



# JV JERICHO

ENERGY VENTURES

ADVANCING THE ENERGY TRANSITION

TSXV: JEV | OTC: JROOF | FRA:JLM

MARCH 2024

## FORWARD LOOKING INFORMATION AND STATEMENTS

- Presentation and Reader Advisory

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Harvesting Strong Cash Flows  
from Preexisting Hydrocarbon  
Business

High-quality North American hydrocarbon assets enable investments in new hydrogen growth opportunities driving the energy transition



Re-Investing in Breakthrough  
Hydrogen Growth Companies

JEV owns key patents and operates hydrogen technology businesses in all three verticals: commercial, industrial and the built environment

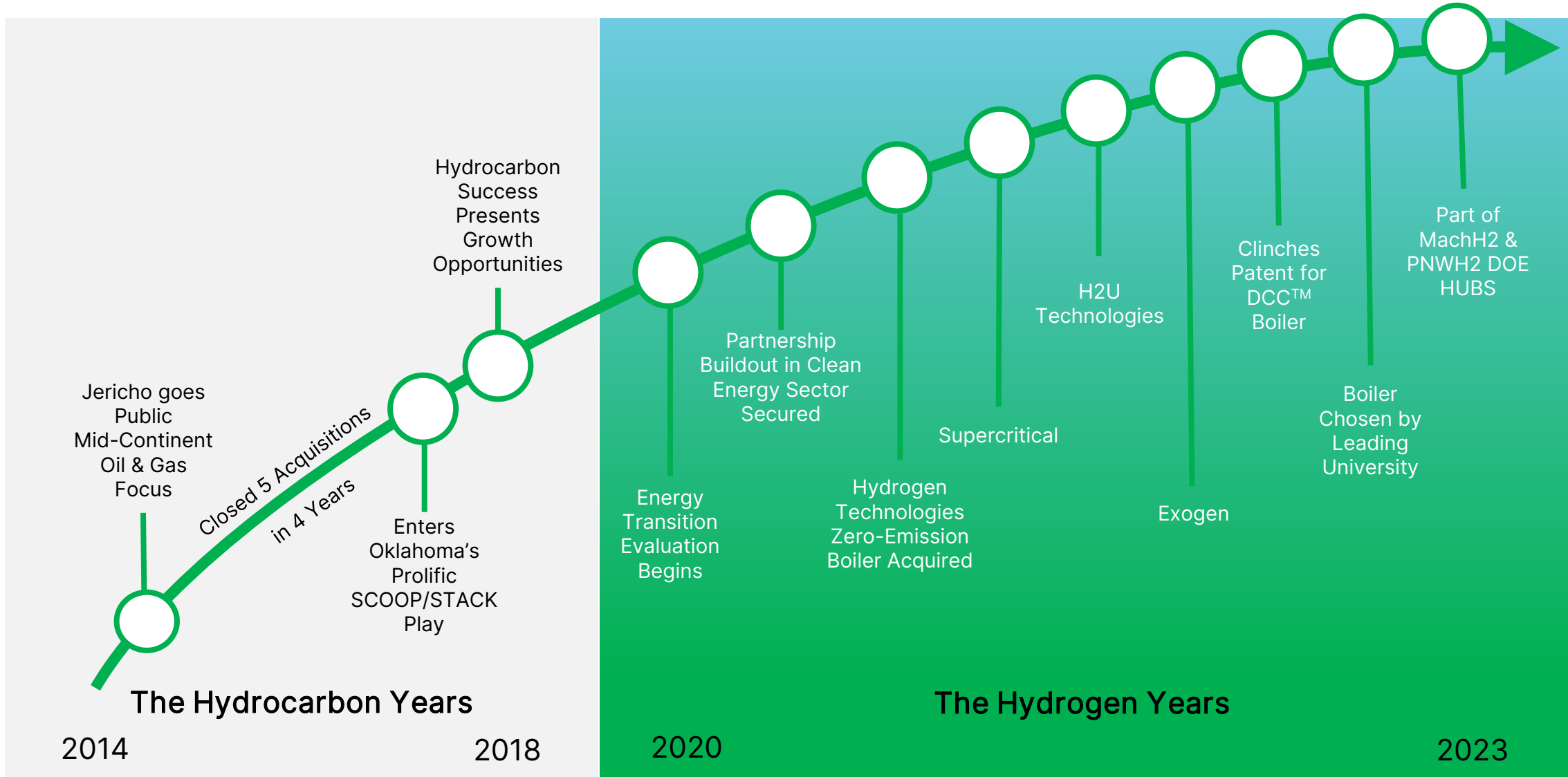


Partnering with Disruptive Early-  
Stage, Low Carbon  
Technologies

Leveraging deep domain expertise from traditional energy businesses for new frontiers in hydrogen and renewable energy technologies

