

## Low Carbon Innovations

The port has actively engaged in reducing diesel dependency and encouraging innovation amongst its employees to develop low carbon solutions. These innovation solutions developed in house are:

The Gottwald Crane that ran on diesel has been electrified by engineers in house

10 RTGs have been installed with Intelligent Hybrid Engines that consume 33% less fuel in comparison to conventional RTGs.

Lube Oil used in cranes and other equipment is recycled after going through an Electrostatic liquid cleaning system that removes solid contaminants and low vacuum dehydrator and degassifier to remove water and gases. The entire cleaning equipment has been developed in house.

Special electric connections have been created on shore so that tugs can plug into them during idle time to run the various systems in the tugs instead of running the diesel engine that is used to power them for marine activities.

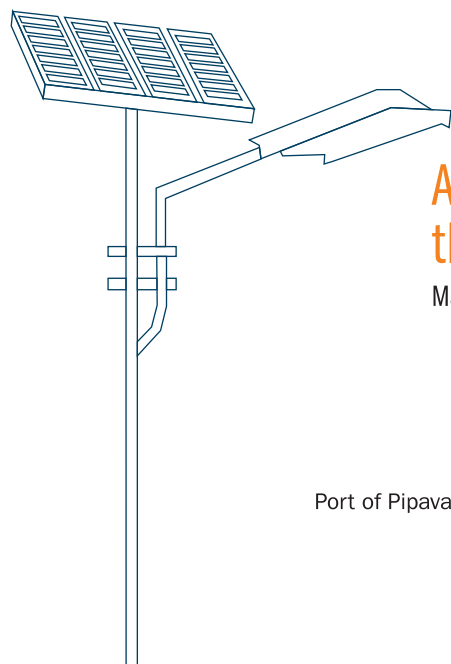
A pilot project to study electricity savings has been initiated by installing solar powered lights at approach bridges to the jetty. This is likely to be expanded to other locations after a cost benefit analysis.

Light sensors, developed in house have been installed in office premises to automatically switch off when not occupied

In addition, Port Pipavav complies with the Water Cess Act (Prevention and Control of Pollution), the Air Act (Prevention and Control of Pollution) - the port's compliance is monitored by Pollution Control Board's approved agency, the Noise Pollution Rules (Regulation and Control), the Hazardous Wastes Rules (Management, Handling and Transboundary Movement) and the Coastal Regulation Zone Act.

Our company policy, principles and standards require proactive efforts to design, develop, operate and maintain the most environmentally sensitive facility possible. It is a responsibility we take very seriously as corporate citizens.

APM Terminals Pipavav's journey has just begun.



**An ounce of practice is worth more than tons of preaching**

Mahatma Gandhi

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**Environmental  
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APM TERMINALS PIPAVAV

## Eco Efficiency Beyond Compliance

APM Terminals, the parent company of APM Terminals Pipavav (Gujarat Pipavav Port Limited) cherishes an ambition to reach “**Eco Efficiency Beyond Compliance**” across all its ports and terminals worldwide by 2012.

To achieve this goal, the company has made some strategic commitments i.e. to Reduce Carbon Footprint; to Reduce Diesel Dependency; to Develop low carbon solutions for new projects; explore carbon neutral options; and to improve sharing and global engagement.

Environment concerns include **Soil, Water and Air** pollution and their impact on the local community. Continuing the heritage of its parent, APM Terminals Pipavav has made a small but significant beginning in all these areas of concern. This report provides a summary of initiatives started at Port Pipavav.



An organic manure site converts kitchen waste from the employee canteen kitchen into compost which is then sold or distributed amongst employees and local villagers for use in gardening and farming.

Water quality at various locations including seawater at the jetty are analysed and monitored.



A sewage treatment plant re-uses the treated water for gardening while the residue is used as compost for plants.

Two villages near the port - Behrai and Shiyalbet - have been adopted for spreading awareness and implementing solid waste management.



560 hectares of mangroves developed - 300 hectares in Surat and 200 in Bharuch - along with the Government of Gujarat's Ecological Commission; 60 acres within the port premises.

Under the 'Greening Project' the port has planted 7000 saplings nurtured in an in house nursery. This is an ongoing project.



Coal has to be handled carefully as coal dust can spread easily. The Yard is surrounded by wind and water curtains to control coal dust from spreading out. This Environment Friendly Coal Yard is a unique feature at Port Pipavav.

Rain water is harvested in two ponds, one with 10 million litres and the other with 0.5 million litre capacity. This water is used by employees living at the Housing Colony at the port. The water curtain at the Coal yard also gets its water supply from rain water.

