

Open-Center Turbine



Overview Presentation

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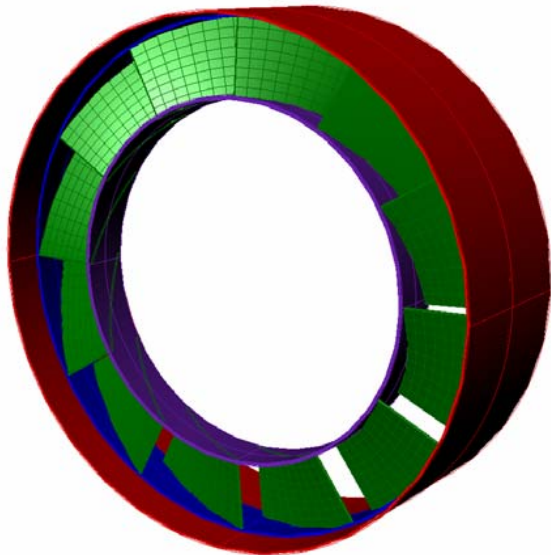
- ❑ The Open-Center Turbine generates electricity via a solid state permanent magnet generator encapsulated within the rim.
- ❑ Advantages include:
 - Only **one** moving part.
 - **No** seals, gearbox, oil, nacelles, shafts, couplings, grease fittings, braking devices.
 - Low manufacture cost.
- ❑ This results in a turbine with minimal servicing requirements.



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U.S. Navy

- ❑ The Carderock Division is the U.S. Navy's center of excellence for research and development of ships and submarines.
- ❑ With world-class laboratories and test facilities, Carderock has been at the forefront of ocean based technologies for more than a century.



- ❑ OpenHydro has an agreement (CRADA) with the U.S. Navy that gives the company access to Carderock's world-class design and engineering facilities plus highly experienced personnel.

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Performance

- ❑ To date, 4 prototypes have been developed and tested in Palatka, Florida.
- ❑ The most recent prototype is 3m in diameter and generates 15.5 kW of electricity.
- ❑ Tests were conducted by the U.S. Navy



Gulf Stream

- ❑ The design is highly scalable.
- ❑ In the Gulf Stream, a 10GW Open-Center Turbine farm could provide 25% of Florida's total energy requirements.

Highlights

- ❑ At this time, there is no doubt that the Open-Center Turbine can generate significant volumes of electricity in a water current.
- ❑ The first permanently installed turbine is scheduled for 2006.
- ❑ Our studies indicate the Open-Center Turbine will compete and beat the economic case for both Onshore and Offshore Wind.

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