



United Heavy Lift (UHL) delivered a 142,000 cu m shipment of wind turbine blades from China to Spain onboard the deck carrier Zhi Xian Zhi Xing.

projects, and it is an uphill struggle to finish those that are under way.”

Martínez added: “This political situation affects how other countries see Spain, and investment possibilities here are very difficult to achieve – or very costly.”

Various industries across Europe are “facing a grey future”, according to Santiago Pérez-Torres Fernández, general manager at logistics company Pérez Torres Marítima (PTM). Tighter environmental legislation with financial consequences – carbon taxes, for instance – makes manufacturing an increasingly expensive business. Companies are moving production overseas, where regulations are less strict and energy costs are lower.

Excess cargo capacity

Spain is not immune to the problem of excess capacity in the cargo market, either. There has been a concentration of shipowners as rates fell in the wake of the global financial crisis. Pérez-Torres Fernández expects “more of the same” in the next few years. He said: “Rates have risen a little, as consolidation has resulted in fewer vessels, but they have not risen enough.”

Foreign operators may be able to respond more flexibly to changes in the supply-and-demand balance than those based in Spain, or even elsewhere in Europe.

Still, Spain is a mature market, so Pérez-Torres Fernández feels it is unlikely that foreign companies will be in competition with Spanish asset owners; pure freight forwarders, on the other hand, may be in a more difficult position.

While Pérez-Torres Fernández expects that industrial project cargo will continue to grow, driven primarily by demand from the wind energy sector, PTM is seeking work in other areas that are likely to remain stable in the long run, no matter how the political situation plays out.

For example: “We are getting into the animal feed market, which mostly involves imports, because this is a fundamental

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– Santiago Pérez-Torres Fernández, PTM

market with large volumes and it is not going to disappear,” he explained.

Spain currently exports large volumes of metal fabrication equipment such as boilers, extractors, reactors and transformers, all of which require heavy lift expertise, to destinations around the world.

Exports

“We also export production and extraction equipment for the oil and gas industry, photovoltaic plants, large infrastructure works, cars and machinery, as well as many other value-added goods for heavy industries,” said Diego Castillo, deputy general manager of shipping company Marguisa.

Still, the most popular exports from the country continue to be from the automotive industry. The country is the 16th-largest export economy in the world, according to the Economic Complexity Index, and the top three commodities exiting its ports include cars and vehicle parts, as well as refined petroleum.

Indeed, Spain sees its fair share of ro-ro cargo because of this, whether it is cars, goods vehicles or machinery. “Goods



The port of Bilbao loaded its heaviest-ever cargo in February: a 2,450-ton (2,223-tonne) ship-to-shore (STS) crane.

vehicles remain a fundamental driver of our economy and overland transport companies keep opening new routes and new businesses. The majority of these exports are bound for European Union (EU) countries and North Africa,” said Castillo.

He added: “Machinery is usually equipment for national construction and civil engineering projects which, as well as being produced for the local market, is exported around the world.”

Wind energy

As for the wind energy business, manufacturers such as GE, Vestas and Acciona set up factories in the country approximately a decade ago to reduce their logistics costs.

Further still, other industries (such as metal fabrication) are adapting to manufacture wind turbine components at their facilities, said Gerardo Toro Ibarguen of the commercial and traffic department at logistics company Consignaciones Toro y Betolaza.

This is perhaps a sign of the decline in Spain’s manufacturing sector – but it also indicates the continuing strength of the wind power market.

According to Fernando Arés, director, industrial projects Spain at Bolloré Logistics, “support for renewable energy has created a project ‘boom’ in Spain, which is expected to last at least another five years”.

Like the rest of Europe, Spain is changing its energy policy, moving away from

traditional fuel sources and investing in clean or renewable energy generation. Currently, there are several projects across the country to dismantle nuclear and fossil fuel power plants that have come to the end of their lifecycle.

As for the sources that are replacing those plants, solar power is developing well – hardly surprising, given Spain’s climate. Still, wind energy is cheaper.

Castillo outlined: “The main projects under way right now do not just relate to the installation of new wind farms, which are almost reaching capacity in terms of onshore facilities. There is also a great deal of investment in repowering of existing onshore sites as technology advances and becomes more efficient (see panel on p97).

“On top of that, offshore wind farms are making progress, reaching ever-greater depths and capacities.”

