

Port of San Diego takes its role as environmental steward seriously

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As the environmental steward for San Diego Bay, the Port of San Diego plays a significant role in the conservation of natural resources and is a leader on environmental issues in the region.

San Diego Bay is a 12-mile long natural bay in southern California, providing important salt marsh and tidal flats, bird nesting and foraging sites, and essential fish habitats such as eelgrass beds for species along the bay.

The Port is committed to preventing, reducing, and eliminating the discharge of polluted stormwater into San Diego Bay. With over 30 miles of waterfront around the bay, and more than 5,000 acres of tidelands in the Port's five member cities (San Diego, Chula Vista, National City, Imperial Beach and Coronado), the conservation of natural resources is no small effort. The Port of San Diego Board of Port Commissioners takes this task seriously, and continually seeks to implement projects and programs to decrease the Port's environmental impact, while maintaining economic viability.

The responsibilities of the Port of San Diego are unique among ports. The Port is an economic engine for the region, operating two cargo terminals, a cruise ship terminal, and is landlord to more than 600 varied businesses along the San Diego Bay waterfront. The Port's annual operating budget is largely generated from these leaseholds and allows the Port to operate free of taxpayer dollars.

Created by the California Legislature in 1962, to manage the Bay and the surrounding waterfront land, the Port also provides public amenities along the waterfront, including 18 public parks,

multiple boat launch ramps, and a commercial fishing marina. With these varied responsibilities, we constantly are looking for opportunities to reduce our environmental footprint, while at the same time maintaining economic viability.

Going green

The Port of San Diego's Green Port Program is one example of how the Port is working proactively to reduce its environmental footprint. The Board of Port Commissioners launched the initiative in December 2007, with the adoption of a Green Port. This policy established the framework for the Green Port Program to achieve long-term environmental, economic and societal benefits through resource conservation, waste reduction and pollution prevention.



Figure 1. The Port of San Diego owns and manages over 30 miles of waterfront property around San Diego Bay.

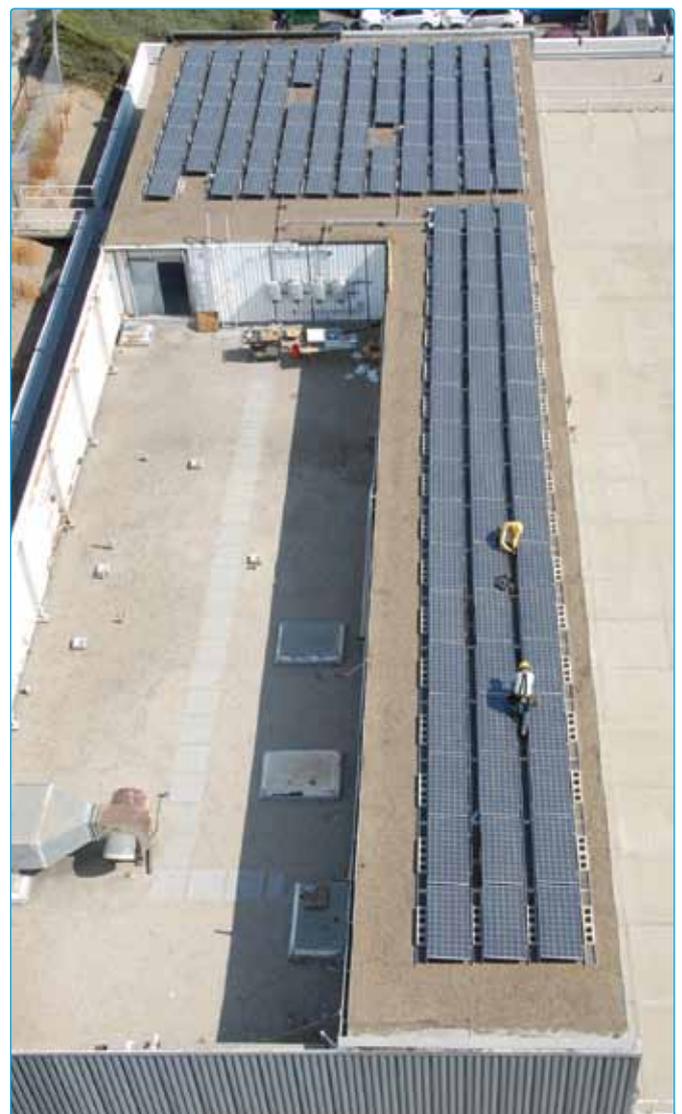


Figure 2. More than 100 solar panels sit atop the Port Administration Building's annex, providing clean energy for the building.

