maintenance Works

We check and service the engineering applications that we get up and running. Our non-destructive testing certified technicians conduct the necessary tests and modifications required by new regulations ensuring that they remain certified.

Services

- Lifting and Assembly systems
- Preventive Maintenance
- Predictive Maintenance
- Solutions for:
 - Erection of wind towers
 - Assembly of nacelles
 - Assembly of blades:
 - Blade to blade system.
 - Complete rotor lifting system
- Special applications for maintenance



Ctra. de Cedeira Km 1,5 15570 Narón (A Coruña)

T. +34 981 397 142

neodyn@neodyn.es

www.neodyn.es



NEODYN was established, setting out by providing a specialized service in engineering, technical consultancy and project management, thus closing the value cycle of the enterprise group's activity.



The main activities are:

- Mechanical and electrical engineering
- Maintenance engineering
- Welding engineering
- Projects
- Inspection
- Tests
- Professional training

Convinced of the importance of innovation and the need to optimize the efficiency and efficacy of management, applying a decisive approach towards the customer and processes, NEO-DYN has developed and implemented a Management System integrating the three core aspects of our activity: quality, environment and the prevention of risk in the work place.

This system has been developed in terms of the UNE-EN ISO 9001, UNE-EN ISO 14001 and OHSAS18001 standards, certified by Det Norske Veritas, an accredited certifying body.

Technological resources / Capacities:

ANSYS DesignSpace is a powerful simulation software, with the capacity to model, design and validate ideas on the computer in a swift, efficient manner.

Solid Edge is a Computer Aided Design system (CAD) for modeling sets and mechanical parts in 3D and for producing technical drawings.

Enterprise Resource Planning (ERP)

Trained and specialized human resources.

Normawind S.L.



Marie Curie, 8-14, 08042 - Barcelona

T. +34.93.241.12.75

info@normawind.com

www.normawind.com



NORMAWIND provides independent and personalised consulting services for wind farm developers throughout all project phases. Our multi-disciplinary team specialises in wind farm development and is able to understand all the key factors (strategic, economic, technical and legal) that contribute to the success of a project.

Normawind's multinational network allows us to offer our services globally, with projects and experience developed in regions including Europe (Western and Eastern), the Americas, Sudafrica and South Asia.

NORMAWIND is the commercial agent for EMD, the developer of WindPRO, software for planning and designing wind farms. WindPRO is recognized as the most efficient and proven tool. Top wind turbine manufacturers, developers, engineering firms, electricity companies and public institutions are using WindPRO worldwide.

We provide sales and technical support for WindPRO and offer basic and advanced training courses for this software.

We provide sales for WindSim. It is a modern wind farm design tool (WFDT). WindSim fuses advanced technologies with unrivaled wind energy domain expertise—so you can design more profitable wind farms.

NORMAWIND offers a comprehensive consultancy service in close cooperation with lawyers and financial consultants. This scope allows:

- Optimal structure of the project finance
- To access to international capital markets
- To minimize delays caused by lawsuits
- To develop negotiation strategies to get land access rights.

NORMAWIND, offers services to do training courses in Wind Energy.

Services if you are a developer

- Designing wind measurement campaigns.
- Mesoscale analysis.
- Preliminary site analysis.
- Project Manager.

NORMAWIND offers a cost effective service for obtaining specific wind data of a site, delivered in partnership with leading developers of weather forecasting modelling software. Thus, the potential site developer can take a long-term view of the wind resource.

Services if you are a manufacturer

- Micrositing and energy assessment.
- Project Manager.
- Training for wind studies.

Services if your are a environmental consultancy

- Wind farm engineering and environmental impact assessment (Noise, flickers, endangered species, Zones of Visual Influence, etc.)
- Sales licences WindPRO.
- Training course WindPRO (Basic and Advanced)
- Training course of wind studies.

Norvento Enerxía

Calle Ribadeo, 2 entlo. 27002 Lugo

T. +34 822 278 89

norvento@norvento.com

www.norvento.com / www.norventoned.com



Norvento is a business group with over thirty years of experience in renewable energies and energy efficiency. Our team is made up by highly skilled professionals in energy, technology and engineering. Norvento's international expansion started in 2006, and nowadays we are present in several countries such as USA, Brazil, Chile, Poland, Italy and United Kingdom. Our main activities abroad are the development and operation of wind, hydro and solar power plants, together with the commercialization of our medium size wind turbine nED100. Currently the company operates a number of power plants in the fields of hydro, wind, biomass, biogas and solar energy. Norvento holds a strategic commitment for research, technological development and innovation, and has developed several R&D projects in the fields of wind energy, ocean energy, biomass, biogas, geothermal energy and distributed wind power. All these years of effort have materialized in our 100 kW nED100 wind turbine, specially designed for distributed generation applications and which is now commercially available. Also, Norvento provides every service involved in the development of renewable energy and energy efficiency projects, including the integral maintenance of renewable energy facilities.



ORMAZABAL Velatia



Parque Tecnológico, Edif. 104 48170 Zamudio (Vizcaya)

T. +34 944 317 777

deo@ormazabal.com

www.ormazabal.com



As one of the leading manufacturers of medium voltage equipment worldwide, we provide our customers with solutions for electrical distribution networks and renewable energies that are based on high added-value products and services. As one of the leading manufacturers of medium voltage equipment worldwide, we provide our customers with solutions for electrical distribution networks and renewable energies that are based on high added-value products and services.

Our key success factor: experience and knowledge of Electrical Networks:

- Pioneer in extensible GIS switchgear.
- One of the four leading GIS switchgear supplier in the world.
- World's top 36 kV MV GIS switchgear manufacturer.
- Over 1,280,000 switchgear are distributing electricity in five continents.
- World's biggest prefabricated transformer substation manufacturer.
- More than 10,000 underground substations are installed worldwide.
- Leader of electricity supply to residential consumers in Spain, France and Germany.
- Protecting over 50% of the off-shore wind turbines in the world.

Milestones:

- 1.28 M distribution cubicles manufactured.
- More than 85,000 prefabricated transformer substations installed.
- More than 20 GW of Renewable projects worldwide.



C/ Los Amigos 8. Pol. Ind. Cortijo Real 11206 Algeciras (Cádiz)

T. +34 956 603 306

info@pablovegasl.es

www.pablovegasl.es



PABLO VEGA S.L. is a company specialising in industrial and naval electromechanics and the installation and maintenance of wind turbines. Since 2007, PABLO VEGA S.L. has belonged to ELINSA, a company which took over all the assets of the company incorporated in 1982.