OUR MISSION IS TO DELIVER FUNDAMENTAL TECHNOLOGIES ENABLING A NET-ZERO FUTURE. WE LEVERAGE DEEP ENERGY-SYSTEM DOMAIN EXPERTISE FOR INVESTING IN NEW HYDROGEN GROWTH OPPORTUNITIES. WE OFFER INVESTORS ACCESS TO KEY TECHNOLOGIES IN A FLOURISHING GREEN ECOSYSTEM.

# EVOLVING GROWTH IN THE ENERGY TRANSITION



## GOVERNMENT AND PUBLIC POLICY

**197** Countries that have adopted the Paris Climate Accord

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

**1.5** Degree Limit on Global Temperature Increase (vs. pre-industrial)

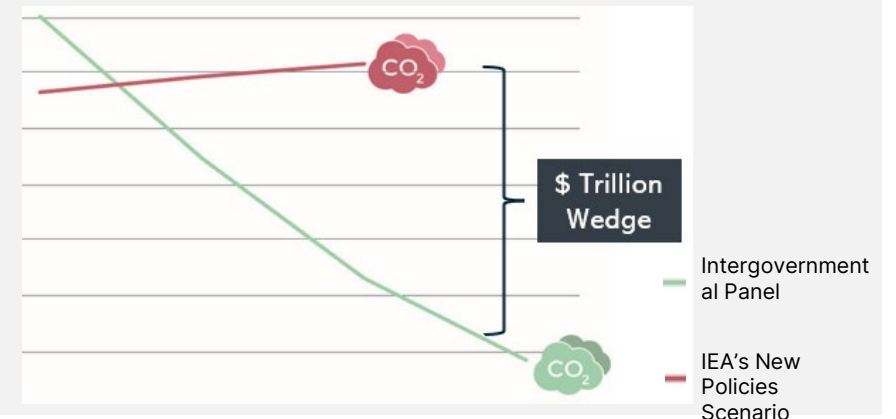
## INVESTOR & SOCIETAL DEMANDS<sup>1</sup>

- 30 global institutional investors representing >\$5trn assets formed the Net-Zero Asset Owner Alliance, aligning portfolios with the Paris Agreement
- Blackrock, the largest asset manager, and other funds holding \$18trn in assets have announced reallocating capital towards sustainable & purposeful investments
- In the past several years, global assets invested in ESG ETFs have increased over 1000% going from \$22bn in 2018 to nearly **\$248bn** as of April 2023