The Green Port Program identifies six key areas of focus: water, energy, air, waste management, sustainable development, and sustainable business practices. The Port has achieved significant resource savings and waste reductions in its daily operations through the implementation of initiatives under the Green Port Program.

With growing concern over rising utility costs and greenhouse gas emissions, energy has become one of the major areas of focus in the Green Port Program. The Port has adopted a goal to conserve energy and maximize the energy efficiency of Port operations, providing accountability and commitment to energy savings. Significant progress is being made toward achievement of this goal, through a number of large and small partnerships and initiatives.

Energy conservation

In 2008, the Port forged a partnership with San Diego Gas & Electric (SDG&E), our local utility provider. The partnership supports the Port's Green Port Program with programs that deliver net energy savings, peak demand savings and greenhouse gas reductions, through the implementation of energy efficiency activities. This partnership will increase the energy efficiency of Port operations, as well as among businesses that operate within the Port's jurisdiction.

Energy efficiency measures have reasonable payback periods and ultimately reduce operational costs. SDG&E also provides many incentive programs, allowing facility retrofits to be implemented at little to no cost. The Port's partnership with SDG&E is being used as a model in the San Diego region. These programs will conserve energy and reduce demand on the grid, resulting in a win-win situation for organizations such as the Port and the local utility.

Renewable energy

One of the most exciting areas of opportunity is the incorporation of renewable energy into Port operations. The photovoltaic systems serve as a great educational tool for staff and public, and southern California's sunny weather makes it a perfect location for solar energy production.

The Port's first photovoltaic system installation took place in the summer of 2009. The 30-kilowatt system includes more than 100 solar panels, on top of the Port Administration Building's annex. Although this was a relatively small project, it was still a significant first step, gaining support and approval from the staff and public. Plans are underway to install a 50-kilowatt system on our General Services Building, as we work to increase our renewable energy portfolio.

Although the Port owns and operates relatively few buildings, we recognized that the open spaces over parking lots and on the roofs of comfort stations in our parks could potentially be used for solar panels. We conducted a solar assessment and identified over two million kilowatt hours of solar potential in areas operated by the Port. The assessment recommends system size, annual system production and annual savings. All of this information will guide the planning, design and installation of future photovoltaic systems. The incorporation of renewable energy on Port tidelands allows us to achieve a high quality of public service and maintain our role as an environmental steward, while providing the benefits of reduced demand on the utility grid.

Renewable energy projects, particularly solar panels, can be extremely expensive and have long payback periods. We continue



Figure 3. The Port, in partnership with SDG&E will pilot a wind turbine made by Nakao International C&E.

to gain experience as we move forward with additional projects, including ways in which we can reduce our direct costs, while still gaining the benefit of incorporating renewable energy projects into our operations.

For example, the Port is installing solar panels on the new Broadway Pier Cruise Ship Terminal now under construction, which will provide at least 12 per cent of the building's energy. The terminal will be serviced by two 30-kilowatt photovoltaic systems, one owned by the Port and the other by San Diego Gas & Electric.

For larger systems, such as those described above in the solar assessment, the Port is looking into a Power Purchase Agreement. Using this mechanism, a third party would purchase, install and maintain the systems on Port property. The Port would then purchase the clean energy from a third party provider, at a competitive rate negotiated by both parties. This would provide potential for savings over the long term.

Through creative thinking, we hope to maximize our ability to incorporate renewable energy into our operations while reducing costs – such as through the use of wind turbines. As part of our partnership with San Diego Gas and Electric, we will be conducting a pilot project to test small vertical axis wind turbines on Port tidelands. This is an exciting partnership opportunity which helps further increase the Port's renewable energy portfolio.

The Port of San Diego takes its role as environmental stewards in the San Diego region seriously. We are continually working to reduce our environmental impact and embrace environmentally sustainable business practices.

ABOUT THE AUTHOR

Robert Valderrama is currently Chair of the Port of San Diego's Board of Port Commissioners. He served for two years as a Director on the San Diego County Water Authority Board and served on the agency's Engineering and Operations Public Affairs Special Budget Committee. He is President of A-D & D Drywall, Inc. and of WestCoast Scaffold, Inc.

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