

# Hydrokinetic River & Tidal energy recovery

The UEK®System  
A clean, cool and renewable energy  
technology  
whose time has come

Bringing Renewables to Wall Street  
Initiated by Troutman Sanders LLP  
New York City, September 18<sup>th</sup>, 2008





# Our niche

- Hydrokinetic river
  - Emerging technology, off-grid, small & medium scale base power



- Hydrokinetic tidal
  - Emerging technology, off-grid, small & medium scale intermittent power



# Capacity Factor

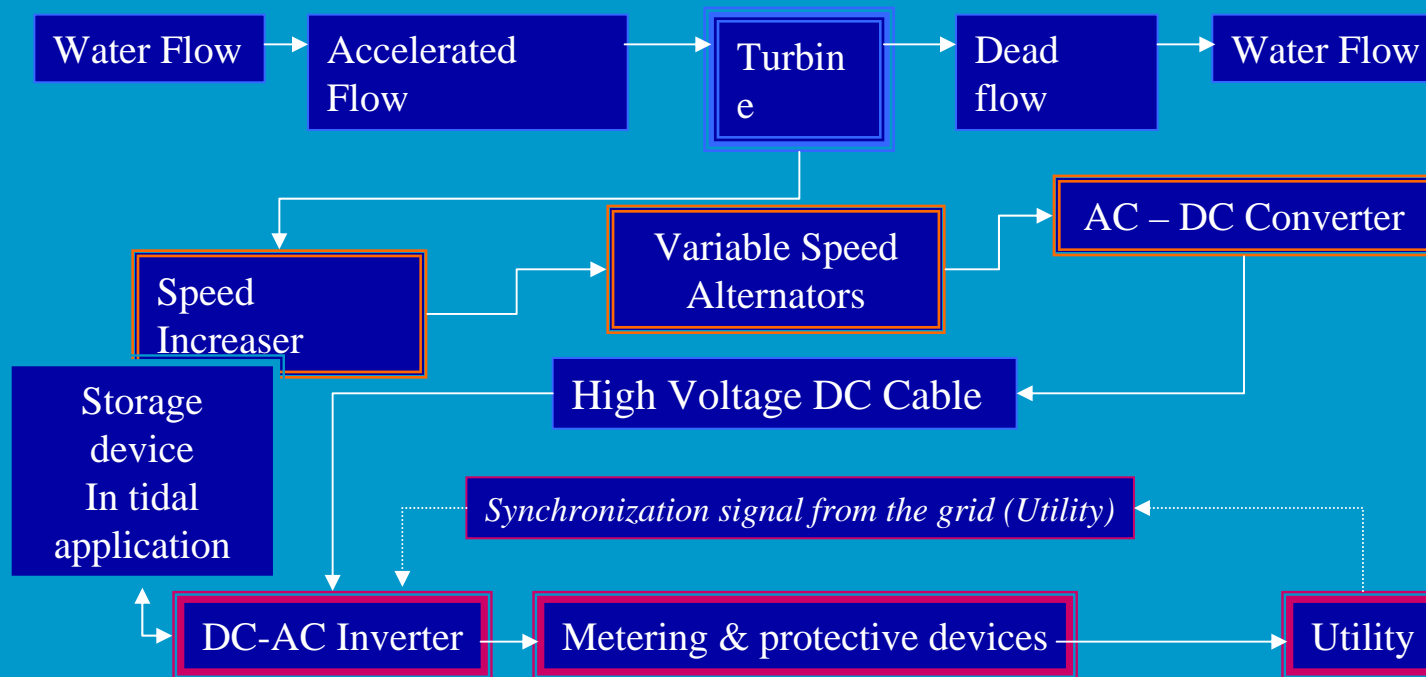
- Base power generating systems have the highest power delivery factor (up to 98%)
- Intermittent power generating systems range from 28% for wind up to 62-64% in tidal operation.