## CORPORATE INVESTMENT WITH AMBITIOUS NET-ZERO CARBON PLEDGES

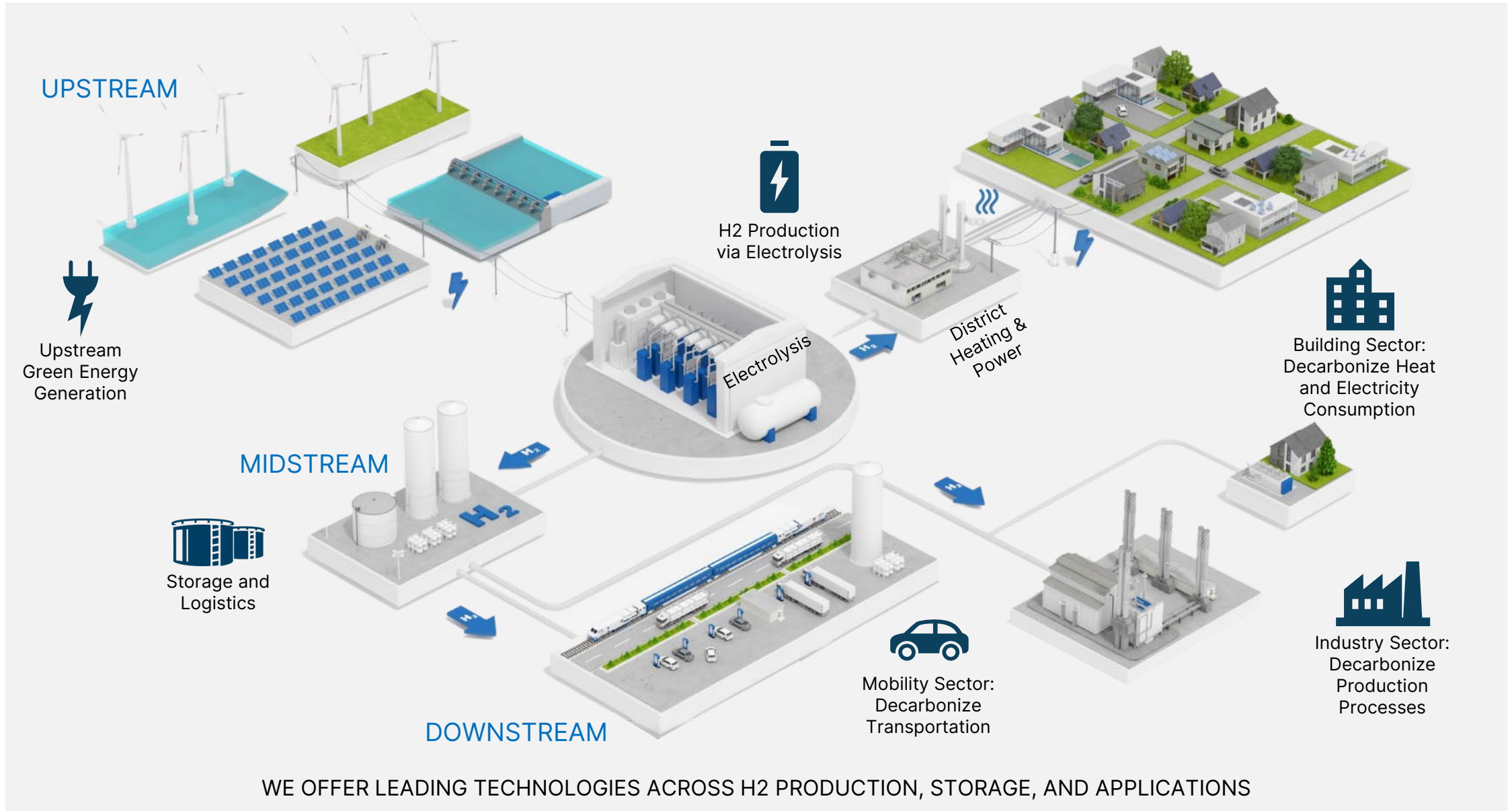


## NET-ZERO GOALS THROUGH 2050 CREATE A ONCE IN A GENERATION INVESTMENT WEDGE



<sup>1</sup>Source: Wall Street Equity Research; Raymond James (2020), BAML (2020); all figures in USD.

# BOOMING HYDROGEN ECOSYSTEM



OUR LOW-CARBON TECHNOLOGY OBJECTIVES

Disruptive Technology

Identify pre or early-revenue growth companies with game-changing H2 technology based on our deep domain expertise

Global Opportunity

Prioritize the surge in interest from corporate clients. As a business operator we understand fundamental technology drivers and see global demand early

Market Ready

Rigorous product market fit analysis through our own operations and verified by corporate partners, informed by their pain points to adoption

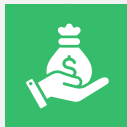
MACRO BACKDROP HAS MULTIPLE TAILWINDS



COP26 in Glasgow, Scotland created a watershed event for hydrogen setting ambitious 2030 targets



The U.S. Reconciliation Bill outlines a \$3 / kg Production Tax Credit, lining up the most consequential piece of hydrogen legislation



The U.S. recently passed (Nov'21) the Build Back Better Infrastructure Plan with \$9.5 billion in funding for hydrogen



Green hydrogen is the only clean molecule recognized in the Net Zero plans adopted to date by the EU

OUR ENERGY TRANSITION PORTFOLIO

Hydrogen-Based  
Application Technologies

Hydrogen Generation  
& Enabling Technologies



Zero Emissions  
Hydrogen Boiler

Owned by JEV

H2 Boiler

Patented method for combining H2 and O2 in a vacuum to create high-temp heat and steam



