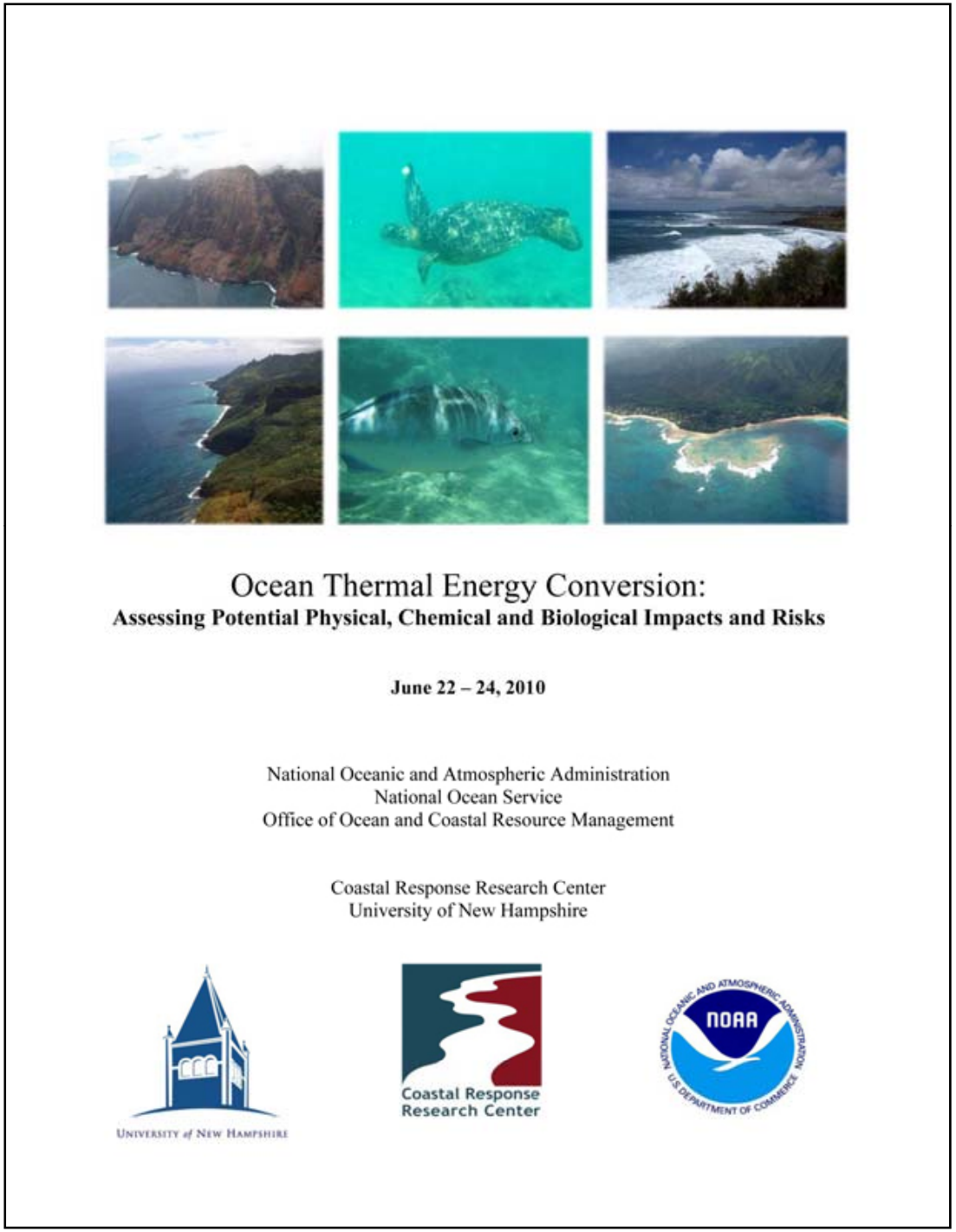

Renewable Ocean Energy and the Marine Environment Conference

Nov 4, 2010

Whitney Blanchard

NOAA Office of Ocean and Coastal Resource Management

Acknowledgements

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- DOE EERE
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- University of Hawaii
- Florida Atlantic University
- ORNL
- Cascadia Research
- MBARI
- Marine Acoustics
- Tenera Environmental
- Alden Lab

Workshop Scope

- Development of baseline data for permitting
  - How to assess potential physical, chemical & biological impacts & risks
  - Methods
  - Mitigate &/or avoid impacts

Regulatory Considerations

- *Ocean Thermal Energy Conversion Act* (OTECA)
  - Authorizations from NOAA & USCG
  - Other federal license/permit requirements through NOAA OTECA license
  - State approval
  - Clean Water Act
  - Magnuson-Stevens Fishery Conservation and Management Act
  - Endangered Species Act
  - Marine Mammal Protection Act
  - Migratory Bird Treaty Act
  - National Environmental Policy Act

Characteristics/Assumptions

5 MWe Demonstration

100 MWe Commercial

Warm Water Intake (WW_i)

