



West Coast Collaborative
Marine Vessels and Ports Sector Workgroup Call
Wednesday, September 5, 2007 – Meeting Summary

ECO Crane Hybrid Technology

Ray Cousineau, Railpower Technologies (rcousineau@railpower.com)

Mr. Cousinaue provided an overview of Railpower Technologies latest commercial endeavor to hybridize rubber tired gantry (RTG) cranes. Details can be found in the slide presentation distributed prior to the call. The following are highlights from the overview and Q&A:

- Railpower worked with TSI Terminal Systems, Inc. at the Port of Vancouver on a demonstration project. One RTG crane around two-years old was selected for conversion to the new hybrid technology. The technology was field tested for approximately two months, running 100% of the time. As long periods of inactivity are typical for RTG cranes, this was built into the test.
- Data provided by the client showed significant energy savings using the hybrid technology, as well as tremendous opportunity for reducing fuel consumption (60-85%) and thus, emissions. The energy efficiencies gained from the hybrid technology also enables other opportunities such as the use of more efficient lighting.
- Fuel consumption reductions are based on economies of fuel, so additional strategies can be incorporated such as use of ultra light fuel or diesel particulate filters. The use of additional measures would compound the results, reaching 95-96% total fuel savings.
- The payback period is approximately 1.5 years. On that basis, tenants could purchase a new crane in nine years (i.e. the technology would pay for itself with energy savings in a little over ten years.) Assuming a \$1.2M cost for a new RTG and \$250,000 for the hybrid technology separately, incorporating the hybrid technology directly into a new crane would result in an approximately \$125,000 net difference. This translates to a 10% rise in capital costs, which would be recouped in less than a year from energy savings.
- Railpower has delivered a second and third updated commercial unit to Terminal System, Inc. The original design was based on locomotive hardware, with the purpose of getting the technology up and running to prove the concept. Railpower has now downsized the design specifically for RTG crane use. The updated design is essentially a drop-and-place package into the existing engine. The updated design maintains the benefits of original unit, but reduces upfront costs and makes installation easier and more cost effective.
- Railpower is currently researching verification of the hybrid technology through EPA and/or CARB. The company is considering emissions testing for its own personal interest, from which the data could lend credibility to the pilot testing results. The technology used is adapted from an already certified particulate filter meeting California CHE rules, and is very similar to hybrid technologies used with yard switchers, the results of which are well documented.
- A variation of this technology could be applied to virtually any RTG crane. Between 700-1,000 RTGs are built every year and shipped worldwide.

Pacific Northwest Economic Region (PNWER) Meeting Debrief

PNWER, a collaboration of State and provincial legislators (and some industry representatives) held their annual summit from July 22-26 in Anchorage, Alaska. Peter Murchie, West Coast Collaborative Lead, spoke at the summit Environment Committee meeting regarding the Marine Vessels and Ports (MV&P) Sector activities and progress towards a North American SECA application. The Committee representatives expressed a great deal of interest in the MV&P Sector and plan to follow its activities. PNWER passed a resolution supporting the ratification of Annex VI in Canada and the United States (note that the provisions of Annex VI have been incorporated into Canadian law now in force). Future meetings of PNWER will focus on greenhouse gas emissions. Peter will continue his involvement with PNWER and will let the group know of any actions that could be taken on the marine front. In addition, while in Anchorage, Peter spoke with representatives at and received a tour of the Port of Anchorage and its expansion projects. Port of Anchorage expressed interest in speaking on an upcoming MV&P Sector call, and was invited to do so.

International Shipping Legislation Update and Discussion

The following are brief updates on legislation currently under consideration:

- Legislation giving the United States (U.S.) authority to implement MARPOL Annex VI was passed in the House and referred to the Senate a few months ago. It currently sits in the Senate Subcommittee on Oceans, Atmosphere, Fisheries, and the Coast Guard, chaired by Maria Cantwell of Washington State.
- The World Shipping Council, Pacific Merchant Shipping Association (PMSA) and Port of Seattle all publicly expressed support of the U.S. proposal to amend Annex VI. Canada has also supported the elements of the proposal.
- The Boxer bill would codify the U.S. position and require EPA to adopt the proposed changes to Annex VI under the Clean Air Act, regardless of if the changes are adopted by IMO. Concern currently exists regarding international competition between ports if IMO rules were not agreed to and Canada did not elect to adopt similar regulations as the Boxer bill. The timeline for implementation of the proposed Annex VI amendments is January 2011 and the timeline for implementation of the Boxer bill is December 2010.
- EPA will issue an Advanced Proposed Rulemaking for Category 3 marine engines late this fall, paralleling the U.S. position on Annex VI. To date, EPA has received three notices of intent to sue from the South Coast and Santa Barbara Air Quality Management Districts, and Earth Justice regarding the timing of implementation of the proposed rule, which has been extended from the original date.
- Work will continue in support of a North American SECA until it becomes no longer relevant to do so due to adoption of legislation which would supersede SECA regulations. Findings from SECA research will be used, to the extent possible, to bolster rationale for the U.S. Annex VI proposal.

The following points were brought up during discussion regarding current legislation and the role of the MV&P Sector:

- As there are competing proposals for amending Annex VI, as much support as possible for the United States proposal, the most stringent, is desired before the IMO meeting next April. To begin to address this, the West Coast Collaborative Team is creating a new international shipping webpage to act as a “one-stop shop” for information regarding all the current proposals (language, progress updates, etc.) on different fronts including IMO and SECA.

Organizations are invited to post their letters of support on the webpage in an effort to encourage others to express their support as well.