The country’s transport providers have specialised significantly to support wind energy imports and exports with investment in terminals, larger ships and high-capacity cranes, for instance.

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Toro y Betolaza itself, in partnership with Finnlines (part of Grimaldi Group), opened a terminal at the port of Bilbao in June last year, with ro-ro access and additional space for today’s larger, heavier wind energy shipments.

The 110,000 sq m terminal features a 500 m berthing line with a depth of 21 m, as well as 21,600 sq m of covered warehousing. Its ro-ro ramp has a capacity up to 250 tonnes, suitable for oversized cargoes.

However, Toro Ibarguen noted: “Wind energy is subsidised – it is not actually profitable in itself, so its success is subject to political decisions. Who knows how long it will last?”

Export markets

PTM has seen a great deal of wind energy-related shipments bound from Spain for South America over the last few years, initially to Brazil but subsequently Peru, Argentina and Colombia.

In the latter country: “Wind energy is a newborn industry, and there are still no cranes to handle them at the ports, for instance,” Pérez-Torres Fernández said.

Other bright spots for Spanish exports of wind power equipment include the rest of Europe, Africa, the Middle East and other Latin American countries such as Chile and Mexico.

However, Alfonso Hernández Gómez, global development director at Coordinadora, said that renewable energy projects have stalled in Mexico, as the

country's new government is placing more emphasis on oil and gas projects such as the construction and refurbishment of refineries.

Still, the Spanish engineered transport management provider, through its Middle East office, has had a lot of work offshore in the Gulf of Mexico, and also has refinery projects lined up for the next couple of years in Peru.

Closer to home, many of Coordinadora's Spanish clients have operations abroad, especially France, Germany, the Netherlands and Denmark, Hernández Gómez said.

Earlier this year, Coordinadora was selected to carry out the transport, load-out, dry towage and float-off operations relating to the Windfloat Atlantic manufacturing project led by Spanish shipbuilder Navantia.

Designed by US-headquartered offshore wind technology company Principle Power, which has subsidiaries in France and Portugal, Windfloat is a floating foundation for offshore wind turbines that enables them to be sited in waters deeper than 40 m.

A full-scale 2 MW prototype has already been installed off the Portuguese coast.

A Windfloat unit is set for delivery at Fene shipyard in Galicia later this year.

Coordinadora will use SPMTs to roll the

Windfloat unit from the manufacturing yard to the loading wharf. The foundation will then be transferred to a semi-submersible barge, which will then be towed to sheltered waters before the Windfloat unit is discharged.

European advantage

Hernández Gómez observed that Northern Europe is home to highly specialised companies at the cutting edge of wind turbine development, and China is not yet able to compete with them.

However, Marguisa's Castillo said that Spain is increasingly importing a great deal of wind turbines from China.

For example, blades for the Torozos wind farm, which is being developed by Vestas in the Castilla y Leon region of northern Spain, were transported from the Chinese port of Dafeng earlier this year.

United Heavy Lift (UHL) handled the transport of 156 wind turbine blades, measuring 60 m in length and weighing approximately 11 tonnes, from China to the Spanish port of Ferrol using the deck carrier Zhi Xian Zhi Xing. UHL said that this was the largest number of rotor blades that Vestas had ever shipped in a single consignment. It was also the first time that the company had



Pérez Torres Marítima (PTM) in Ferrol recently loaded wind turbine blades measuring approximately 70 m in length.

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Solar developments come to the fore

Developments in the design and size of solar power installations are opening up opportunities for project forwarders and heavy lift providers. Generally speaking, there is not enough sun or space to build such installations in mainland Europe, but the sector is picking up in the Spanish market, thanks to its favourable climate.

As the country's energy policy moves away from traditional fuel sources towards clean or renewable power generation, solar installation will likely develop apace.

Investment

Speaking at the ground-breaking ceremony of the Núñez de Balboa photovoltaic (PV) plant in March, Ignacio Galán, chairman of Spanish utility Iberdrola, said the company plans to install another 2,000 MW of solar and wind power in Spain's Extremadura region by 2022.

Some projects in the region are already in the advanced stage of development, including the Ceclavin, Arenales and Campo Arañuelo I and II PV plants.