Low-Cost  
Electrolyser

Co-Led Minority Investment Stake

H2 Generation

Novel and disruptive Proton Exchange Membrane (PEM) design with upgradeable catalysts



AI-Driven Electro-  
Catalyst Discovery

Co-Led Minority Investment Stake

Enabling Catalysts

Ultra-high throughput AI and data-driven process which prepares, characterizes, and quantifies the catalytic activity of millions of compositions per month (fuel cell and electrolyser)



Membrane-less, high  
pressure Electrolyser

Lead Minority Investment Stake

H2 Generation

Eliminates the need for membranes and stages of gaseous compression in an ultra-efficient, high-pressure output electrolyser (200bar+) for use in H2 applications





Hydrogen-Based  
Application Technologies

CHEMICAL REACTION SOLUTION

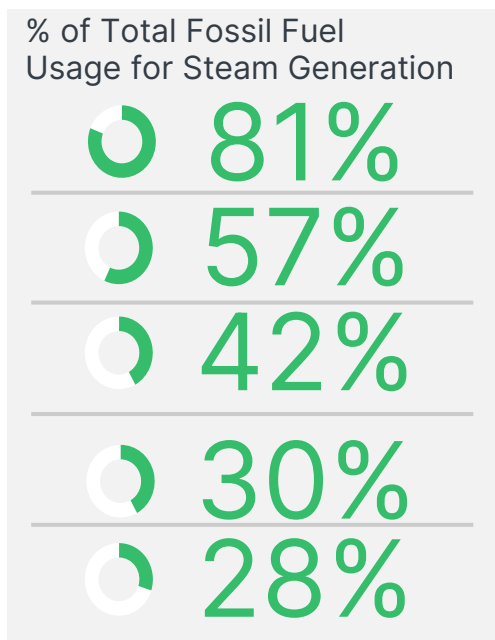
**+US\$19BN**  
Annually<sup>1</sup>

- 37% of fossil fuels burned for Industrial Utilization in the US is to produce steam
- Global heating and steam markets account for >15% of all CO2 emissions
- Macro-tailwinds driven by rising carbon pricing and policy decisions to eliminate sales of new fossil-based boilers and will increase adoption



INDUSTRIES THAT CONSUME THE HIGHEST % OF FOSSIL FUEL TO GENERATE STEAM:

Pulp and Paper	<ul style="list-style-type: none"> <li>• Steam is the key component in refining and treating wood chips before they are pulped</li> <li>• High fossil fuel emissions from steam generation</li> </ul>
Food and Beverage	<ul style="list-style-type: none"> <li>• Steam heat used for sterilization, disinfecting, cooking, curing, and drying</li> <li>• Hot water and steam for boiling and pasteurization</li> </ul>
Chemical / Petrochemical	<ul style="list-style-type: none"> <li>• Steam is utilized to heat and cool reactors that operate in a cyclical fashion</li> <li>• Steam is used to produce various by-products (jet fuel, ammonia, chlorine, etc.)</li> </ul>
Oil refineries and Production	<ul style="list-style-type: none"> <li>• High-pressure condensate return system's conserve energy by pumping hot water directly into steam boilers</li> <li>• Utilize steam as a key component in enhanced recovery operations (i.e. SAGD)</li> </ul>
Commercial Properties	<ul style="list-style-type: none"> <li>• Commercial properties typically use a boiler as part of a district energy system</li> <li>• Utilize steam as the major input for space heating and hot water</li> </ul>



<sup>1</sup> Sources: MarketsandMarkets, "Industrial Boilers Market by Fuel, Boiler, Function, Boiler Horsepower, End-Use Industry And Region - Global Forecast to 2030," March 10, 2023 & Fortune Business Insights, "Commercial Boiler Market, 2021-2028," Feb. 11, 2022.