Located in Algeciras (Cadiz), it comprises more than 2,000 m² of covered surface, equipped with gantry cranes and diverse necessary machinery for electromechanical repair: Test bed equipment, drying furnaces, painting and dripping booth, pressure cleaning, as well as any other necessary equipment or tool for the correct performance of the jobs.

PABLO VEGA S.L. provides specialised industrial services through three differential divisions:

Electromechanics Division: Specialising in the repair, winding and corrective, preventive and predictive maintenance of rotating electrical machines of any kind and of transformers.

Renewable Resources Division, including the wind and solar energy subdivisions:

- Installation. Electrical wiring and cable connecting. Start-up
- Assembly-Disassembling and Overall general corrective maintenance.
- Small correction maintenance. Design improvements (Retrofits).
- Overall maintenance and testing. Aligning, with own Optaling Smart equipment.
- Reinforcement personnel.
- Oil changes of the multiplier.
- Spare parts supply.

High-voltage Division: Operation and installations maintenance teams. Preventive and corrective maintenance, availability service, on duty personnel or failure notices to different substations of wind parks and other premises.

References: for over 400 wind turbines from different manufacturers, diverse type of power and technologies, as well as 24-hour control, operation and maintenance of high voltage infrastructures (20/66KV) at different wind parks. A large number of great corrective operations have been carried out for different technologies and premises in Spain and other European countries: Portugal, France, Italy, etc.



J. Pinilla Uson S.L.U.

Pinilla®

C/Veintitres De Abril, Pol. Ind. El Pilar, Naves 16-18 50014 Zaragoza

T. +34 976 570 500

correo@pinilla.com

www.pinilla.com / www.pinillawindtools.com



PINILLA was founded in 1980, beginning its activity by commercializing components and services in hydraulic, pneumatic and sealing. Nowadays, it consists of a staff of 30 professionals in a 3000m² facilities, with 20,000 available references. Since 2006 it collaborates with important technologists and O&M companies for the wind sector by supplying spare parts and safe and reliable equipments around the world.

Main products

Turn Gear: Hydro-mechanical equipments for blades assembly; Turning Tools For High Speed Shaft: they can turn in a controlled way the power train totally assembled through the brake disk (Set hub with blades+high speed shaft+generator). It allows a hub positioning in order to get inside, lock the wind turbine, inspection gearbox, bearings, axis alignments; Equipments for Voltage Cable Assembly and Installation. All of these equipment mentioned are available for different gearboxes and wind turbines. Nowadays, the development of several adapted tools for other size of windturbines is being carried out.



Procal Control S.A.

Avda. del Castillo, 182 – Entrepantia 24402 Ponferrada (León)

T. +34 987 418 084

info@procalcontrol.es

www.procalcontrol.es



ProcalControl, a company participated by ISQ group (www.isq-group.com), focuses its work in the verification and quality control of components in all the energetic industry.



Its extensive experience makes it become a reference in this sector, working for the different technologists and manufacturers at a world-wide level.

In this sector, ProcalControl offers services of evaluation, verification, examination and testing during the whole project development as well as the quality control in the manufacturing of components, operation, maintenance, revision and audit of the state of the wind turbines.

ProcalControl and the Investigation and Development laboratory of ISQ work together in the development of new advanced techniques for the control and automation of the inspection processes.



Promociones y Construcciones PYC Pryconsa S.A.



Glorieta Cuatro Caminos 6-7 28020 Madrid

T. +34 915 140 300

alabarga@pryconsa.es

www.pryconsa.es



Created in 1965, PRYCONSA is a well know Spanish real estate promoter, with a long track record of succesful residential buildings. Although the renewable energy branch is relatively young, it takes advantage of the promotion & financing know how of the company.

Started RES branch in 2007, PRYCONSA has experience in the development, feasibility analysis and investment in RES power plants. The group owns 3,65 MW in PV plants in Spain and has a portfolio of 285 MW in wind projects under development.

The target of PRYCONSA Renewables is the promotion of wind and photovoltaic power plants at international level, focusing on selected markets, and for third party or own investment purposes.



REVERGY offers an integrated service in Management, Audit and Technical Consultancy in an objective and independent manner. Quality, knowledge and professionalism are the values that identify our activities from project planning to finalization. We work to maximize the productivity of our client's installation and considerably reduce the risks that can affect production. We offer an integrated service that involves all the phases of a renewable energy project: planning, installation and Start up, Operation and Maintenance in the warranty period, Operation and Maintenance in the post warranty period.

Planning (Processing -Permission -Development): Resources analysis, Supplier analysis, Advising in the selection of supplier, Definition and scope of the contracts, Technical and Financial support in the selection of suppliers, Risk analysis and definition of responsibilities.

Supervision and management during installation and start up:

Supplier projects, Lack of resources during installation, installation, regulations for workplace risk prevention, CAP signature (provisional acceptance of the farm).

Supervision and management phase of the warranty period. Supervision and management during the operation and maintenance phase in the post-warranty period.



RISP – Renewable Innovative Sustainable Power



Pol. Ind. de Granadilla de Abona / Pol. 4, Z. 042, N. 13 38600 Granadilla de Abona (Tenerife)

T. +34 922 773 303 / +34 637 965 265

info@rispower.com

www.rispower.com



We are a multifunctional company of highly experienced engineers and professionals in renewable energies with a common passion: Energy Generation. RISP mission is to provide reliable and suitable equipment and systems for people to produce their own energy and to contribute to energy self-sufficiency. RISP offers a range of solutions and is working on new systems for the transition to the Distributed Energy Generation that will be the base of the Smart Power Generation. As well, we believe new economical growth will be based on new industrial energy generation.

RISP is located in Tenerife in the Canary Islands. Our own range of products is reliable, efficient and quiet and has been developed under strong winds in Canary Islands.

RISP is specialized in intelligent small wind turbine towers, in particular in Horizontal Axis Wind Turbine RISP 2kW and 12,5kW and Vertical Axis Wind Turbine RISP 2k W. The intelligent small wind turbine towers are designed to deliver maximum efficiency at the most common wind velocities at adequate locations with moderate wind resource.

In addition we offer other renewables energies equipment's as wind pumps, desalination plants, solar thermal energy, photovoltaics or ultrasonic wind sensors.

RISP adjust their products to customer requirements. Any of our products can be selected individually, as well as combined.



Grupo Técnico RIVI

Pol. El Plano, naves 828 P7 50430 María de Huerva (Zaragoza)

T. +34 976 126 585

comercial@rivi.net

www.rivi.es



Grupo Técnico RIVI is a company founded in 1991 mainly dedicated to design and manufacture lubrication systems and equipment.

Under premises as quality, efficiency and service, the staffs of the company intends to develop and optimize technical solutions together with customers, according to requirements of mechanical components to be lubricated. Nowadays, there are more than 5000 systems designed and manufactured by RIVITM, properly working worldwide.

