JUJERICHO ENERGY VENTURES

ADVANCING THE ENERGY TRANSITION TSXV: JEV | OTC: JROOF | FRA:JLM DECEMBER 2024

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MISSION STATEMENT



- A Dedicated Hydrogen Solution Company Enabling Low-Cost, Industrial Decarbonization
 - One Focus:
 - Developing and delivering the most energy efficient and reliable hydrogen solutions for real-world industrial and commercial applications
 - Two Advantaged Products:
 - Zero-Emission Steam Solution decarbonizing industrial applications, 20% of global GHG emissions₁
 - Electrolyzer providing lowest-cost clean hydrogen to a \$300bn and growing market
 - Macro Tailwinds:
 - Global decarbonization trends and policies have created structural incentives, opening industrial end-markets for significant, secular growth

(1) Source: IEA/Heat Pump Centre (2023) Medium Unsustainable; Industrial heat & steam 1/25/2024



MARKET OPPORTUNITY

PUBLIC POLICY

Ountries plus the EU have adopted the Paris Climate Accord

Largest Global Economies have announced Net Zero Carbon Emissions targets (U.S., China, Japan, EU, India)

INVESTOR & SOCIETAL DEMANDS¹

- ESG investment flows: ~2,800 global ESG funds totaled \$3.3 Trillion (Oct "2024)
 - Total ESG Funds: 2.3x from '20 to '23
 - \$3 of every \$10 moving into equities is going to ESG

STRONG GOVERNMENT INCENTIVES

U.S. passed the most consequential piece of hydrogen legislation in the world with its Clean Hydrogen Production Tax Credit (PTC) worth up to 3/kg

- Equivalent to \$22/MMBtu natural gas
- \$9bn for hydrogen hubs and R&D
- \$1bn+ more demand-side applications (July '23)

The EU and Australia have put in place a Carbon Contract for Differences scheme that will pay producers of clean hydrogen the difference required to reach cost parity with fossil fuel-based alternatives

- Clean hydrogen is already competitive with European natural gas prices
- EU Prices on carbon (2022): \$80/ton

Canada: 40% tax credit for hydrogen production

• Price on Carbon (2022): \$50 / ton; \$133 / ton by 2030

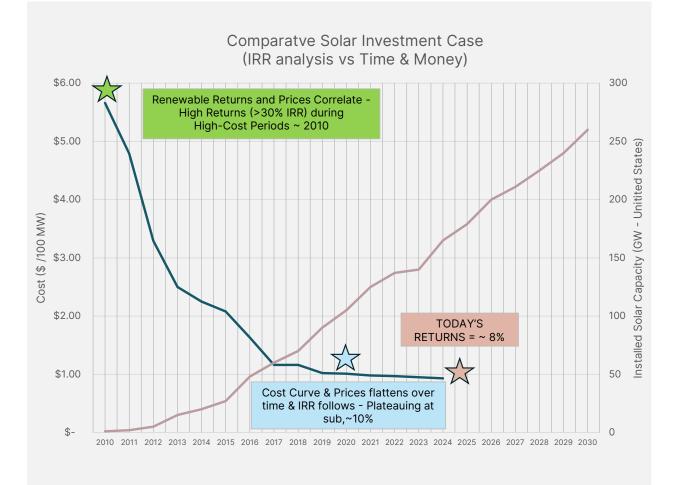


NET-ZERO GOALS THROUGH 2050 CREATE A ONCE IN A GENERATION INVESTMENT WEDGE



(1) Source: Grand View Research October 2024 ESG Investing Market Size and Trends, Wall Street Equity, Research; Raymond James (2020), BAML (2020); all figures in USD.

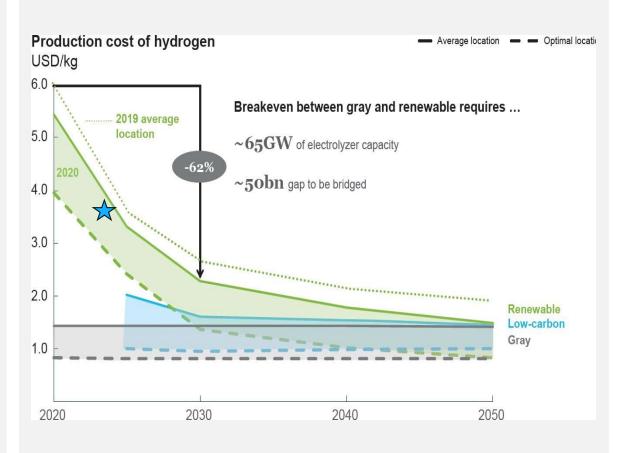
INVESTMENT CASE



Source: NREL – National Renewable Energy Laboratory; Solar Costs from U.S. Solar Photovoltaic System and Energy Storage Cost Benchmark: Q1 2020 (NEED TO GET PROPERLY CITED)

