



# **Research Priorities for the Wave Energy Industry in Oregon**

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**Oregon Wave Energy Trust**

**National Hydropower Association  
Washington DC**

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# Oregon Wave Energy Trust (OWET)

Mission and Scope:

***To build and share the expertise needed to accelerate the development of the Wave Energy industry in a responsible manner***

- State-wide Environmental Assessment
- Community Outreach
- Research and Development
- Regulatory Coordination
- Utility Markets



# OWET Board of Directors

## **Electric Utilities**

- PNGC Power
- Portland General Electric

## **Developers/Technology Providers**

- Finavera Renewables
- Ocean Power Technologies
- Ocean Power Delivery

## **Environmental**

- Oregon Shores Coalition

## **Service Sector**

- Stoel Rives (law)
- Shorebank Pacific

## **Government**

- State of Oregon
- Ocean Policy Advisory Council

## **Industry**

- Oregon Iron Works
- Commercial Fishing
- SAIC

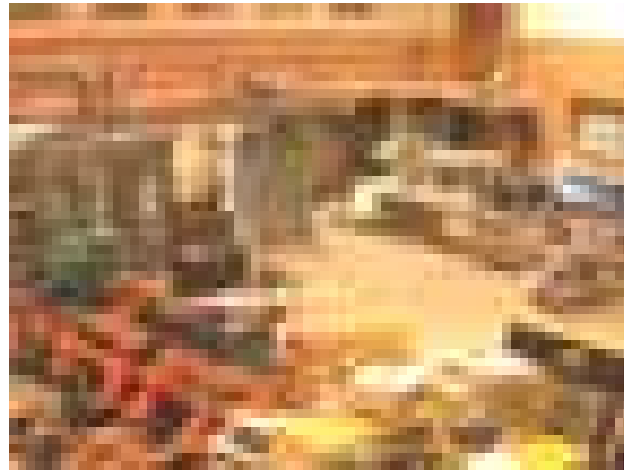
## **Higher Education**

- Oregon State University

## **Local Counties/Ports**

- Oregon Coastal Zone Management Association

# National Wave Energy Center: Oregon State University



Motor Systems  
Resource Facility  
(MSRF)