RIVI's quality policies imply continuous and permanent enhancements, and therefore an internal quality system allows competitive improvements. The company also collaborates with most of authorized control agencies for inspections, as well as innovation on internal procedures are normalized in order to achieve a state-of-the-art management. It occurs by means of improvement of critical processes, administration tasks and support to technical innovation.

RIVI's General management look forward to supporting customers become more competitive and profitable, by means of reliable and efficient lubrication of their machinery and mechanism. Every directives aims to this long term target.

Business activities

Every heavy industrial market (i.e Pulp & Paper, Steel, Renewable Energy, Oil & Gas, Cement. . .) houses RIVI systems. Nowadays, wind turbines imply one of the main business activities in the company, regarding to design and manufacture lube systems and tools for greases and oils. Also retrofits and technical service worldwide are being requested more and more frequently, either for onshore and offshore WTGs.

Products & Solutions (for WTGs)

- Lube systems for Pitch gears
- Lube systems for Pitch bearings
- Lube systems for Yaw gears
- Lube systems for Yaw bearings
- Lube systems for Rotor bearings
- Lube systems for Generator bearings
- Recovery bottles for used grease
- Recovery systems for used grease
- Lube tools for manual lubrication
- Lube tools for semi-automatic lubrication
- Lube tools for grease transfer & refilling
- Engineering & Design
- Technical Service
- Training



Rodmon Energy Invest



Parque Científico Tecnológico de Gijón, Calle Los Prados 166 33203 Gijón

T. +34 627 779 298

info@rodmon.es

www.rodmonenergyinvest.com



Rodmon Group is the result of the mixed of different companies whose objective is the renewable energy management over the lifetime of the generation equipment and facilities, giving way to a sustainable business model and friendly environmental.

The main companies that represents Rodmon Group are, Rodmon Energy Invest and Rodmon Centro de Recuperación de Equipos para Energías Renovables.

Rodmon Energy Invest is the investment entity for the development of energy efficiency and development of energy self-sufficiency technologies from the use of clean technologies, in turn giving support through engineering services.

The aim of Rodmon Centro de Recuperación de Equipos para Energías Renovables is the remanufacturing of obsolete equipment or required to uninstall in order to extend its lifecycle and provide a new equipment with conditions of commercial guarantees equivalent to a newbrand.

- Investment and energy developments. Promotion and financial booking for energy facilities, solar and wind power energy resources. Feasibility studies, business and project development, including planning permission and construction project management.
- Industrial self-generation. Design, Energy Audits, and implementation of alternative energy for industrial facilities intended to decrease their total energy waste.
- Solar and Wind Renewable Energy. Design, construction, installation, commissioning, operation and maintenance of energy facilities, implementing all technologies at all kinds of electrical grids.
- Industrial Safety Engineering. Studies and safety engineering and construction safety management.
- Training and release, one of our main motivations is to educate and promote expertise in Industrial Safety and Environmental issues relating to the energy sector. Therefore, one of our approaches work is aimed at strengthening our organization through training workers in the sectors we are involved.



Ronergy Services S.L.

C/ García Ollolqui Nº6 Bajo 36201 Vigo

T. +34 986 607 235

administracion@ronergy.com

www.ronergy.com



Ronergy Services, S.L. is a specialized company that offers any kind of services related with the maintenance and preservation of wind turbine blades.

We are a young company but our teams are made up of high skilled people with many years of experience in the wind energy and more specifically in the production and repair of blades of the most relevant producers: LM Wind Power, Gamesa, Vestas, etc.

At present we are working all over the world, having around 20 work teams and we estimate to continue increasing our capacity.

Our services include everything related with the blade maintenance:

INSPECTIONS: both internal and external on the ground or with any elevation mean. Inspections during the assembly and previous to the guarantee end, etc.

Preventive maintenance: surface cleaning, conditioning, installation of leading edge protective means (PPT tapes or protective paints). Change of decorative vinyl tapes, towers and nacelles cleaning, etc.

Corrective maintenance repairing any kind of blade defects in coating, lay up, leading and trailing edges, light protection systems, tip brakes of blades stall, etc.

Instalation and repair of aerodinamic and protective systems like flaps, zig-zag tapes, spoilers, vortex generators, diverters, beaconing, etc.

Our references

We have been working in more than 120 wind farms in Spain and more than 60 wind farms in 16 countries all over the world.



Trigo 27, Nave 1, Pol. Ind. Polvoranca 28914 Leganés (Madrid)

T. +34 916 882 178

info@roxtec.es

www.roxtec.es



Swedish Roxtec Group is the world-leading provider of flexible modular-based cable and pipe seals. The company's invention for adaptability to cables and pipes of different sizes is called Multidiameter™. The solution is based on sealing modules with removable rubber layers, which allows for a perfect sealing, regardless of the outside dimension of the cable or pipe. The technology simplifies design and engineering, speeds up the installation process and reduces the need for stock, material and logistics. It also provides built-in spare capacity for easy retrofit and future upgrades. Roxtec serves and supports customers in more than 70 markets through 23 subsidiaries and a network of distributors.

Roxtec supplies sealing solutions for pipe and cables in the wind turbine as well as the grid connection both in onshore and offshore.



Royal & Sun Alliance Insurance



Torre Europa, Paseo de la Castellana 95, planta 19 28046 Madrid

T. +34 911 102 436

rsa.spain@eu.rsagroup.com

es.rsagroup.com



RSA GROUP has become one of the world's leading insurers of the Renewable Energy industry, with market-leading positions in many countries worldwide. Our international team of renewable energy underwriters have experience totalling over 600 years and can cover insurance needs in 150 countries.

With offices in Madrid and Barcelona, RSA SPAIN consists of a current team of 49 people with extensive experience across the industry.

Our products

- Transit - Marine Transit and Marine Delay in Start-up
- Construction - Contract Works, Advanced Loss of Profits and Liability covers
- Operation - Property All Risks, including Machinery breakdown, business Interruption and Liability covers

Our wealth of experience and expertise in the insurance and renewable energy markets allows us to offer insurance cover across the full customer experience, from the early shipment of material, through the construction phase and to the provision of Property, Business Interruption and Engineering covers during the operational life of the facilities.

With the largest number of Renewable Energy insurance experts in the world with over 100 people, our team specialise in a number of technologies, including:

- Wind energy - Onshore and Offshore
- Solar energy - Photovoltaics, Concentrated and
- Thermal installations
- Hydro energy
- Bio energy - Biomass, Biogas and Waste to Energy plants
- Wave and Tidal energy

RSA has a market share of approximately 15% and have areas of clear market leadership such as offshore wind, where we have an involvement in over 80% of all offshore wind farms.