HYDROGEN EARLY DAYS – LOOKS A LOT LIKE SOLAR

- Management believes the Prime investment period for Hydrogen is now, as it offers a similar investment case to Solar with a target IRR ~30%+ based on the technology curve
- 2030 represents the inflection point to begin moving to the flattened cost curve, offering limited IRR.
- By 2040 the technology adoption will pass critical mass offering average market return.
- Currently we can produce at ~\$4.25kg/H2 or less (blue star)
 - Meaning we are on target with this data



Source: Goldman Sachs Equity Research; Key assumptions: Gas price: 2.6-6.8 USD/MMBTU; LCOE USD/MWh 25-73 (2020) 13-37 (2030) and 7-25 (2050)

MANAGEMENT AND EXPERTISE





BRIAN WILLIAMSON CEO, Director

- Spent 20+ years at various financial institutions and family offices in investment leaderships roles (Arthur Anderson, The Harbor Group)
- Collectively managed \$1bn+ in assets focused on oil and gas and energy investments
- JD & CPA by education



BEN HOLMAN CFO, Director

• Experienced financial leader with 18 years in financial management and accounting Held senior-level positions at Apco Oil & Gas, former subsidiary of The Williams Companies and WPX Energy



- **Chief Commercial Officer** • 30+ Year Energy Industry Executive
- Led Larsen & Toubro Global Digital Solutions Group Sales & Partnership efforts
- President of Arc IT
- Product Director at Alstom
- Electrical Engineer by Education



RYAN BREEN Head of Corporate Strategy

- Drives company-wide strategy focused on due diligence, deal structuring and execution for new investments
- Prior experience within J.P. Morgan's investment banking group advising Fortune 500 clients focused on Multi-Industrial, Aerospace & Defense and Transportation opportunities



JANET REISER President, Hydrogen Technologies

- Experienced policy maker, senior executive and program manager, over 35 years experience in energy management, engineering construction and telecommunications, recently running Alaska Energy Authority
- Janet has been recognized as one of the Top 50 Women in Hydrogen as well as Top 10 in Hydrogen Technology and Innovation



Lead Engineering

- . B.S. Mechanical Engineering, Ph.D. Chemical Engineering
- Leading new Technology development in energy, renewables, and IOT. Startup founder and CEO; project and division manager in SMEs; technology scout, manager of dozens of JV projects, and investor at GE & GEV



JOURDAN URBACH Senior Technical Advisor

- · Most recently worked at McKinsey & Co., where he helped build their internal venture capital group, serving as Product Manager or interim CTO of a portfolio of over 20 internal startups, called McKinsev Solutions
- Co-founded Mass Lab, Director of R&D at Mimedia, Neurogenomics researcher specializing in bioinformatics, Harvard & MIT



ROMI KADRI Senior Technical Advisor

- 25+ granted patents, \$100mm+ venture investing experience
- Led innovation at \$1bn+ public company Serves on the board of several tech companies and advises fusion energy company TAE & MIT's Martin Trust Center for Entrepreneurship



AARON NACKOS Principal Engineer

- Experienced chemical engineer with 15 years of industrial experience (Phillips 66, John Zink Hamworthy Combustion, Hydrogen Technologies) 3+ granted patents
- . Diverse R&D experiences include pilotscale hydroprocessing catalytic reactor design and operation, industrial process modeling, and combustion and postcombustion emissions control solutions engineering