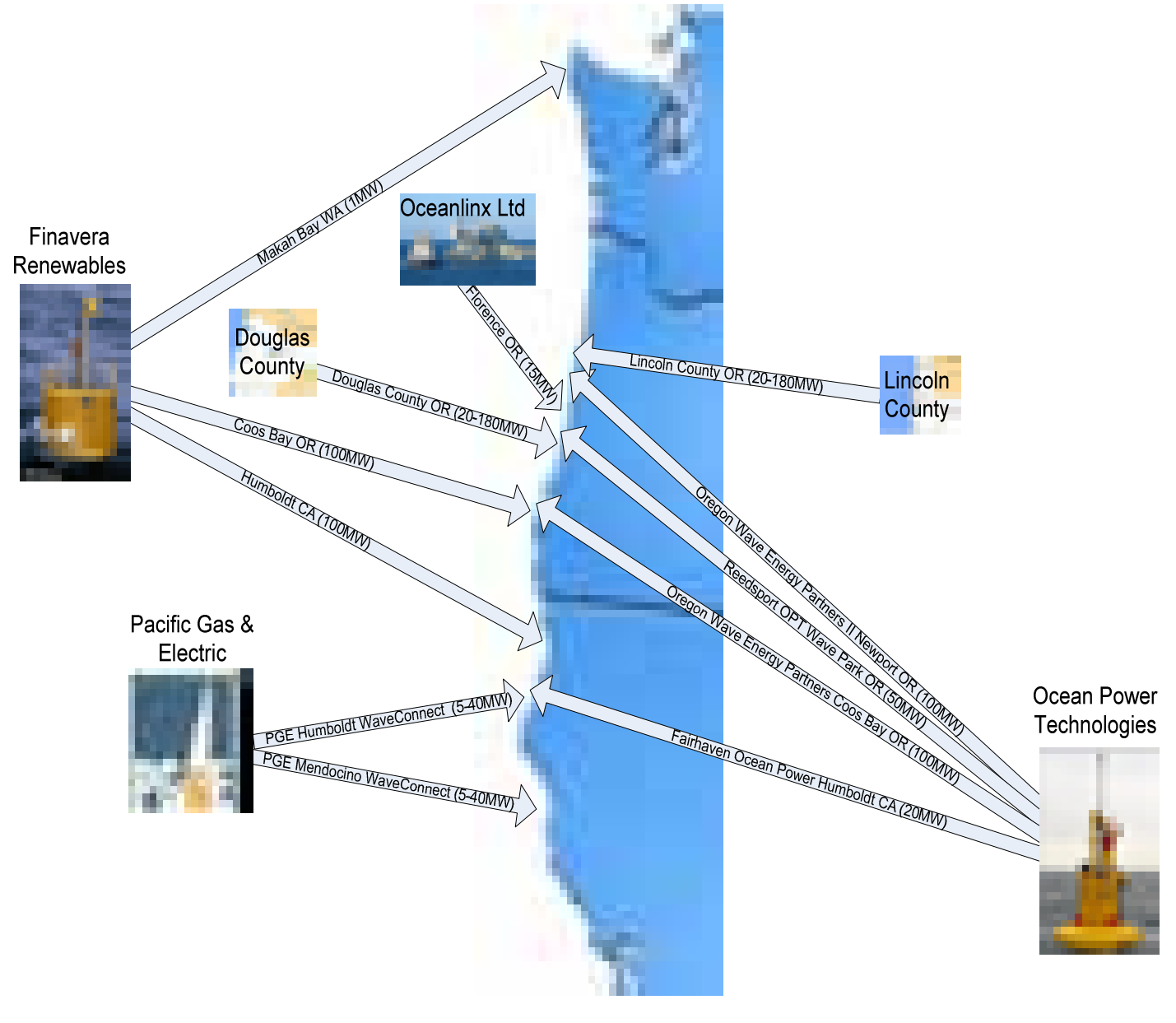
O.H. Hinsdale Wave  
Research Lab  
(HWRL)



# Challenges for Wave Energy

- **Education and outreach**
- Costs of converting energy
- Optimal technology
- **Environmental effects**
- Environmental data
- **Existing use conflicts**
- **State-wide planning**
- Regulatory framework
- Research and development

# West Coast Wave Energy Projects





# Ecological Effects Workshop

Location: Newport, Oregon (October 12-13, 2007)  
50 National Scientists

## Goals

- Develop initial assessment of the potential impacting agents (**stressors**) and ecological effects of wave energy (**receptors**)
- Develop a general **conceptual framework of physical and biological relationships** that can be applied to specific

