

RESULTS

Summing up FY2011

INTERVIEW

Ignacio Oficialdegui,
member of the
ACCIONA
WINDPOWERED
ANTARCTICA
expedition



DOSSIER

Renewables, the solution for sustainable mining

RESPECT FOR THE LAW AND ETHICAL VALUES RESPECT TOWARDS
PEOPLE EFFECTIVE EQUALITY COOPERATION AND DEDICATION
WORKPLACE HEALTH AND SAFETY PROTECTION OF CORPORATE
ASSETS IMAGE AND REPUTATION LOYALTY TO THE COMPANY AND
AVOIDANCE OF CONFLICTS OF INTEREST MEASURES AGAINST
BRIBERY AND CORRUPTION TREATMENT OF INFORMATION AND
KNOWLEDGE CUSTOMER RELATIONS RELATIONS WITH SUPPLIERS
CONTRACTORS AND COLLABORATORS RESPECT FOR THE
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AND DEDICATION WORKPLACE HEALTH AND SAFETY PROTECTION
OF CORPORATE ASSETS IMAGE AND REPUTATION LOYALTY TO

**this code is for everyone,
it provides the guidelines for our conduct**

Download:

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Route: The Company > Code of Conduct

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For all your queries



Experts in sharing

Comparing experiences and sharing life's teachings are vital when it comes to searching for solutions. And that's the way it is too in the business world, where theoretical knowledge and technical excellence need to be rounded-off with vision and the ability to turn things into a reality in order to guarantee a project's successful outcome.

Experience has been an essential component in ACCIONA's push for international expansion, showing us to be a company that's capable of turning the lessons of yesterday into a reality today, an organization ready and able to take on challenging projects such as tunnels and other underground works, raising the bar yet another notch in the field of construction.

Using our Corporate University as a way of constantly acquiring and updating knowledge also serves to create professional networks that provide mutual support and assistance in the face of the challenges that come with each new day. Technology is an ally in this task, and many new technologies are available that help us to extend the scope, interaction and dissemination of knowledge, such as the new 2.0 platform that will help to boost the emergence and sharing of proposals for improvements and innovations applied to our business activities.

Knowledge exchange is the breeding ground for synergies and new applications for solutions and progress achieved in other fields. A prime example is the ability to guarantee electricity supply on the basis of renewable energies, an alternative that is gaining ground in sustainable mining.

With the right frame of mind and the right resources for managing knowledge and for coming up with new solutions, going beyond the established limits becomes a veritable adventure, like the one Ignacio Oficialdegui and his team successfully completed by reaching the South Pole on board a sled driven exclusively by wind power. It's a success that combines innovation, sport and scientific research.

The ability to take stock of lessons well-learned is a value-added that enhances quality, reduces costs and neutralizes many risks, and knowing how to share knowledge is a trump card that helps us to be the best in the game.

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its push for growth
with a total 989
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ONLINE INFO



» www.acciona.com

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ACCIONA maintained its rate of investment

ACCIONA invested a total 989 million euros in FY2011, giving continuity to the Company's growth policy in the face of adverse circumstances.

The Company's investment efforts have supported the growth strategy in its three strategic areas. The lion's share of Group investments went to ACCIONA Energy, with a total 802 million euros aimed at boosting organic growth. ACCIONA Infrastructure followed, accounting for 275 million euros mainly for the concessions business. ACCIONA Agua and Environment Services accounted for 84 million euros' worth of investment. As for other divisions, one of the year's highlights was the gross divestment in

the Company's real estate business to the tune of 182 million euros, arising mainly from last October's sell-off of the Splau! shopping mall. This solid investment pace was combined with a policy aimed at containing debt, helping to consolidate ACCIONA's healthy financial position. Subsequently, the Company has partially financed its high investment levels by generating cash flow; this led to net debt at year-end 2011 of 6,991 million euros, a slight increase of 6.1% on December 2010.

ACCIONA FY2011 revenues came to

a total 6,646 million euros in 2011, 6.1% higher than the previous year's figure; EBITDA came to 1,312 million euros, 8.3% up on FY2010. Net attributable profit rose by 20.8% to 202 million euros.

These results display positive progress in the Company's strategic businesses, especially Energy and Infrastructure. ACCIONA Energy's results were lifted by the evolution of prices in Spain's national electricity market in 2011, the increased international wind load factor and the contribution of the 701MW installed in FY2011.



Results by division

- **ACCIONA Energy** closed FY 2011 with a 16.4% increase in EBITDA on 2010, taking its contribution to 72.6% of total group EBITDA. The division's revenues rose to 10.2%, amounting to 1,650 million euros. In 2011, ACCIONA Energy increased its installed capacity by 701MW, mainly in wind power (651MW) of which 604 were installed in international markets. ACCIONA's total installed capacity amounted to 8,211MW at 31st December 2011 (5,818MW national and 2,393MW international).
- **ACCIONA Infrastructure** closed FY2011 with an EBITDA of 215 million euros (5.6% up on 2010) while revenues rose by 12.9% to 3,522 million euros as a result of increased activity in the international

construction business. At December 31st 2011, the projects portfolio came to 6,497 million euros, a 10% dip on 2010. The weight of the international portfolio increased to 41% of the total, compared with the figure of 38% for 2010.

- The decrease in tendering activity in Spain and the slowdown in a number of international projects took their toll on **ACCIONA Agua and Environment Services**, with a 4.8% dip taking revenues to 697 million euros, and with EBITDA amounting to 55 million euros, 5 million down on 2010. The Agua portfolio at December 2011 stood at 4,783 million euros, 6% less than twelve months earlier.

As regards ACCIONA Infrastructure, the division's internationalization process has led to a 12.9% increase in revenues and EBITDA of 5.6%. This positive evolution of ACCIONA's businesses was also abetted by capital gains totaling 280 million

euros obtained from the rotation of the Company's assets, fundamentally owing to the sell-off of two concessions in Chile (the "Américo Vespucio Sur" and "Red Litoral Central" roadways and the Company's car park business). ■

ONLINE INFO



» <http://tv.acciona.com>
» www.acciona.com/pressroom

*ACCIONA's
results for
2011 showed
good progress
in all of the
Company's
strategic
businesses*

Income Statement Data

Net debt



EBITDA



Net attributable profit



■ 2010
■ 2011

IMAGINNE, the value of ideas in a network

From now on, ACCIONA employees can share their ideas with all their colleagues using IMAGINNE, a social network where every idea counts.

IMAGINNE is a social network for Open Innovation open to all ACCIONA employees. This web 2.0 platform is ready to receive ideas from any ACCIONA employee, share them and make the very most of them. Now, thanks to this new instrument, ideas, thoughts or suggestions that previously would have gone no further than the coffee machine have the chance to become a source of value for the Company.

With the roll-out of IMAGINNE there's no excuse to put off a proposal for an idea; ideas can be shared right away because, as the campaign slogan for this network states, "Any time is the right time for a great idea". And the whole package of "great ideas" extends from the simplest idea to the most ambitious ones. From a new way of doing things to solving a

problem. In short, it's all about innovation, a driver for change and a tool for continuous improvement across the Company.

The interactivity and feedback offered by this new tool set out to stimulate employees' motivation and creativity in an effort to make ACCIONA more competitive.

IMAGINNE, a space for innovation

The advantage of a 2.0 platform is that it creates a space for collaboration. It gives ACCIONA employees the chance to contribute their ideas and to see how their fellow workers discuss, support or rule them out; but, above all, it creates a network of mutual collaboration. Just as in Twitter, this new network will have its people-to-follow and its

followers. Channeling and exploiting the potential of millions of ideas from thousands of ACCIONA employees worldwide will be absolutely invaluable; the ideas will all feed off one another in a common space, all of them interconnected and working together. ACCIONA is fully aware that for IMAGINNE to be a success it will require an active participation by one and all, and each employee will need to feel a leading player on the stage. So taking part in IMAGINNE will have its rewards; there are plans to organize competitions and prizes; the people with the best proposals will be acknowledged publicly and will receive awards. If you want to be in the running, just go to www.accionaimaginne.com and register. Don't stand by the coffee-machine waiting for inspiration—it may come too late! Think now and tell everyone about it in IMAGINNE. As well as motivation and acknowledgement, you'll get the feeling that your ideas can be transformed into real value and that they are making the best possible contribution to your Company: ACCIONA. ■

To find out more, register at: www.accionaimaginne.com

7:30 am 🕒

THE MOST CREATIVE MOMENT OF THE DAY



Any moment is a good one for a great idea

Presenting IMAGINNE, a space to share your ideas. A place where an innovative idea, capable of creating value for ACCIONA, can come away with a reward.

Register now to find out more:

accionaimaginne.com



International expansion set on solid pillars

In 2011, ACCIONA continued to expand worldwide. To overcome tough international challenges, the Company has developed a number of global, sustainable and end-to-end solutions aimed at meeting society's most pressing needs regarding infrastructure, water and renewable energies.

ACCIONA's entire range of international operations is marked by the spirit of innovation, the will to collaborate, a commitment to local communities and, fundamentally, the desire to create shareholder value. The Company's push for international expansion is centered on eleven countries which, jointly, account for 40% of world GDP and 30% of the planet's population. Outside of Spain, ACCIONA's strategic markets are Brazil, Canada, Chile, Colombia, Mexico and USA in the Americas; Italy and Poland in

Europe; the United Arab Emirates in the Middle East, and Australia and India in the Asia-Pacific region.

