INFORMATIVE DOSSIER

ENDESA’S FIRST LNG CARRIER TO GUARANTEE THE SHIPMENT OF ITS PURCHASES OF TWO BILLION M$3 PER YEAR IN THE US

- In early 2018, Endesa commissioned the Norwegian shipping company Knutsen OAS Shipping to build the first latest generation LNG carrier (an LNGC with a capacity of 180,000 cubic metres) in South Korea for the transportation of liquefied natural gas (LNG).

- The vessel will be chartered by Endesa in the Summer of 2019 and will initially be used to transport the LNG supplied to Endesa by Corpus Christi Liquefaction LLC (Cheniere Energy Group), within the purchase and sale contract of 2 bcm (two billion cubic metres per year) for the next 20 years.

- This 7-year charter contract includes two possible extensions for seven and six years, and will partly cover the maritime transport needs under the LNG contracts held by both Endesa and the Enel Group (to which Endesa belongs) over the coming years.

- The LNG volume transported by the “Adriano Knutsen”, which will be the largest vessel sailing under the Spanish flag, is equal to one day’s demand from the whole of Spain or the average annual supply for a city of 170,000 households.

March 2019. In 2014, Endesa concluded the purchase of 2 bcm per year (two billion cubic metres) of LNG from the Cheniere Energy project, in the port of Corpus Christi, in Texas, USA, whose commercial operation is expected to start in 2019, once the liquefaction plant has received the necessary permission to commission its first train.

For the transport and management of this volume of purchases, Endesa, which until now had opted to contract the LNG with delivery to the destination, has embarked for the first time in the maritime sector of LNG through the forward contract of newly constructed LNG carriers from the shipping company, Knutsen. In this way, Endesa will be able to cover part of its gas supply for the next 20 years with much more flexible and competitive options.

In early 2018, construction began on the first LNG carrier for the transportation of LNG (Liquid Natural Gas), the “Adriano Knutsen”, which will have a capacity of 180,000 cubic metres (equivalent to 72 Olympic swimming pools) and will be completed this July. This third generation of LNG carrier with complete on-board re-liquefaction is owned by the Norwegian shipping company Knutsen Oas Shipping and is being built at the Hyundai Heavy Industries (HHI) shipyard, the largest shipyard in the world, located in Ulsan (South Korea).
The charter contract entered into by Endesa and Knutsen was concluded for a period of 7 years with two possible extensions for seven and six years respectively, and will guarantee part of the maritime transport needs under the LNG purchase agreements held by both Endesa and the Enel Group over the coming years. The value of the contract is some 25 million dollars per year, and the construction cost of the LNG carrier amounts to around 185 million dollars.

The LNG carrier “Adriano Knutsen” in the Hyundai Heavy Industries shipyard (HHI) in Ulsan (South Korea).

The vessel is practically finished, pending the final touches and performing the tests at sea and with cargo prior to the delivery, which will start in April. Based on the predictions, the “Adriano Knutsen” will be ready to set sail starting in July 2019. In one year, from Corpus Christi, the LNG carrier will be able to complete 12 trips in the Atlantic or 6 transoceanic trips to the Pacific.

The LNG carrier, sailing under the Spanish flag, is 300 metres long and 48 metres wide (the maximum permitted to cross the Panama Canal) with a draught of 26.4 metres (length from the keel to the main deck). The volume of LNG transported by the carrier, which is stored in a liquid state at a temperature of -160 degrees centigrade in four cryogenic tanks, is equivalent to the demand of one day in all of Spain or to the annual supply of 170,000 homes.

The total onboard reliquefaction system allows reducing the carrier's gas consumption and selecting the fuel for its propulsion, which can be 100% natural gas or low-sulphur fuel oil, which makes it much cleaner in emissions than most vessels that use petroleum derivatives in their engines, significantly reducing them. In addition, the vessel has systems to reduce NOx emissions.
Twenty-six people will live together in the vessel: 11 officials (relieved every three months, and of Spanish nationality) and 13 sailors (of Filipino nationality), plus two officials doing internships.

The first crossing of the “Adriano Knutsen” will probably be to the United States, where it will deliver its first shipment.

In the middle, José Manuel Goyeneche, Endesa’s LNG transport manager, accompanied to his left by José Ángel Gil, captain of the Adriano, and to his right, Iñaki Ullibarri, captain of the future Traiano (now in the construction phase).

In Spain, there is a need for gas because the country does not have its own gas deposits. The pipelines are not sufficient to cover the demand and are completed with the supply of liquid gas (LNG) which travels on carrier vessels from producer countries. The contract modality chosen would guarantee enjoying the advantages of the carrier during a period of 7 years, with the possibility of being extended to 20 years.

The trend of removing the most carbon-pollutant plants will increase demand for natural gas as a cleaner fuel for the production of electricity (in addition to other sources of generation, like nuclear), thus providing strength to the system and allowing the progressive penetration of renewable energies toward a scenario of zero-emissions in 2050.

For the transport of gas within the Enel group, the “Adriano” carrier will be followed by new constructions, given the economic advantages and the purchase volumes of LNG contracted for the coming years. Construction of a twin vessel to the “Adriano”—the “Traiano Knutsen”—recently started in the same shipyard in Ulsan. It will be charted by Enel, and its construction will be complete in mid-2020.
Endesa and the gas market

Endesa, as an energy company, is present in both the electricity and gas markets. The company is the second-largest gas supplier in Spain, with a market share of 16.3% in gas sales to clients of the deregulated market in 2018.

The total volume of gas sold in 2018 by Endesa added up to 103 TWh, 2 percent more than the previous year, of which 75 TWh were sold to the retail market; 12 TWh to the wholesale market; and 16 TWh were used for the production of electricity in combined cycles. The total number of Endesa’s clients grew in 2018 by 3%, accumulating 1,604,000.

The “Adriano Knutsen” in figures

300 metres: Overall length of the boat
48 metres: width of the boat.
26.4 metres: draught or length from keel to main deck
36,400 tonnes at lightship: Weight of the vessel without any cargo
116,000 tonnes of displacement: weight with cargo
180,000 Cubic metres: LNG storage capacity of the tank
1,100,000 hours/18 months: Time for construction
19.5 knots: Maximum speed
-160º: Average temperature of the LNG stored in the four cryogenic tanks.

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