



GEODYN
SOLUTIONS



**TWO 150 MW
MULTI-FUEL
POWER BARGES
FOR PUERTO
RICO**

www.geodynsolutions.com

EXECUTIVE SUMMARY





Geodyn Solutions proposes the deployment of two 150 MW multi-fuel floating power barges using proprietary Geodyn Solutions multifuel barge technologies to deliver a total of 300 MW of dependable, scalable electricity to Puerto Rico's power grid. This solution offers rapid deployment (6–12 months), robust operational flexibility, and sustainable long-term performance. The barges are designed to operate on LNG, diesel, and HFO, with future adaptability for cleaner fuels such as hydrogen.

At a competitive rate of \$0.19/kWh, this project ensures high returns, energy stability, local job creation, and compliance with environmental standards.

PROJECT SUMMARY

PARAMETER	VALUE
Number of Power Barges	2
Capacity per Barge	150 MW
Total Installed Capacity	300 MW
Power Technology	Geodyn Solutions multifuel barge system
Fuel Types	LNG, Diesel, HFO (Hydrogen-ready)
Deployment Timeline	6–12 months (turnkey)
Electricity Rate	\$0.19/kWh
Contractual Fee	25% contingent success fee



CAPITAL EXPENDITURE (CAPEX)

Item	Estimated Cost (USD)
Power barge construction (2x150MW)	\$450 million (\$1,500/kW)
Fuel supply and docking systems	\$30 million
Onshore transmission interface	\$20 million
Environmental and permitting	\$10 million
Contingency (25%)	\$127.5 million
Total CAPEX	\$637.5 million

OPERATING EXPENDITURE (OPEX)

Annual Operating Costs:

Item	Annual Cost (USD)
Fuel cost (LNG-based @ \$10/mmBTU)	~\$210 million (for ~1,100 GWh)
Salaries and technical ops	\$10 million
Maintenance & spare parts	\$15 million
Logistics & docking fees	\$3 million
Insurance and regulatory costs	\$2 million
Environmental monitoring	\$1 million
Total OPEX per year	~\$241 million/year



ENERGY PRODUCTION AND REVENUE

- **Capacity factor:** 85%
- **Annual Generation:**
 $300 \text{ MW} \times 0.85 \times 8,760 \text{ hrs} = 2,233,800 \text{ MWh}$ (~2.2 TWh/year)
- **Revenue at \$0.19/kWh:**
 $2,233,800,000 \text{ kWh} \times \$0.19 = \$424.4 \text{ million/year}$



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RETURN ON INVESTMENT (ROI)