In each of these markets, ACCIONA has set up its own teams to carry out its core activities (renewable energies, infrastructure and water), enabling the Company to offer its clients genuinely end-to-end and sustainable solutions. At the same time, ACCIONA has begun to use its solid footing in each of these countries as a bridgehead towards other, new markets with favorable growth prospects. ■

In 2011, ACCIONA strengthened its growth in foreign markets

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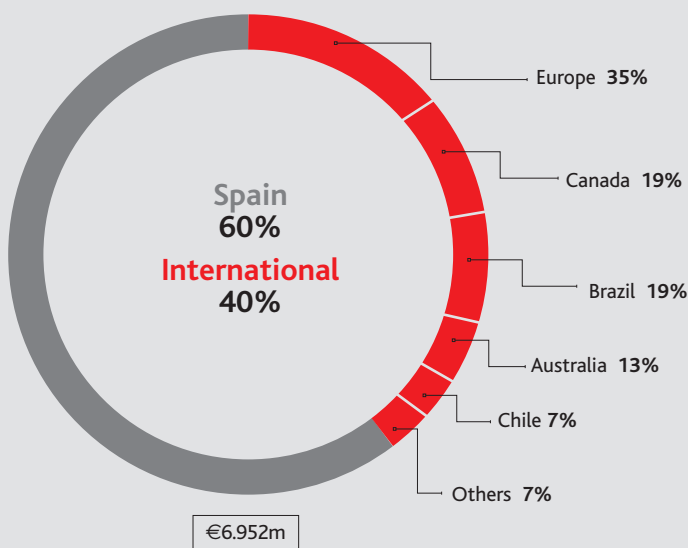
International expansion: The challenges

ACCIONA's Chief Global Business Development Officer, Fidel Andueza, has ample experience in international finance and investment and he uses it to identify and develop commercial and business opportunities that strengthen the Group's internationalization strategy. "ACCIONA is faced with the same challenges as any other company that's looking to expand beyond its borders. It has to become familiar with different business models and other country's customs; overcome entry barriers to attractive markets such as Brazil, India or USA, and take on huge competition from local and foreign companies, which squeezes

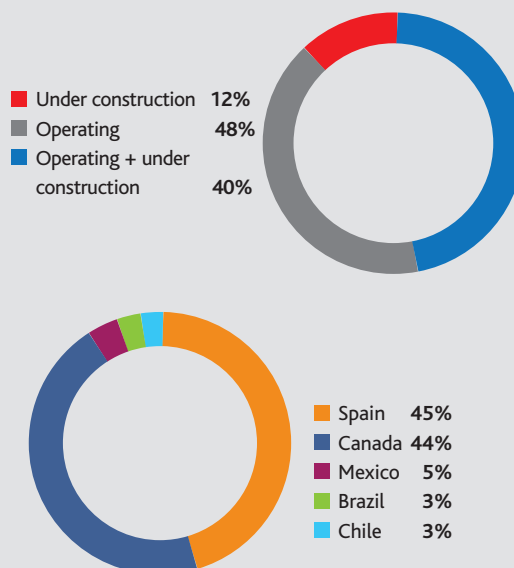
margins. That's why we make permanent efforts to balance growth and profitability".

"ACCIONA has taken measures to meet these challenges: it attempts to be more and more 'local' by taking on qualified local staff, it takes advantage of existing platforms to open the door for all of the Group's divisions, and moves into new areas where ACCIONA has something unique to offer. This strategy has worked well in Australia, for example, where our wealth of experience in energy and our local management team have helped our infrastructures and water arms to break into a market that foreign companies find difficult to enter."

CONSTRUCTION BACKLOG 9M 2011



CONCESSIONS: BOOK VALUE (EUROS1.414M)



ACCIONA INFRASTRUCTURE

In 2011 ACCIONA Infrastructure continued to expand internationally owing to its strong presence in its traditional markets and thanks to its entry into new, highly dynamic markets. At year-end, the international area contributed 41% of the construction portfolio, while contracts obtained outside of Spain exceeded 50% of the division's overall figure.

Last year, the division switched to new strategic focus: specialization in sectors with a strong technological component, such as ports projects and auxiliary work for the mining industry.

We bring considerable value-added to these sectors thanks to our technological capacity, our

R&D department's innovations and ACCIONA Engineering's wealth of experience, in conjunction with other ACCIONA divisions.

This positive use of our abilities has helped the Company to achieve a solid international presence, leading to new contracts in 2011 in Brazil, Chile and Colombia. A prime example is the 400 million euro project in Brazil's Açu super-port, which is set to become Latin America's biggest shipyard and in which ACCIONA Infrastructure will provide engineering, construction and design. Other important projects include a deal with Chile's CAP, in cooperation with ACCIONA Agua, and three water contracts in Colombia, just a year after opening our offices in Bogota.

In 2011 we shifted our focus to specializing in projects involving a strong technological component, innovation and engineering

ACCIONA ENERGY

In 2011, a year of strong investment activity, ACCIONA's renewables activities were carried out mainly in overseas markets. Eighty-six percent of the Company's 701 MW of installed capacity were located outside of Spain. The figure is even higher for wind power: 93% of a total 656 MW of new installed capacity.

As a result, overseas assets, in accumulated terms, rose by five points in ACCIONA's renewables mix from 24% to 29%, coming to 2,393 MW; and saw a 6-point increase in wind power, from 27% to 33%, totaling 2,283 MW.

In 2011, ACCIONA installed power in twelve wind farms, eight of which were located overseas: three in Mexico (306 MW) and one each in

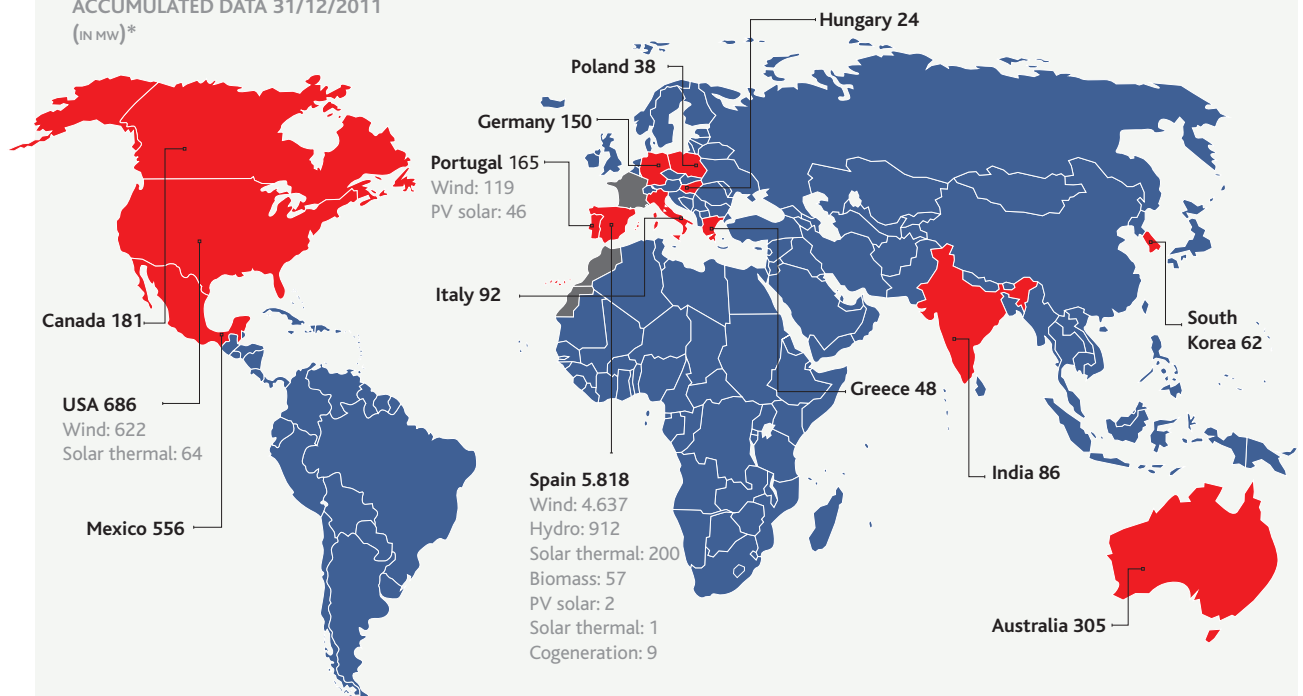
USA (132 MW), India (56.1 MW), Australia (46.5 MW), Canada (40.5 MW) and Poland (38 MW).

In Spain, the Company installed 46.5 MW in three wind farms, as well as bringing a 50 MW solar thermal (CSP) plant into operation.

At year-end 2011, ACCIONA had a total 8,202 MW of installed capacity in renewable energies (not including 9 MW in co-generation plants) of which 5,809 MW are located in Spain and 2,393 MW are to be found in other countries. In wind power, the Company has a total 6,920 MW, of which 4,637 MW are located in Spain and 2,283 MW are overseas. In other renewables, ACCIONA has 64 MW of solar thermal (CSP) in the US and 45.8 MW of PV solar in Portugal.

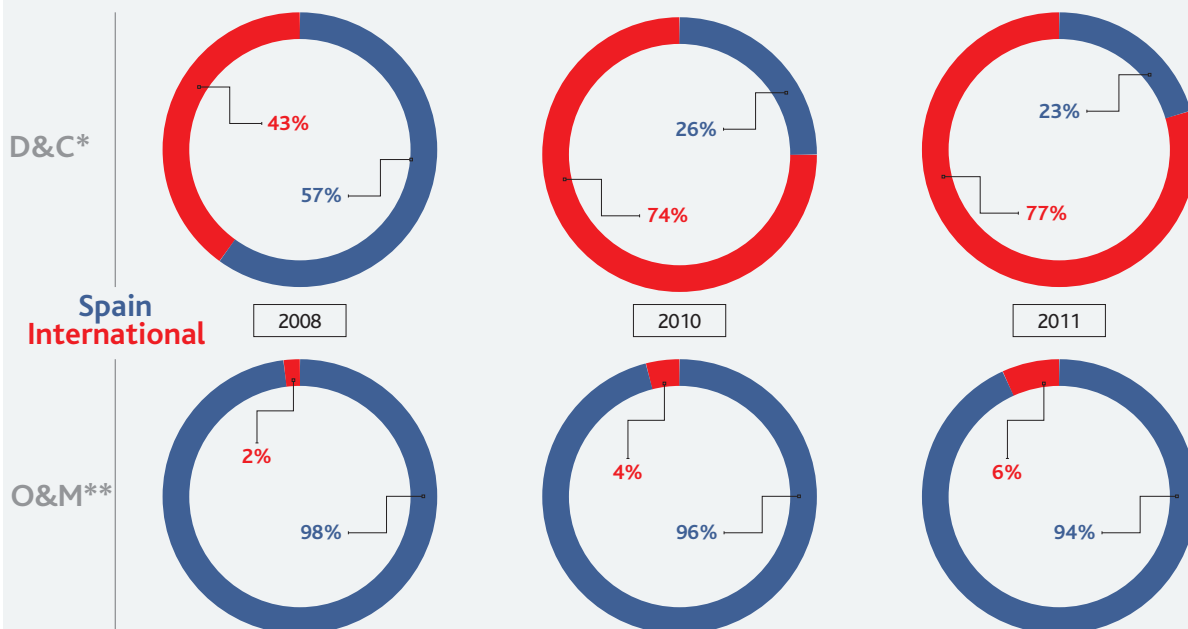
86% of the renewable energies ACCIONA Energy installed in 2011 were located outside of Spain

ACCUMULATED DATA 31/12/2011
(IN MW)*



* Unless otherwise specified, the installation referred to is wind power.

