

# ABB India's first shore-to-ship power supply for Tuticorin port to significantly reduce carbon footprint



The first such installation in a commercial port, it provides a plug and play power solution to help eliminate emissions that would result from burning diesel while ships are berthed

01 Ship docked at VOC Port in Tuticorin

In line with the government of India's Green Ports project, ABB India has commissioned a state-of-the-art solution for shore-to-ship power supply for ships at the V.O.Chidambaranar Port, formerly the Tuticorin Port. This solution expands the scope of the green agenda beyond renewable power to technology, which will enable ships docking at a port to plug for power instead of running on polluting diesel generators and using expensive power.

The Indian grid delivers power at a frequency of 50 Hz. So ships, most of which adhere to 60 Hz, have to depend on onboard diesel generators for power. For an average docking time of 60 hours for a commercial vessel at a port, the diesel generators produce a staggering 360 MT of carbon dioxide. ABB shore-to-ship technology supplies ships that are docked with electricity from shore, so they can turn off the diesel engines that provide electricity for systems like heating, lighting and refrigeration of the vessel, and reduce greenhouse gas and noise emissions in the port. The technology also helps reduce low-frequency noise and vibrations, and allows the crew to maintain diesel engines while the ship is berthed

"ABB is a global leader in shore-to-ship solutions and this is the first such installation at a commercial port in India. I would like to congratulate the V.O. Chidambaranar Port for their vision and focus on clean energy and we are proud to bring this technology to India. Trade volumes and efficiency of ports will play a large role in furthering initiatives such as Make in India and volume increase will be sustainable only when the carbon footprint of berthed ships' power sources reduce significantly," said Sanjeev Sharma, CEO and Managing Director, ABB India Limited. "ABB's deep footprint and technology expertise makes it well positioned to partner the nation in its journey of decoupling growth from carbon emissions."

The existing infrastructure at the port, which entailed usage of generators by the ships, was upgraded with ABB's state-of-the-art shore-to-ship supply system. The scope includes the proven PCS100 based Static Frequency Converter (SFC) with the associated electricals. The PCS100 SFC end-to-end solution is engineered for the demanding port applications with a modular construction, overload capability and power flow control in either direction using the advanced ABB technology.

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02 Mr Rajive Kumar,  
Secretary, Govt of India,  
Ministry of Shipping  
congratulating local  
ABB staff member

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03 PCS100 Static Fre-  
quency Converter (SFC)

The V.O Chidambaranar Port is one of the 12 major ports in the country, which will implement various schemes related to the Project Green Port initiative in a time bound manner. Approximately 1350 ships dock at the port, transferring around 33 MT of goods per year. The installation was inaugurated by Rajive Kumar, I.A.S., and Secretary to Government of India, Ministry of Shipping in the presence of S.Anantha Chandra Bose, Chairman, and S.Natarajan, Deputy Chairman, V.O.Chidambaranar Port Trust with N. Chadrasekar, Zone Group Head, Discrete A to-mation and Motion and S.Muthu Kumran, Manager, Sales from ABB India.

India's 7,500 km coastline is serviced by 12 major ports, 200 notified minor and intermediate ports handling over 95 percent of the country's trading (by volume). Reducing their carbon footprint through the use of bio-diesel and renewables is central to the government's green port initiative. Switching to shore-to-ship power has the potential of significantly reducing emissions, contributing to the efforts of the Indian government in reconciling economic growth and preserving the environment. An offshore FPSO and India's largest shipbuilding company have already deployed ABB shore-to-ship power solutions to increase efficiencies.



To find out more about ABB's power protection solutions:

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