A U.S. Department of Energy Center

designated at Florida Atlantic University

Power from OCEAN CURRENTS

163

could supply **4% of annual**

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SOUTHEAST NATIONAL MARINE RENEWABLE ENERGY CENTER

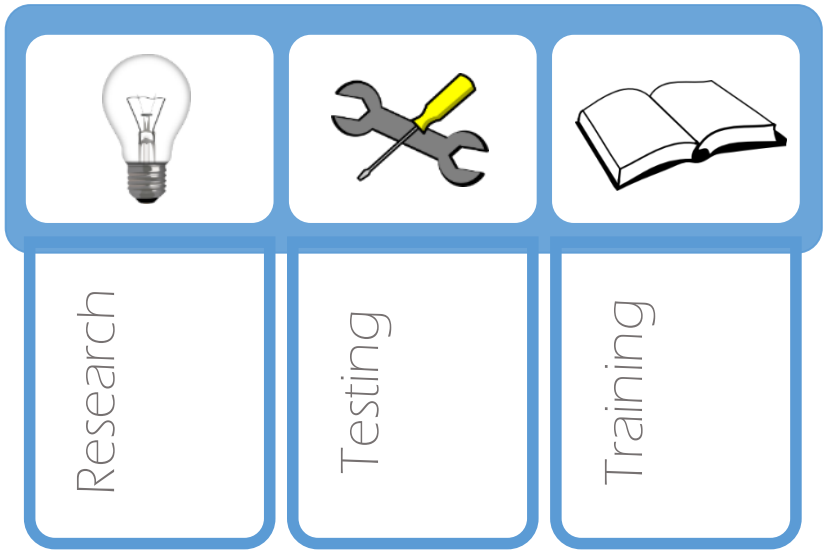
or more than all of the households in **Florida**, **South Carolina**, and **North Carolina**

$ 19 Billion

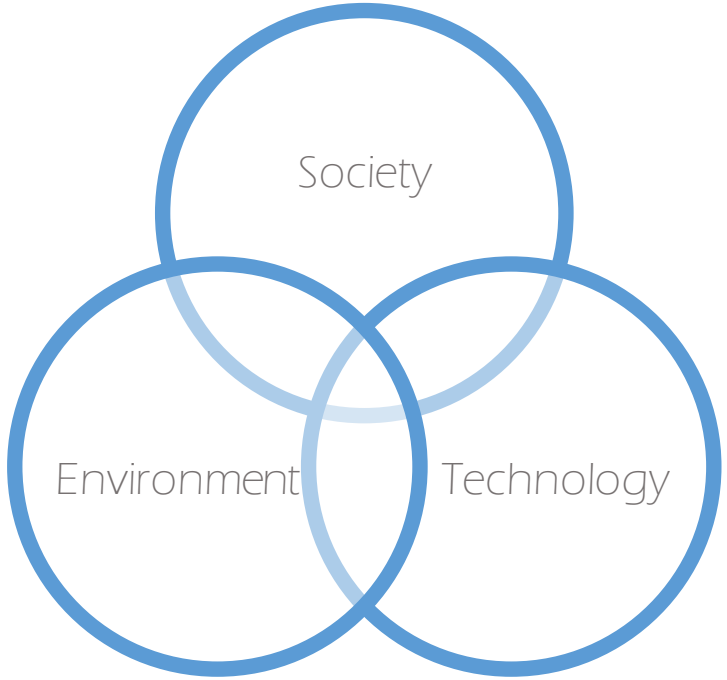
annual market opportunity

SNMREC Approach

Enable the safe and responsible commercialization of marine renewables around the world.