ACCIONA AGUA INTERNATIONAL WATER MARKET SHARE 2011



ACCIONA AGUA

ACCIONA Agua delivers the water needs of 50 million people in 20 countries. Its order book was worth 5,071 million euros in October 2011 with more than 300 wastewater treatment projects representing a total capacity of 10.5 cubic meters a day (m^3/d), enough to serve a population equivalent of 46.1 million people.

ACCIONA Agua is currently building water treatment plants (WTPs) in Australia, Chile, the Dominican Republic, Peru, Brazil, Venezuela, Algeria and Egypt, as well as the world's biggest wastewater treatment plant ($42 \text{ m}^3/\text{s}$) in the State of Mexico.

ACCIONA's water arm has more

than 110 WTPs on its books, with a combined capacity of more than 6.5 million m^3/d , capable of servicing more than 23.2 million people; more than 70 desalination plants, with an installed capacity of 1.8 million m^3/d , and has been awarded more than 80 Operation and Maintenance contracts representing a total treatment capacity of 4.2 m^3/d .

In 2012, ACCIONA Agua is set to target more countries for international expansion: the most noteworthy is India, where we already have offices and a commercial team. Recently, ACCIONA was awarded the Medellin (Colombia) WTP, one of the most important of its kind in Latin America.

*ACCIONA
Agua delivers
the water
needs of 50
million people
in 20 countries*

* D&C: Design and Construction

** O&M: Operation and Maintenance



An ACCIONA solar thermal plant in Alvarado (Badajoz, Spain).

Mining and renewables, a winning tandem for the future

Mining operations are energy- and emissions-intensive. Renewable energy can help to solve the problem. Despite their different energy profiles, Chile and Australia both have important mining sectors that require a more sustainable energy supply.

The mining sector is a point of reference in terms of energy consumption and emissions.

Mining's large-scale operations require a permanent and competitively-priced energy supply; at the same time, they need to reduce their emissions while increasing their production rate. Situations differ across the globe, but they all have something in common: in the short, medium and long term, depending on individual cases, the mining industry needs to step up its use of clean energy. ACCIONA has what it takes, now and in the future, to help solve this problem.

Chile is a prime example of the mining-renewables tandem. In Chile mining companies, mainly copper, account for one third of all national energy consumption and up to 80% in the regions in which their operations have a larger presence. In revenue terms, they are major companies in a sector in which global demand is continually on the increase and outstripping availability, which leads to recurring rises in mineral export prices.

The need for new mining facilities to meet demand will lead to increased energy consumption in Chile—the forecast is for a 52% rise in the period 2008-2020. The question now is how to cover the increasing

demand in an efficient and profitable way without increasing carbon emissions, which may penalize the country and its mining sector in the international community.

This is where renewable energies come into their own—and on an ever-increasing scale. Renewables are increasingly more efficient and, with costs on the wane, they are set to compete with the prices of traditional energies (currently high in Chile owing to the country's particular energy mix) which are based more and more on coal and fuel oil after a series of failed attempts at obtaining low-priced gas from Argentina.

The situation in Australia—another global mining power—is different. The country is not faced with energy supply problems. But it does need to lay down the foundations for a greater presence of renewables in a country where more than 90% of energy production is based on fossil fuels. Mining companies contribute to this situation by accounting for 9% of Australia's total energy demand.

Introducing sector-specific renewable energy solutions in Chile, Australia and other countries, will help the global mining industry to join the international trend towards making the planet more sustainable. ■

ACCIONA delivers renewable energy solutions for the mining industry

ONLINE INFO



» <http://www.accionna.com/pressroom/indepth>
» <http://tv.accionna.com>

Chile's Minister of Energy and the President of the Senate, accompanied by the Ambassador and representatives of the country's mining industry, visited ACCIONA's renewables facilities in Spain. They were welcomed at the Company's head offices (Navarre, Spain) by the Managing Director of ACCIONA Energy, Rafael Mateo.



CHILE: Mining is beset by energy-supply problems and high prices

At the outset of the last decade, Chile was forced to make sudden changes to its energy matrix following the announcement that gas supplies from Argentina, which had initially been expected to cover a large part of Chile's needs and at low prices, would not be available even remotely in the amounts foreseen. Chile opted for coal, built coal-fired power stations and switched to fuel oil in power stations that had been initially designed to run on gas.

In 2010, coal-based generation in the country's main energy systems—the *Sistema Interconectado del Norte Grande* (SING, for short) and the *Sistema Interconectado Central* (SIC)—accounted for 30% of total demand; gas accounted for 20% and oil 12%. Hydro production came to 35% and other renewables provided 3%. In all, 62% of the total demand was met by fossil fuels, a figure that in the regions covered by the SING system (northern Chile, where most of the country's copper mining industry is concentrated) comes to 97% owing to an almost total lack of hydro production.

As a result, energy prices have risen and so too have emissions. It's a situation that calls for medium- and long-term solutions.

Renewables as an alternative

Mining companies are building new coal-fired power stations; they account for 62% of the requested power for new facilities over the next few years.

From an environmental point-of-view, hopes currently rest on the possibility that the remaining 38% of projects will be renewables-based.

Some of those initiatives will be

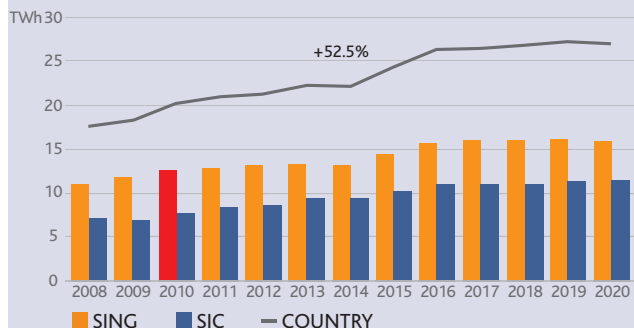
carried out by mining companies that have already set up wind farms aimed at reducing their emissions and which have introduced policies that set out to make their processes more energy-efficient. But the country's enormous possibilities in terms of making the most of its solar resources—solar radiation rates in Northern Chile, where most of the country's copper mining is located, are among the highest anywhere on the planet—open the door to new alternatives as a way of guaranteeing the mining industry's energy needs.

Solar thermal energy with heat storage: an option for the sector

Solar thermal technology coupled with thermal storage devices are one of the renewables options with the greatest potential for development in Chile and other countries. In this type of installations, a fluid, usually nitrate salts with a large capacity for absorbing heat, is heated to extremely high temperatures by solar radiation and the heat is accumulated in a storage tank. From there, the fluid goes to an interchange where the water is turned into steam and makes its way to a turbine connected to a generator that produces electricity.

Thanks to this thermal storage system, energy can be produced even in the absence of radiation and for several hours at a time, which is key to ensuring an uninterrupted energy supply. Moreover, the estimated price will not be far off the real price per kWh paid by Chile's mining companies for energy produced in coal- or gas-fired power stations.

PROJECTED ELECTRICITY CONSUMPTION BY COPPER MINING OPERATIONS, UNTIL 2020

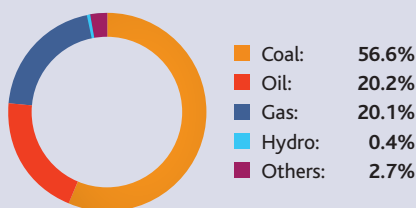


"Electrical energy demand in Chile by copper mining operations and supply-security prospects". Chilean Copper Commission, Studies Department.

MINING, BY THE NUMBERS

- Chile is **the world's number one copper producer** (33% of the world market).
- Copper prices rose by **49% in 2010**.
- **Chilean copper production** is expected to **rise by 40%** between 2008 and 2020.
- Mining companies' **electricity consumption** is set to **rise by 52%** between 2008 and 2020.
- **Copper mining** accounts for **85% of electricity consumption** in the regions covered by the SING system, namely Antofagasta, Atacama and Tarapacá (34% of the total in Chile).
- Copper-mining generated **GHG emissions** registered a **95% increase** between 2001 and 2009.

ELECTRICITY GENERATION THE SING SYSTEM (NORTH), BY SOURCES



"Chile's Energy Matrix: Precedents and Future Challenges". Energy Ministry, Chile.

