

**Commissioner Mario Cordero**  
**Federal Maritime Commission**  
**Remarks at the World LNG Fuels Conference**  
**Houston, Texas – January 26, 2012**

Thank you for inviting me to speak at the World LNG Fuel Conference and for the kind introduction.

As you are all aware, there has been significant activity in the maritime community in the environmental arena, including advocating for the use and development of alternative fuels. The Federal Maritime Commission is an independent regulatory agency responsible for regulating ocean borne transportation in the foreign commerce of the United States. My remarks today are my personal views and do not necessarily represent the views of the FMC. My past association on environmental policy issues also stems from my previous experience as a Commissioner at the Port of Long Beach, by all accounts a global leader not only in containerization, but a leader as a Green Port.

While many of us may be frustrated by the slow progress of alternative fuel application, I suggest we remain optimistic with the present scope of the environmental agenda. As recently as last week, it was reported that Kawasaki Heavy Industries completed the development of a large 9,000 TEU container ship fuelled by LNG. It was also noted that the industry expectations are high for LNG as a clean fuel alternative to reduce reliance on current fuel oil used. According to DNV, the new container ship design features a twin island design maximizing cargo space available for loading containers, a two stroke dual-fuel main engine which is electronically controlled with a high combustion efficiency coupled with a hull form optimized for safety and fuel efficiency, and the engine may be equipped with an exhaust gas recirculation system which satisfies the International Maritime Organization's requirements for voyages in North American and European Emission Control Areas.

As innovation pushes forward to achieve the International Maritime Organization's standards to control harmful exhaust emissions from ships engines pursuant to Annex VI to the International Convention on the Prevention of Pollution from Ships (MARPOL), the program consists of two sets of standards to control emissions from ships. The global standards for the sulfur content of fuel and nitrogen oxides (NOX) emissions from engines apply to ships at all times. As some areas may require further control, Annex VI contains geographic-based standards where ships operating in certain designated Emission Control Areas are required to comply with more stringent fuel sulfur and engine NOX limits.

To place things in perspective, the international ocean shipping industry accounts for approximately 3% of global greenhouse emissions. This percentage would translate in the industry, if it were a country, to ranking 7th in world emissions. From a policy perspective, I believe the industry leaders are sensitive to their commitment to addressing carbon emissions. This mindset has been accelerated by the belief of many that oil will be an increasingly a scarce commodity, or at the very least, an expensive commodity. Clearly, everyone in the industry would agree that there is a continued high cost of diesel fuel including the lowest grade used by the international carriers – bunker fuel. It should be noted that 90% of global trade is carried by

sea thus furthering a policy for the use of LNG fuel by international carriers is not only paramount in reducing the carbon footprint by the industry, but clearly would have a global impact that requires present day commitment by the various stakeholders.

On the international maritime front, let me recognize some who have made clear their interest for best practices as to the environmental issue. The Federal Maritime Commission has presented the Chairman's Earth Day Award for innovation and environmental leadership to Los Angeles in 2010 and Maersk in 2011. Maersk is one of the largest ocean carriers, and former CEO Eivind Kolding identified three areas to address based on customer demands, one of which was best environmental performance. Mr. Kolding shared the idea that the shipping industry should be known to beat environmental expectations instead of struggling to meet them. Senior Vice President of Maersk North America, Bill Woodhour, upon accepting the FMC Chairman's Earth Day Award on behalf of Maersk, noted that their goal was to drive toward zero sulfur emissions while cutting carbon dioxide by at least 25 percent per container between 2007 and 2020, thus furthering Maersk's commitment to environmental performance.

In addition, one of the world's largest container port operations, the Port Authority of Singapore, stated a clear commitment to reduce its carbon footprint at the Green Technology Asia Conference 2011. Lam Yi Young, Chief Executive of the Port Authority, announced the implementation of the Maritime Singapore Green Initiative promoting clean and green shipping. The program includes incentives for ships to reduce fuel consumption and carbon dioxide emissions.

