

BUNKERSPOT

BOATS FROM A SMALL ISLAND

SANDBOXING GLOBAL ENERGY
SOLUTIONS IN THE SHETLANDS

INSIDE:

LNG BUNKERING
MARINE LUBRICANTS
MARKET FOCUS: POLAND
VOYAGE OPTIMISATION



Wind is ready

TOWT's **Yaël Soubeyran** believes that wind technologies are set fair to make a major contribution to shipping's decarbonisation journey

Throughout the industrial galaxy of maritime transport, sailing ships are often seen as the witnesses of a beautiful history of the men and the sea, the way our ancestors used to do it. Today, these ships mostly represent heritage, a sport or a means of pleasure. At a time when the maritime sector is stunned by its own energy limits and lacks decarbonisation prospects, as the climate emergency becomes more concrete, as the legal framework becomes stronger and as oil prices soar, confining sailing to the strict area of leisure might turn out to show a lack of creativity, and vision.

Over the past 10 years, everything has accelerated: the Millennium Development Goals have become Sustainable Development Goals; the Paris Agreement has been signed; the Tony deBrum declaration has become the IMO's ecological spearhead; the number of environmental labels or associations has exploded; the COPs have followed one another hosting countless speeches of collective ambition as the Intergovernmental Panel on Climate Change (IPCC) reports have become more and more alarming. In

its 2019 European Green Deal, a roadmap for a carbon-neutral Europe by 2050, the European Commission took stock of the urgency of including the maritime sector in its decarbonisation strategy. At the source of everything, a new generation of citizens now votes by its purchases, striving to conceive its economic choices according to a planetary ethical meaning and matching its consumption according to the climate equation.

From these observations, TransOceanic Wind Transport (TOWT) wanted to do its

part. After chartering old rigs for over 10 years, seeking to combine economic profitability and sustainable transport, and having already transported more than one million goods on transoceanic routes, TOWT has launched the construction of four sailing cargo ships in partnership with the French shipyard Piriou. The first vessel of the 'Phoenix' model will be delivered next year with an overall length of 81 metres, an air draught of 64 metres and a load capacity of 1,100 tonnes. Followed by several sister-

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ships, she aspires to become the ambassador of a renewal of maritime transport.

As maritime transport is struggling to decarbonise and does not find in technology the future miracles for its environmental neutrality, recourse to sail technologies are, in the short, medium and long term, an obvious solution.

I say 'obvious' because wind is a free energy. Today, thanks to the incredible meteorological progress – which is certainly purely technological – aerodynamic movements and wind patterns are largely predictable at sea while routing software enables precise control over ETAs and logistics planning. This is obvious because sailing provides by far the best efficiency to convert this free energy into the movement of large volumes over long distances.

Obvious because sailing has power to decarbonise the shipping business not just marginally or 'probably', but almost entirely – propelling a carbon-based industry towards future ecological standards.

Obvious because, on an industrial project such as TOWT's, sailing reduces CO₂ emissions by 90% per kilo transported, and 92% for sulphur and nitrogen oxides, compared to the average of conventional shipping. Obvious because a sailing ship sails silently and does not emit underwater noise.

Finally, it is economically obvious – as a response to consumers who are increasingly challenging the environmental and human impact of global consumption. This generation of customers

is better trained to detect the smoke-screens of 'greenwashing' and more determined to support projects that make sense.

Green awareness is not a fad that may suddenly fade away, but an anthropic response to the progressive extinction of species, global warming, resource depletion and chemical imbalances of our ecosystems. For TOWT's cargo owners, the disconnection of ships from pipelines, the confidence of an honestly sustainable and environmentally friendly transport, the implementation of a serious policy of transparency through the creation of a label and the possibility of consuming a product imported from foreign latitudes without fear of expanding its environmental footprint are a real boon.

SAILING, AN INDUSTRIAL OPPORTUNITY

A growing number of cargo owners, seeking to find partners able to decarbonise their supply chains as much as possible, are struggling to find viable and mature solutions in the various multimodal segments of the import routes (road, sea, air, river, rail). More and more, clean transport is becoming a commercial requirement. The maritime environment is lucky to have the option of sail movement, a mode of travel hardly reproducible to other modes of transport. It is imperative to seize this opportunity. The wind already offers numerous retrofit possibilities: rotors, kites, spinnakers, rigid wings and auxiliary flexible sails are all more or less mature technolo-

gies developed by equipment manufacturers. Nevertheless, these are all power-assist equipment which, albeit offering encouraging decarbonisation yields on existing vessels, remain dependent on a main thermic engine propulsion to be properly effective.