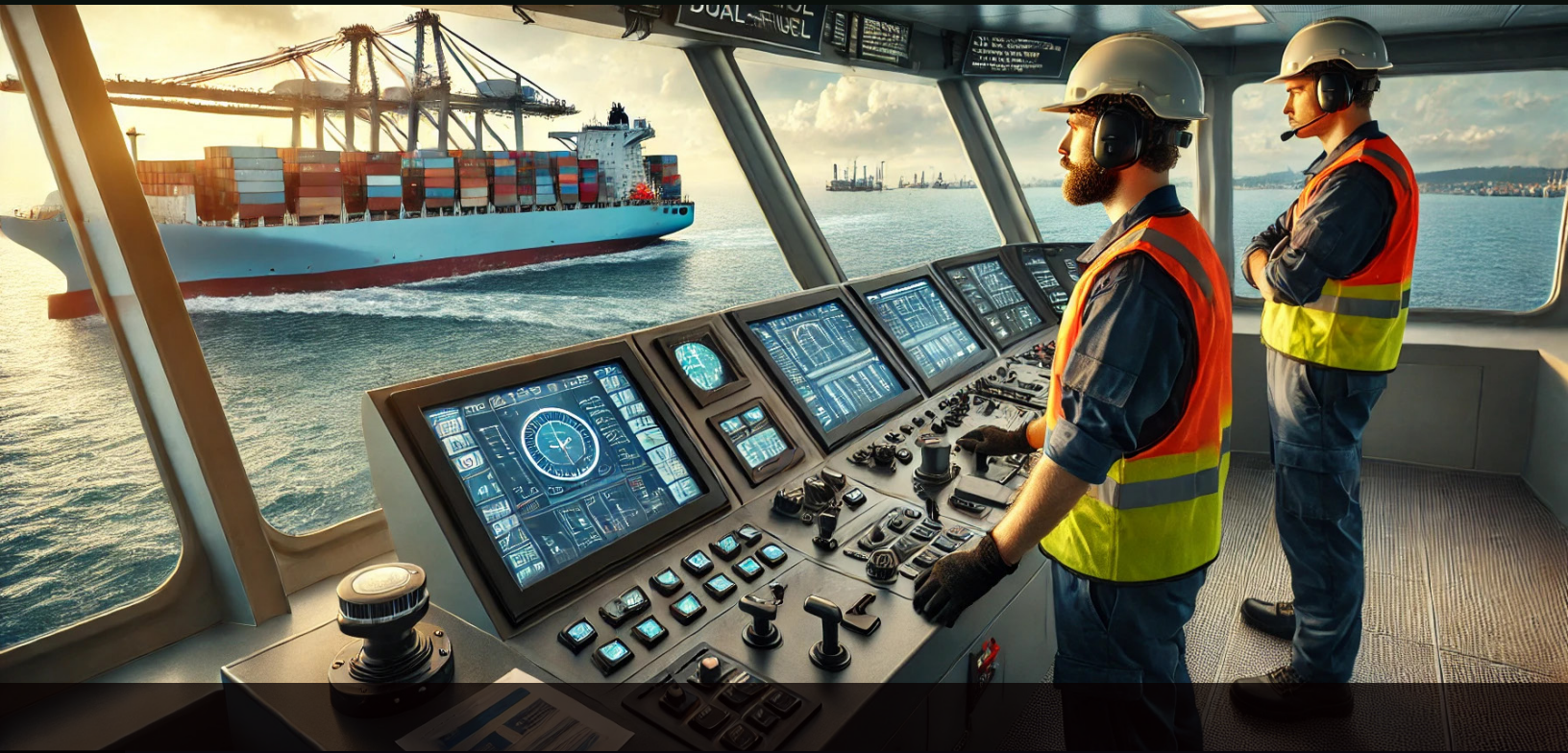
Metric	Value
Annual Gross Revenue	\$424.4 million
Annual OPEX	\$241 million
Net Operating Income	\$183.4 million
Total CAPEX	\$637.5 million
Simple Payback Period	~3.48 years
12-Year Net Profit	\$2.20 billion (gross revenue minus OPEX)
12-Year ROI	~345% before depreciation and taxes



JOB CREATION IMPACT

Job Category	Estimated Jobs Created
Construction & setup phase	~500 temporary jobs
Permanent technical operations	~120 (60 per barge)
Support, admin & logistics	~80
Fuel supply chain & local ops	~100
Total Direct/Indirect Jobs	800+
Payback Period	~3.7 years