# Power Conversion & Delivery

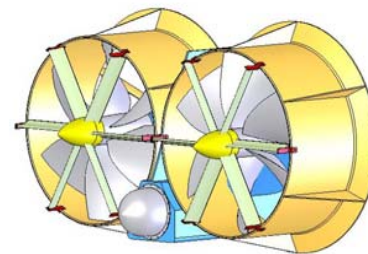
UEK®System





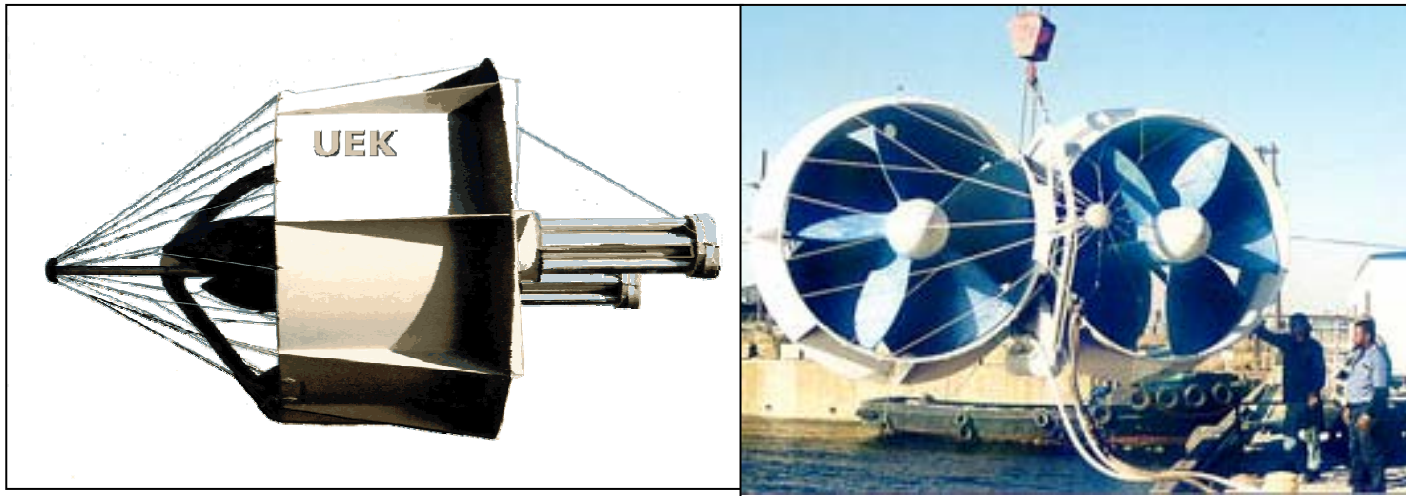
# UEK Innovative approach

- Twin counter rotating runners operating in a shrouded Augmentor Ring© that permit the assembly to free itself from supporting structures, resulting in reducing considerably the time and cost of implementation





# River Twin Unit



Early version tested from 1998 to 2002

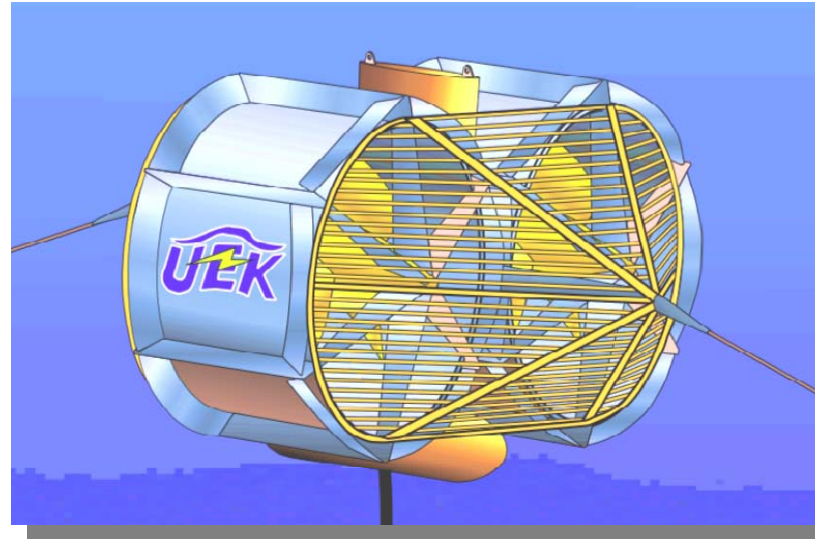


# UEK<sup>®</sup> Tidal System

Maximizing kinetic energy conversion

17' x 32' x 15' ( 1,030.6 kW @ 411.8cm/sec (8kts))

