

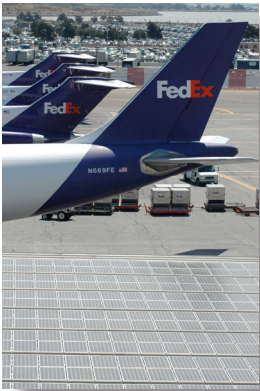
PORT ENERGY INNOVATION INITIATIVE



Generating the Port of the Future

What: *The Port Energy Innovation Initiative is a Port of Oakland initiative to study and implement ways to achieve lower energy costs and long-term energy sustainability via energy efficiency, renewable energy, and other innovative technologies and strategies that will enhance the **competitiveness** of the Port and its seaport, airport, and real estate businesses, generate **jobs**, and improve long-term **sustainability**.*

Why: *Long-term energy and fuel costs are rising, and regulatory requirements show no signs of lessening. The long-term trends are away from fossil-based transportation fuels to alternative renewable fuels and grid-based electricity, ideally from renewable and sustainable sources. The Port can either play “catch-up” in the future to these demographic, economic, and policy realities, or we can embrace a position of innovative leadership, helping trail-blaze, shape, and take advantage of these trends. **The Port of Oakland chooses innovative leadership.***



Many of our tenants are already leading the way – FedEx with a rooftop solar array and Bloom Box fuel cell installation, APL with the first shore power installation; as are their customers who see opportunities to reduce costs and market energy efficiency because of the associated environmental benefits. The Port has taken leading steps as well with its Maritime Air Quality Improvement Plan (MAQIP); renewable energy portfolio goals, which we are reaching with projects such as our 1.2 Million KWH Sun Edison solar installation; policies around lighting, buildings and use of alternative fuels; LEED certification; Energy Star Certification of the main Port building since 2006; compressed natural gas fueling stations; and electric vehicle charging stations.

We are embarking on this new initiative to build on the work done to date by the Port and our tenants and stakeholders, and orient it toward the cutting edge of the future, capitalizing on multiple potential benefits that align with the Port’s 5-year strategic plan focused on economic development, innovation, sustainability, and core business strength:

1. **Competitiveness** via lower energy costs for the Port, tenants, customers, and stakeholders
2. **Sustainability** via stewardship of limited financial, capital, and natural resources related to energy
3. **New revenue** from energy and utility infrastructure optimization
4. **Jobs** via economic development, including potential cleantech-related employment
5. **Healthier communities** via reduced emissions, esp. local criteria pollutants and diesel particulates
6. **New technologies** to achieve emission reduction and environmental objectives
7. **Cost-effective compliance** with California’s leading emissions and greenhouse gas regulations
8. **Enhanced energy independence** and resilience, specifically greater security of adequate local supply of energy despite shocks or failings in the grid from natural or human-induced disasters

COMPETITIVENESS



JOBS



SUSTAINABILITY

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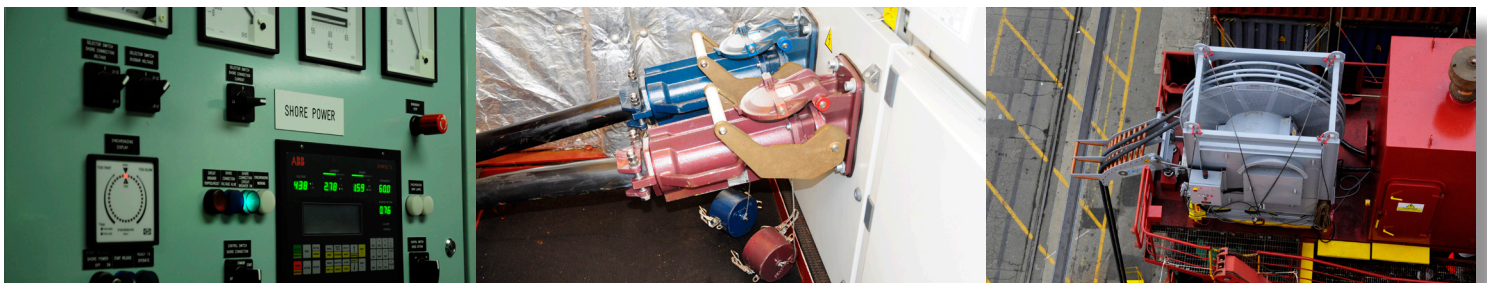
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How: This initiative has **three phases**. Currently we are in the **scoping phase**. Energy is a complex and highly interconnected arena. This initiative has to be broad enough to be effective and focused enough to deliver feasible, cost-effective recommendations. The next phase will be the **study phase**, where the smartest scientific minds in the world, as well as the best practical engineering and financial minds will help us identify and evaluate energy options. The final phase, the **implementation phase**, will involve delivering on the recommendations of the study. To fund the study, the Board of Port Commissioners has allocated \$100,000, a seed grant that we are seeking to augment with investors and additional funding partners.

Who: This initiative is driven by the Port with input from a broad array of stakeholders, among them scientists, community members, investors, and Port businesses. We are in the early stages of **building and aligning a coalition** with the right interests, commitment, and resources to deliver results that are implementable, cost-effective, and in line with the goals of the project. The Port is also engaging with **national research laboratories** such as Lawrence Berkeley National Lab and the National Renewable Energy Laboratory, to ensure that world class science is applied to the study of energy options for the Port.

When: The scoping phase will run through the summer and fall of 2011. The study phase should begin in early 2012, with completion by the end of 2012, at which point we could begin the implementation phase, depending on funding and the cost-benefit analyses of identified opportunities. This is a **long-term** initiative with incredible potential, which requires our focus and attention today. Along the way, the Port will seek to take advantage of near term opportunities – the “low-hanging fruit” – most likely via energy efficiency measures. In addition, there are regulatory deadlines that this initiative will help us comply with, and which have defined dates.

APL Shorepower technology at the Port of Oakland.



For additional information and to be part of the innovation, please contact initiative project lead, Isaac Kos-Read, at ikos-read@portoakland.com or 510-627-1565.

COMPETITIVENESS



JOBS



SUSTAINABILITY