PV project

As for the Núñez de Balboa plant, when complete, it will feature 500 MW of installed capacity, which Iberdrola claims is the largest PV project under construction in Spain and Europe. At the ceremony Galán said: "This renewable mega-facility will become the spearhead that will consolidate the leadership position of Extremadura, Spain and the European Union in the transition to a more sustainable energy system."

The projects under development in Extremadura and the rest of Spain form part of the EUR34 billion (USD38.4 billion) global investments that Iberdrola will make between 2018 and 2022.



transported wind turbine blades from the Far East using a deck carrier.

Changing cargo flows

Perhaps shipments from the Far East will become increasingly more prominent in years to come. Jonas Dalsgaard, global sales and business development manager international offshore wind energy at RSA CODAN Insurance, said at the recent WindEurope conference and exhibition held in Bilbao: “In 15 years, Asia will be very developed and this will benefit the whole industry.”

Aside from wind energy, Spain continues to be an important gateway to Africa, which according to Arés, is a significant market for the Bolloré Group. The company

operates in 46 countries there, including its freight forwarding, Customs brokerage, logistics, railway line operation, shipping agency and port concession services.

Key industries keeping Bolloré busy in Africa include power generation (wind, solar, biomass and combined cycle plants); construction and public works; distribution and treatment of water; mining; and of course, oil and gas.

While Spain’s airports, ports and railways are all undergoing improvement works, Martínez at Sarens feels that there is a need for more investment in infrastructure across the country.

However, certain areas need a particular focus for that investment. For instance:



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– Alfonso Hernández Gómez, Coordinadora

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Bolloré Logistics handled the transport of four oversized natural gas tanks from Spain to the Ivory Coast.

“Normally, heavy and outsize cargo tends to arrive by ship, so it is our coastal zones that ought to be more prepared for that type of cargo,” Martínez explained.

Laydown space

As wind turbine blades increase in size, one issue that is becoming more pressing is laydown space at Spain’s ports. Pérez-Torres Fernández pointed out: “This is more a problem for imports, which may involve ports that are not used to this type of cargo, depending on the location of the wind farms involved, than for exports. That is because the export terminals are more used to this traffic and are better equipped for it.”

Arés feels that a definitive solution to the

country’s stevedoring problems would help improve competitiveness.

In addition: “The level of standardisation of bureaucratic processes across various administrations – the state and the different autonomous communities, and so on – would be something to improve.”

It can take six weeks for a permit to be

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– Fernando Arés, Bolloré Logistics

issued, which can make schedules tight, and Spain’s bureaucracy can be a stumbling block for foreign companies in particular.

“Obviously, if you are based in a country that belongs to the EEC [for example Belgium, where Sarens has its headquarters], the processes are simpler than if you are not a member, but they are far from what would be required if Sarens were a Spanish company,” Martínez explained.

He also pointed to the lack of standardisation across different authorities. “The bureaucracy is different depending on the autonomous region where you are going to be working – so permits and documents that are valid in one region may not allow you to work in another.” **HLPFI**

Repowering Spain’s wind farms

At this year’s Wind Europe conference held in Bilbao on April 2-4, one panel discussion focused on the repowering of existing wind farms in Spain in order to generate more power from fewer, more efficient turbines occupying the same footprint as the ones they replace.

Heikki Willstedt, director of energy policies and climate change, at the Spanish wind energy association Asociación Empresarial Eólica (AEE), explained: “In Spain, old turbines are being repowered now because there are no spares for the old models. By 2030, 19 GW of assets will be over 20 years old, and we

need policies for repowering after 2025 so we can get more energy from the best places – which, obviously, is where the old turbines are now.”

But legislation can be cumbersome. Luca Bragoli, head of international and institutional affairs at wind power operator ERG Group, noted that when repowering with more modern turbines, which are two or three times bigger than their predecessors, there can be complications in terms of obtaining permits from the authorities as well as resistance from local communities.

There are other challenges, too. As Preben

Skatvedt, global development manager at Vestas Wind Systems, pointed out: “Repowering in Spain is slow because of the permitting process, but also because the business case is not clear cut. Investors must decide whether it is better to start a green field project or go for lifetime extension, and consider costs, savings and return on their investment.”

Plus, repowering can be a sort of “limbo” state, Skatvedt said. “You lose your right to benefit from the old system – that is, legacy funding such as a feed-in tariff for existing installations – but you cannot apply for the new system either – that is, auctions, which are intended for new installations only.”

He suggested that there could be an auction system developed solely for repowering.