

# Energy & Sustainability Fund: National Renewable Energy Lab Analysis

Stephanie Meyn, Aviation Environmental

Elizabeth Leavitt, Engineering, Environment & Sustainability

# Action Requested

Authorization for the Executive Director to commit previously approved Energy and Sustainability Center of Expertise funds to analyze energy and technology alternatives for both aviation and maritime facilities in the amount of \$127,000

# Outline

- Overview of National Renewable Energy Laboratory expertise
- The benefits of a joint maritime-aviation approach
- Why this effort is needed in 2021

# Overview of NREL

- Sought-after for innovative energy & technology
- Cost-effective
- Does not compete with consultants
- Long history of partnerships with other ports and complex campuses



# Joint Maritime-Aviation Approach

- Support for energy and technology analysis for projects such as:
  - Reducing or eliminating demand for natural gas in large campuses and buildings
  - Evaluate opportunities for distributed energy, storage, and microgrids in maritime applications
  - Evaluate maritime shore power distribution and optimization

# Effort in 2021

- The planning horizon for capital projects is long, and energy supply work must be done in advance of traditional project-footprint level planning
- Without this research in 2021, the airport's central utility plant expansion may not be able to meet Century Agenda goal
- NREL expertise needed in first (2021) of the two-year Seattle Waterfront Clean Energy Strategic Planning effort.

# Project Cost & Schedule

- Total project cost \$150,000. Energy & Sustainability Fund = \$127,000 and Environmental Center of Expertise = \$23,000

Project Step	Estimated Completion
Scope Definition	12/31/2020
Commission Authorization to Enter into MOU	2/16/2021
Agreement with NREL signed	2/17/2021
Data Gathering	3/31/2021
Evaluation of Alternatives & Technologies	11/30/2021
Final Recommendations	12/31/2021