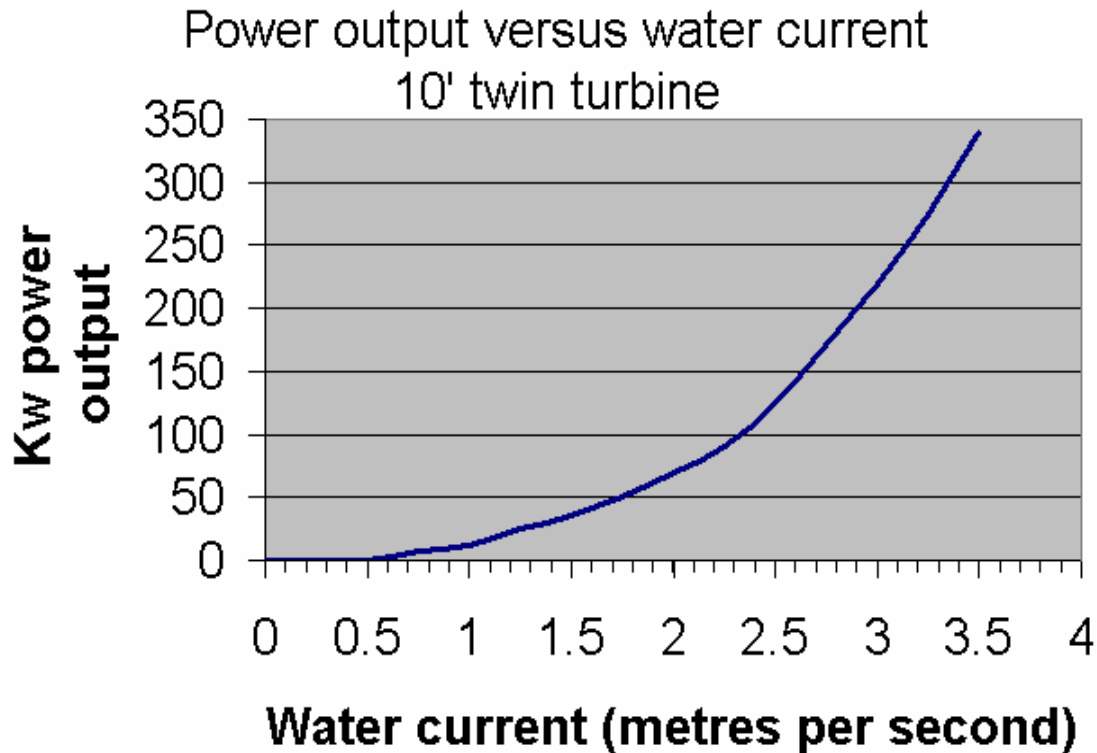
Pat. No.: 6,139,255 – 6,168,373B1 – 7,308,981B2



Competitive-Clean-Fish &  
Environmentally Friendly Technology



# Power Output



Utilities have a capacity factor close to 100%

Wind up to 30%

Tidal up to 60%



# Past Market Summary Experiences

- R&D Contract with New York Power Authority 1985-86 (Put in practice Patent Number 4,205,943 -June 3, 1980)
- Contract with Ontario Power Generation 2000 (testing at the DeQew Power Station, Niagara complex; put into practice Patent Number US 6,168,373 B1 –January 2, 2001)
- R&D sub-contract (DOE) 2000-01(Ocean UEK®System developed for the Gulf Stream application).



# Contract Summary

- Chitokoloki Mission Hospital (diesel displacement Zambia)
- Great Energy Utility / Coal Creek Power Plant North Dakota (energy recovery system for cooling towers outflow)
- University of Manitoba & Manitoba Hydro (testing at the Pointe Dubois hydroelectric power plant)
- Alaska Power & Telephone (pilot unit at Eagle, Yukon River, Alaska)
- Heads of Agreement with Crest Energy NZ for 200 turbines
- Selected for Bay of Fundy tests





# Mission Statement

- UEK Corporation is a leader in the conversion of river and tidal kinetic water flow energy into Utility grade electrical power
- Established in 1981, the company goals are:
  1. Develop & test its own original designs (R&D)
  2. Develop some of its own sites (IPP)
  3. Develop Client sites (Turnkey Operation)
  4. Associate, partnering and work with Utilities and other Stakeholders for the benefit of our Investors

# Questions?



## Thank you for your attention

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