RWE Innogy Aersa S.A.U.

Plaza de Catalunya 1, Edificio Triangle, Planta 3E, Barcelona

T. +34 932 702 800

www.rwe.com



RWE Innogy Aersa is a wholly-owned subsidiary of RWE Innogy, which pools the renewable energy expertise and power plants of the RWE Group. The company plans, builds and operates facilities generating power from renewable energies. RWE Innogy aims to vigorously grow renewable energies in Europe, with a strong focus on the onshore and offshore wind power businesses, as well as hydroelectric power generation. We are also pushing ahead with the development of new technologies for the future and as such operate biogas facilities. In addition, we support innovative companies in their start-up and growth phase by providing short-term finance.



Our mission statement and our corporate goals clearly define our action: To be a trusted partner for competitive renewable energy.

At present, we operate a power plant capacity of around 2,800 MW based on wind power, biomass, hydroelectric power and new technologies. We are, of course, especially strong in our home market in Germany, followed by the United Kingdom, Spain, Poland, Italy and the Netherlands. The asset base in Spain currently comprises 450 MW of onshore wind and 10 MW of mini-hydro plants. The company is also present in the Andasol-3 solar project.



Sálvora Vento S.L.



Parque Empresarial de Alvedro -Calle H- Nave 39 15180 Culleredo (La Coruña)

T. +34 981 205 132

info@salvoravento.com

www.salvoravento.com



Blade Inspection and repair services, including:

- Major repairs and retrofits (on ground, in-house and up-tower)
- End of warranty & post warranty inspections
- 3rd party blade consulting expertise
- Ultrasonic & Termographic inspections
- Touch-up repairs before wind-farm construction
- Training
- Manufacturing of other wind turbine composite components
- Supply of materials
- Logistics



Santos Maquinaria Eléctrica S.L.

C/ Sindicalismo, 13-15, Polígono Industrial Los Olivos 28906 Getafe (Madrid)

T. +34 914 683 500

direccion@santosmaquinaria.es

www.santosmaquinaria.es



Since 1967, and for over four decades, our main activity has been focused on repair and maintenance services, and sale of rotating electrical machinery. During this time our experienced group of technicians, quality policy, the use of best materials and state of art technology has allowed us to be one of the most representative companies in the industry of the repair of electrical machines.



We count with ISO 9001:2008 and ISO 14001:2004 certification and we are official authorized repair partner of the most prestigious brands.

Our activities Include:

- Repair, maintenance and sale of AC/DC, high and low voltage rotating electrical machines.
- Maintenance, Rewinding and repair of electrical motors and generators.
- Repair and maintenance of wind turbine gearboxes and gearboxes
- Machining and rebuilding of mechanical parts
- Manufacture of formed coils and Roebel bars up to 15 KV
- Insulation tests EDA III, vibration analysis, videoscope inspection, Tan Delta measurement, laser alignment, Surge & HI-POT test and thermography
- Dynamic Balancing
- Onsite services
- Load motor testing up to 1200 kW



We also manufacture and provide didactic equipment for engineering and technical education

Schaeffler Iberia S.L.U.



C/Foment 2; Pol. Pont Reixat 8960 Sant Just Desvern (Barcelona)

T. +34 934 803 410

marketing.es@schaeffler.com

www.schaeffler.es



For over 30 years, INA and FAG have designed and produced bearing arrangements for wind turbines. Schaeffler's close cooperation with designers, manufacturers and operators of wind turbines has resulted in unbeatable know-how. Bearing selection and documentation are backed up by sophisticated calculation methods.

Developed for wind power

- Cylindrical roller bearings with optimized rib contact are low friction and can support much higher axial loads than other bearings available on the market.
- Our high-capacity cylindrical roller bearings beat the competition due to the innovative cage geometry with high load ratings and low friction.
- Additional axial loads from the helical tooth gears usually have to be supported around the second planet stage.
- As direct bearing supports: FAG cylindrical roller bearings X-life without outer rings.

The raceway of this bearing is integrated in the planetary gear, the inner rings and rolling elements are black oxide coated.

- High-capacity FAG cylindrical roller bearings combine the advantages of full-complement bearings and cage-type bearings due to the particularly streamlined design of the cage.
- A combination of locating/non-locating bearings is advisable for the intermediate and output shafts. This combination comprises either two tapered rolling bearings in X arrangement and one cylindrical roller bearing or one four-point bearing and two cylindrical roller bearings.

Non-locating bearings: FAG tube roller bearings with Durotect® B coating. Cylindrical roller bearings with cages are usually used as non-locating bearings to achieve smooth kinematic movement conditions.

- Four-point contact ball bearings are also a proven low-friction locating bearing solution in gearboxes.

The range is rounded off by Condition Monitoring systems, lubricants, mounting and maintenance tools. Schaeffler Group Industrial helps to achieve low operating costs for wind turbines.

Segula Technologies

Vía Dos Castillas 33, Ed. Ática 7, Pl. baja 28224 Pozuelo de Alarcón (Madrid)

T. +34 917 991 112

www.segula.es



Since 2002, SEGULA Technologies is present in Spain. We are an engineering services company with more than 700 professionals working in Staffing, Consultancy, PLM and Fixed Price Projects.

It is based in 12 locations in Spain: Madrid (Pozuelo de Alarcon and Getafe), Barcelona, Vitoria, Zaragoza, Bilbao, Pamplona, Vigo, Valladolid and Puertollano, Cartagena, Cadiz closed to the main customers.

In 2012, SEGULA Technologies turnover in Spain was more than 44 million euros. More than 60% of our collaborators are university graduates. Our customers include leading companies in leading sectors: Windpower, aeronautical, automotive, energy, industry, IT, rail, etc. . .

SEGULA Technologies Group works with the most advanced applications: CATIA, UGS, I-DEAS, PRO-E, DELMIA, NASTRAN, Solid Edge, SolidWorks, ANSYS, ABAQUS and others, and we are also distributor and implementer of advanced engineering solutions like CATIA, DELMIA, ENOVIA and 3DVIA, as we are Dassault Systemes Partner. In 2010 we were Dassault Systemes Value Added Reseller leader in Spain. Furthermore, we are Dassault Certified PLM Educational Partner.



Servicios Renovables de Navarra S.L. (SERENA S.L.)



Polígono Industrial Mendikur N14 31160 Orkoien (Navarra)

T. +34 948 321 630

info@serenasl.com

www.serenasl.com



Serena is a specialized wind-sector services company which helps its customers obtain the maximum performance from renewable energies.