ELECTRICITY CONSUMPTION

(THE NORTHERN HALF OF CHILE, BY REGIONS)
Consumption data (GWh)

TARAPACÁ*

Total consumption
2,351
Copper mining
64.8%

ANTOFAGASTA*

Total consumption
11,346
Copper mining
85.5%

ATACAMA*

Total consumption
3,107
Copper mining
45.1%

COQUIMBO**

Total consumption
1,964
Copper mining
53%

VALPARAÍSO**

Total consumption
4,370
Copper mining
22.2%

METROPOLITANA**

Total consumption
16,997
Copper mining
21.6%

O'HIGGINS**

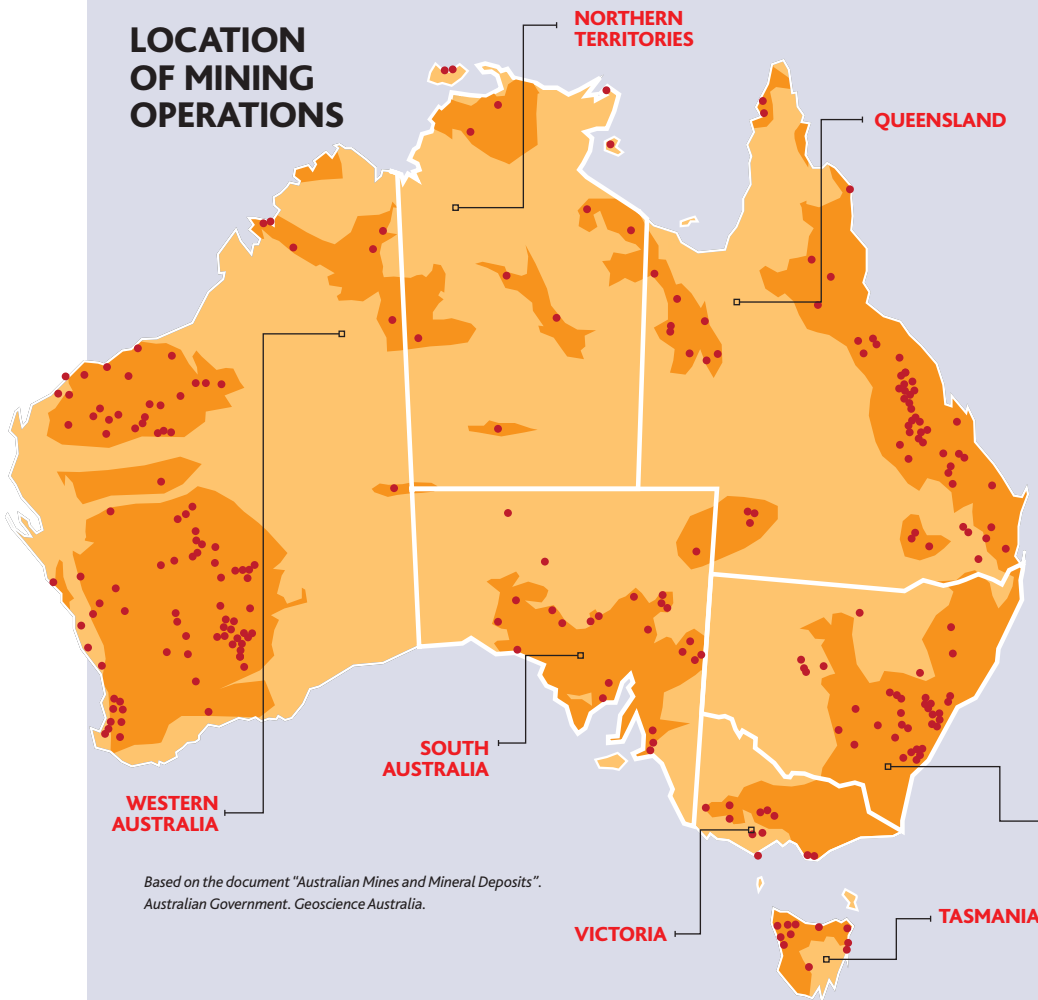
Total consumption
3,695
Copper mining
34.6%

"Energy Distribution and Consumption in Chile". National Institute of Statistics; Information Bulletin.

* Norte Grande Interconnected System (SING)

** Norte Central Interconnected System (SIC)

LOCATION OF MINING OPERATIONS

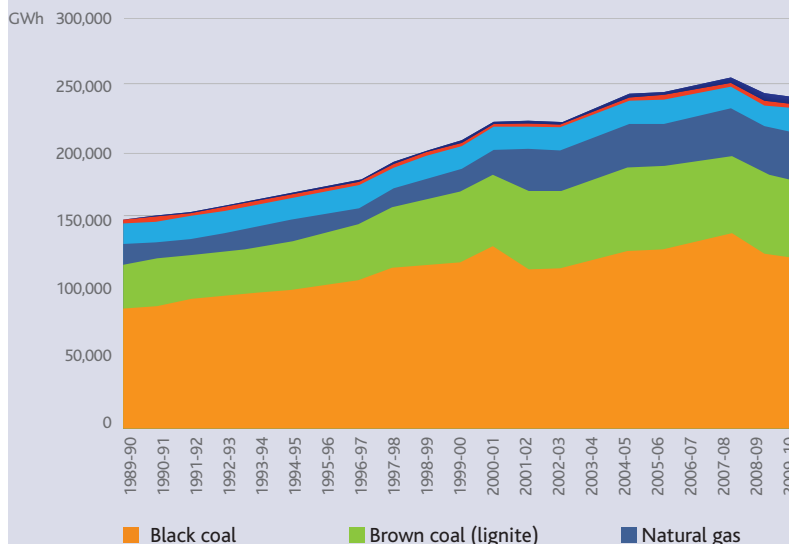


Based on the document "Australian Mines and Mineral Deposits".
Australian Government. Geoscience Australia.

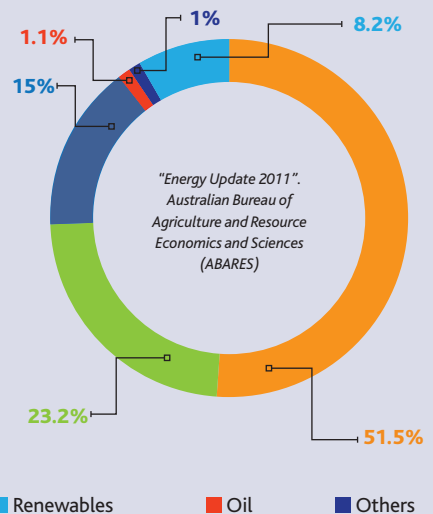
AUSTRALIA'S MINING INDUSTRY, IN FIGURES

- Australia is the **world's number one coal exporter** (and the number four producer behind China, the US and India).
- It is the **world's number two producer of gold, nickel and zinc**, the number one producer of opals and the number three uranium and iron producer.
- It has the **world's third-largest diamond reserves**, and copper-, silver- and bauxite-mining operations.
- Australia's mining industry accounts for **5.6% of GDP** and **35% of the country's exports**.
- Mining companies consume **9.2% of the country's total energy**.

ELECTRICITY PRODUCTION LEVELS, BY SOURCE (1989-2010)



ELECTRICITY CONSUMPTION DISTRIBUTION



AUSTRALIA:

A coal-based model with low energy prices

Australia is another leading mining country, but its energy supply problems differ to those of Chile. Electricity prices are low and supply is not at risk. However, regulations have been in place for some time now that set out to provide a boost for renewables solutions aimed at reducing GHG emissions country-wide.

In Australia 75% of electricity generation is coal-based, 15% comes from gas and 1% from oil, which means that more than 90% of the country's electricity system relies on fossil fuels. As a result, the country has a large carbon footprint and the Australian authorities have set their sights on a significant reduction in emissions levels. However, renewables-based energy production in Australia, mainly hydro, still meets only 8% of the country's energy demand.

A carbon emission tax

In an effort to advance towards a less coal-dependent energy model, the Australian authorities have set a renewables-based electricity target of 20% of total electricity production in 2020 and have set

up a range of support mechanisms such as the trading of green energy credits or a carbon emission tax slated for July 2012. The tax is expected to run for three to five years and will be accompanied by the introduction of an emissions trading scheme similar to the European Union's.

There's no doubt that the carbon emission tax will hit the mining companies energy costs given that most of them rely on fuel-oil or gas for independent off-grid systems.

The upward trend in fossil fuel

prices, aggravated by the carbon emission tax, is in marked contrast to the trend in the costs of renewables technologies, which are expected to compete with traditional energies shortly and, in some cases, are already doing so.

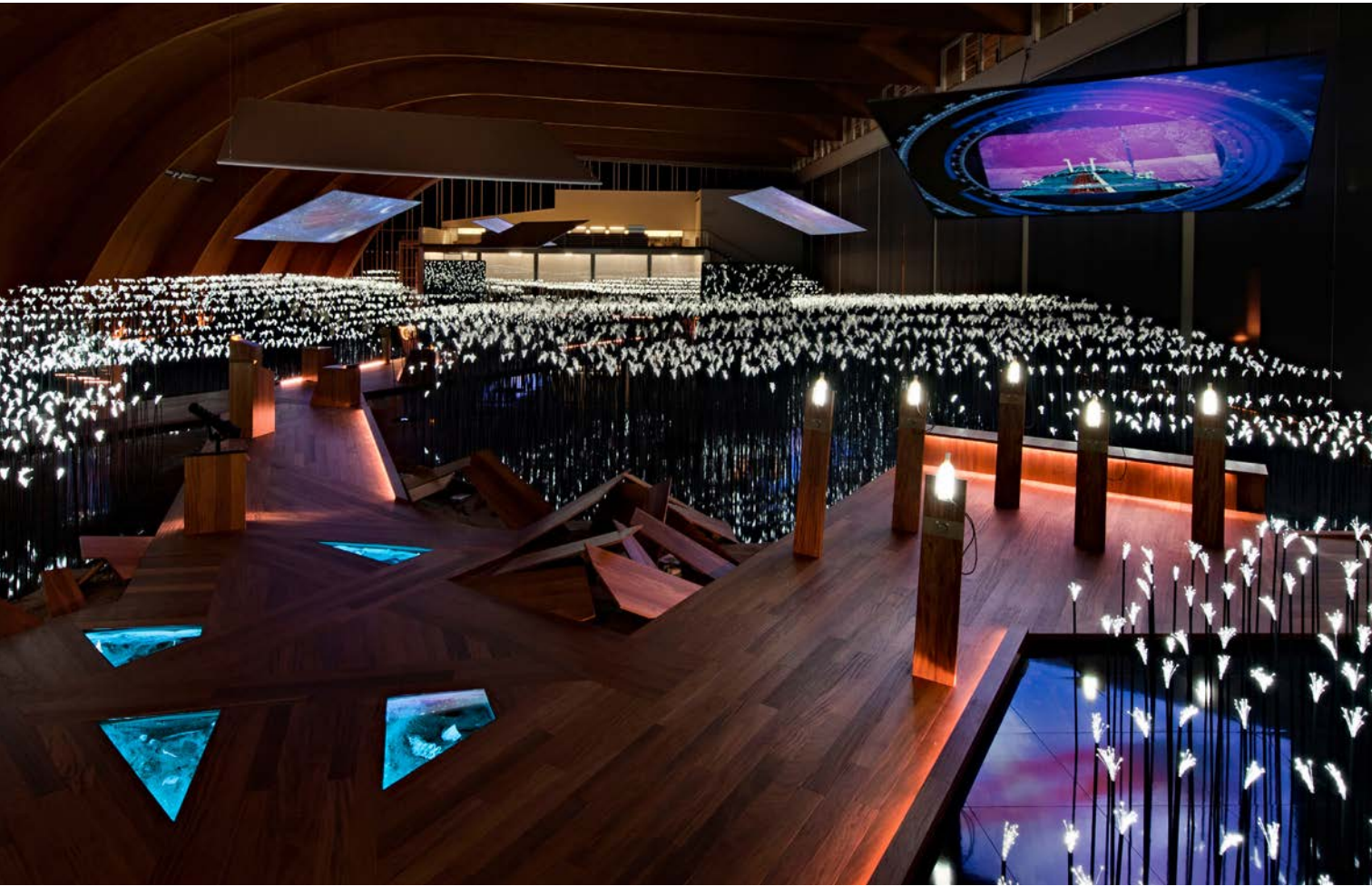
Similarly, the modular character of renewable energies makes them even more suitable for mining activities given that they allow companies to scale the installed potential according to an operation's needs with independent, off-grid solutions.

