



# Ocean-Based Climate Solutions

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# Ocean Renewable Energy Conference

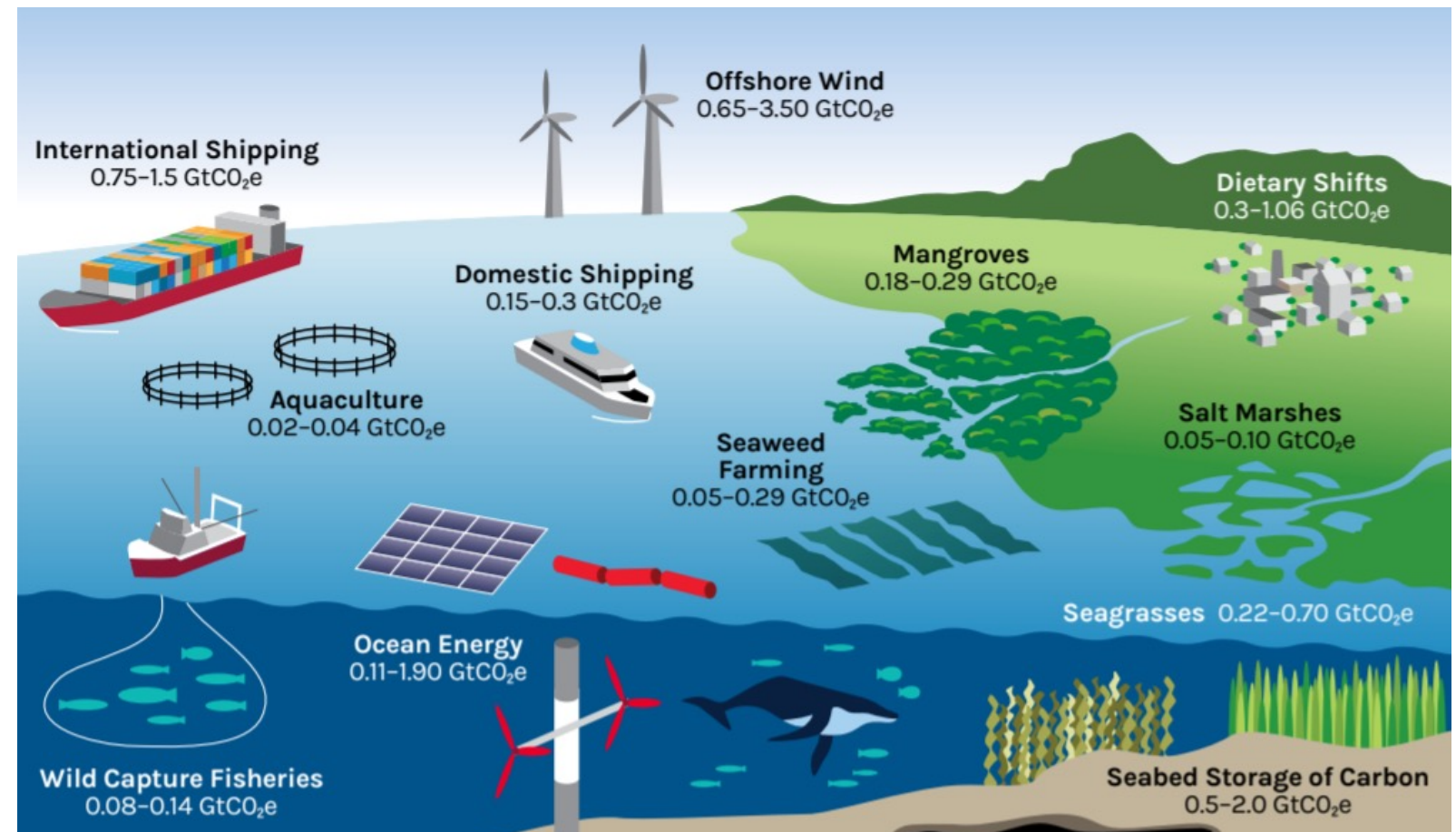
LEADERSHIP EXPERIENCE SOLUTIONS

LEFTBANK ANNEX PORTLAND, OREGON

The banner features a blue background with a subtle wave pattern. It includes the dates "SEPTEMBER 14-15, 2022" at the top, the main title "Ocean Renewable Energy Conference" in large white letters, the tagline "LEADERSHIP EXPERIENCE SOLUTIONS" below it, and the location "LEFTBANK ANNEX PORTLAND, OREGON" at the bottom. The banner is framed by four light blue corner brackets.

# Ocean-Based Energy and Climate Solutions

- Ocean-Based climate solutions can provide up to **21% of the energy and emissions savings** to stay under 1.5 degrees.
- Ocean solutions support **coastal resilience, equity, and jobs** in the “Blue Economy”.
- President Biden announced new “whole of government” **Ocean Climate Action Plan (OCAP)** on Feb 8.



# Thinking about an OCAP...

## Ocean Climate Challenges



Power—Green the Grid



Decarbonize the Blue Economy



Gigaton-scale Carbon Removal and Storage



Materials—Water--  
Food—Fuels



Coastal Community and Ecosystem Resilience

## Policy Approach

### Invest

- Research
- Demonstration
- Infrastructure

### Standards

- Equitable
- Sustainable
- Profitable

### Coordinate

- Common challenges
- System challenges
- Industry/stakeholders
- Permitting
- Planning

## Potential Outcomes

Realize the vision of a \$6 trillion blue economy...

Thriving, energy secure/resilient coastal communities...

20% emission reductions needed to address climate change goals...

New supply of energy critical materials...

New ocean knowledge to improve management and conservation...

# Where does Marine Energy Fit?



Power—Green the Grid



Decarbonize the Blue Economy



Gigaton-scale carbon removal and storage



Materials—Water--  
Food—Fuels



Coastal Community and Ecosystem Resilience

**Necessary system element**

**Potential system element**

**Emerging marine energy technology (beyond hydrokinetics)**

**Common/shared challenges and opportunities for learning?**



## Run of Show

*Ocean-based climate solutions are all systems challenges...what does it take to address systems challenges? From a technology perspective? From an organizational perspective?*

Shana Hirsch, PMEC, University of Washington – Potential impacts from emerging marine energy technologies on the UN Sustainable Development Goals

Bill Henry, POET – Offshore Renewable Energy and Green Hydrogen

Andrea Copping, Pacific Northwest National Laboratory – New Use Cases for Ocean Thermal Energy Conversion

Christian Meinig, Pacific Northwest National Laboratory – Public Private Partnerships for Ocean Technology Development and Marine Carbon Dioxide Removal

Cassidy Fischer, Washington Maritime Blue - New Models for Innovation to Grow a Low Carbon Blue Economy