- Uniform support for the U.S. proposal is desired, as is timely and expeditious action by IMO. If the proposal passes, the worldwide patchwork of regulations would be unified, and the U.S – Canada competitive concerns around the Boxer bill would be nullified.
- If an IMO decision on amending Annex VI is delayed, the possibility to work collaboratively between Canada and the U.S. on Boxer bill, EPA Category 3 marine engines, or other similar regulations is open. However, it is too early to determine a process forward on this front. Mexico is still under consideration as a partner as well.
- PMSA has taken a position regarding the Ports of Long Beach and Los Angeles workers health study, stating that they are not opposed to the study moving forward; however, if it does it should be conducted in a manner that is consistent and comparable with other similar studies. The ILWU has issued a memo in reaction to PMSA's position, with the feeling that real-time monitoring of workers health is being resisted, and that this resistance is inconsistent with PMSA's support for Annex VI regulations. PMSA noted that they wholeheartedly support uniform regulations, such as those that the amendments to Annex VI would create, and are not opposed to the workers study. Their concern is around the way the study would be conducted.

These discussions will continue at the October MV&P Sector face-to-face meeting.

General Collaborative Update and Announcements

United States Federal FY08 Budget

The current legislative language for the FY08 budget contains approximately \$50M earmarked for the National Clean Diesel Campaign. If this passes through Congress, there could be significant increase in resources for the West Coast Collaborative RFP process next year as goods movement is a huge priority for EPA funding. The Senate language has an additional \$15M included for projects in the San Joaquin and South Coast areas. Currently a discrepancy exists between the House and Senate language regarding nonattainment. The Senate language states that money would only be distributed to areas in nonattainment. The House budget does not include this language.

Due to the lengthy Continuing Resolution on the FY07 budget, only limited funds were distributed. The West Coast Collaborative will issue an RFP in the next couple of months for approximately \$500,000 total for all Sectors. As funds are limited, grants will only be awarded for Region 9 project proposals.

State Funding

Oregon passed legislation creating a statewide clean diesel program. Under the new program, approximately \$1M – \$1.5M million will be distributed over the next two years for clean diesel projects.

There has been movement forward on a similar clean diesel program in Washington State. In addition, the Department of Ecology received additional funding to address diesel emissions reduction projects with a priority focus on school buses and public fleets. Once those two areas' needs are met, remaining funding can be used for private fleets. The Puget Sound Clean Air Agency also has some funding to address private sector fleets, and is working with the Ports of Tacoma and Seattle on this front.

Canadian Funding

Applications are now being accepted for the first round of funding under Transport Canada's Freight Technology Incentive Program and Freight Technology Demonstration Fund. Round one will close on November 1, 2007. The Freight Technology Demonstration Fund provides the freight transportation industry with cost shared funding for real world testing of freight transportation technologies that have the potential to reduce the amount of fuel consumed and the emission of air pollutants and greenhouse gases. The Freight Technology Incentive Program provides cost shared funding to support the purchase and installation of proven technologies throughout the freight transportation system that can reduce the amount of fuel consumed and emission of air pollutants and greenhouse emissions. Program guidelines and the application form can be found at: <http://www.tc.gc.ca/programs/environment/ecofreight/menu-eng.htm>.

Upcoming Conferences

Sector related conferences are posted on the conference calendar on the Collaborative website.

- **Marine Log 2007** Global Greenship – September 25-26, 2007 in Washington, D.C.; Ferries – November 5-7 in Delray Beach, FL; and Intelligent Shipbuilding – December 5-6 in Washington, D.C.
 - Information and registration: <http://www.marinelog.com/DOCS/Conf.html>
- Air and Waste Management Association Conference: **Managing Ship Emissions and Effluents with Emphasis on Eastern Canada and the North Atlantic Seaboard** – October 1-3
 - Information and registration: http://www.awma.org/events/view_event.html?typeid=1&id=52
- **BunkerWorld Forum: Marine Fuel Sustainability** – October 25-26, 2007 in Long Beach, CA
 - Information and registration: <http://www.bunkerworld.com/events/losangeles2007/>
- The **West Coast Collaborative Marine Vessels and Ports Sector** meeting – October 24, 2007 in Long Beach, CA
 - In conjunction with the BunkerWorld Forum
 - Information and registration: <http://www.westcoastcollaborative.org/mvp-mtg-register.asp>
- **Pacific Ports Clean Air Collaborative** – November 2007 in Shanghai
 - Conference participation is by invitation only
- **Faster Freight Cleaner Air** – July 2008 in New York, NY
 - This conference has not yet been formally announced – details TBD

Marine Sector Face-to-Face Draft Agenda

The group reviewed the draft face-to-face agenda distributed prior to the call. Peter noted that the MV&P Sector is a top priority for the Collaborative, and that the face-to-face meeting is an excellent opportunity to hone in on the goals and advance the work of this group. All members are greatly encouraged to attend the meeting, and to reach out to other partners and encourage their attendance as well.

Call participants made the following comments regarding the agenda:

- The Sector Lead should make a direct extension to elected port Commissioners along the West Coast, inviting them to the meeting.
- The Sector Leads should court European and Pacific Rim attendees of the joint Bunker World conference to present and/or attend the MV&P meeting.

Additional comments on the draft agenda are due by September 14, and can be sent to Grace Cheng, MV&P Sector Lead (Cheng.Grace@epamail.epa.gov).

Adjourn

The next Marine Workgroup teleconference will be held on November 7, 2007 from 9:00 am – 10:30 am PT. The teleconference line for all calls is: 1-866-299-3188. The conference code is: 2065538087#.