AZOTERA
Distributed Ammonia Systems for Multi-Week Grid Resilience and Local Fertilizer Production
DC RECTIFIER 1000 VDC
AZOTERA
OFFLOAD CONNECTION KEEP AREA CLEAR
Alliance of Angels | October 4 2026

Two Critical Energy Problems

Problem 1: Electric Grid Resilience

- Regulatory emissions compliance
- Renewable power curtailment
- Backup technology limited to hours, but outages last days

Problem 2: Fertilizer Crisis

- Emissions: 600k tons CO_2 in WA
- #1 cost to farmers: > $1,000 /ton
- Global energy markets and vulnerabilities

One Ammonia Solution

Azotera builds systems that deliver weeks of backup power **and** produce low-cost fertilizer

One System. Two Markets. Zero Emissions.

Making green fertilizer and zero-carbon grid resilience affordable

For Utilities

Resilience & Compliance
7-day backup per tank
Firm Capacity

For Ag Markets

Reliable local supply
25+% commodity price savings
50+% transport cost savings

For Investors

60%-80% Gross Margins
Large follow-on markets

Operators Get Paid Twice for One System

Revenue Stream 1: Electric Grid Resilience

$450,000/yr

from 3-storage cycles
(600hr of 2.5 MW)
100 $/MWh CETA Compliance
200 $/MWh arbitrage spread

Revenue Stream 2: Sustainable Fertilizer

$1,050,000/yr

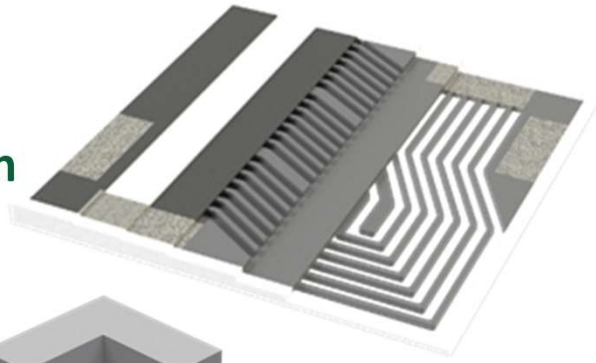
from ammonia offtake
(2500 t/yr @ $420 net)
600 $/t wholesale + $120 $/t credits
- $300 $/t cost

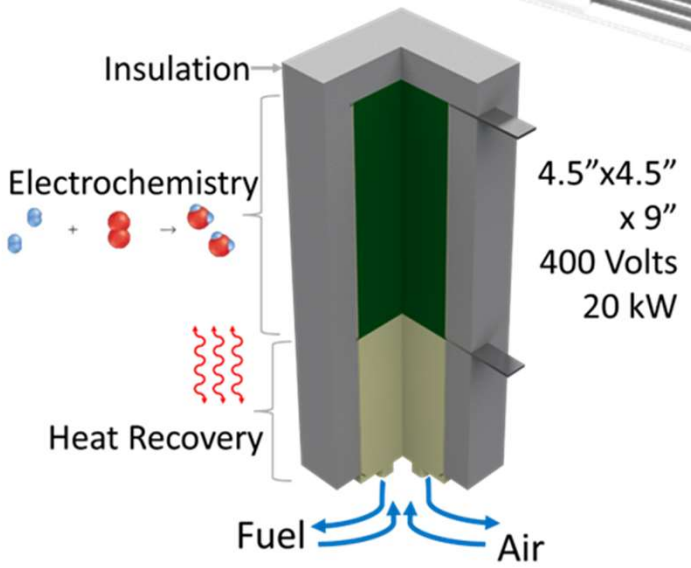
$1.5M/yr combined gross profit
6yr payback, 2.5yr with grants or ITC

Core Technology

Ammonia Synthesis Improved from 45% to 70%

Reactor Miniaturization
~ 2,000 layers





Electric Power→ NH_3 Synthesis → Storage → Storage → Reversible Electric Power

No Hydrogen Compression

Simple, compact, modular design for rapid duty cycle deployment

70% Conversion Efficiency

Integrated electrochemistry & thermochemistry (vs NG SMR 43% eff)

Reversible Operation

On-demand distributed power (50% round-trip)

Patented Technology

Pressure-tolerant electrode (US 11,594,738 B2)

Ammonia Storage vs Li-Ion Batteries

Feature	Azotera 2.5	Li-ion Batteries
Energy Density	**4,300 Wh/L**	200-400 Wh/L
Duration	**7 days per 100-ton tank**	12 hours
Round Trip Efficiency	**50%**	85%
Lifespan	**20 yr**	10 yr, 5,000 cycles
Secondary Value Stream	**Green Fertilizer**	None
Safety	**Non-flammable**	Thermal runaway risk
Footprint (2.5MW/420MWh)	**5,000 ft²**	30,000 ft²
Total Cost	**$10M**	$20M
Materials	**Trace Rare Earths With Allied Nation Supply**	Critical materials with mining challenges

Technical Expertise

Dr. Dustin McLarty

Chief Technology Officer

- 18 yrs Solid-Oxide Tech • 25+ papers • 1000+ citations
- Tenured Professor • Fulbright Fellow • $6M+ grants
- Former US National Team for swimming and Pro Triathlete

- Founder and Fulbright Fellow with degrees from UC Irvine and the University of Florida.
- Former Associate Professor of Mechanical and Materials Engineering at Washington State University.
- 18 yrs of solid-oxide research attracted multiple DOE and ARPA-E grants to develop next-generation hybrid power systems
- Founded company in 2023 and raised $2M+ through grants and sales of in-house fabricated solid-oxide test stations.