Renewables alternatives for Australia's mining industry

Technology offers many possibilities of bringing clean energy solutions to Australia's mining industry, all of which are grid-connectable and adaptable to the availability of renewable resources in each region, namely wind in southern parts of Australia and solar in most of the country.

Along with wind power generation for grid-connected systems, there are other innovative options for independent systems such as thermal electric plants with molten salt storage devices; hybrid solar solutions (combined) with gas-fired generating plants (more than 5,000 MW's worth have come into service in high solar radiation areas); and, finally, the possibility of combining thermal solar facilities with new-generation plants that run on coal seam gas (around 2,550 MW's worth of projects are currently registered).

All of these are ways of bringing technological solutions to Australia's mining industry which is particularly important in the states of Western Australia and Queensland and also relevant in New South Wales and South Australia.



Sailing towards history

Twenty years after taking center stage at the 1992 Seville Expo, the Navigation Pavilion morphs into one of the Andalusian capital's major exhibitions and congress venues.

Back in 1992, the Navigation Pavilion was hailed as the Seville World Fair's most innovative construction. Twenty years on, the building stands as a major exhibitions and congress center looking out across the Guadalquivir River.

True to the company's line of interactive museography, GPD has come up with a permanent exhibition that blends seamlessly with the pavilion's original architecture. The complexity of transatlantic navigation and the adventures of the seafarers who sailed

Museum of Jewish History and Tolerance Center

Thanks to a collaboration agreement, General de Producciones y Diseño S.A. (GPD) and Ralph Appelbaum Associates Incorporated have teamed up to work on the Museum of Jewish History and Tolerance Center. The Museum, with more than 3,000m² of floor space, will be located in Moscow, in the former Bakhmetevsky bus garage, designed in 1926 by the architect Konstantin Melnikov, the leading figure of Russia's Constructivist movement in the 20th century.



the oceans in search of new horizons combine to tell an exciting tale (and with no architectural barriers).

The visitor's senses are stimulated by a sea of LED lighting, an ocean of infinite light that illuminates the navigators' exploits. Immersed in this tale, visitors learn about the real-life, flesh-and-blood men and women who took part in these adventures and are privy to their hopes and desires.

The large wave of light carries the visitor towards a mural that recounts the history of navigation. The planks of a colossal ship make up the graphic outer skin that tells the visitor

about the ingenuity and efforts of men and women who used passion and technology to overcome their fear of the sea. The mural is made up of images, texts and three-dimensional objects enveloped in a blue lyricism from beginning to end.

This narrative sequence ends with the space dedicated to Life on Board. This is the very heart of the pavilion, a place aimed at showing young and aspiring mariners the workings of a vessel. This interactive installation combines information and fun, and lets visitors "take" the ship's wheel or "handle" the rigging, two skills essential to governing a sailing ship.

The essence of this video game lies in experimentation and learning.

The crowning moment of this journey across time and waters is a tribute to Seville and the river that defines the city. Both are shown in a succession of interactive stations called "Historic Visions" which go through the oldest artistic and technical renderings of a city in which the port has always been and still continues to be its guiding light. ■

ONLINE INFO



» www.gpdsa.es

» www.pabellondelanavegacion.es

Quality and care for the environment

The Spanish cities of Cáceres and Ubeda, both declared World Heritage Cities, are also municipalities where ACCIONA Agua manages the Integrated Water Cycle.



Ubeda city council, in the Spanish province of Jaen, selected ACCIONA Agua to handle its municipal services for residential drinking water, the sewer system and wastewater treatment.

The brief calls for management of proprietary water capture (San Bartolomé), distribution and maintenance of drinking water, maintenance of 106km of sewers, three

compact WTPs (Donadío, Solano and Veracruz), storage of 18,710m³ drinking water and a planned WTP with a daily capacity of 12,696 m³ with tertiary processing for reuse of water for irrigation. All of these infrastructures service a population of 35.649. The project will run for a 25-year period requiring an investment of one million euros in infrastructures and 750,000 euros in technological innovation.



ACCIONA Agua will run Ubeda's public drinking-water services for at least 25 years

As well as in Ubeda, as of January 2012 ACCIONA Agua runs the municipal services for residential drinking water, the sewer system and wastewater treatment for the city of Cáceres.

By taking on this contract ACCIONA Agua has set itself a clear priority, which is none other than to deliver an excellent service for the people of Cáceres. The Company has undertaken to im- ►



Innovation in Cáceres

ACCIONA has taken on a commitment to the people of Cáceres to use cutting-edge technological innovation to manage the integrated water cycle:

Geographic Information Systems (GIS) to draw up an accurate map of the ground below the asphalt, and to obtain detailed information on the mesh of drinking water pipelines, pipe diameters and their quality and materials. It is worth noting that Cáceres has 319km of pipelines—more than the distance separating Cáceres and Madrid!

Night-time water networks leakage detection

using microphones that pick up and record sounds made by leakage and then pinpoint leakage points accurately, avoiding potential and imminent faults and failure.

In addition, ACCIONA will carry out improvement work on pipelines and start to clean out wastewater pipes; it will also use remote control equipment to take pressure readings and check chlorine levels.

ACCIONA will make cutting-edge technology available to its users



Human Heritage Cities

Caceres has been a Human Heritage City for the past 26 years and is Europe's third most important monumental site. This land, which was inhabited as early as the Late Stone Age, mirrors the different stages of the development of mankind and history: Romans, Almohads, Jews, Portuguese, Castilians... Each one had its own culture and religion which came together and combined in Caceres leaving behind an incomparable historic and cultural heritage. Ubeda was declared a Human Heritage City in 2003. Its catalog of cultural jewels includes Renaissance art and architecture on a par with the best in Italy, living in perfect harmony with the city's many Romanesque and Baroque treasures.

► prove environmental conditions by reducing water capture, optimizing the performance of the networks and applying active training and awareness policies to get end-users to “use only the water they need”. ACCIONA will make available to its users cutting-edge technologies applied to customer management and plant and network operation and use the very latest resources

and special vehicles.

As the manager of the new Caceres service, Cayetano Cases, states “the water in Caceres is excellent, but we can improve on it; ACCIONA is faced with the challenge of consolidating a new way of working, one which will benefit the people of Caceres while showing the utmost respect for the environment”. ■

ONLINE INFO



» <http://www.accion-a-agua.com>

» <http://www.accion-a.com/pressroom/indepht>



ELENA NEVADO, MAYOR OF CACERES

IMPROVING THE QUALITY OF LIFE FOR THE PEOPLE OF CACERES

What does it mean for Cáceres to have ACCIONA Agua at the helm of the integrated water cycle for the next 24 years?

Managing the city's integrated water cycle is one of the most important services provided by the city council, for private individuals and businesses alike. That's why when it came to awarding the contract for the next 24 years, we looked for a project that offered a guarantee and continuity in its approach to running the system and making improvements and raising the bar in terms of quality and efficiency.

How do you think that the fact that ACCIONA Agua is taking on water management is likely to affect the people of Cáceres?

Any kind of investment leading to the application of new infrastructures and technological innovation at the service of water management will be positive for the functioning of not only the water system but also the city overall. Technology advances continuously and should be applied to every part of society. The progress made in each of the processes included in this service will mean tangible improvements

in its functioning, along with the maximum optimization of its resources and the utmost respect for and care of the environment. The latter is a key aspect that the city council has particularly insisted upon.

Does Cáceres have enough water resources for the medium and long term?

In recent years Cáceres has grown at a considerable pace in both economic and demographic terms which has translated into a tangible rise in the city's water management needs. This city,

the capital of Cáceres province, has always managed to meet water needs for its people and this is not likely to change. To guarantee this we've set up the necessary infrastructures and we're always on the lookout for alternatives that enable us to anticipate future increases in water services demand and ensure uninterrupted and top-quality service.

Is water reuse viable for environmental sustainability and does it warrant a reasonable amount of investment over the next few years?

We're certain that the reuse of an important resource like water should be a major priority. We should encourage sustainable and environment-friendly use of all resources, and do everything we possibly can to make people aware of the need to use resources in a responsible way. Investments in this direction will lead to considerable economic savings in the medium term, and we need to work hard to obtain optimization and to make the most of a fundamental but finite resource: water.

"Reusing resources as valuable as water must be a major priority"





Underground adventure

Tunnel-building's inherent complexity gives rise to a host of engineering challenges. ACCIONA's track-record of tunnel construction makes it an expert partner, ready to take on even the most difficult "black holes".

