

Laying the Groundwork for Innovation in Goods Movement



■ Trade and Transportation

By Thomas O'Brien

Within the next few months, the Ports of Los Angeles and Long Beach are expected to release a Request for Qualifications (RFQ) in conjunction with the Alameda Corridor Transportation Authority. The RFQ identifies firms and academic institutions that can develop and demonstrate a financially self-sufficient, zero-emissions container-mover system for the region. Maglev technology has received the most attention, but the ports seem open to any technology that fulfills the Green Ports mission and helps implement the goals of the Clean Air Action Plan.

It is not surprising that both the demand for innovation of this nature and its likely supply will come from Southern California. The region is an innovator for a number of reasons. First and foremost, perhaps more than any other region in the country, we have a need for operational strategies and technologies that can address the growth in trade that has occurred over the past decade and that we expect will return after the end of this recession. The greater the environmental problem, the greater the need for innovative solutions.

One homegrown operational innovation is PierPASS. In February 2004, a bill (AB 2041) was introduced in the California Assembly requiring off-peak gates at the Ports of L.A. and Long Beach as a means of spreading out truck traffic and

reducing truck-related congestion. Terminal operators were faced with a difficult choice, since passage of AB 2041 seemed certain. They responded by setting up their own extended-gate program to forestall further legislative action. That program, PierPASS, has resulted in a shift of approximately 35 to 40 percent of eligible gate moves to the evening and weekend. It also established an industry-driven means of collecting fees used to pay for infrastructure improvements and environmental mitigation.

Sometimes the combination of rising trade volumes and legal action can encourage the ports to take the lead in adopting environmental innovations. The use of ship-to-shore power at the San Pedro Bay Port complex, also known as cold ironing, came about as a result of a lawsuit filed by the Natural Resources Defense Council (NRDC) against the Port of Los Angeles over the construction of the China Shipping Terminal in 2000. The settlement required the terminal to test cold ironing, which was then a relatively new technology, so that ship engines could be turned off while in port.

The Ports' Clean Air Action Plan is itself an institutional innovation, this time an experiment in port-directed - as opposed to legislatively mandated - environmental policy making. It includes a Technology Advancement Program, an investment of some \$15 million over a five-year period in the identification and development of new, clean technologies like the zero-emissions container-mover system. The ports have also been a partner in the testing of the world's first hybrid tugboat.

While congestion and external political and environmental pressures have driven innovation in Southern California to an extent; other factors also make this region a center for innovations. Major research universities, research and development firms and business incubators - sometimes all working together - are important partners for the ports in their environmental efforts. The combination of mega-region,

mega-port, and mega-research center is rare, and the concentration of leading industry players in Southern California means that there is a potentially ripe commercial market for innovations developed and tested locally.

Finally, another driver of innovation is the competitive nature of the ports themselves. While Los Angeles and Long Beach are immediately adjacent to each other and act, in many ways, like a single port complex, they are in fact competitors. The desire of each to draw business away from the other means that they are forced to differentiate themselves in the way of operations and facilities, including new technologies.

Innovation also plays a role in competition between L.A./Long Beach and other ports. As the largest port complex in North America, the San Pedro Bay ports are likely to exert a certain influence on their counterparts, particularly those along the West Coast. The amount of trade-related activity L.A./Long Beach draws to the West Coast provides a critical mass of actors that help to mediate the development and adoption of innovation for the system of ports stretching from Baja to British Columbia. At the same time, L.A. and Long Beach provide the incentive for innovation at the local port level. The desire to lure traffic away from Southern California and increase market share is one reason other ports try to differentiate themselves. Innovations in process, policy and technology help them compete more effectively. Our success in maintaining our own competitiveness depends upon cultivating our comparative advantages in the same areas.