Our experience in this industry allows us to offer a comprehensive service which provides solutions to the needs of energy companies, manufacturers and promoters in all phases of their projects.

Serena signifies the very latest technology in the hands of specialized professionals, thus ensuring the highest quality service for our customers.

We have bases in Spain and USA.

Quality, environmental, and occupational health and safety certified.

Business activities

SERENA GEARBOX. Business unit specializing in gearboxes. Serena has technical specialists and with over 10 years experience you multiplied from leading manufacturers.

SERENA QUALITY. Since this unit Serena offers services related to Quality inspections at different stages of the construction and operation of a wind farm. These inspections are performed during the process of gathering and assembling the park, pre-commissioning, in order to guarantee.

SERENA "SAFETY BY CONAPRO". With certified technicians leading manufacturer of Epl's, Serena offers installation and annual review Lifelines regulatory, emergency Descenders, fall and all necessary safety equipment for work at height.

SERENA SERVICES. This unit encompasses the special maintenance services. With its specialized and multidisciplinary technical team carried out all kinds of Retrofits and Operation and Maintenance of wind farms.

Productos / Services

Serena offers its clients a global service, participating with them in all phases of the life projects.

Installation supervision.

Inspection of quality of wind turbines, prior to commissioning.

Supervision of installation and mounting of wind farms.

Elevator installation of assistive devices to the installation of lines from life.

Installation of meteorological towers rise.

Serena makes troubleshooting and replacement of different elements of the turbine in the corrective maintenance.

Preventive maintenance and operation of wind farms.

Maintenance predictive study and design.

Modifications to machine.

End of warranty quality audits.

SGS Tecnos S.A.

Trespaderne 29 28046 Madrid

T. +34 913 138 000

luisa.eugui@sgs.com

www.sgs.es



The SGS Group is the largest verification, testing and certification organisation in the world. Founded in 1878, the SGS Group brand is recognised as a global benchmark for the highest standards of expertise, quality and integrity. As a global entity, SGS operates a network of over 850 offices and 340 laboratories in 140 countries with over 48,000 employees.



SGS Industrial Services is a true global service provider for technical verification, inspection, testing and conformity assessment in industrial markets. Our core values of complete independence, transparency and integrity guide us in our mission to deliver world-class service to customers around the world.

Backed by the resources of the SGS Group, our teams of engineers and technicians work across the industry to ensure that vital needs for safety, quality and reliability during construction and operation are met. Accredited for numerous governmental regulations and national and international standards, Industrial Services is your local partner with global experience and connections. And we go further than that. Together with you we find the solution that best fits with your specific situation.

Industrial Services assures you that Quality and Performance of a product, construction or installation meet applicable requirements, whether they are regulatory, voluntary or client based. And we help to improve the Safety & Health conditions of employees and the environmental impact of activities. We do this by providing technical solutions that create added value for our clients and by helping to execute growth strategies, whether in existing local or in new geographical markets.

Sincro Mecánica S.L.



Ctra. de Cedeira Km 1,4 15570 Narón (A Coruña)

T. +34 981 397 090

sincromecanica@sincromecanica.es

www.sincromecanica.es



SINCRO MECÁNICA develops its activities in the wind energy sector: the manufacture, retrofitting and assembly of the power train systems for wind turbines. Conscious of the vital nature of the power train system in the wind farm sector, SINCRO MECÁNICA was established as a specific and specialized business unit in the field of comprehensive maintenance of this component, equipped with the infrastructure and technical, human and technological resources necessary in order to provide a differentiated service which is characterized by our permanent determination to add value to the wind farm production. The company provides direct services in the wind farm or at its industrial facility (more than 5.000 square meters) according to customer needs.

SINCRO MECÁNICA has developed and implemented a Management System integrating the three core aspects of our activity: quality, environment and the prevention of risk in the work place. This system has been developed in terms of the UNE-EN ISO 9001, UNE-EN ISO 14001 and OHSAS18001 standards, certified by Det Norske Veritas, an accredited certifying body.

Technical resources



Coordinate measuring up to 1,600 x 2,400 x 1,400 mm with a maximum error allowed nominal $3.5 + L / 250$ microns (DIN-EN ISO 10360) with a real deviation calibration of ± 1.0 .

Gear coordinate measurement ensuring quality level 5 DIN 3962.

Electrically closed loop test bench up to 1.5 MW at 100% load and 3 MW at 50% load.

Standard Level oil Cleaning: 16/15/12 according to ISO 4406.

Lifting capacity up to 50 t.



Over 2,000 m² available for storage of components, spare parts and in progress, designed to optimize the service logistics.

Vibration analysis of field and remote visual inspection.

Enterprise Resource Planning (ERP) to support all processes and functions.

Trained and specialized human resources.

Avda. de Manoteras, 46-bis, Edif. Delta Norte III, 3ª Pl. 28050 Madrid

T. +34 917 684 200

skf.esp@skf.com

www.skf.com

SKF



SKF Group is the leading global supplier of products, solutions and services within rolling bearings, seals, mechatronics, services and lubrication systems. Services include technical support, maintenance services, condition monitoring and training.

The SKF Group

SKF was founded in 1907 and grew at a rapid rate to become a global company. As early as 1920, the company was well established in Europe, North and Latin America, Asia and Africa. Today, SKF is represented in more than 130 countries. The company has more than 100 manufacturing sites and also sales companies supported by about 15,000 distributor locations. SKF also has a widely used e-business marketplace and an efficient global distribution system.

Three divisions, 40 segments

SKF does business mainly through three divisions: Industrial Division and Service Division, servicing industrial original equipment manufacturers (OEMs) and aftermarket customers respectively, and Automotive Division, servicing automotive OEMs and aftermarket customers. SKF operates in around 40 customer segments, whereof examples include cars and light trucks, wind energy, railway, machine tool, medical, food and beverage and paper industries.

Remember when efficient wind energy was just a vision?

Today, it's an established business. Competition is tough and the demands greater than ever. Staying at the technological forefront has become a key success factor.

At SKF, we are committed to driving the design and development of bearings, seals, condition monitoring systems, and lubrication systems that enable more cost-effective wind energy generation. Working together with original equipment manufacturers and wind farm operators, SKF engineers provide dedicated solutions that can optimize the reliability and performance of new and existing wind turbine designs.