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JUST ENERGY VENTURES

BACKED BY KEY SHAREHOLDERS

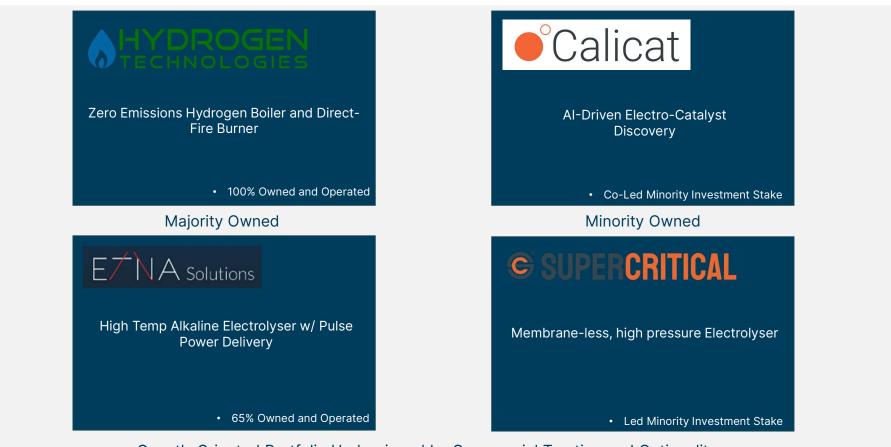
- Edward Breen (Breen Family) Chairman and CEO Dupont (NYSE:DD), former Chairman and CEO Tyco International. Lead Independent Director Comcast
- Belzberg Family (Strauss Zelnick) CEO Take-Two Interactive (NASDAQ: TTWO) Balfour Holdings, Real Estate Development. Former Chairman CBS Corporation
- Graves Family 70+ Year multi-generational energy asset owner and operator
- McKenna Family Andrew McKenna, Founder & CEO McKenna & Associates. Advisory, Consulting and Investment Firm, based in Washington DC
- Frank Drendel Founder & Chairman Emeritus CommScope (NASDAQ: COMM)



* Ownership Estimates as of December 2024

THE HYDROGEN VALUE CHAIN PORTFOLIO

J. J. J. J. ENERGY VENTURES



Growth-Oriented Portfolio Underpinned by Commercial Traction and Optionality



THE FOUNDATION - WE CHECK THE BOXES!





PARTNERS UNDERPIN GROWTH & ASSET-LITE MODEL





- World leading manufacturer of industrial boilers and boiler room equipment (founded in 1917)
- MOU to establish commercial relationship including manufacturing and distribution
- Install DCC[™] demonstration unit for customer site visits
- Joint marketing and promotional activities for clean steam



- Heat technology conglomerate with diverse range of industrial burners and thermal accessories across five portfolio companies (founded 1896)
- Industrial burner manufacturing for HT's proprietary burner
- Licensing opportunities within directly fired applications (e.g., glass, cement industries)

Experienced value chain partners increase sales pipeline opportunities and reduce execution risk

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SALES STRATEGY & VALUE CHAIN OPPORTUNITY





Sales Focus Drives Scalable and Actionable Opp's

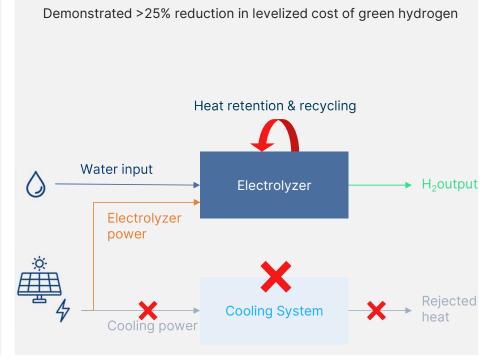
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WHAT WE BUILT



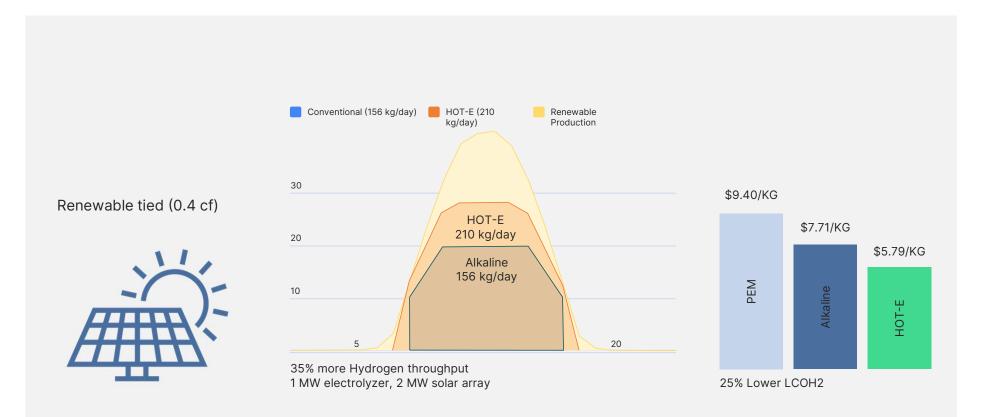
- Leverages decades of published research and industrial deployment of alkaline electrolyzers.
- **Employs novel materials and controls** to enable high temperature operation.
- Leverages unique power delivery system borrowed from fast charging and nuclear fusion fields.
- Makes use of heat to improve efficiency (*lower opex*) and throughput (*lower capex*), rather than wasting energy to remove it.
- Is designed to be manufactured anywhere, with no supply chain constraints, conflict minerals, or specialized manufacturing processes.



