PowerDocks LLC
The future of Aquatic Charging
www.power-docks.com
E-Boat = Need Power on our Mooring…!!
Solution = Sustainable Power Mooring
Marine Electric Vehicle Markets

on-water / underwater / inland waterways / e-workboats / offshore / military-defense/ other, smaller market subsectors

MARKET SIZE = 2011 $2.6 Billion → 2023 $6.3 Billion (1)

(1) http://www.idtechex.com/research/articles/global-marine-electric-vehicle-market-to-reach-6-3bn-in-2023-00005445.asp
Marine Electric Propulsion OEMs

ABB / Torqueedo / Ocean Volt / ELCO / AQUAMOT / + Others
Solution Offerings

PowerDocks develops **Powered Docking Platforms** designed and produced to serve the needs of the **Aquatic Market Space**

Marinas

Moorings
$6B U.S. Marina & Boating Opportunity

**Marinas:** 11.5K (US) (1); 875K Slips; 85% Occupancy Rate (2); 131.25Ku U.S. @ $5K-$10K/Unit => $2B

**Moorings:** (US 2015) (3) > 11M; 5% E-Boats = 550Ku U.S. @ $5K-$10K/Unit => $4B

5 Mo. Season~$6,750  
5 Mo. Season~$175

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Marina & Boating
Competitive Market Technologies

Floating Sustainable “Micro-Grid” Platforms

Floating Power Generation Sources
- Fossil Fuel Power (contaminant)
- Diesel-Electric Power (contaminant)


(None Integrated Renewable Generation, Energy Storage, Dockside / Wireless Power Distribution Capability)
Company

• R.I. - April 2016 (Chris Fagan & Anthony Baro)
  ✓ Over 30 Years Combined Professional Experience - Sustainable Design-Build, Renewable Energy Developments, Design/Engineering, Management, Commercial, Industrial, Marine and Defense Markets

• 4 Utility Patents Pending + 3 New Innovations in Pipeline:
  ✓ Floating Solar Energy Platform For Marine Environments US 62/308,554
  ✓ Floating Solar Energy Platform For AUVs, USVs, ASVs in Marine Envt. US 62/328,092
  ✓ Solar Energy Inflatable Raft US 62/343,270

• Operations in Newport R.I. and Fall River MA.
Business Traction

✓ Accepted to UMASS Center for Innovation & Entrepreneurship VTC, MA – 9/2016

✓ Accepted to join Defense Industry Science & Technology Showcase, TX – 11/2016

✓ Won Innovation Grant Voucher from RI Commerce Corporation – 12/2016

✓ Won entry to join the Advanced Naval Technology Exercise 2017, RI – 12/2016

✓ Teamed with BCube Analytics to Develop Own Secured Communications Network to Process and Transmit Data from Unmanned Robotic Vehicles Operating Off PowerDocks Floating Platforms – 1/2017

✓ Teamed with Truston Technologies, Wibotics, HyPower, Oceanvolt, UMASS CIE, and Unmanned System Developments to collaborate on Development of its Autonomous Marine Micro-Grid Platform for Advanced Naval Technology Exercise to be held at NUWC in Newport R.I. August 2017

✓ Nominee of 2017 SBANE Innovation Product Award – 5/17

✓ Launched “Blue Isles™” 1st Unmanned Floating Micro Grid in Newport, RI – 6/17
Core Team

Anthony Baro  
B.S.M.E / M.B.A

Chris Fagan  
B.A / M.U.P

Charles Thangaraj  
B.S.E.E / P.H.D.

Mike Jaques  
Field OPS Mgr.

Strategic Advisors

Rhode Island Commerce

UMass Dartmouth  
Center for Innovation & Entrepreneurship

Truston

Wibotic

HyPower

SBA

Bridge to Massachusetts

Senedia
Adjacent Market Opportunities

Aquaculture > $10M U.S.

577 Farms (U.S. 1992) (5)

Oceanographic / Defense > $10M

6Ku (2011-20 Worldwide) (4)

Back Up Slides
The rapidly growing $2.6 billion market for marine electric vehicles (EVs) will reach $6.3 billion in 2023. It is unusually varied with average unit prices increasing as larger craft are electrified to improve cost over life, performance, green credentials and for other reasons. The market includes on-water and underwater electric vehicles for inland waterways and the sea. Military electric craft are the largest market sector by value today but e-workboats and other, smaller market subsectors will increase their share of market by value through the coming decade. Read more at: [http://www.idtechex.com/research/articles/global-marine-electric-vehicle-market-to-reach-6.3bn-in-2023-00005445.asp](http://www.idtechex.com/research/articles/global-marine-electric-vehicle-market-to-reach-6.3bn-in-2023-00005445.asp)
> $6B U.S. Aquatic Space Opportunity