SKF's dedicated wind turbine solution can help both turbine manufacturers and wind farm owners to:

- decrease warranty claims
- increase turbine performance and reliability
- reduce time to market
- reduce operating and maintenance costs
- customize solutions
- reduce lubricant consumption
- manufacture globally
- minimize environmental impact
- increase energy production
- reduce energy losses



Avenida Cerro del Águila 3, Edificio 2 Oficina 1C2 28703 Madrid

T. +34 916 588 204

info@solute.es

www.solute.es

solute



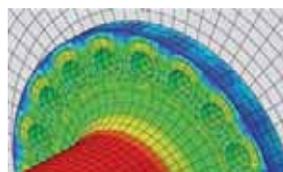
Solute is an engineering consulting company who delivers specific technical assistance for different industrial groups among which we can highlight automotive, railway, conventional energy, aerospace and, most intensely, in wind energy.

Ever since SOLUTE was founded it has been working for wind turbine manufacturers providing technical support in their approaches: product development, structural and mechanical analysis of components, product improvement and assessment during the certification process. Customized service is the only way to overall satisfaction.

Over time it has extended its business lines to supply services to other industry's stake holders who have a relevant role in the stages composing a wind farm development project: may those be wind resource and site assessment for wind farm promoters and developers, calculation of foundations, verification of the suitability of machines and project management for EPC contractors, audit and study of the facilities and components for O&M companies, etc.

It has established alliances and Joint Ventures with companies worldwide so as to develop its own wind farm constructions projects, resulting in appealing proposals all over North America, South America, Europe and Asia.

Regarding R&D&I development, SOLUTE has great interest in becoming one of the cutting edge players in the industry. It is aware of the fact that added value solutions enhance its consultancy services therefore it has embarked in an R&D&I project to develop its own in-house software program for wind resource assessment, mending the flaws other similar commercial products may have. This project is led by SOLUTE but has been possible only by partnering with several Spanish universities. In other ongoing initiatives SOLUTE has been invited to participate as a team member valued by its experience.



Solvento Servicios S.L.



Pol. Valdeconsejo C/Monte Perdido 14 Nave 2 50410 Cuarte de Huerva (Zaragoza)

T. +34 876 261 413

mci@solventosl.com

www.solventosl.com



Our company is involved in the renewable energy industry in projects world wide. Our services are divided in different sectors and functional areas. Solvento is offering "Turn-key" solutions for met-masts supply, installation, commisioning and service for new project development, power curve certification and continuos data acquisition in wind farms. We specialize in multi-technology wind turbine installation and commisioning. Solvento is offering O&M services for different wind turbines technologies and power range. We are offering O&M services for PV plants where we are specilizes in monitoring and control solutions. Our team is flexible, fast and available to travel and participate in projects all over the world. Eventhough Solvento is a young company our team has accumulated more than 10 years of experience in this bussiness.



Spares in Motion B.V.

PO Box 23456 3001 KL Rotterdam (The Netherlands)

T. +31 854 011 724

marc.huyzer@sparesinmotion.com

www.sparesinmotion.com



Spares in Motion is an online marketplace for the wind turbine aftermarket that directly connects buyers and sellers for:

- Wind turbine spare parts
- Repairs of wind turbine components
- Used and new Wind Turbines



Mission: Creating transparency and connecting supply and demand for the wind turbine aftermarket. Core values are independent, reliable and transparent.



Services Technologies Environnement Global S.L.



Calvo Sotelo, 12 - 2º B 50830 Villanueva de Gallego (Zaragoza)

T. +34 976 186 672

admin@ste-global.com

www.ste-global.com



STE GLOBAL is a company dedicated to supply services and products for renewable energies and telecommunication systems.

Working in the field of renewable wind energy and communication markets, we handle masts and towers which offer a large range of services and supplies, with the objective to fulfill our clients' needs all over the world. From assistance for the selection of sites, the furniture and installation of masts, maintenances on masts, dismantling, operations on mast following legal and safe security procedures, offering measurement systems and wind analysis, working with bankable experts in wind resource evaluations.



The STE GLOBAL towers catalog includes models of self-supporting and guyed lattice towers (request more information). Expressly we are a lattice towers specialist.

Since 10 years of experience STE GLOBAL has already worked on different countries and many type of site with many type of tower.

STE GLOBAL find other activity to develop and keep rising and working, even in the actual situation. It is in Senegal where the door of a new office are opened, expressly for the telecommunication market.

Our team, consisting of over 20 professionals, is open to all new challenges and continuously strives to offer products and services of quality. For any further information, please contact us at admin@ste-global.com



Sumelec Navarra S.L. – Silyco Renewables

Pol. Ind. Talluntxe II – Calle F, 12 31110 Noáin (Navarra)

T. +34 948 368 087

sumelec@sumelec.es

www.sumelec.es www.silyco.es

silyco
RENEWABLES



SOLUCIONES ELÉCTRICAS GLOBALES

sumelec
NAVARRA S.L.



Sumelec Navarra SL is a company working in the Electrical sector as engineering and technical wholesaler of electrical components. Created in 1975, we start working for the Renewable Energy sector in 1994. We have grown up alongside the sector itself learning, improving and innovating with our customers.

In this process we have learnt that an integral solution is an added value for our customers. So, we have joint the knowledge, expertise and services to offer vertical integration of electrical and electronic solutions to the green industry through Silyco Renewables.

We count with a team of persons highly qualified, motivated and committed.

Leading companies in the sector trusts on us as supplier of integrated solutions for the Renewable Energy Industry.

Sumelec Navarra SL is certified by Underwriters Laboratories (UL) to mark products manufactured under UL508A Industrial Control Panels and UL 817 Processed Wire. Besides it is certified with ISO 9001, ISO 14001 and OHSAS 18001.

Products

Being member of Silyco Renewables we are able to supply

- customized full protection relays
- over speed guard alarmas
- waterproof LED lamps for wind turbine indoor lighting
- wind speed heated sensors
- signal converters
- impedance interfaces
- UL/CSA special cables
- 2.500 high speed fuse protections
- over-voltage protection cabinets (IEC & UL)
- interconnection and auxiliary boxes
- GFCI receptacle boxes
- cable trays under dimensions and specifications
- cold climate kits
- wiring harnesses

Taiga Mistral Sgecr S.A.



Camino de la Zarzuela 15, Edif. B, 2ª planta 28023 Madrid

T. +34 913 576 310

cristina.tunon@taigamistral.com

www.taigamistral.com



Taiga Mistral is a private equity fund manager specialised in investing and managing renewable energy projects. Taiga currently manages over 200 MW in operation (wind, solar PV and hydro), as well as additional 40 MW under construction and a 200 MW portfolio scheduled for construction in the coming years.

Taiga Mistral is already present in many international markets through its offices in Lima, Peru (Latin-American office), Madrid, Spain (Spanish office) and Warsaw and Gdansk, Poland (Central Europe office), from which Taiga manages its investments in Peru, Costa Rica, Spain, Poland and Romania, as well as our clients' investments.