ENVIRONMENTAL IMPACT

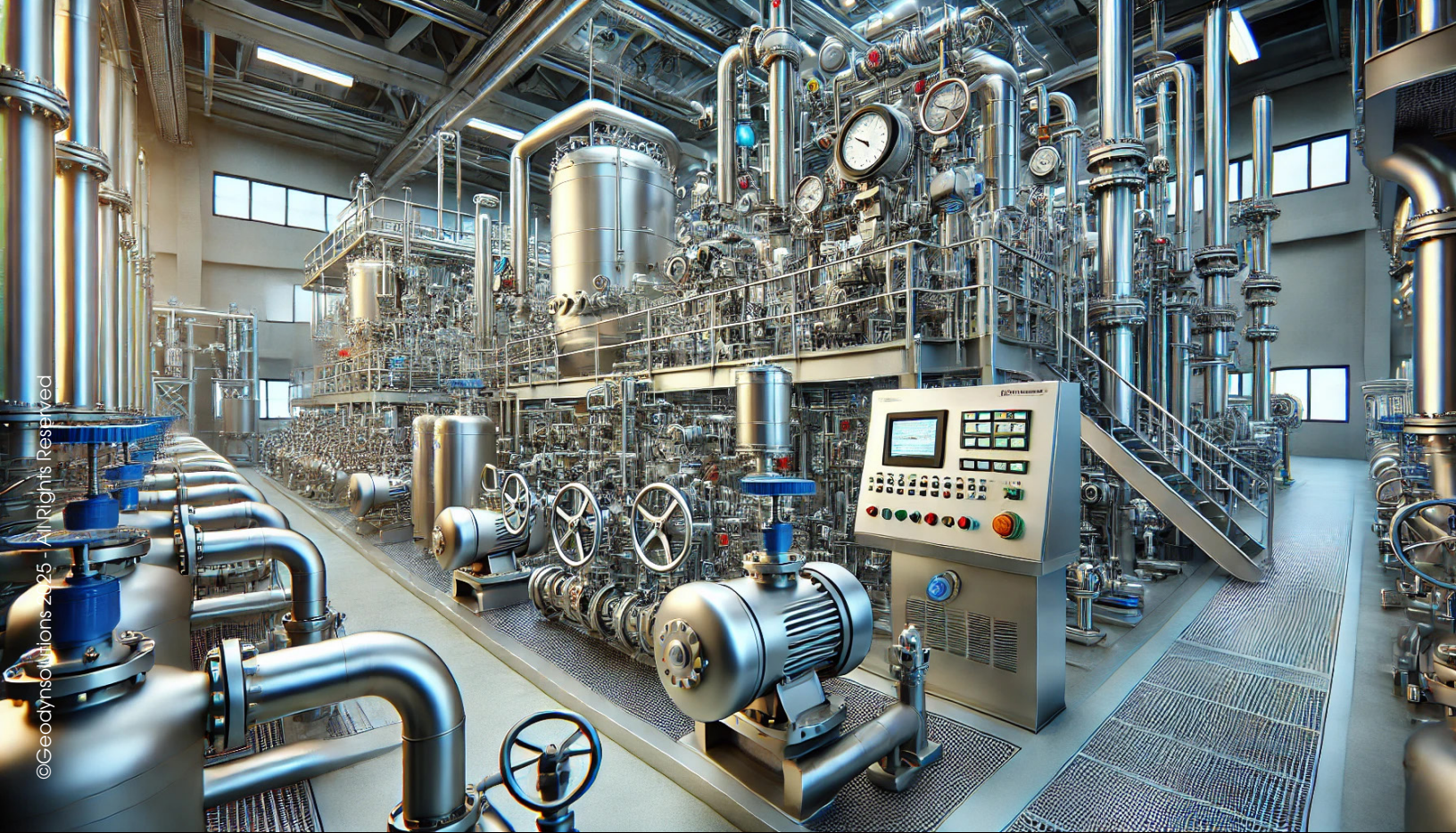


BENEFITS

- Cleaner energy transition versus legacy diesel
- Supports LNG and hydrogen-ready future adaptability
- Minimal land disruption due to marine-based design
- Advanced onboard emissions controls

MITIGATION & COMPLIANCE

- Full alignment with EPA & Puerto Rico Environmental Quality Board
- Real-time environmental monitoring systems
- Maritime safety and fuel spill prevention measures
- Potential for future integration of carbon capture technologies



STRATEGIC BENEFITS FOR PUERTO RICO

- Rapid deployment (6–12 months) for immediate energy needs
- Enhances emergency energy resilience in hurricane-prone zones
- Floating, modular, and redeployable infrastructure
- Public-private partnership potential and federal funding alignment
- Flexibility to evolve with renewable energy policies



IMPLEMENTATION AND PARTNERSHIP STRUCTURE

Geodyn Solutions will:

- Provide full EPC, commissioning, and operations
- Partner with local utilities (e.g., PREPA), DOE, FEMA, and local governments
- Engage in a 25% contingent success fee model for contract execution
- Develop a PPA or lease-to-own structure to support Puerto Rico's energy independence goals



Geodyn Solutions' two 150 MW multi-fuel barges represent a clean, fast, and scalable infrastructure solution tailored for Puerto Rico's energy transition. This project delivers a 12-year ROI of ~345%, creates over 800 jobs, ensures compliance with environmental standards, and enhances power grid resilience and flexibility—positioning Puerto Rico for a smarter, greener energy future.

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