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November/December 2008

# The MARITIME EXECUTIVE

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# The MARITIME EXECUTIVE

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# Who Says Cleaner Vessels Always Mean Higher Costs?

**On October 9, the U.N.'s** International Maritime Organization (IMO) formally adopted new vessel fuel quality standards to reduce harmful emissions. Those standards will mandate progressive reductions in the global sulfur cap for vessel fuel to 0.1 percent by 2020 from the 4.5 percent allowed today. In designated "emission control areas" (ECAs), the maximum sulfur content will be reduced to 1.0 percent by July 2010 and to 0.1 percent by January 2015. With President Bush's signing into law the Marine Pollution Protection Act of 2008 in July, the United States formally embraced the entire IMO framework, including the new standards for ECAs.

The focus now is on establishing ECAs. At present, there are none in the U.S., and the IMO recognizes only two worldwide. Various initiatives by the EPA, the California Air Resources Board and a bill pending in Congress center on the concept of establishing an ECA extending 200 to 250 miles around the entire U.S. The Environmental Defense Fund (EDF), the leading U.S. environmental group with a track record of working constructively with the business community, has just weighed in with an excellent 45-page white paper sup-

porting a 200-mile ECA. The paper is accessible at the organization's [www.edf.org](http://www.edf.org) Web site.

These are nothing short of cataclysmic changes that will play to the inherent advantages of smaller-engine U.S.-flag vessels. This is because vessels with less than 4,000 horsepower typically have high-speed engines that only use a cleaner distillate fuel that already meets all of the IMO's fuel quality standards. And the same elements that drive cost-efficiency also produce enormous environmental benefits. These smaller vessels are truly the green workhorses of the Jones Act fleet.

## The Trailer Bridge Model

Trailer Bridge, a U.S.-flag carrier moving 53' containers on tug/barges between the U.S. mainland and Puerto Rico, is one such example. Its tugs use a marine gas-oil distillate fuel with no more than 0.05 percent sulfur content. In contrast, the self-propelled vessels serving Puerto Rico use a typical residual fuel which generally contains 3.5 percent sulfur. That 70-times differential


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expands further when you take into account the lower fuel consumption per unit mile of tug/barges. Despite this extraordinary difference in air pollution, U.S.-flag tug/barge systems also have lower costs per unit mile compared to U.S.-flag self-propelled vessels. Once at the dock, Trailer Bridge extends its over-the-water advantages with 53' containers moving inland in another combination of cost and environmental efficiency. In another first, the tractors it uses have auxiliary power units which provide cost and environmental benefits from reduced engine idle time.

Today, Trailer Bridge only serves the Caribbean, but when domestic short-sea services are implemented the successful ones will look a lot like its transportation system. Cost- and environmentally-efficient tug/barges moving cargo in cost- and environmentally-efficient 53' containers are the true marine highway. All the full-load domestic cargo you see moving on asphalt highways moves in 53' equipment, and it shouldn't be any different on the marine highway. The only environmentally superior marine highway will be one whose vessels use cleaner distillate fuel all the time. And the most pronounced environmental and congestion benefits will come from marine highways focused on moving domestic freight in 53' equipment along coastwise and inland waterway routes. In any complete analysis, successful and sustainable short-sea services will be built around U.S.-flag tug/barges moving domestic 53' containers.

Environmental groups like EDF often note that actions corporations take to improve environmental sustainability are also in their own best long-term economic interests when all the effects are considered. The cleaner distillate fuel needed to comply with the new IMO fuel standards costs twice as much as residual fuel. Vessel owners who are required to switch will see little benefit to their own corporations because the real effects of the emissions resulting from their polluted fuel are not borne by vessel owners. In a November 2007 study authored by Dr. James J. Corbett of the University of Delaware along with other leading academic authorities, the particulate matter emissions from vessels using residual fuel were linked to 60,000 deaths per year worldwide in coastal areas. The societal health cost from treating these cases and the more numerous non-fatal cases are many times the vessel owners' incremental fuel cost. The switch to distillate will reduce particulate matter emissions and the resulting mortality effect by 90 percent. Regulations exist to bridge the gap between individual and societal best interests, and the new IMO vessel fuel quality standards are clearly in our broader best interests.

The underlying data are compelling and will result in the establishment of a broad ECA around the U.S. that will go into effect in just 20 months. This will lead to unprecedented opportunities for smaller U.S. flag vessels that combine cost-efficiency and environmental cleanliness in a win-win for everyone. Don't let anybody say that cleaner marine transportation always costs more. The small vessel workhorses of the U.S.-flag fleet are proving every day that lower costs and breathing easier aren't mutually exclusive.

**MarEx**

**John D. McCown, 54,** is the CEO of Trailer Bridge, Inc., a U.S.-flag container shipping company. He holds an MBA from Harvard Business School and has worked in the shipping industry for 30 years. McCown is the holder of a patent related to Trailer Bridge's unique loading and unloading process for its newest vessels.



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