Our product, "HOT-E" (<u>H</u>igh <u>O</u>utput <u>T</u>hermogenic <u>E</u>lectrolyzer)

YIELDS IMMENSE BENEFITS

JANJERICHO ENERGY VENTURES

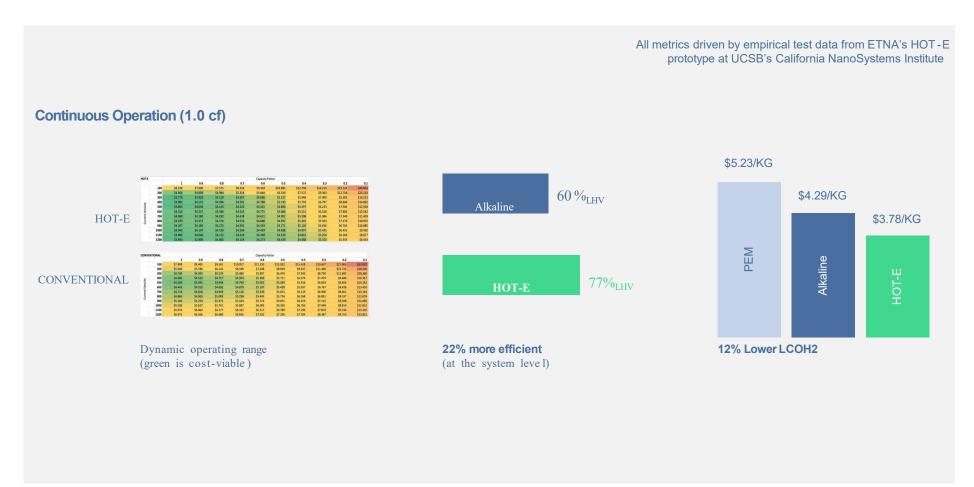


All metrics driven by empirical test data from ETNA's HOT-E prototype at UCSB's California NanoSystems Institute

*Key Assumptions: 1MW system; \$1M system cost; \$333k installation cost; \$478k financing costs; 10yr stack life (alkaline & Hot-E); 5yr stack life (PEM); 5c/kWh electricity; 0.2c/kg water; 1% p.a. degradation

DELIVERING THE LOWEST LEVELIZED COST OF GREEN HYDROGEN





*Key Assumptions: 1MW system; \$1M system cost; \$333k installation cost; \$478k financing costs; 10yr stack life (alkaline & Hot -E); 5yr stack life (PEM); 5c/kWh electricity; 0.2c/kg water; 1% p.a. degradation

MARKET-LEADING-COST OF GREEN HYDROGEN, WITHOUT COMPROMISE



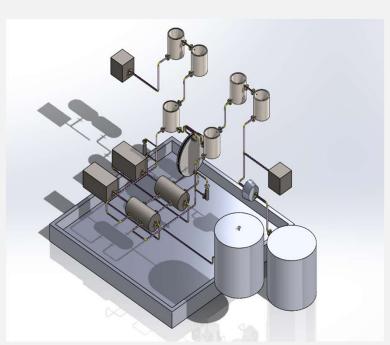
	PEM	AEM	SOEC	Alkaline Conventional	ETNA HOT-E
Capex	Medium	Medium	High	Low	Low
Opex	Low	Low	Low	Medium	Low
Levelized Cost of Hydrogen	High	High	Medium	Low	Lowest
Dynamic Operating Range	Medium	Medium	High	Low	High
Stack life	Short	Short	Medium	Long	Long*
Maturity	Medium	Low	Medium	High	High*
Renewable-Tied Performance for Green H2 production	High	High	Incompatible	Medium	High

*Note: ETNA's HOT-E applies decades of alkaline electrolyzer design and optimization, using contemporary materials to unlock the high performance that comes with elevated temperatures. Stack life is estimated at 87,600 hours based upon findings from our research to date.

