

POLB: Energy, Resilience, and Jobs

CMANC Fall Meeting – California's Sustainable Energy Challenges
and Opportunities

Christine Houston, Manager of Sustainable Practices



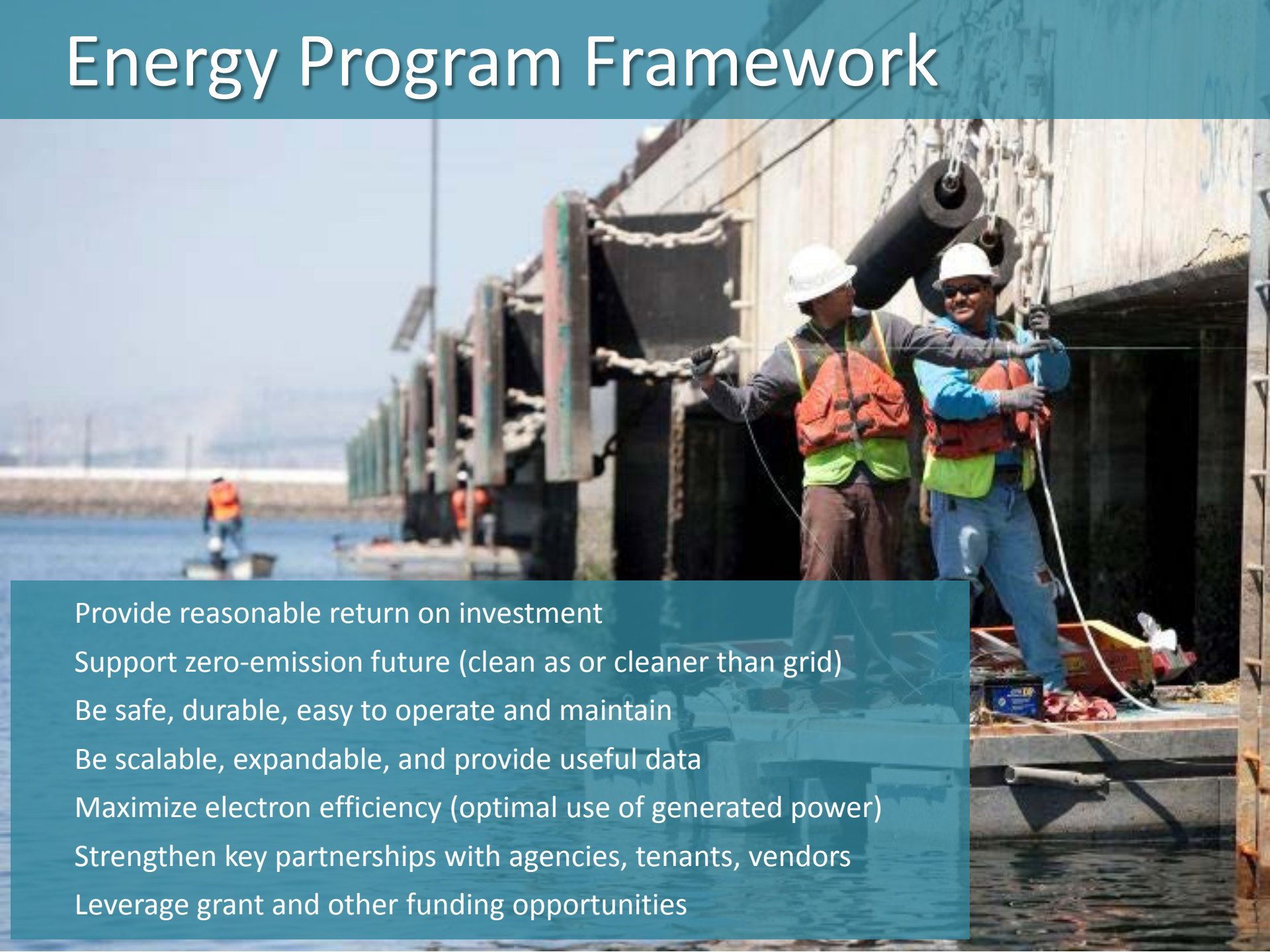
Energy Program



2013 POLB Energy Policy:

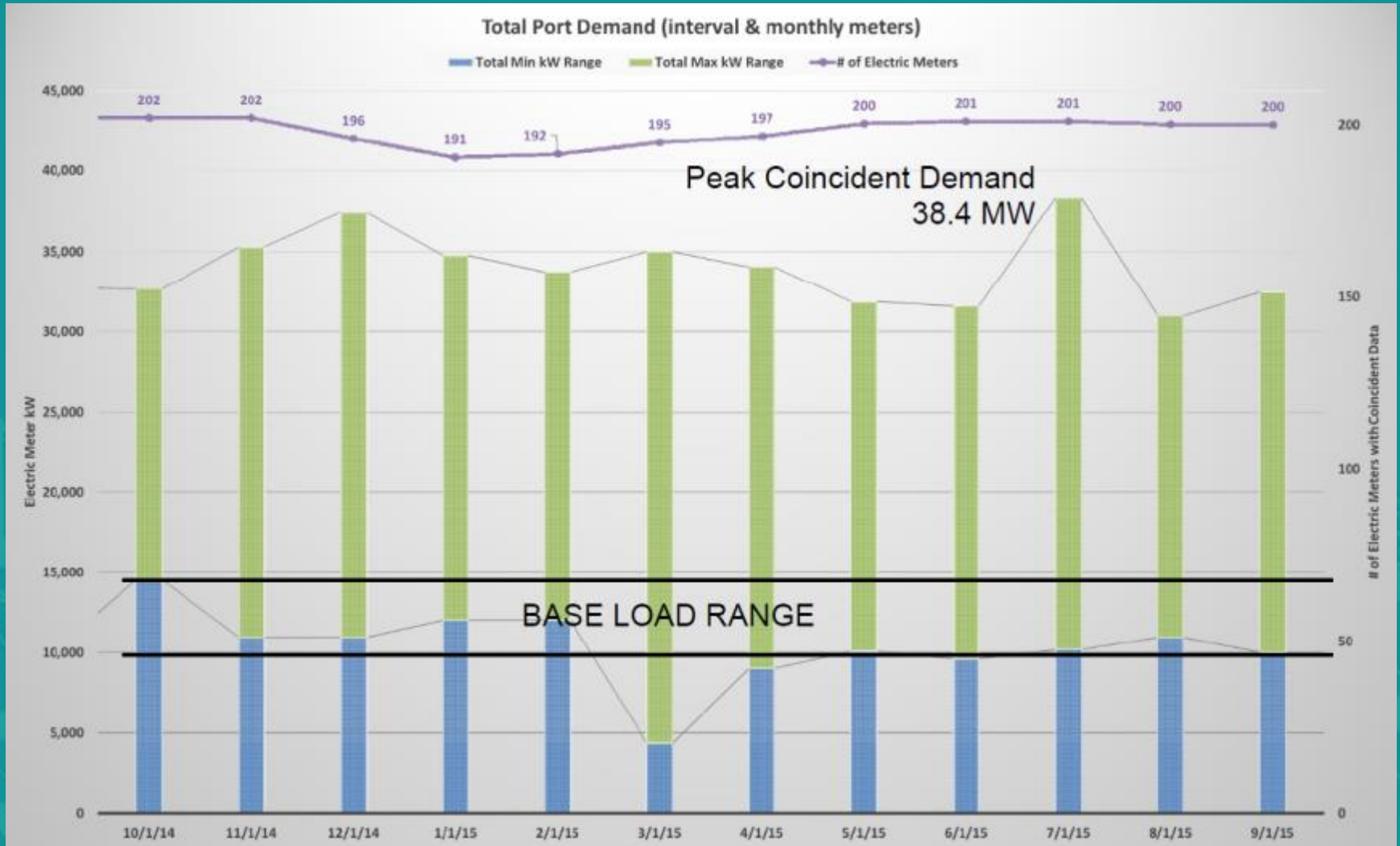
- Increase use of clean and renewable power
- Improve resilience against grid vulnerabilities
- Integrate energy systems
- Provide cost stability

Energy Program Framework

A photograph showing two workers in white hard hats and orange safety vests on a barge. They are handling a large black pipe that is being lowered by a crane. The barge is on a body of water, and other barges are visible in the background. The scene is set during the day with clear skies.

- Provide reasonable return on investment
- Support zero-emission future (clean as or cleaner than grid)
- Be safe, durable, easy to operate and maintain
- Be scalable, expandable, and provide useful data
- Maximize electron efficiency (optimal use of generated power)
- Strengthen key partnerships with agencies, tenants, vendors
- Leverage grant and other funding opportunities

Pre-ZE Energy Baseline



Port of LONG BEACH

Electrification Challenges

- Cost – terminal equipment, charging infrastructure, utility service, kW-h
- Capacity – the delta between peak and base loads will increase dramatically, especially if all equipment charges at once
- Reliability – Off-road EV equipment hasn't been tested for long
- Resilience – potentially relying on a single source of power
- Equipment availability
- Trained workforce




POLB Microgrid – Resilience for Critical Facilities

- 300 kW solar carport
- 330kW/670kWh stationary BESS
- 250kW/220kWh mobile BESS
- Energy Control Center with AC and DC bus – direct DC transfer from PV
- \$7.12M total cost
- \$5M CEC funding



Workforce Development

- 
- Develop project labor agreements for local hiring
 - Establish project apprentice goals for trades
 - Collaborate with community colleges to study workforce needs and corresponding curricula
 - Promote internal professional development

Partner Funding

- Adopt goals
- Participate in working groups/task forces
- Understand agency spending plans
- Advocate for your projects
- Collaborate with your utility
- Write excellent grant applications
- Get the engineers involved early