Taiga Operating Services, subsidiary of Taiga Mistral holding, offers full management services to all Taiga's investments as well as to third parties that have trusted Taiga as their investment manager.



Talleres Martínez S.A.

Pol. Industrial De Morero, Parcela 1.3 39611 Guarnizo (Cantabria)

T. +34 942 251 450

info@t-martinez.com

www.t-martinez.com



The core business of Talleres Martínez, S.A. is the precision machining of large components and assemblies, with a weight up to 25 tons, according to drawings supplied by the customers. Some examples of components that TM produces for Wind Energy Market are hubs, main frames, shafts, bearing housings and others. TM has more than 20 years of experience in the Wind Energy Market. It is located near the Port of Santander where it's possible to deliver components everywhere. In 2011 Talleres Martínez started its operations at its new facilities, where it has a facility covering of 10,000 m².

Milling and boring. Maximum machining capacity is X = 14.000 mm, Y = 4.000 mm

Vertical turning. Maximum machining capacity is Ø 5.050 x H = 3.500 mm

Talleres Martínez can supply the raw material (forging, casting, rolled or prefabricated structures in any material: steel, iron, duplex and super-duplex stainless steel, inconel, Cu-Ni-Al, etc.)

TM carries out the performing of the necessary controls to guarantee the quality of work: dimensional controls and non destructive examinations N.D.E. It also has Three-Dimensional measuring equipment, Faro Laser Tracker which guarantees the precision of hundredths.

TM carries out the "turnkey" projects, including the necessary complementary activities, according to customer drawings and specifications: Dimensional control with 3D measurement machine, Surface treatment (shot blasting, painting and metallization), Welding and weld overlay, Heat treatment, Electrochemical treatment (with chrome and nickel), Packaging and transport.

TM carries out repairs: performing of weld overlays, grinding, chrome plating, etc in damaged mechanical components such as crankshafts, shafts, engine blocks, antifriction bearings, etc to restore to design conditions.



TAMOIN S.L.U.



Ribera de Axpe 47 48950 Erandio (Vizcaya)

T. 944 35 65 50

tamoin@tamoin.com

www.tamoin.com/es/



TAMOIN, founded in 1956, is currently a group of companies evolving towards the specialization in industrial services focused on providing integrated solutions and aiming at contributing to the achievement of their Customers' objectives.

Wind Power Division is focused in rendering integral and independent industrial services through special solutions developed under 56-year of technical experience within Energy Industry.

Tamoin has developed AN INNOVATIVE AND COMPREHENSIVE SERVICE PROGRAM which has turned into a unique reference in the Sector:

- WIND SERVICE & MAINTENANCE PROGRAM:
- REDUCES THE COST OF MAINTENANCE
- REDUCES LCOE
- INCREASE OF IRR
- REDUCE THE DEPENDENCY ON THE OEM
- INCREASE OF THE CONTROL OF SPR'S ASSETS
- INCREASE THE OPERATIONAL RETURN OF EXPERIENCE

It includes:

- Facility Management
- Services
- Preventive and Predictive Maintenance
- Spare Parts and Components Management and Repair
- Add-on Services
- Blade inspection & repair
- Technical audits
- Mechanical & electrical inspections, etc.
- Projects
- Retrofits
- Solve Specific Damages
- Special maintenance programs
- More services:
- Supervision-Commissioning services of Wind Farms
- Support services
- Technical audits
- Blades inspection & repair
- Major corrective maintenance
- Supervision-Technical support
- Maintenance of Wind Farms

Experience summary

Currently TAMOIN has O & M contracts in force for 934 Mw in three different countries (Spain, Germany and Poland) and five different technologies: G47, G5X, G8x, GE1.5 and GE750.

Commissioning Supervision and Technical Audits developed in: UK, Spain, Italy, France, Hungary, Mexico, USA.



C/ Santa Susana 5 – Bajo A 33007 Oviedo

T. +34 985 246 547

jgranero@taxusmedioambiente.com

www.taxusmedioambiente.com



TAXUS is an innovative environmental consultancy firm that was born with the objective to satisfy a growing demand for environmental management and assessment services. To accomplish this goal, TAXUS conducts a variety of environmental and ecological studies which contribute not only to better environmental practices, but also facilitate progress toward sustainable development.

In order to meet these objectives, TAXUS employs a team of environmental specialists with ample field, laboratory, and professional experience. The TAXUS team includes licensed engineers, biologists and environmental scientists, specialized in ecology, environmental impact assessment and environmental management policies and protocol.

Focal Areas

In the field of Environmental Impact Assessment, TAXUS collaborates with its clients to ensure success at all stages of EIA development and application:

- In the implementation of a new development or activity, TAXUS facilitates the acquisition of required authorization and permits (Environmental Documents, Authorizations, EIA, etc.) and supports their respective follow-through during the transition process.
- During the application and integration of new permits and policies, TAXUS develops appropriate monitoring programs, revision strategies, management policies, and professional training.
- In the final stage, TAXUS proposes actions that are aimed at improving the overall environmental profile of the client through environmental restoration and recuperation projects.

Our services include

- Environmental Impact Assessment
- Design and Application of Environmental Monitoring Systems
- Avifauna Studies
- Quiroptero fauna Studies
- Studies about the Barrier Effect, Fragmentation and Ecological Connectivity Loss
- Cumulative or synergistic effects
- Mathematical models for the calculation of the probability of birdstrikes
- Acoustic Simulations and Studies
- Landscape ecology studies
- 3-D modelling
- Environmental Park Certification

Tecman S.L.



Ctra. de Cedeira Km 1,5 15570 Narón (A Coruña)

T. +34 981 397 283

tecman@tecman.com.es

www.tecman.com



TECMAN was established in 1992 as a company specializing in industrial maintenance and mechanical fitting, its strong points being a marked specialization and a human resources team involved in and committed to the company policy of a dedicated approach to the customer in providing a service.

Its main activities are:

- Integral operation and maintenance of wind parks
- Operation
- Preventive maintenance
- Small scale correctional maintenance
- Predictive maintenance
- Retrofitting

Also develops activities in preventive maintenance in industrial plants, naval sector and industrial supplies.

TECMAN is part of a multidisciplinary group of companies, enabling us to achieve an on-going optimization in our service by an exchange of synergies while providing a service that marks the difference, characterized by the sum of the group's capacities. The company is composed by trained and specialized human resources.

Convinced of the importance of innovation and the need to optimize the efficiency and efficacy of management, applying a decisive approach towards the customer and processes, TECMAN has developed and implemented a Management System integrating the three core aspects of our activity: quality, environment and the prevention of risk in the work place. This system has been developed in terms of the UNE-EN ISO 9001, UNE-EN ISO 14001 and OHSAS18001 standards, certified by Det Norske Veritas, an accredited certifying body.