ACCIONA's long-track record in tunnel construction is dotted with milestones and is a worldwide industry referent. Today, it continues to expand and advance with a host of new challenges.

A long list of tunnel works, such as new subway lines, the introduction of High Speed Railway and the upgrading of Spain's roads network, has led to the need to build, improve, innovate and explore hundreds of kilometers of

tunnels up and down the country and in which ACCIONA has contributed greatly.

In the early days of ACCIONA, one of its parent companies, MZOV, built 94 tunnels along the Zamora-Orense railway line, the first major line built in Spain during the first decade of the 20th century.

Since then, ACCIONA has been behind underground works that, in their day, were considered "the most

1 LLEIDA-SAINT GIRONS TUNNEL (1922)

In its early days, ACCIONA contributed to the development of Spain's railway network and also worked on the construction of the first tunnels to cross the Pyrenees, including the Lleida to Saint Giron (Noguera-Pallaresa) tunnels, completed in 1922.



2 HORNA TUNNEL (1940)

Several tunnels were built along the Madrid-Barcelona Spanish-gauge railway and the Horna tunnel was one of them. Located in Soria, it was the third on the stretch and ran for 3.231km. It was completed in 1940.



3 EL PADORNELO TUNNEL (1929 - 1957)

The El Padornelo tunnel stretches for 5.949km of the Zamora-La Coruña conventional railway line. Work got under way in 1929 and the tunnel opened for use in 1957. Originally, ACCIONA built this straight tunnel with the intention of laying two tracks, though only one was eventually laid. The interior masonry was modified for maintenance by ACCIONA.



4 TAGUS-SEGURA WATER-TRANSFER TUNNEL

ACCIONA carried out a number of important works on the two stretches that make up the water transfer between the Tagus and Segura rivers. The first stretch called for a surge tank and a pressure gallery nearly 14km long. The second stretch featured twelve tunnels (more than 12km long), including the Villarejo (5km) and Carrascosa (2km) tunnels.

CERN TUNNEL

In 1983, ACCIONA used 4.5-meter diameter tunneling machines to bore the 25.378km of tunnel for the CERN particle accelerator located between France and Switzerland. It also dug 18 wells of up to 131 meters deep and 31 chambers of up to 496m² in section, setting a world record for the time.



► difficult yet” and which now stand as a worldwide industry yardstick. A prime example is the Regajal tunnel at Ontigola (Toledo), on the Madrid-Valencia HSR line. This tunnel boasts a one-meter thick concrete-and-fiber lining, and fiber glass security bolts and micro piles were used to avoid using metal for support. And because the tunnel was located in saline soil, with presence of glauberite and halite at one of the entrances, the lining was built supported on fiber glass reinforced piles.

Other major challenges included, for example, using the 12.09m Earth Pressure Balance (EPB) tunneling machinery for building Line 9 of the Barcelona subway (setting records in its class in 2002, the year it was built), and which set new world standards by enabling two-way traffic in the same tunnel.

ACCIONA has designed and carried out a long list of stretches of subway lines in major Spanish cities, including Madrid, Barcelona, Valencia and Bilbao. It is also behind some of the

longest and most important tunnels ever built, such as Somport, and is responsible for a long list of railway tunnels, some of which rank among the world's longest, e.g. Guadarrama and Pajares.

ACCIONA's experience in the design and construction of subterranean works, including chambers, stations and hydraulic conduits in Spain and a host of countries in Europe, Latin America and Africa, mirrors our international vocation. ACCIONA is one of the most respected and experienced players in this field. We are also one of a handful of companies in the world with more than 400 items of proprietary tunneling machinery, including tunnel-boring machinery (TBM), roadheaders, automatic sprayed-concrete machinery, platforms and others. And we also have a vast experience in using maintaining and repairing them in the cutting-edge and comprehensive workshops at our Integrated Machinery Servicing Center, in Noblejas (Toledo). ■

ONLINE INFO



» www.acciona-infraestructuras.com
» <http://tv.acciona.com>
» www.acciona.com/pressroom/indepth

6 LOADING TUNNEL AND CHAMBER - LA ALMENDRA DAM

Work on La Almendra (Madrid), an arch-gravity dam with embankments and Spain's third-largest dam, was carried out between the 1960s and the 70s. It included underground works leading to the Villarino falls, in Salamanca, that were carried out by ACCIONA by building galleries and the Villarino loading tunnel (15km long and 7.5m in diameter). The works included an underground chamber to house the engines.



6

7 TUNNELS ON THE ADEMUZ-VILLANUEVA STRETCH OF THE MADRID-SEVILLE HSR LINE

In 1990 work was completed on the Ademuz-Villanueva stretch of the Madrid-Seville HSR line which featured 7.215km of assorted tunnels. It was the longest stretch on the line.



7



8

8 TUNNEL. LINE 5, VALENCIA SUBWAY SYSTEM

In 1992, EPB tunneling machinery (6.52m diameter) was used to build two parallel 4.6km tunnels connecting the Alameda andAVINGUDA stations on Valencia's subway system. It was the first time ever that foam was used in Spain to prepare the ground for this type of mechanized excavation.



9

9 SOMPORT TUNNEL

Work on the Somport international tunnel between the valleys of Aragon (Spain) and Aspe (France) began in 1994 and concluded in 2002. The tunnel was built with a free section of 78m² and two lanes for vehicle traffic, both 8.608km long, of which 5.759km were on Spanish soil.

10 ACCESS TUNNELS TO BOLOGNA (MILAN – NAPLES)

Work on the accesses to Bologna of the Milan-Naples HSR line was carried out between 2000 and 2007. It included two 6.125km tunnels for which two EPB 9.4m diameter tunneling machines were used. This project featured the world's first experiment with earth-consolidating injections and compensation with guided boring on a curved line. Other innovations included metal rings with doors for connecting-galleries, designed by ACCIONA Engineering.



10

11 NORTH BYPASS TUNNEL, M-30 RING ROAD

EPB tunneling machinery was used to excavate the North Bypass Tunnel on Madrid's M-30 ring road, with a record-breaking 15.2m diameter in 2006. The machine was used on a 3.526km stretch of urban roadway.



11



12

12 GUADARRAMA SOUTH TUNNELS – LOT I

Built between 2002 and 2008, the tunnel was the sixth-longest in the world (28.4 km). Half of each tunnel tube (each one 14km long and started at the Southern entry) was excavated by ACCIONA using two double-shield TBMs (9.5m).



13

13 PAJARES TUNNELS – LOT I

Construction work on this tunnel, the longest tunnel carried out from a sole entry point and the ninth-longest in the world, ran from 2004 to 2009. The project gave rise to extraordinary innovation: 34 rings were put into place in a single day, with 50cm thick segments. A number of complicated hydro-geological factors were overcome and in order to support pressures of up to 40 bars from rock formations, ACCIONA's engineers came up with concrete rings capable of supporting simple compression of up to 110MPa, a first for Spain.

14 SUBWAY TUNNEL, LINE 5. BARCELONA

ACCIONA completed Line 5 of the Barcelona subway system with a 2.6km extension that included three stations and their corresponding accesses. The more relevant features of the project include the construction of the subway station caverns using lateral galleries, the pile-driving operations used on a non-circular section, the construction of the station accesses using the traditional method of ramps in sections of up to 70m², and a number of shafts of up to 60m deep and 16m in diameter on an urban site.



14



15

15 LEGACY WAY TUNNEL (AUSTRALIA)

Carrying out the Legacy Way tunnel project in Brisbane (Australia) poses a new challenge for ACCIONA and features a number of innovations such as the use of vehicles fitted with tires for the feed for rings, and the use of two-component mortar for the filling behind the rock-tunnel lining.

Perforation of the tunnel on the Vigo-Das Maceiras stretch of the HSR lined

This is Spain's fourth-longest tunnel, behind the Guadarrama, Pajares and San Pedro tunnels.

Last February saw the perforation of the second parallel tunnel that joins Redondela (in Pontevedra province, Spain) with Vigo railway station, on the Vigo-Das Maceiras stretch of the so-called Atlantic Axis of the high speed railway line that joins Pontevedra and Vigo. Perforation for the first tunnel ended in November 2011 and, owing to the dimensions of the exit well, the tunneling machine had to be dismantled before work could be completed on the second tube.

This project involved two twin yet independent 8km tunnels. Round in section, with an internal free diameter of 8.5m, construction was carried out using two twin-shield tunnel-boring machines which are ideal in this kind of high-resistance and abrasive rocky terrain. The urban zone was highly unstable owing to faults and groundwater, and called for special treatment from the ground downwards and from the wells in an effort to consolidate the terrain before using the tunneling machinery, and the foundations and drainage of buildings on the surface were monitored exhaustively. This marked a milestone in the excavation on terrain on an urban site using open-type hard rock tunneling machines rather than EPB tunneling machinery.



IGNACIO OFICIALDEGUI, MEMBER OF THE ACCIONA WINDPOWERED ANTARTICA 90°S EXPEDITION

TEAM, THE WORLD'S FIRST ZERO-EMISSIONS, 100% WIND-POWERED CROSSING TO THE SOUTH POLE

Out in the cold

It was a new and ground-breaking approach that helped to take us closer to a cleaner future and places its trust firmly on the possibilities of renewable energies. That's the best way to sum up the first-ever expedition to cross the Antarctic Continent and reach the South Pole on board a wind-powered, zero-emissions vehicle. And it showcased the efficiency of this vehicle and its potential for carrying out scientific program in a totally eco-efficient way in some of the most far-flung corners of the Antarctic.

PROFILE

Ignacio Oficialdegui heads ACCIONA Energy's Department of Evaluation of Energy Resources. He led the coordination of the ACCIONA WINDPOWERED ANTARTICA 90°S Expedition, and has taken part in other Polar expeditions, such as the South Pole Without Limits 2009 (Geographic South Pole); Kangerlussuaq 2008 (Greenland); Spanish Transantarctic 2005-2006 (with the Spanish TV documentary series "Al filo de lo imposible"); and From Navarre to the Geographic North Pole 2004. An immensely keen alpinist, Oficialdegui is also a member of the Board of Directors of Medicus Mundi Navarre. Before entering the world of renewable energies, he worked in the field of cooperation and humanitarian aid.

