

# Solar Implementation at Pier 69



# Port Century Agenda Goals

- Be the greenest, and most energy efficient port in North America
  - Meet all increased energy needs through conservation and renewable sources.
- Economic and Social
  - Promote small business growth and workforce development

Project aligns directly with Century Agenda goals

# Project Summary

Scale	Total Estimated Costs	Department of Commerce Grant	Net Cost to the Port	Electricity Produced kWh/Yr.	Electricity Value/yr.	Annual MtCO2 reduced
100KW	\$515,000	\$182,500	\$332,500	100,000	\$11,000	1.5 Mt



Location, building structure, utility service and Incentivization influence project siting

# Benefits

- Reduces 49.5 MtCO<sub>2</sub> over project life
- Reduces operating costs at P69
- Positive public perception of promoting renewable energy technologies
- Supports 7 clean tech jobs by using in-state sourced solar panels and local installation contractors

P69 is an economically and environmental feasible renewable energy project

# Cost Estimates and Financial Analysis

<b>Total Project Cost</b>	<b>\$515,000</b>
<b>Expected Grant Reimbursement (50% of construction costs)</b>	<b>(\$182,500)</b>
<b>Total Cost to the Port</b>	<b>\$332,500</b>
<b>Project life</b>	<b>33 years</b>
<b>Payback period</b>	<b>24 to 30 years ( @3% to 5% growth rates in grid-based electricity cost)</b>
<b>NOI after depreciation</b>	<b>\$2,000 to \$11,000 annually</b>
<b>IRR</b>	<b>3.4% to 4.7%</b>
<b>NPV (@7.6% discount rate)</b>	<b>(\$149,000) to (\$203,000)</b>

## Financial Details

# Contracting Method and Schedule

- Building Engineering Systems (BES) Contract
  - Based on lessons learned from pilot project at FT
  - Port will provide performance specs and contractor will design and construct
  - Opportunities for efficiency, quality, and innovation
- Schedule
  - Q1/2018: Advertise, award, and execute BES contract
  - Q2-Q3/2018: Design and construction
  - Q4/2018: Project closeout

Implementation Details

# Questions