TECMAN is also credited as follows:

- Fitting , dismantling and preservation of Tower Cranes.
- Preserver of Mobile self-driven Cranes.
- Installation and repair of pressure systems.
- Low voltage installer.
- Company Register of the Directorate General of Arms and Material (Ministry of Defence).
- Register of Construction Subcontractor Companies.



Fundación Tecnalia Research & Innovation

Geldo, Edificio 700 48160 Derio (Vizcaya)

T. +34 946 430 850

igone.ugalde@tecnalia.com

www.tecnalia.com



TECNALIA is an applied research centre with extensive technological competences and services related to wind energy in fields such as resource and power forecasting, off-shore wind foundation, high-power electronic converters and electrical machines, failure analysis & material testing, advanced manufacturing systems and operation and maintenance.

The wind energy market for TECNALIA is subject to the continuous development of networks and alliances with companies. These help to promote joint specialisation projects of differing characteristics and risk levels among businesses and our technology corporation. A recent example is the establishment of the company Nautilus Floating Solutions S.L. between TECNALIA, Astilleros Murueta, Velatia, Navantia and Vicinay Marin to create a floating platform for off-shore wind energy.

Within the scope of manufacture, a system has been created for monitoring the production process of composites which reduces processing times and improves energy efficiency.

In the field of electrical machines, a high-power (10 MW or higher) superconducting generator is being developed, the purpose of which is to reduce the weight and size of the machine.

Likewise, there are significant examples of technology transfer by TECNALIA to SMEs in the field of the electrical connection of marine structures.

As regards O&M, TECNALIA has extensive experience in the design of systems for monitoring structural health and condition, with highly flexible data collection systems and low maintenance costs (RACING BRAVO), geared towards extending wind farms lifetime. At present, we are introducing innovative systems for monitoring corrosion and predicting resources in harsh conditions such as the marine environment.

Along with the classic Electrical and Materials laboratories, TECNALIA has THOR, a singular infrastructure with huge experimental capacity under high voltages and power, especially useful for the testing of wind converters, HVDC and storage systems, among others.

Tesicnor S.L.



Pol. Industrial Mocholi, C/ Río Elorz, Nave 13 E 31110 Noain (Navarra)

T. +34 948 214 040

tesicnor@tesicnor.com / formacion@tesicnor.com

www.tesicnor.com



Tesicnor was born in 2002 from the experience of a group of highly qualified professionals in the field of security (preventive and predictive), prevention, quality and engineering.

Initially established as a company dedicated to providing engineering, consulting services and technical training in the control of occupational risk prevention and environment, during its career, Tesicnor SL has been defined and its services are directed to companies in the renewable energy sector (70%), manufacturing (20%) and construction (10%).

The H&S Training Department of Tesicnor offers to its customers different educational products and solutions taking into account their specific needs.

- Design and development of training materials.
- Traditional class-based training or online training.



Tresca Ingeniería S.A.

C/Estrella, 4 Bajo 24700 Astorga (León)

T. +34 987 616 637

info@tresca.es

www.tresca.es



Tresca Engineering was launched in 2001, offering our customer engineering and consultancy services in the industrial tertiary and residential sectors. Our mission is to provide an amenable service which is always focused on our customer's best interests. Our engineering services encompass project design and management for industrial buildings, electrical, installations, telecommunications, security, heating and cooling systems, fire protection, compressed air chemical products fuel etc.



Engineering 2.0

Tresca Engineering has reinvented the concept of consultancy as previously carried out by companies in the sector by integrating the existing services and adding the others that we have been offering to our customers for 11 years, in our role as an external engineering department. These services reveal the true value of engineering: epc; due diligence; legal assistance; hazard identification; investment assessment; procurement management; project management; legal engineering; accident management.



Vortex Factoria de Càlculs S.L. (Vortex)

VORTEX



Marie Curie 8-14 8042 Barcelona

T. +34 933 543 453

info@vortex.es

www.vortex.es



Vortex is a remote-computed modeling service that delivers on-demand estimations for the Wind & Site, Forecast, Solar and Offshore industries. Our service is easily accessible by means of a web-based interface where the users themselves initialize a model chain that runs in parallel at a massive cluster avoiding the need of expensive in-house investments in hardware or expertise.

Wind farm development is a challenging process where critical decisions have to be taken. Vortex Wind & Site solutions help you taking some of them via our web-based interface.

Once your wind farm has already been built, the past does not longer matter. Vortex Forecast services will asses you about next week, season or decades wind and power.

Sun radiation touches every site on Earth but scattered by many diffusive agents. Vortex helps you narrowing uncertainty on site-specific solar energy projects.

Ocean is hard but Metocean technology can be soft. Vortex brings you access to wind & waves estimations the easy way, direct from your desktop to our computer cluster.



Wind Power Transmissions S.A.

Avda. Santa Eulàlia, 260 8233 Terrassa (Barcelona)

T. +34 936 118 013

roger.marcos@wptservices.com

www.windpowertransmissions.com

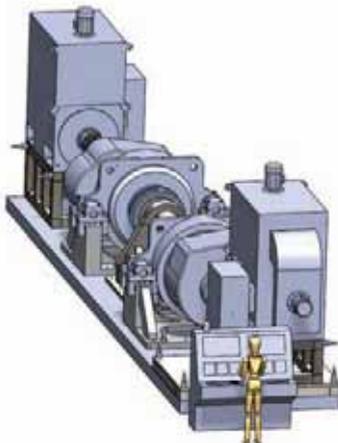


WPT is a service company focused in the Wind Energy industry, with more than 11 years of existence, which provides repair and predictive, preventive and corrective maintenance of Wind Turbines and Gearboxes of the more important manufacturers in the market (W-ENERGY, PUJOL MUNTALA, HANSEN, JAKE, etc. ...).



WPT consists of a powerful and professional team that covers all aspects related to the maintenance of wind farms. WPT has extensive experience in the sector and its facilities (in Manresa, near Barcelona) are perfectly sized and equipped to respond to customer needs (Test Benches, overhead cranes of 10 and 20Tn, among others ...).

WPT also performs inspections and audits of Wind Turbines, including vibration analysis, endoscopic camera inspections and repairs (when possible) in the Wind Turbine, anywhere in the world. Wind Power Transmissions is developing a new Test Bench for all type of Gearboxes up to 2MW. With this new Test Bench, the position of Wind Power Transmissions will be favorable to fulfill all the technical and warranties requirements of our customers.







Spanish Wind Energy Association

Serrano, 143. 28006 Madrid. Spain

www.aeelica.org