

Subject: New CARB Regulations and Cold-ironing  
Date: Tue, 13 Dec 2005 12:07:42 -0500  
From: Tim Tyler <ttyler@paretoenergy.com>  
To: lwilliam@arb.ca.gov  
CC: Guy Warner <gwarner@paretoenergy.com>

13 December 2005  
Dear Ms Williams:

Mr. Jim Sweeney of Seaworthy Systems just forwarded me the latest press release from the CARB related to the Board actions on December 8th. That led me to the "Draft Emission Reduction Plan for Ports and International Goods Movement (December 1, 2005)" which I have excerpted below.

In kitchen English, you have the time-line wrong. I believe that we can begin introducing cold-ironing to California ports in a major way by 2007 and provide much better energy/emissions management in the ports. The bones of our approach, which we have already vetted with the NRDC, is found in the one page attachment. Please note the supportive quotation from the NRDC's Diane Bailey. We intend to approach two shipping/navigation companies and their associated terminal operators in the near term. We believe we can kick-start cold-ironing on the west coast. We also have active interest in our approach from east coast and gulf ports.

I would appreciate your initial, gut reaction and that of your colleagues to the approach laid out in the attachment. The operative question is: would you like to see a dramatic acceleration of cold-ironing implementation? I can, of course, provide you with additional information if you desire. There is simply no need to wait until 2010, 2015 or 2020 to make real, dramatic progress in this area.

Warm regards,

Tim Tyler

/Tim Tyler/

John T. Tyler  
Director & COO  
Pareto Energy LTD  
1101 30th Street, NW  
Suite 500  
Washington, DC20007  
Tel: 202.625.4388  
Cell: 202.468.3883  
Fax: 202.625.4363



## The Pareto Energy LTD Cold-Ironing Product

**Problem:** The pollution from ships in US ports damages the environment and threatens public health to such an extent that environmental and citizens groups and local politicians have demanded a solution that forces ships to use shore-power in port (cold-ironing) or to make the expensive shift to cleaner burning fuels.

Ship owners and terminal operators see no sensible, economical way to make cold-ironing work. To solve the impasse between the citizenry and the maritime industry, Pareto Energy LTD created a cold-ironing solution that will predictably have the same market effect as a new, disruptive technology. It introduces an incremental approach compatible with rebuilding the electrical grid infrastructure locally; it avoids many up-front capital costs associated with new T&D systems and central power plant construction; saves time, and combines the control of emissions with the provision of high quality, reliable electrical power for ships and for economic development.

**Product:** Pareto Energy LTD and its strategic partners propose a cold-ironing solution that uses on-site power to provide thermally efficient “cooling heating and power” (DG(CHP)) that can be used for:

- Providing shore power to ships at terminals that have access to DG(CHP) capability
- Providing electrical power to operate cranes and other terminal equipment
- Providing cooling for refrigerated warehouses/offices and reliable electrical power for refrigerated containers, plus providing steam for heating where and when needed
- Providing back-up electrical power through long-term power purchase agreements to local utility companies (e.g. as demonstrated in San Diego, CA)
- Provide incremental, just-in-time electrical infrastructure modernization
- Power that is highly reliable and of high quality for a Port Energy and Emissions District™ (PE&ED™) that can enable increased ship days in selected ports and economic expansion in around port districts. (A PE&ED™ is an organizational concept analogous to an Energy Improvement District—but managing port emissions issues as well as power. A PE&ED™ is particularly recommended when a port area operates under a court restraining order or under court directed palliatives to pollution/emissions.)

There will be guaranteed “negative net emissions” and if appropriate there will be opportunities for carbon credit trades; any new emissions generated will be offset. Pareto’s solution provides a standardized, scaleable approach to DG(CHP) deployment/employment; ship conversion and “new construction” that is scaleable and that can be implemented in all US ports and world-wide.

**Market:** How many ships are there? How many terminals are there? How many ports are there? At the Port of Long Beach alone, over 1200 ships make over 3000 port calls annually . The market is huge on both coasts and is rife with both political and economic pressures. The immediate challenge will be structuring an integrated approach to the both the shipping companies and terminal operators in multiple ports in order to maximize the economic benefits of converting ships to cold-ironing.

**Challenges:** There are sets of challenges related to: 1) Environmental issues; 2) Power availability and quality in port areas; 3) Terminal operations; 4) Ship conversion factors; 5) Port or ports—solution integration and timing. Converting a ship for cold-ironing at a single port defies economic sense. Converting a ship for cold-ironing at multiple ports makes sense. The problems of implementing a cold-ironing program are formidable at a single port and escalate with multiple ports. But, cold-ironing makes the best sense when the ship can use its cold-ironing capability at multiple terminals.

“NRDC would like to see ports and shipping companies provide and use shore-side power as rapidly as possible and to the maximum extent possible. If the Pareto Energy approach shows promise for faster implementation, and as long as the new generators comply with 2007 standards and are acceptable to local communities, NRDC would do nothing to stand in Pareto's way.” (31 August 2005, As amended by Diane Bailey, NRDC )