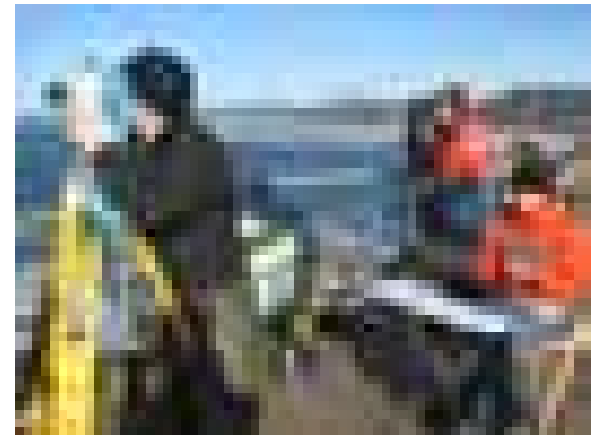
## Outcomes

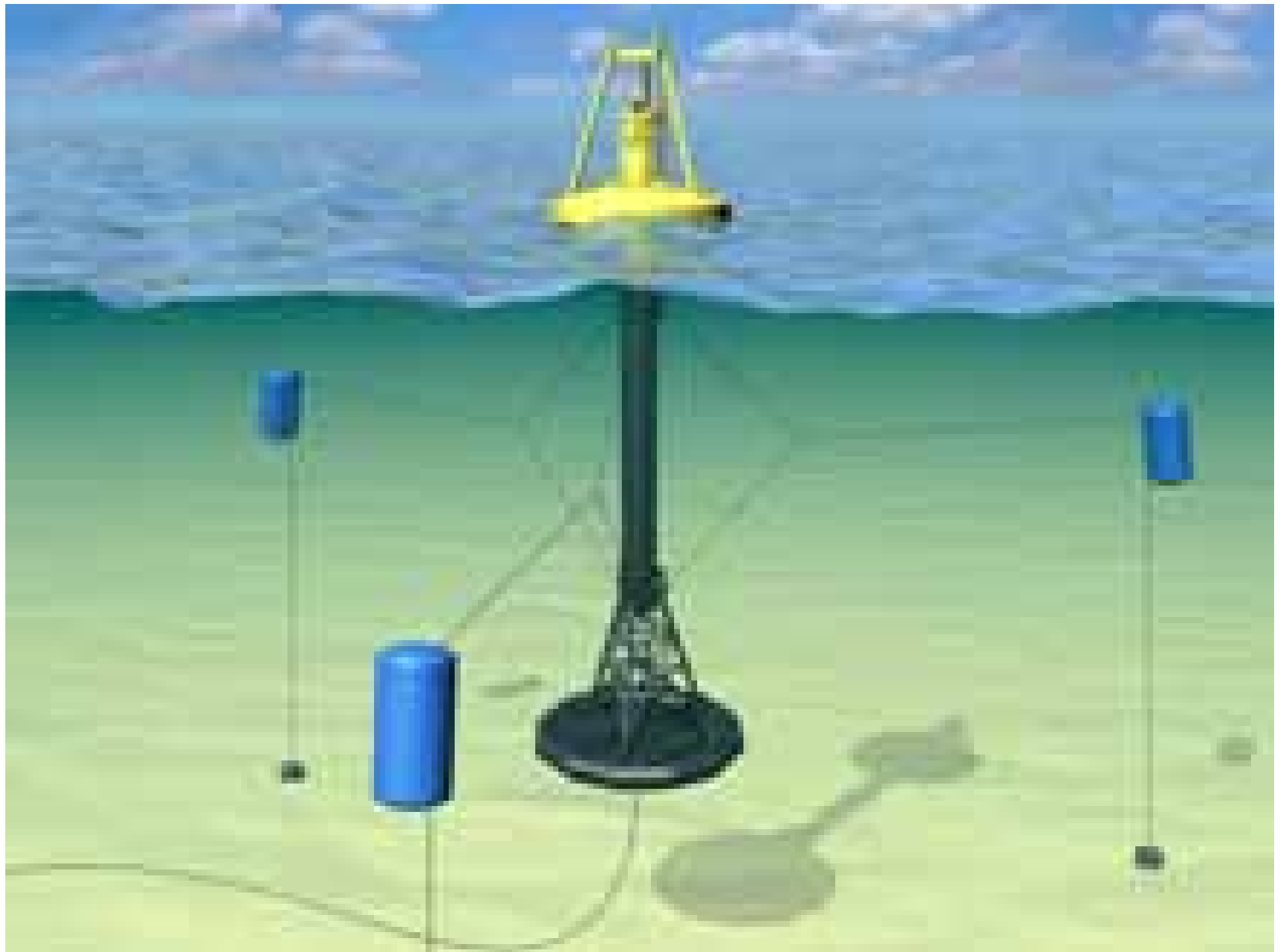
- What we know
- What we don't know (key info gaps)
- Level of uncertainty/level of agreement?
- A sense of priority of issues
- Recommended studies and parameters



## Key Findings

- Need for Baseline Data
- Habitat creation
- Multiple control sites
- Extensive monitoring
- Acoustics
- Electromagnetic Fields
- Antifouling chemicals
- Marine mammal entanglement
- Seabird collision





An aerial photograph of a wave energy farm. The ocean is a deep blue, and several yellow buoys are visible, connected by thin lines. The buoys are arranged in a grid-like pattern across the water. The sky is a pale blue, and the horizon is visible in the distance.

Oregon Wave Energy Trust

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