Shipping is on the rise. Trips and traffic of commercial ships have nearly doubled in the last decade. This form of transport is considered energy-intensive, as ships emit polluting gases and particles that are bad for human health and the planet. Growth in the ‘blue sector’ must therefore find a way to balance business and environmental priorities. For port cities, where large ships and local residents, industry, commerce and tourism must find a way to coexist, environmental concerns are a top priority.

New regulations from the International Maritime Organization (IMO) are going into effect in 2020 to significantly reduce sulphur oxide (SOx) emissions from ships. France, meanwhile, is pushing for lower speed limits. Ports, shipyards and shipowners are looking for solutions to reduce their footprints and improve their ships’ energy efficiency. Depending on operating methods and technical requirements, they may be able to use less polluting fuels, such as LNG, or to choose electrical propulsion and ship-to-shore electrical systems.

BARILLEC Marine, a French company that designs electric and hybrid propulsion systems for shipping by sea and inland waterways is able to modify ships to ready them for cold ironing. The system integration takes places in multiple stages: First, an electrical port must be created or modified in the ship’s existing equipment, the ship’s network must be synchronised with the dock to move from one to the other without interrupting the power, and the procedure for connecting to the dock power
BARILLEC Marine has the expertise and the resources to master every aspect of this kind of installation from start to finish: delivering the design and implementation through their network of partners, preserving or modifying the necessary volumes for the onboard dimensions, making electrical modifications, getting the design and implementation approved by a classification organisation, and even training the crew.

Ship-to-shore power completely eliminates local emissions of harmful particles. The system produces real energy savings and reduces fuel consumption, making it a potential solution to complement the use of LNG. It also reduces noise pollution and helps improve the image of both the city and the port. To power CMA CGM’s container ships, the port of Dunkirk just inaugurated an 8MW energy conversion plant, the most powerful in Europe, designed by Actemium Brest. With their Vinci Énergies sister company, BARILLEC Marine is able to deliver a complete solution for ship-to-shore power, from modifying ships to energy production and conversion to shore points. This expertise requires the complete mastery of electricity, open-loop control, mechanics and civil engineering, all of which BARILLEC Marine will be promoting 4-6 February 2021 in Marseille at EUROMARITIME. Fittingly, the port of Marseille-Fos plans to become the first 100% electric Mediterranean port. This is certainly a market to watch.