Hydrogen-Based  
Application Technologies

WITH A PATENTED **DYNAMIC COMBUSTION CHAMBER (DCC™)** TECHNOLOGY, HYDROGEN TECHNOLOGIES MANUFACTURES AND SELLS ITS BREAKTHROUGH, INNOVATIVE, HYDROGEN-BASED BOILERS FOR COMMERCIAL AND INDUSTRIAL SCALE

#### CHEMICAL REACTION SOLUTION

- CleanH2steam DCC™ boiler is HT's proprietary hydrogen-based boiler
- The scalable process is based on combining pure hydrogen and pure oxygen to form water molecules – this reaction releases 61,000 BTUs (heat index) per pound of hydrogen
- Pure hydrogen and pure oxygen combine (in the presence of a spark) which exothermically converts back to water (think: steam) in a high-temperature reaction, creating a mild vacuum owing to the condensing characteristic of the chemical reaction
- Critically, hydrogen burns in the ultraviolet (with little to no radiant heat) compared to typical fossil-based combustion processes where radiant heat (energy) is released and lost
- The chemical reaction fully captures the total heat of steam, allowing for the greatest amount of heat retained in the combustion reaction of hydrogen and oxygen
- The boiler system was designed based on the chemical reaction to function as a closed-loop system, eliminating all need for typical combustion exhaust

JEV IS CURRENTLY DEPLOYING / INSTALLING DCC™ BOILERS AROUND THE WORLD



Hydrogen Generation &  
Enabling Technologies

H2U IS THE LEADING DEVELOPER OF ABUNDANT, LOW COST, EFFICIENT, AND DURABLE CATALYSTS AND SYSTEMS FOR HYDROGEN GENERATION AND FUEL CELLS.

H2U TECHNOLOGIES: CATALYST DISCOVERY



Caltech spin-out startup using AI-driven chemistry to catalyze the Hydrogen Economy

- Caltech scientists awarded \$122mm from DOE - IP licensed exclusively to H2U



H2U has developed a proprietary electrocatalyst platform focused on the discovery of non-rare earth catalysts for generation of clean hydrogen – accomplished one million times faster than any other method



Initial Catalyst Discovery has found cheap, earth abundant Oxygen Evolution Reaction and Hydrogen Evolution Reaction catalysts

- Relationship with De Nora (Top 5 MEA manufacturer) to screen and license a new chlorine catalyst in addition to MEA testing of H2U's family of non-rare earth catalysts for electrolysis

H2U TECHNOLOGIES: LOW-COST PEM ELECTROLYSER



Proprietary low-cost PEM electrolyser, utilizing in-house earth abundant catalysts



Commercial Pilot to verify non-rare earth catalyst PEM design with SoCalGas, the largest gas distributor in the United States

KEY DEAL TERMS

- Series A Preferred Shares
- Total Round: US\$7.0mm
  - JEV Investment: US\$1.5mm (PF Ownership: 6.5%)
- Co-Investors: Hess Oil Corp, Dolby Family Ventures, Motus Ventures
  - Use of Funds: Setup HTE catalyst discovery system and technology pilot EL with SoCalGas



Hydrogen Generation &  
Enabling Technologies

SUPERCRITICAL ELIMINATES THE NEED FOR MEMBRANES AND STAGES OF GASEOUS COMPRESSION IN AN ULTRA-EFFICIENT, HIGH-PRESSURE OUTPUT ELECTROLYSER (200BAR+) FOR USE IN H2 APPLICATIONS

### ULTRA-EFFICIENT, HIGH-PRESSURE, MEMBRANE-LESS ELECTROLYSER



**Pain Point:** Nearly all H2 today is utilized in high pressure applications - However, current electrolyzers output low-pressure H2 (membranes cannot tolerate heat and pressure), thus, requiring costly compression (US\$1.00-1.50/ kg) for nearly every current H2 application



**Solution:** Membraneless electrolyser architecture that can output H2 at pressure required by end-users



**How does SC's EL work?**

- High-pressure electrolysis is performed by removing the membrane and applying heat and pressure to the WATER before the electrolysis process which reduces the thermodynamic barriers and increases kinetics, allowing for lower overpotential (i.e., increased efficiency)
  - SC's design exploits the benefits of electrolysis of water under thermodynamic supercritical conditions
  - The result is >200bar output of H2 and O2 gases