Hardware Scaling

Christopher E. Wood

Chief Executive Officer

- 30+ yrs operator/investor
- Lean/TPS expert
- 30+ yrs key roll in startup ramps
- Partner in a wheat farm with 1000t NH3/yr

- Led full operational build-out for the Lucas Museum of Narrative Art's façade program,
  - hired 240 people, stood up a 150,000 sq. ft. facility, and delivered 1,271 custom FRP panels 100% on time.
- He scaled startups including Purcell Systems and PV Power to 4x+ production capacity, supporting sales increases of $100 millions.
- Led Boeing supplier turnarounds at Faber Enterprises, Weber Aircraft, and RMI Titanium

Go-To-Market Strategy

Eastern Washington, Launch Friendly Market

- State mandated CO_2 compliance criteria
- Capacity constrained grid
- Renewable energy rich
- Utility demand for 6+ day resilience at 40+ stations
- Stable, recurring agricultural off-take demand

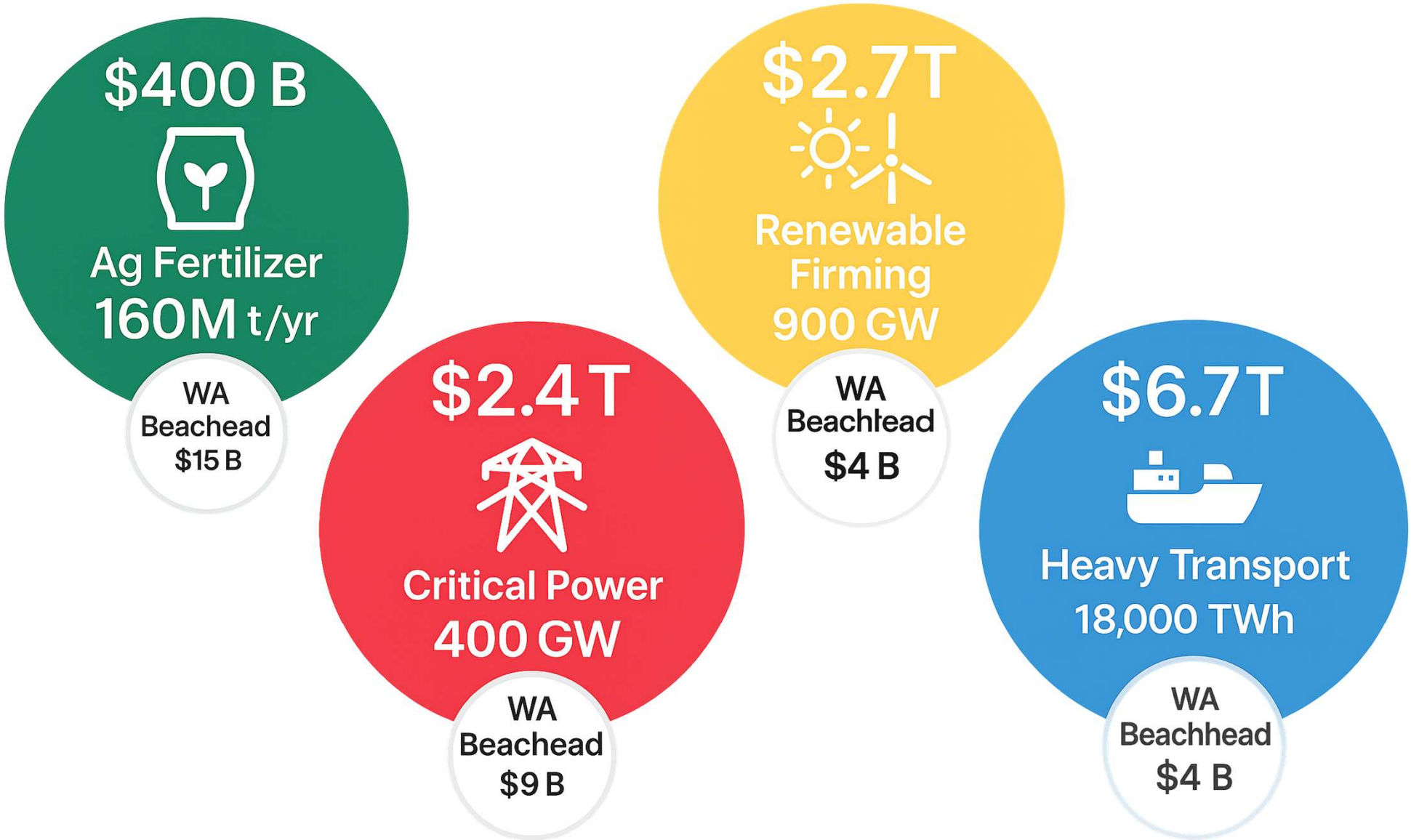
50,000 tons
ammonia fertilizer demand

$60M+
fertilizer market

80 MW, 0.5TWh
surplus renewable energy

125k tons
Potential CO_2 avoidance

$12T Cumulative Equipment Market in Four Segments



Staged Investment

Stage	Timeline	Investment	Outcomes
1	Q4-2026	$750k as 1:1 match	• Mark1 printer • 5-50 kg/day Ammonia Synthesis • Independent Review • IP filings
2	Q3-2027	Seed Closing + Milestone 1 $2.25M	• Integrated Benchtop MVP • Sales LOI's • Manufacturing Facility Design • Pilot Installation Specification
3	Q2-2028	Seed Milestone 2 $2.5M	• $15M+ USDA Loan • Pilot Assembly, Installation & Field Commissioning • Manufacturing Buildout

6 years
Lab bench → 50 units/yr

~$3.0M
Investment to reach demo

~$15.0M+
USDA Loans

Q2 2029
Groundbreaking — in-field demos

Join Us in to Support Farm and Grid Resiliency

Contact Us
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