In regard to the specific issue of fuel usage by international transport carriers, LNG continues to make progress as a credible fuel alternative. In addition to what I have discussed earlier, the international vessel classification society Bureau Veritas has approved, in principle, a design for a 14,000 TEU containership to be powered by LNG. Bureau Veritas' Deputy Technical Director Jean-Francois Segretain remarked that the market will be the driver as to the number of vessels ordered and built, but the real industry milestone is the fact that there is a fully worked and approved design for a main line ultra-large containership running on LNG. As for the development, Mr. Segretain shared that in addition to major operational savings being delivered and combining that with lower air emissions, a notable point is that these vessels can also run on heavy fuel oil if required, increasing flexibility in the period before LNG bunkering is widely available.

It should not be overlooked that LNG marine fuel has been discussed for a number of years now. In 2000, the Langsten shipyard in Norway produced the *Glutra* as the first ferry to use LNG as a fuel. According to Marine Log, since that time, more than two dozen dual-fuel ferries and Platform Supply Vessels have been built. Specifically, Harvey Gulf International Marine has ordered vessels as part of its "Going Green Vision." Additionally, the U.S. Government has continued its research of LNG feasibility and engineering/design study for the Great Lakes, which is expected to be released this fall. Parameters of the study include: investigating the existing maritime use of LNG, exploring the feasibility of and conceptual designs for conversion of steam-powered Great Lakes bulk carriers, assessing the availability of LNG in the Great Lakes region, addressing supply chain requirements, and engaging in significant outreach with government agencies and other industry entities both within and outside of the Great Lakes.

Use of LNG as a ship fuel was discussed in the past year at a maritime conference in Hamburg, Germany. Sweden's Wallenius Marine is one company that is presently studying the use of LNG as a maritime fuel. Again, there are challenges in balancing the cost effectiveness of LNG fuel and the positive impact on the environment. To that end, LNG usage as a fuel is not just a dialogue, it is a technology being placed into practice in the maritime industry. As reported in *Pacific Maritime Magazine* (August 2010), Per Tunell, the head of environmental management for Wallenius, opined as to the use of LNG fuel by Wallenius as a step closer to its vision of having emission-free vessels and that LNG is a stepping stone to running ships on biogas in the future.

The above illustrations of leadership and stewardship on the environmental agenda will translate to the use and availability of LNG fuel in the maritime industry in the years to come. There are many more examples available regarding the present day commitments in the maritime community, even including port authorities in the United States.

At present, the major drawbacks center on availability and cost of LNG as a fuel source for the maritime industry. Despite these challenges, there is a vision that many have embraced as to LNG, as you can all tell from the attendance at this conference, in large part due to the hard work and advocacy by stakeholders and policy groups. This vision includes making this a better world by promoting technology and fuel usage to lower the carbon footprint and not only to reduce harmful emissions, but to strive toward zero emissions. On this note, the Federal Maritime Commission can be a partner in the recognition of best practices in furthering environmental progress and enhancing carbon emissions transparency as well as be an advocate for the use of sustainable shipping practices.

In our role as a regulator of marine terminal operators and ocean carriers, the FMC has seen environmental issues become increasingly central to the agreements and shipping practices we monitor and regulate. As ports and ocean carriers adjust to reduce their environmental footprint, the FMC will serve as a helpful partner. One of the Chairman's top priorities for the FMC is helping advance the Obama Administration's goals of creating green jobs and seeking a more sustainable approach to maritime issues.

Lastly, I am very appreciative of the opportunity to address you here at the First Annual Conference of World LNG Fuels. I first addressed LNG as a fuel source a few years ago as a Port of Long Beach Commissioner in relation to harbor truck drayage. The Clean Truck programs of the Ports of Long Beach and Los Angeles have been very successful in moving forward not only cleaner fuels, but alternative fuels. The latest truck fuel development at the Port of Long Beach is that of the Hydrogen Fuel Cell truck, a development toward a zero-emission in harbor truck drayage system. History reflects periods of technological advancement in the furtherance of both public and commercial interest. I suggest we are now experiencing such an era. A time that we not only ask which technology is cost effective and furthers efficiency, but in addition, recognizes social responsibility. I thank you and your respective entities in securing a cleaner and more sustainable maritime community.

Thank you for your time and interest in this area of discussion. I would be happy to answer any questions that you have at this time.