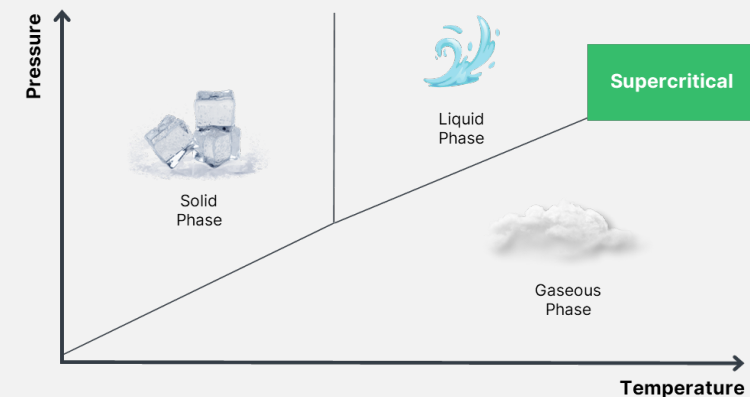


**Why is this important?**

- Eliminating the need for expensive multi-stage compression (US\$1.00-1.50/kg)
- 55% of all H2 today is used for Ammonia, which requires the same pressure that Supercritical produces H2, allowing for clear go-to-market strategy

### KEY DEAL TERMS

- Co-investors / Commercialization Partners: Lowercarbon Capital, Anglo American, New Energy Technology, Deep Science Ventures
- Seed Preferred Shares
- Total Round: US\$3.45mm
  - JEV Lead Investment: US\$1.78mm (PF Ownership: 10.3%)
  - Use of funds: Technology Pilot