**Marinas:** 11.5K (US) (1); 875K Slips (2); Average 85% Occupancy Rate (2)
- 131.25Ku U.S. @ $5K-$10K/Unit > $1.3B Market Opportunity (Slip PowerDocks)

**Pleasure / Yachting:** (US 2015) (3) > 11M; 5% E-Boats Assumed = 550Ku (U.S. only)
- 5% Share @ ~ $5K-$10K/Unit > $4.2B Market Opportunity (Mooring PowerDocks)

**Oceanographic Instrumentation & Defense:** 6Ku (2011-20 Worldwide) (4)
- 5% Share @ $20K-$40K/Unit > $10M Market Opportunity (AUV PowerDocks)

**Aquaculture:** 577 Farms (U.S. 1992) (5)
- 5% Share @ 20K-40K/Unit > $10M Market Opportunity (PowerDocks)

**Other Opportunities:**
- Powered Life Raft (PowerDocks IP Pending)
- Water Quality/Remediation i.e. EPA, US Clean Water Act, NOAA
- Aquatic Unmanned Aerial Drone Services
- Floating Residential / Hospitality

Business Model


Internal: Design, Engineering, Sales, Marketing, Services, Operations

External Partners: Local Manufacturing, Suppliers, Service Providers

Customer Marketing Acquisition Strategy

Media: Technical Articles, Media Ads, Press Releases

Industry: Exhibits / SME Conference Speaking Engagements


External Partners: Leverage Manufacturing, Suppliers, Service Providers
Business Traction

✓ Accepted to pitch at the Grand Maritime Innovation Conference, MA – 4/2016
✓ Accepted to UMASS Center for Innovation & Entrepreneurship VTC, MA – 9/2016
✓ Accepted to join Defense Industry Science & Technology Showcase, TX – 11/2016
✓ Won Innovation Grant Voucher from RI Commerce Corporation – 12/2016
✓ Won entry to join the Advanced Naval Technology Exercise 2017, RI – 12/2016
✓ Selected Participant of MassChallenge “Bridge To R.I.” Bootcamp – 12/2016
✓ Honorable Mention in “Go Beyond Design Challenge International Competition – 1/17

✓ Teamed with BCube Analytics to Develop Own Secured Communications Network to Process and Transmit Data from Unmanned Robotic Vehicles Operating Off PowerDocks Floating Platforms – 1/2017

✓ Selected to Present Paper at International Marina & Boatyard Conference – 1/17

✓ Teamed with Truston Technologies, Wibotics, HyPower, Oceanvolt, UMASS CIE, Unmanned System Developments, RI Air Drone Services, and Aspin Kemp & Associates to collaborate on Development of its Autonomous Marine Micro-Grid Platform for Advanced Naval Technology Exercise to be held at NUWC in Newport R.I. August 2017
Marine Electric Vehicle Markets

On-water electric vehicle charging for inland waterways and littoral coast line
✓ Powered Moorings for single and multiple number of electric propulsion vessels
✓ Powered Entertainment Docks
✓ Powered Pleasure Destination Docks
✓ Custom Design Applications

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<tr>
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<td>Higher Safety</td>
<td>No Combustible Fuel-Oil-Fumes Safety Hazards</td>
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<td>Electric Propulsion Recharge</td>
<td>Convenient Electric Recharge Access (Docks, Marinas, Moorings)</td>
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<td>Autonomous Mooring Recharge</td>
<td>Autonomous, Mobile Recharge Access</td>
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<tr>
<td>Lower Propulsion Operating Cost</td>
<td>No Oil-Fuel-Filter Services, Zero Cost Renewable Energy</td>
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<td>Lower Environmental Liability Risk</td>
<td>No Oil, Fuel Environmental Spillage Liability</td>
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Marine Electric Vehicle Markets
Autonomous Underwater Oceanographic / Military Electric Vehicles

- Powered Moorings for AUVs electric charging
- Powered Onsite Security and Telecommunications Data Transmission Capability
- Electric Generation, Energy Storage, Power Distribution and Charging Capability
- Custom Design Applications

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Natural Disaster Emergency / Power Resiliency Markets

Natural Disasters Frequency = Increasing Trend

By: Munich Re Insurance Co.
Natural Disaster Emergency, Power Resiliency, and Life Safety Markets
Natural Disaster Emergency, Power Resiliency, and Life Safety Markets

Autonomous Underwater Oceanographic / Military Electric Vehicles

- Powered Moorings for AUVs electric charging
- Powered Onsite Security and Telecommunications Data Transmission Capability
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