Just how important is this Expedition?

We've managed to cross the Antarctic via the Geographic South Pole; that's 3,500km in 31 days, including the windless days that prevented us from moving and two days in which we covered more than 300km, as well as the stops to take samples for the research programs that we took on and to make improvements on the sled. It's been one of the longest trans-Antarctic crossings ever, but also one of the fastest. And we did it carrying nearly a metric ton's worth of gear and supplies and relying exclusively on wind power. Leaving modesty aside for a moment, we've raised the bar in terms of exploration and ingenuity.

How would you sum the crossing?

Cape Town, Novo runway, the landscape of Queen Maud Land, our arrival at the Plateau, crossing the shoulder of the Dome, the endless kilometers on the way to the South Pole, the field plagued with cracks in the ice, the "pre-Polar" townships, our entrance to the South Pole, the Scott-Amundsen ice station, the winds when we set off, temperatures between 80 and 85 below zero, the hundreds and hundreds of kilometers at the helm, hours on end of bitter cold, hundreds of knots, hundreds of pictures; hundreds of scientific samples, spoonfuls of butter, liters of melted snow, raising the kite, sending back files, struggling with the kite-lines, sastrugis ►



UP CLOSE AND PERSONAL

Your favorite journeys

I like just about any kind, from a short walk or a personal challenge, to the journey through life. I enjoy anything that starts in one place and takes you to another.

Why do you enjoy that kind of experience?

Because they're big, ambitious projects that are carried out on

a shoestring; they rely more on ingenuity and willpower rather than a fat wallet. They take you to the limit.

Tell us about a personal or professional dream or ambition

I'd like us all to face up to the fact that we need to adapt ourselves to the planet and learn to live without doing it harm. A lot of it is about managing our energy resources.

What do you like best about your work?

I enjoy the feeling of being a kind of bridgehead for change in the world. I like sharing that with others.

What's the worst part?

Not always being able to transform our ideas, knowledge and experiences into something real and to take them farther and faster. It makes me feel powerless...



The Larramendi Sled



MULTIPURPOSE TENT
A 3 x 3 meter tent that optimizes the sun's heat and has a specific suspension system. Equipped with seats and a table and can be used as a sleeping- or working-space.



SOLAR HEATING
The tent's windows let in the sunlight and use the Greenhouse Effect to provide improvised heating.

KITES OF UP TO 80M²
Twelve kites range from 5 to 80m². The kites used are NWP5 and NWP9, depending on wind strength and direction.

BUILT AS A SLED
A vehicle inspired by Inuit sleds and made up of a variable system of wooden, aluminum or polyethylene runners and crossbars.



INSULATED BOXES
The vehicle carries isothermic boxes for storing most of the food and the scientific instruments.



THE STRENGTH OF THE WIND
The navigation system is made up of a set of four different pulleys for lines of 75, 150, 300 and 500m in length, depending on the strength of the wind.



THE SLED – GENERAL CHARACTERISTICS

- **Length:** 7m; two sleds: one 4m and one 3m
- **Width:** 3.3m
- **Surface:** 22m²
- **Unladen weight:** 200kg
- **Payload:** 1.000kg
- **Average speed:** 10-15km/h
- **Highest speed reached:** 40km/h
- **Average daily distance covered (estimate):** 100-125km
- **Maximum distance covered in a single day:** 311km
- **No. of people aboard:** 4
- **No. of people needed for steering:** 2-3
- **Minimum wind required for movement:** 3km/h
- **Maximum wind:** 70km/h
- **Length of the kite lines:** 75-300m
- **No. of kites used:** 12 different kite-sizes available
- **Largest kite:** 82m²
- **Smallest kite:** 5m²
- **Differences to the original prototype:**
 - Larger payload: up to 1 metric ton.
 - Changes to the construction of the sled, introduction of a set of two larger units, and changes to the construction of runners and crossbars.
 - Modifications to the tent: more living space and more heat- and energy-efficient.
 - Modifications to the kites and to the pulling distance: kites of up to 82m² at a pulling distance of 500 and using different materials and designs.
 - Rotation system during navigation.
 - Adaptations for installing scientific equipment.

- and tamatumos, winds blowing all over the place, lulls, “rugs”, chronicles, being buffeted when we tried to sleep, mug-upon-mug of onion soup, snowstorms, cracked crossbars, frozen fingers, endless kilometers of bitter cold....

How would you define this first-ever wind-powered, zero-emissions Polar vehicle?

Quite simply fantastic! It's not just a vehicle for sports use, although it outperforms all existing sports vehicles, And it's not a conventional research vehicle fitted with tracks and stacked with umpteen fuel cans. It's something totally new that meets the needs and expectations of scientific researchers at the South Pole, and it's faster and cheaper than anything currently available. It breaks with the usual standards of comfort and convenience. It's a pioneering project and, what's more, it's one that shows the utmost



A project under way

The ACCIONA WINDPOWERED ANTARTICA 90°S Expedition has been a total success. Its center piece was the world's first Polar vehicle capable of crossing the Antarctic and arriving at the Geographic South Pole relying solely on wind power. In the long-term, the project sets out to lay down the technological, logistical and scientific foundations for carrying out a stable Scientific Research program in the Eastern Antarctic and in other Polar regions using an innova-

tive means of transport that does away completely with the need for fossil fuels. In this expedition a four-man team carried out a non-stop, 3,500km crossing, taking turns at the helm around the clock, making the expedition 50% more efficient. A new geographic, sporting and exploration milestone has been set. The expedition has shown that a zero-emissions vehicle (doubling as a mobile laboratory) is the ideal means of moving people and cargo from one Polar ice station to another. During the expedition, the team members carried out a range of scientific projects related to Climate Change and Global Warming, in collaboration with France's Institute of Glaciology and Geophysics CNRS-IJF in Grenoble; the Institute of Environmental Diagnostics and Water Studies (DAEA), part of the CSIC national research center in Barcelona, and with the Limnopolar Group of Madrid's Autonomous University's Biology Department. The projects were coordinated by team-member Dr. Juan P. Albar, a researcher at the CSIC's National Biotechnology Center.

In addition, the team took a range of readings and carried out tests to study the ice and air avoiding any kind of pollution. The expedition team, led by the seasoned explorer, was made up of four specialists and scientists: Javier Selva, Juan Pablo Albar, Juanma Viu and Ignacio Oficialdegui.

- respect for future sustainability. This is the context into which ACCIONA, yet again, has taken the plunge and has brought about a huge paradigm shift in exploration and the conservation of our planet. We've left nothing behind apart from the tracks of five runners (where the snow was soft enough), and most of them faded away as we moved along. We've taken the sun and the wind and turned them into knowledge, and with no side-effects, no externalities...

What does this Expedition mean for you personally?

It's a unique experience. To be part of a very ambitious project, overcome all

kinds of difficulties, come face-to-face with your own limits, share life with a team of great and untiring people, witness the infinite mantle of whiteness where you can see the curve of the planet and experience the violence and power of Nature, the feeling that there is an infinite energy that's there for the taking, three-and-a-half-thousand kilometers where all you see and feel is ice, wind, sky, sun, clouds, and the cold. That's the way the Earth is, nobody says it was made to suit us...and yet it's perfect! It offers up are myriad opportunities for us to get on well with the planet and to come up with a future of mutual respect. ■

"ACCIONA has brought about a huge paradigm shift in exploration and the conservation of our planet"

ONLINE INFO



» <http://tv.acciona.es>
 » <http://www.accionantartica.com>
 » www.acciona.com/news/the-acciona-windpowered-antarctica-expedition-successfully-completes-its-polar-crossing-

Innovation outside of the Technology Centers

Introducing improvements in processes and coming up with new solutions for a range of problems make up an increasing part of ACCIONA's innovation activities.



Left to right: the Tampa plant (USA), and Briviesca and Mijadas. (Spain).

Innovation appears in many of our day-to-day activities. “The flourishing of innovation” is an initiative aimed at detecting and valuing all innovative activities carried out in the course of business.

In its broadest sense, Research and Development extends beyond the laboratory and can often be considered a part of the realm of engineering.

We come across it every day when it comes to defining a project that poses a technical challenge in itself. Innovation is present in the different solutions used to solve problems that crop up onsite or at the design and development stages of new processes, software or machinery.

Innovative activities detected by the Company's divisions are analyzed jointly by the persons in

charge of Technology Transfer. Identifying those activities and documenting them helps to obtain access to attractive financing and subsidies; but, above all, it helps to introduce new technological and knowledge advances into each work, plant and facility.

This initiative got off the ground in 2007 with a pilot carried out in the Company's Infrastructure and Agua (water services) divisions and it underscored the value of the activities carried out in the Tampa (Florida, USA) desalination plant and the Villarobledo WWTP (Spain).

In 2011, 163 activities were identified in the different countries where ACCIONA operates. Of those activities, an average 60% are classified as Basic Research or Development. ■

Outstanding projects in the “Flourishing of innovation 2011” initiative

- A waterproofing system in tunnels subject to strong pressure (ACCIONA Infrastructure).
- New techniques aimed at increasing sustainability at biomass plants (ACCIONA Energy).
- Atotonilco WWTP. New construction processes and technologies applied to water treatment. (ACCIONA Agua).
- Airport operations management and control system. (ACCIONA Airport Services).

ONLINE INFO



» www.tv.acciona.com

» www.acciona.com/pressroom/indeph

Year 2012: The International Year of Sustainable Energy for All

The International Year of Sustainable Energy for All is an invaluable opportunity to heighten awareness on the importance of sustainable access to energy, energy efficiency and renewable energies at a local, national, regional and international level.

The lack of access to non-polluting, accessible and reliable energy is a barrier to social and economic development and stands as a major obstacle to

meeting the UN's Millennium Development Goals. There are 1.4 billion people on the planet who do not have access to modern energy, while 3 billion rely on "traditional biomass" and coal as their main energy sources.

This strategy sets out to bring together the efforts of governments, the private sector and civil society and direct them towards meeting three major goals for the year 2030.