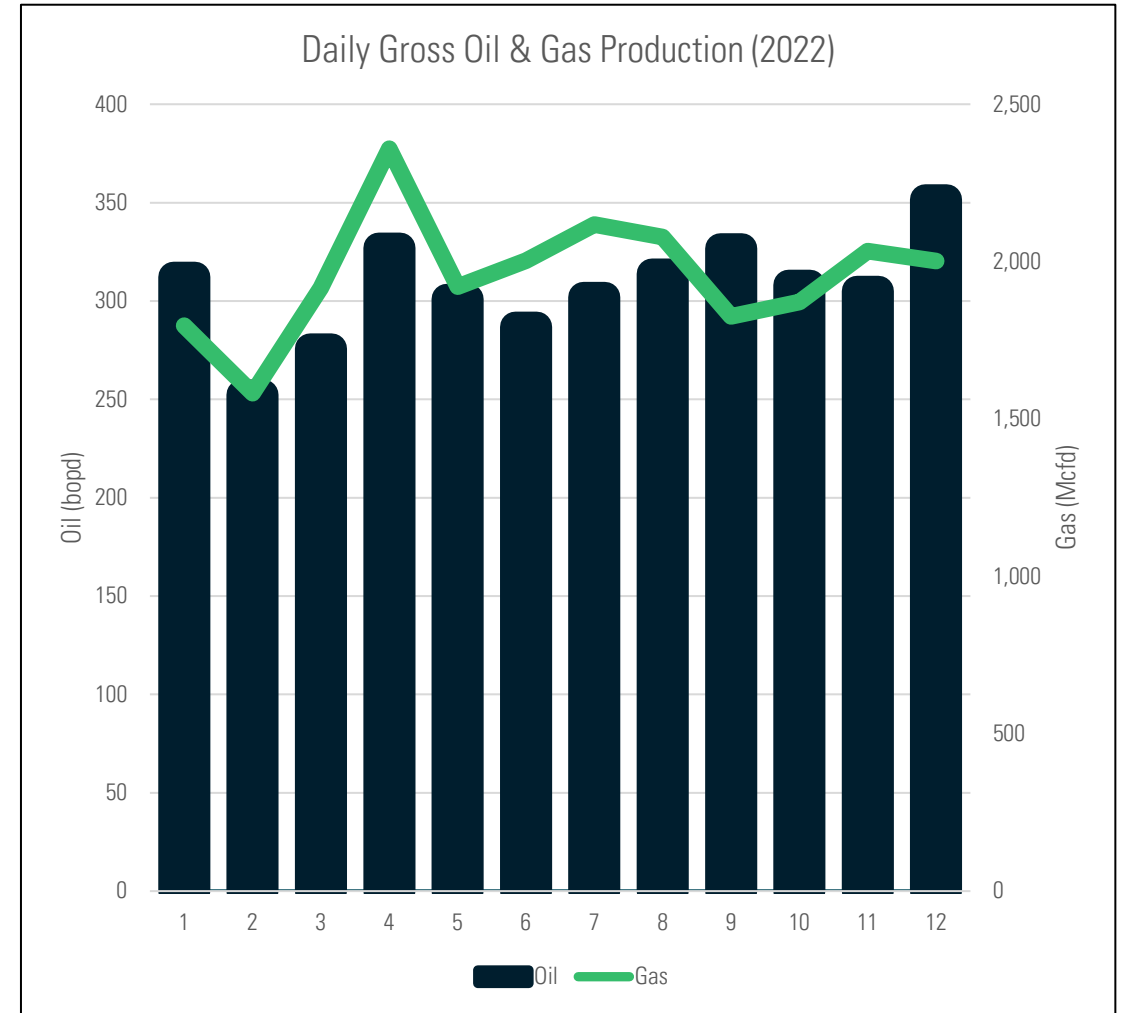


# PORTFOLIO GROWTH DRIVER AND CATALYST – EAGLE ROAD OIL

**TOTAL ASSETS**

- 01** Average 12 Month Prod: 305 BOPD, 1,959 MCFD
- 02** Well Status: 61 Active PDP Cases
- 03** Average NRI: 80%+
- 04** Acreage: 41,000
- 05** Total Proved PV10: ~\$43.7mm (\$54.3mm-SEC 2022 Price Deck)\*
- 06** Total Proved Reserves: 1,630 Mbo, 2,533 Mmcf, 325 Mbbls NGL

\*PV10 is from 51-101 Report and incorporated into 2022 YE audited financials for JEV's interest in oil and gas properties in Oklahoma. SEC Pricing is not audited and represents the YE 2022 SEC Price Deck. Jericho holds a varying ownership percentage in its oil and gas joint ventures. Please refer to pg.4 of JEV's FY 2022 MD&A for more



## EXPERIENCED SENIOR MANAGEMENT



**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



**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



**DEAN MORETTON**  
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



**ADAM RABINER**  
Director of Investor Relations

- 20 years' experience in investor relations and marketing communications.
- Managing Director of Sequoia Partners Inc
- Award winning journalist



**JANET REISER**  
President, Hydrogen Technologies

- Policy maker and senior executive over the last 35 years, previously headed up the governmental Alaska Energy Authority
- Chemical Engineer by education



**TONY BLANCATO**  
Director of Business Development & Marketing

- Spearheads new shareholder opportunities & maintain relations with current shareholders, the investment community, and other constituencies
- Oversees online & social media presence to maximize share price and create a positive image



**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 McKinsey 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



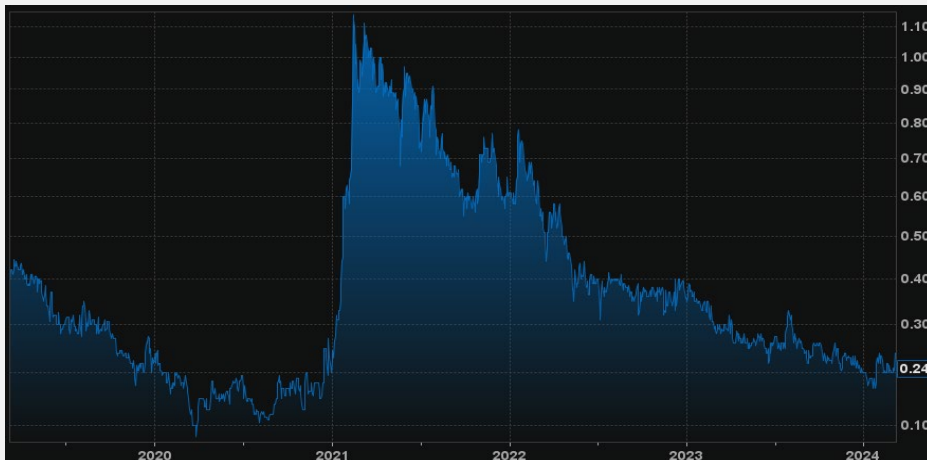
**SHANE MATSON**  
Director of New Earth Ventures

- Geoscientist
- President-elect of Tulsa Renewable Business Alliance
- Liaison to local, County, State & Federal Government officials
- 15+ years of subsurface Geology

## MARKET AND ADDITIONAL INFORMATION

### JEV BY THE NUMBERS

- TSX.V: JEV
- OTC: JROOF
- FRA: JLM
- Shares Issued & Outstanding: 259.3m
- Options: 16.8m
- Warrants: 28.1m
- Market Cap (CDN): \$52m
- Share Price (CDN): \$0.20- As of March 1<sup>st</sup>, 2024



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### LOCATION OF OPERATION