A CLEAR AND RAPID ROADMAP TO VALUE CREATION



- 1 Deliver MVP at demo scale
 - Install a 10 kW HOT-E MVP with >3 cells using all production/COTS components
 - Use a design and form factor that are scalable to 1MW without fundamental architecture changes
 - Validate performance, including accelerated life cycle testing
- 2 Further R&D for gen2 product
 - Further refine diaphragm design and mitigate corrosion
 - Improve electrode design and efficiency
 - Integrate pulse power delivery and optimize process kinetics



Rendering of MVP system that will validate 1MW product architecture

We have acquired the lease to the only appropriate manufacturing space in Santa Barbara and will be building v2 of our prototype there over the next 6 months. We're enroute to the first commercial deployment in 2025.

MINORITY STAKE INVESTMENTS

VENTURE PORTFOLIO



• Ownership: ~7%

- **Product:** Electrocatalyst discovery platform enabling low-cost PEM electrolyser systems w/o scare resources
- **Background**: Caltech spin-out using Al-driven chemistry; original work funded by \$122mm DOE grant led by Dr. Nate Lewis
- Unfair advantage:
 - Technology can prepare, characterize and quantify catalytic activity 10,000x faster than competition
 - Utilize in-house discovered abundant catalysts in proprietary PEM systems
- Partners and Co-Investors:



SUPERCRITICAL

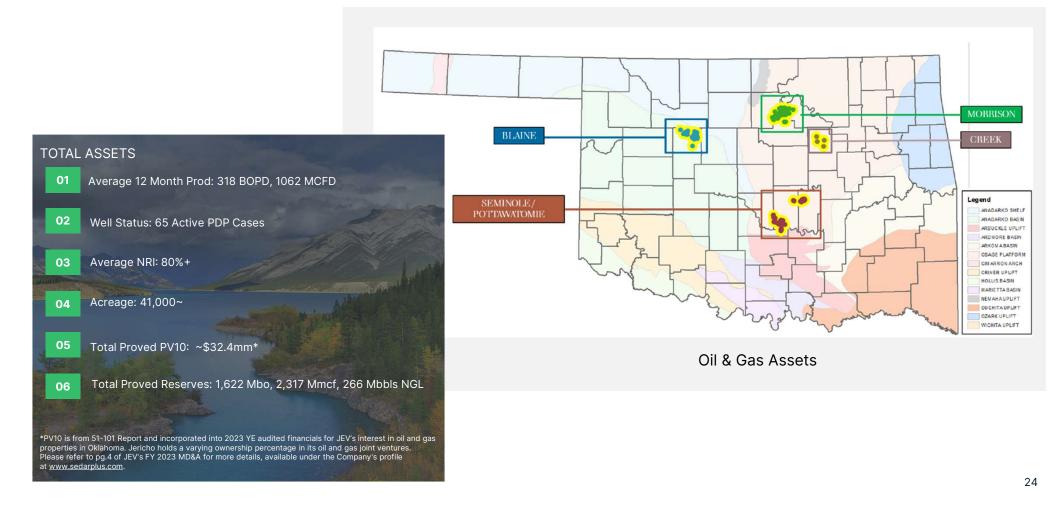
- Ownership: ~11%
- **Product:** High-pressure, membraneless electrolyser utilizing supercritical water
- **Background**: Deep Science Ventures and Anglo American incubated and funded initial work on supercritical water electrolysis; current fundraising round led by Shell and Toyota (valuation 2x our entry cost)
- Unfair advantage: Creates low-cost 200+bar hydrogen at output, eliminating the need for high-cost compression for all current H2 applications (ammonia production and oil refining)



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EAGLE ROAD OIL

PORTFOLIO GROWTH DRIVER AND CATALYST – EAGLE ROAD OIL



EVOLVING GROWTH IN THE ENERGY TRANSITION