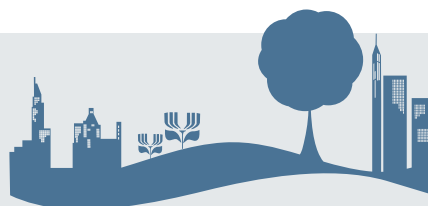
THREE MAJOR GOALS FOR 2030

ACHIEVE
**UNIVERSAL
ACCESS**
TO MODERN
ENERGY
SERVICES

IMPROVE ENERGY
EFFICIENCY BY
40%

PRODUCE
30%
MORE OF THE WORLD'S
TOTAL ENERGY
FROM RENEWABLE
RESOURCES

ACCIONA calls for public-private alliances between businesses and the UN in Davos



On the first anniversary of the Global Compact LEAD, a platform set up by the UN's Global Compact and aimed at leading the way in corporate sustainability, the member companies, including ACCIONA, met with UN Secretary General Ban-Ki moon at the World Economic Forum to discuss the way to encourage public-private alliances, in an effort to make more headway towards the UN's Millennium Development Goals.

The meeting took place following the announcement by the UN Secretary General of the setting up of a new Cooperative Fund aimed at strengthening business alliances and working more actively with UN agencies. Among other reasons, the Fund was set up in response to the main recommendations of the Global Compact LEAD Working group (in which ACCIONA took part) laid out in its report "Catalyzing Transformational Partnerships between the United Nations and Business". The Fund is aimed specifically at accelerating public-private ventures of each company at a national level.



ACCIONA, one of the world's top 100 sustainable companies

The latest list of the Global 100 Most Sustainable Corporations in the World, an index that brings together the world's most sustainable multinationals, was announced during the World Economic Forum in Davos (Switzerland). ACCIONA, ranked 37th, obtained the highest score of the four Spanish companies included in the list. The other three are Repsol (ranked 49th),

Iberdrola (55th) and Inditex (58th). This index includes companies from 22 countries and a range of sectors. It is compiled by "Corporate Knights", a magazine specializing in Corporate Social Responsibility, based on a prior study of 3,500 companies worldwide. ACCIONA's inclusion reaffirms the Company's leadership in the sphere of sustainability.

CDP* PERFORMANCE LEADERS

- For the first time ever, the CDP Europe 300 Report 2011 Carbon Materiality ranks ACCIONA among the leading European corporate front-runners for their activities and performance in the fight against Climate Change.

- In the CDP Iberia 125 Report 2011, focused on the Iberian Peninsula, ACCIONA also ranks among the leaders as one of the three companies that stand out for their transparency and commitment and integration in their environment strategy.

*The Carbon Disclosure Project (CDP) is an independent non-profit organization that identifies benchmark companies in the field of climate change management. It evaluates more than 3,000 corporations for their transparency, commitment and integration and the performance of their actions.



What is the global compact lead?

*The Global Compact LEAD is a platform created by the UN Global Compact, made up of **54 international companies** including ACCIONA. It sets out to raise the bar in social, **environmental and government action** and establish a new benchmark in corporate responsibility.*

ACCIONA University

ACCIONA University was set up several years ago with a clear mission: to guarantee the overall training and development of our people in line with the needs arising from business strategies in the context of our corporate culture of sustainability, innovation and excellence.

Today, ACCIONA University is a reality. It offers up-to-date infrastructure including a Training Center located at the Corporate Head Office and a ground-breaking online campus (“Campus Virtual”) which can be accessed from any company office...and even from home!

The 1,500 square meter Training Center (20,000 “students” in the past two years) is made up of four classrooms, an e-library and a number of multi-purpose rooms.

Campus Virtual gives the Company’s employees a range of more than 2,000 learning resources in a variety of languages and formats: podcasts, virtual classrooms, training manuals, e-learning sessions, multimedia case studies, and many others. Specific training materials and documentation are available for each division for training in languages or skills, as

well as functional content (marketing, finance, HR...). ACCIONA professionals have already made more than 250,000 downloads of learning materials.

Social learning. The Campus recently opened a social learning section on its “Learn in ACCIONA” online platform. It enables our people to share, spread and acquire knowledge using collaborative tools (forums, shared libraries, etc.) through online learning communities. There are more than 30 such communities active at the moment.

The University’s structure. The University is structured as follows: Technical Schools (Renewable Energies, Infrastructure and Water), Languages Schools, Functional Faculties, Competencies Development Center and the Business School. The Technical Schools offer specialties and technical learning itineraries to provide a single,



uniform, innovative and easily-accessible training model for all ACCIONA professionals according to their role, family and activity. **Itineraries:** In 2011 the Competencies Development Center carried out more than 30 Competencies Learning Itineraries. Each of them is made up of a range of multi-channel training activities available to our people through their personalized itinerary pages. Each employee receives a monthly e-mail with tailored information on



There are more than 2,000 learning resources available to our people on Campus Virtual. The site registered more than 250,000 downloads by ACCIONA professionals

School has also carried out an International Management Program aimed at boosting the development of international business.

There are new and ambitious plans for 2012, such as setting up a University Board (which sat for the first time in February 2012) and Academic Councils; identifying Program Directors and putting together a solid internal training team. We're working with enthusiasm on consolidating existing initiatives, developing new training programs and improving technology, methodologies and training resources. ■

new activities in his/her particular itinerary.

Business School: The Business School has carried out five ACCIONA MBAs in Sustainable Economy in which more than a hundred Directors and Managers from different businesses and countries have taken part. The School's first international MBA is currently in progress, with students from Canada, Poland, Mexico, Australia, USA, Italy and Spain. The Business

By the numbers

- More than **290,000** training hours.
- More than **4,700** training activities.
- More than **5 million euros'** worth of investment in training.
- More than **250,000** downloads registered by Campus Virtual.

ONLINE INFO



» <http://www.acciona.com/human-resources>
 » <http://campusvirtual.acciona.es>

News round-up...

In 2012, ACCIONA will deliver renewable energy for **70% of the consumption of the national HT grid** acquired by Adif.



ACCIONA was ranked, for the first time ever, among Europe's front-runners in implementing measures against climate change and for the results obtained, by the **Carbon Performance Leadership Index, compiled by the Carbon Disclosure Project (CDP)**.

ACCIONA Energy brought into service the 38MW **Golice wind farm, the Company's first in Poland**. It will produce clean energy equivalent to the consumption by 40,000 Polish households and will avoid 77,625 metric tons of carbon emissions a year.

ACCIONA won a tender by Chile's Compañía Minera del Pacífico (Grupo CAP) for the construction of the water and concentrate conduits for the **Cerro Negro Norte mine project**, in Copiapó Valley, in Atacama Region III.



NaturEner awarded ACCIONA Windpower a contract to provide 189 MW for the Rim Rock wind farm, in Montana (USA).

DECEMBER 2011

The Cáceres (Spain) city council awarded ACCIONA Agua **the contract for the municipal domestic drinking water supply**, sewer and water treatment system for a 24-year period.



ACCIONA was awarded the **Codespa Prize in the "Empresa Solidaria" ("Caring Company")** category for its "Luz en casa" ("Light in the Home") initiative, carried out through the ACCIONA Microenergy Foundation.

JANUARY 2012

ACCIONA won a **Build-Operate-Maintain contract** for the Purchena y the Autovía del Mediterráneo (A-7) stretch of the Almanzora highway.

ACCIONA is one of the world's **100 most sustainable companies**, according to the index compiled by the "Corporate Knights" magazine. The Company was officially recognized as such during the recent World Economic Forum in Davos (Switzerland).



ALSA and ACCIONA Trasmediterránea have set up a **nationwide intermodal coach/sea ferry passenger service**, offering accumulated discounts of 35% on additional routes of both companies.



ACCIONA Agua won a **Design-Build-Operate-Maintain contract** the **Bello wastewater treatment plant in Bello (Medellín, Colombia)** following a tender called by Aguas Nacionales EPM de Medellín. The deal, including construction and operation, is worth more than 260 million euros. Initially, the plant will service a population of three million inhabitants.

ACCIONA was in Davos to advocate for **public-private alliances between the UN and businesses**. The event coincided with the first anniversary of the Global Compact LEAD, platform set up by the UN Global Compact aimed at leading the way in corporate sustainability.



ACCIONA Energy has begun the construction of the 30MW Jelinak wind farm in Split-Dalmatia (Croatia). The facility will comprise twenty 1.5MW ACCIONA Windpower wind turbine generators. This new project strengthens the Company's international expansion and makes it **the first spanish wind power developer to develop a wind farm in Croatia**.

Mexican President, Felipe Calderon, **inaugurated Latin America's largest wind power complex**, wholly-owned by ACCIONA. The three 360MW farms that made up the facility, located **in Oaxaca**, will produce electricity equivalent to the consumption of 700,000 Mexican households.



FEBRUARY 2012



At the FITUR trade fair, Transhotel and ACCIONA Trasmediterránea signed an agreement, the first of its kind by a shipping Company and an end-to-end tourism services provider. Transhotel will offer all **ACCIONA Trasmediterránea sea routes on its booking platform**.

ACCIONA closed **FY2011 with total investment of 989 million euros**, giving continuity to the Company's growth policy in a hostile economic environment.

ACCIONA brought a new wind farm into service in Guadalajara, in Spain's Castile-La Mancha region. **The 16MW El Chaparro facility will produce energy equivalent to the consumption by 12,000 households**. With this new wind farm, ACCIONA's proprietary wind capacity in the region comes to a total 560MW.



ACCIONA celebrated the success of its ACCIONA Windpowered Antártica Polar expedition in Madrid's Natural History Museum.

MARCH 2012



7 BILLION REASONS TO TAKE CARE OF OUR PLANET

It might seem simple, but it isn't. In fact, the only way to turn our planet into a home for everyone is by raising awareness as much as we can, taking on a commitment to our environment and to everyone who is a part of it. At ACCIONA, we try to put this into practice each and every day: by building infrastructures that make life easier for communities; committing to renewables as the only way to stop the insatiable demand for energy, and working to ensure that everyone has access to water. This way, our planet will have enough room for seven billion people and for all the others yet to come.