With its cargo ships fleet, TOWT wishes to offer a transport service that brings back the main wind propulsion of the vessel, while approaching the industrial standards through an alternative logistic model.

Although these are comparatively small volumes that can be transported on an industrial scale (1,100 tonnes), by operating on fast, secure vessels equipped with their own handling equipment at the quayside, a vessel owner has all the cards in hand to provide a competitive offer, both in terms of pricing and extra-financial levers.

As far as prices are concerned, freight rates remain the competitive touchstone, and a sailing cargo vessel will certainly require marginally higher rates than those currently practised by the world's major shipping companies. Nevertheless, the high volatility of these prices and their sensitivity to geopolitical turbulence make them a source of uncertainty for loaders who find it difficult to project long-term supply budget lines. Bunker Adjustment Factors, the charges imposed by shipowners on shippers to compensate for the volatility of oil barrels, are not very predictable over time and constitute a risk for companies. By decoupling transport from oil, sailing makes it possible to engage fixed

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prices over time, as TOWT does by offering its clients invariable rates over 10 years.

From a logistical point of view, the advantages of choosing a sailing transport company like TOWT are numerous. Firstly, a dedicated transport, almost without any stopovers as lighter vessels are not subject to a multiplicity of shippers. This opportunity to perform direct routes reduces transport delays and the damage naturally caused to the cargo during long navigations. Secondly, on-board handling equipment allows port handling operations in record time. Finally, transport in a controlled environment eliminates the risk of losing a container at sea and allows better care of the transported cargoes, some of which may sometimes be very sensitive to factors such as temperature, humidity and ventilation levels, such as fine alcohols, cocoa beans or coffee grains for instance.

THE CHALLENGE OF TRANSPARENCY

In 2017, TOWT created the ANEMOS label, a certificate of trust guaranteeing a 100% sail transport. Furthermore, based on a certification purpose, ANEMOS also aims to become a transparency portal for sail maritime transport, bringing the activity as close as possible to the public.

The final consumer, through a travel code affixed to each labelled product, can find online information related to the voyage, the ship's itinerary and its nautical energy options (for instance, which segments are powered by engine, sail, or hybrid), details of ports of call,

a notice on the terroir of the products transported, the actual decarbonisation balance of the voyage, calculated and validated by the regulatory authorities, photos of the sea, the ship and the crew, and the seafarers' logbook, explaining the reality, joys and difficulties of their jobs. The point is to instil a cultural, economic, social and human 'cost' to the maritime transport, by involving the consumer-citizen in a world that is currently too opaque and invisible to be part of final consumption choices.

For shippers, this label represents a marketing leverage, as long as they position their relationship with transport in a different perspective, not only displaying a product coming out of nowhere but the final fruit of a production process, a transport, an organisation. This commercial matrix is growing today, as environmental and societal issues, but also the lack of information for consumption, take precedence over the mere material characteristics of a product in purchase choices.


Glancing at the debates on the different types of fuels in order to combine ecology and economic performance, sailing offers a rather radical alternative. Of course, large sailing vessels remain equipped with engines to carry out port manoeuvres, to reach wind flows offshore, and sometimes, to go upwind and harness apparent wind (the wind experienced by a moving object, as opposed to the real wind which applies to immobile objects). Nevertheless, the increasing precision of meteorological tools and routing software enables the optimal reduction of engine power.

In addition, wake hydro-generation allows us to ensure the needs of the ship

without relying on fuelled generators. By using the reverse rotation of the propellers during sole wind propulsion, electricity can be generated in a turbine and stored in the battery park to meet the needs of the crew, navigation tools and bow thrusters.

WIND IS READY

Sailing has been around for thousands of years. We have inherited a technology created by thousands of brains. The histories of sailboat navigation and construction are, in many ways, fascinating and brilliant. The challenge today is to reveal this transport through the prism of the technical and economic race of our time, although this implies reforming certain visions of the sector. A real wind propulsion industrial sector is developing in France and in the Netherlands, bringing on board equipment manufacturers, charterers, shipowners and visionary shipyards in a project of ecological, aesthetic and human significance. TOWT's Phoenix Class cargo ships, which will travel the transoceanic routes following the wind currents, are on the way to showing the industry that another model, carefully thought out, is now operational, that the wind technologies are ready, and that there is a tremendous demand to support a maritime project that fascinates, intrigues and gives hope.

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