University Tools



Marine Renewables Sector

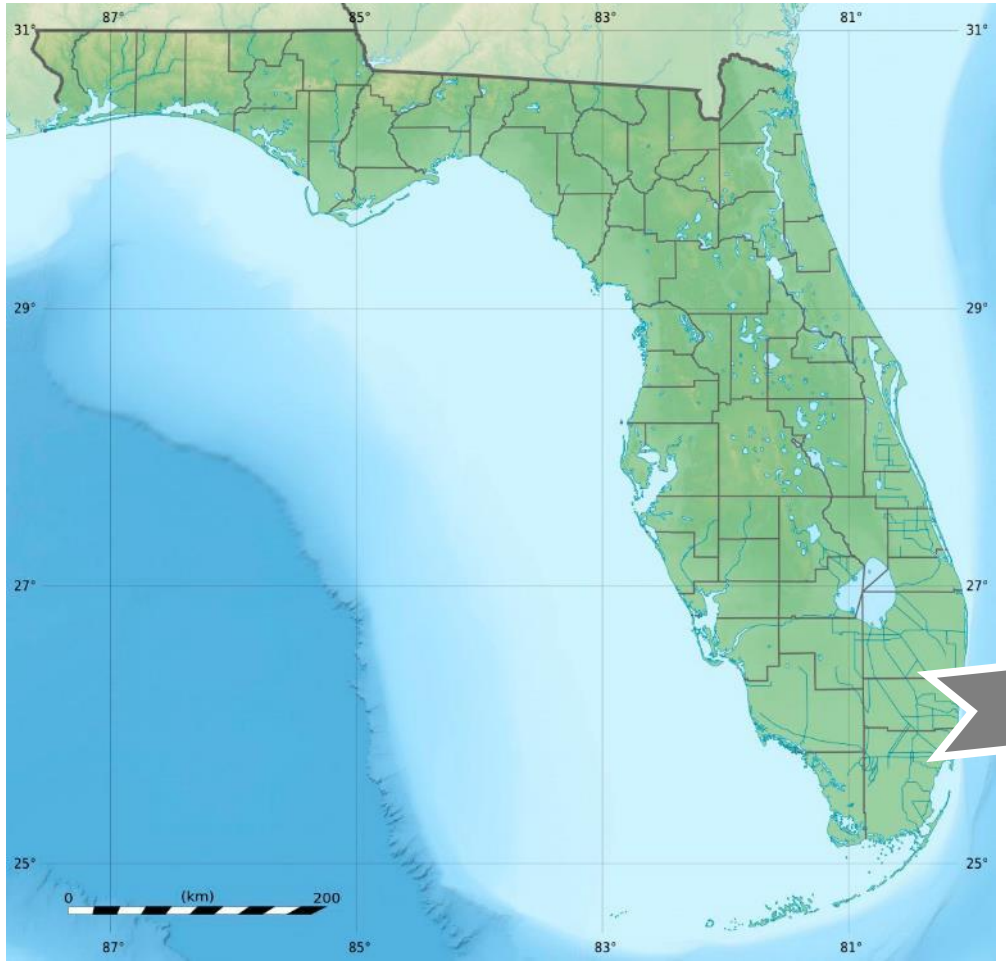
Major SNMREC Contributions

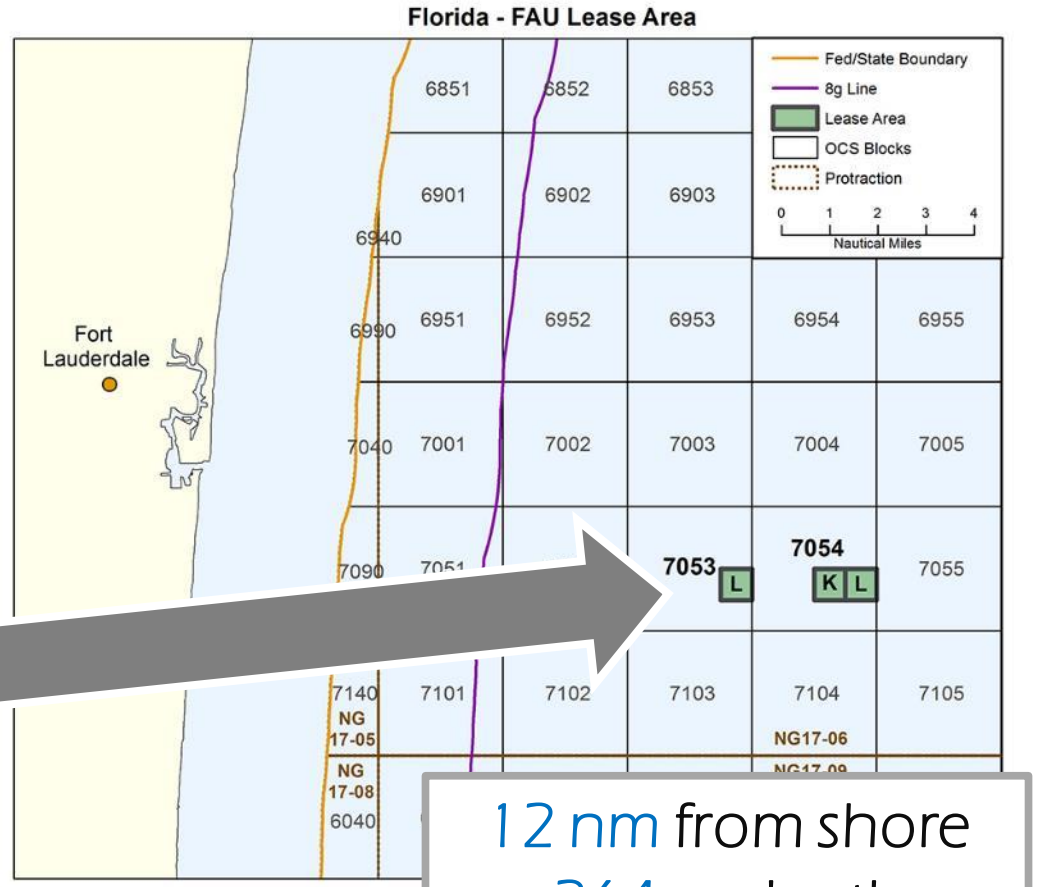
- negotiated the **U.S.'s first and only lease to conduct marine renewable activities** on the outer continental shelf - the basis for established federal guidelines,
- leveraged state funds to become **one of only three U.S. centers dedicated to marine renewables** and the **only center serving eastern U.S.**,
- facilitated organization of **state-federal Florida task force** for marine renewables
- compiled more than **two years of aerial marine animal surveys** to understand risk of animals encounters with marine renewables offshore southeast Florida
- **constructed and tested a research turbine** to accelerate component design and environmental analysis,
- collected more than **six years of unprecedented Gulf Stream resource data** essential to designs, regulation, and site selection,
- **guided and sponsored novel R&D in more than 45 key areas** to fill in early stage knowledge gaps,
- **trained more than 200 teachers in 7 south Florida counties** to introduce marine renewable energy into high school science classrooms, and
- **founding member of US marine renewables industry trade association** and **founding member of international technical standards efforts** for marine renewables.

Small Scale Offshore Testing

- Fully Permitted for up to 100kW power and 7 meter rotor
- Resource characterization and real-time measurement
- Health monitoring system
- Ship-board turbine management up to 25kW power
- 20kW 3 meter rotor turbine test bed
- Persistent research and measurement platform in the Gulf Stream for long term studies