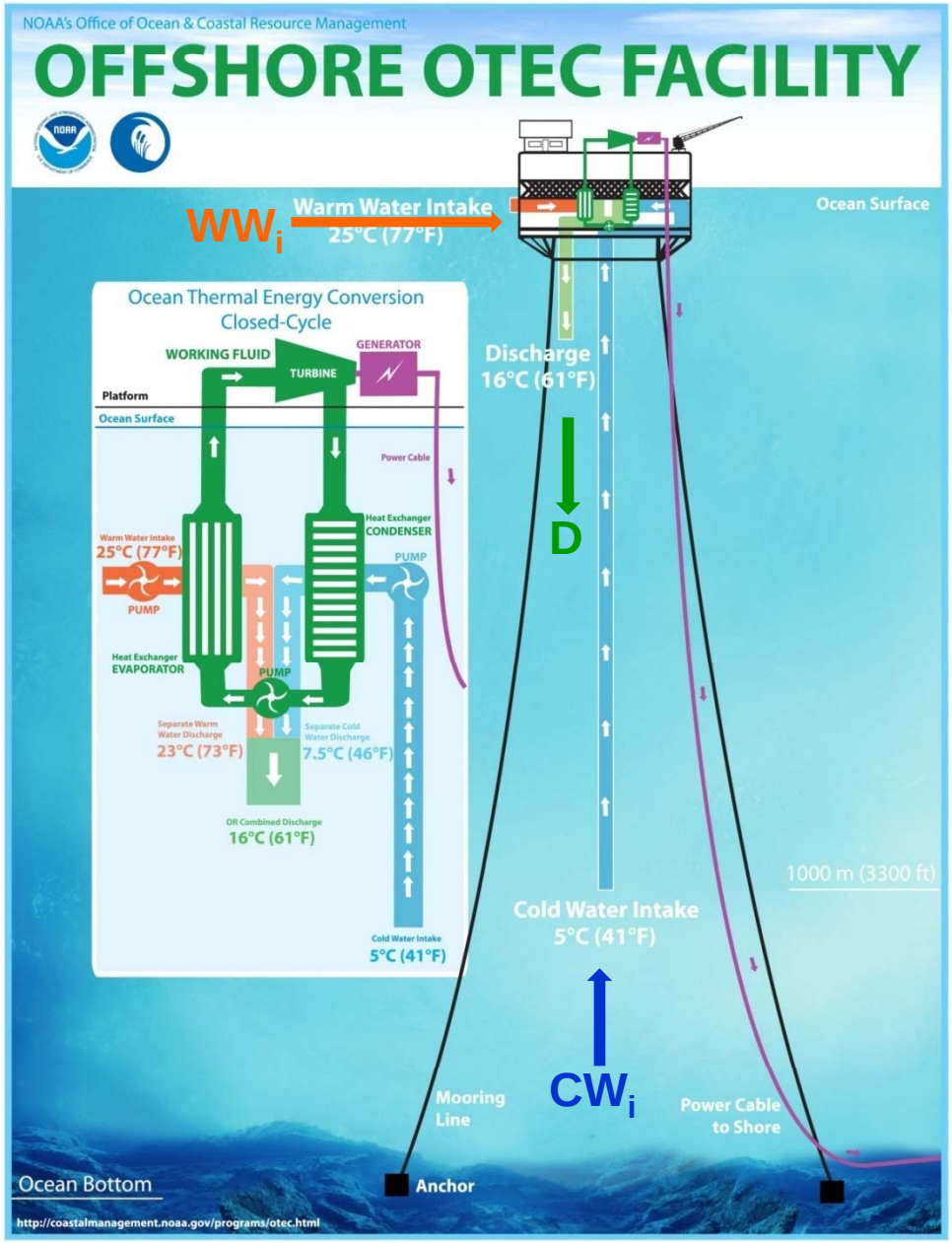
- 20 m Depth, 25 ^oC
- Velocity, v = 0.15 m/s
- Flow, Q = 25 – 500 m^3/s

Cold Water Intake (CW_i)

- 800 – 1000 m Depth, 5 ^oC
- v = 2.5 m/s, Q = 25 – 500 m^3/s
- Pipe diameter = 2 – 10 m

Discharge (D)

- Combined or separate
- Depth and velocity TBD



Day 1 & 2 Breakout Groups

- Warm water intake
- Cold water intake
- Discharge (including biocides and working fluid leaks)
- Physical presence, construction, and accidents
- Noise and electromagnetic fields
- ID Potential Impacts
- Baseline, monitoring, modeling
- Best available technology
- Additional research

Day 3 Breakout Groups

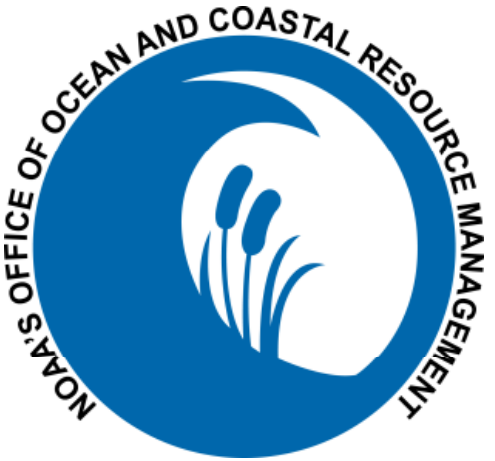
- Fisheries and corals
- Marine mammals and turtles
- Oceanography
- Plankton

1. Baseline data
2. Monitoring
3. Modeling

General Observations

- 25+ years of knowledge/experience
- Existing data & models available
- Lack of appropriate data
- Workshop
  - Not an exhaustive analysis
  - Information gathering for licensing process
  - Findings are not determinative

http://coastalmanagement.noaa.gov/programs/otec.html



Thank you.

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