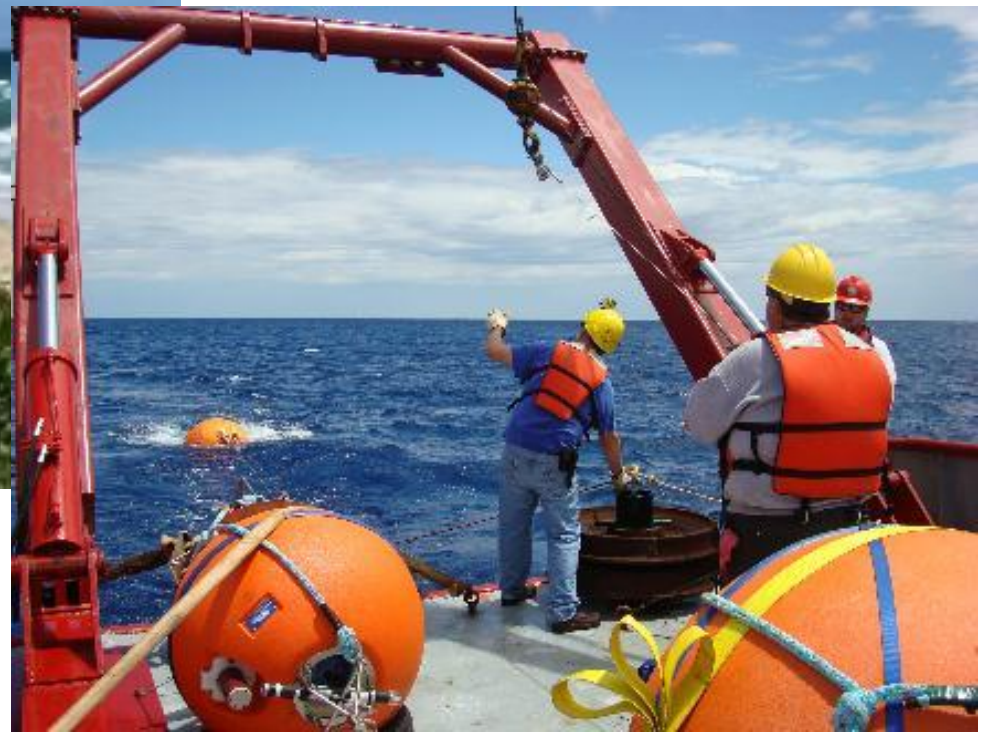
Offshore Test Sites



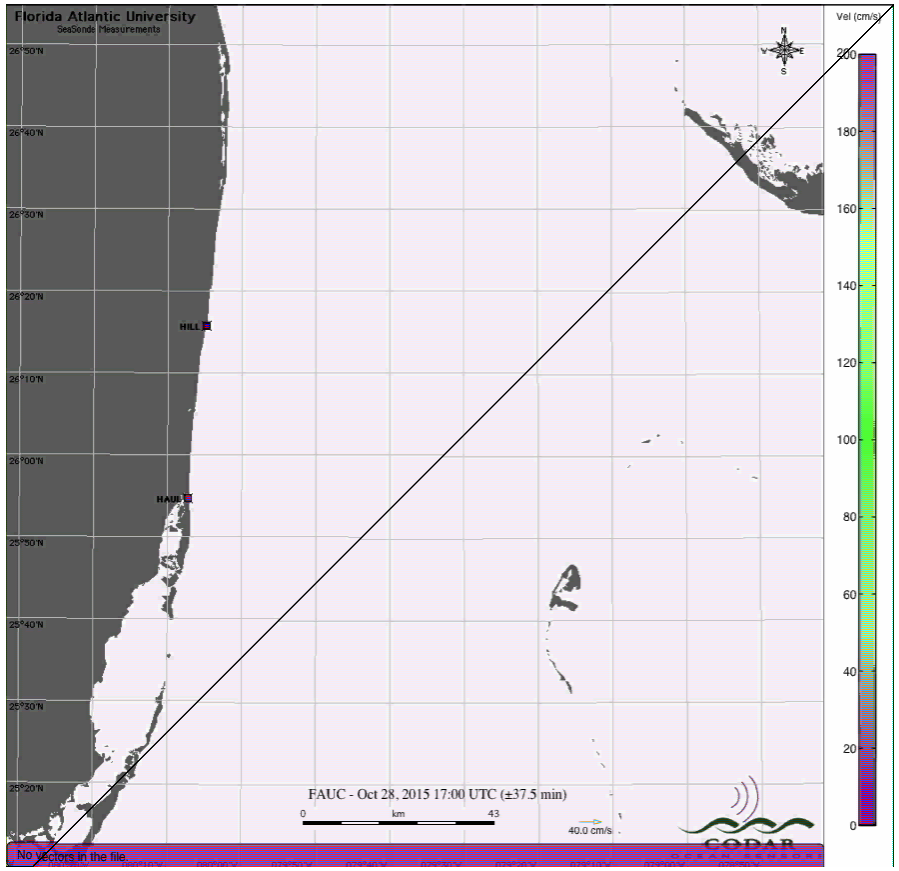


12 nm from shore
264 m depth

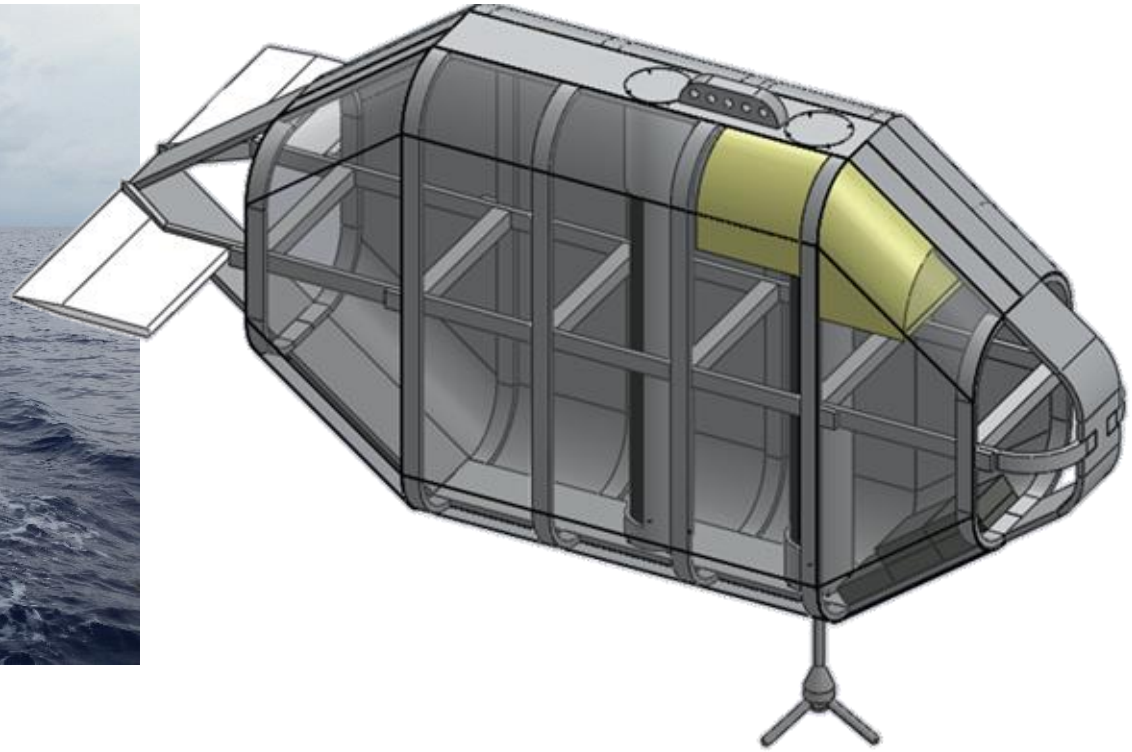
Ocean Current Measurement Program



CODAR Data


Florida Atlantic University
SeaSonde Measurements
26°50'N
26°40'N
26°30'N
26°20'N
26°10'N
26°00'N
25°50'N
25°40'N
25°30'N
25°20'N
HILL
HAUD
Vel (cm/s)
200
180
160
140
120
100
80
60
40
20
0
FAUC - Oct 28, 2015 17:00 UTC (±37.5 min)
0
km
43
40.0 cm/s
CODAR
No vectors in the file.

Natural Ocean Current Turbulence Characterization



Questions

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