

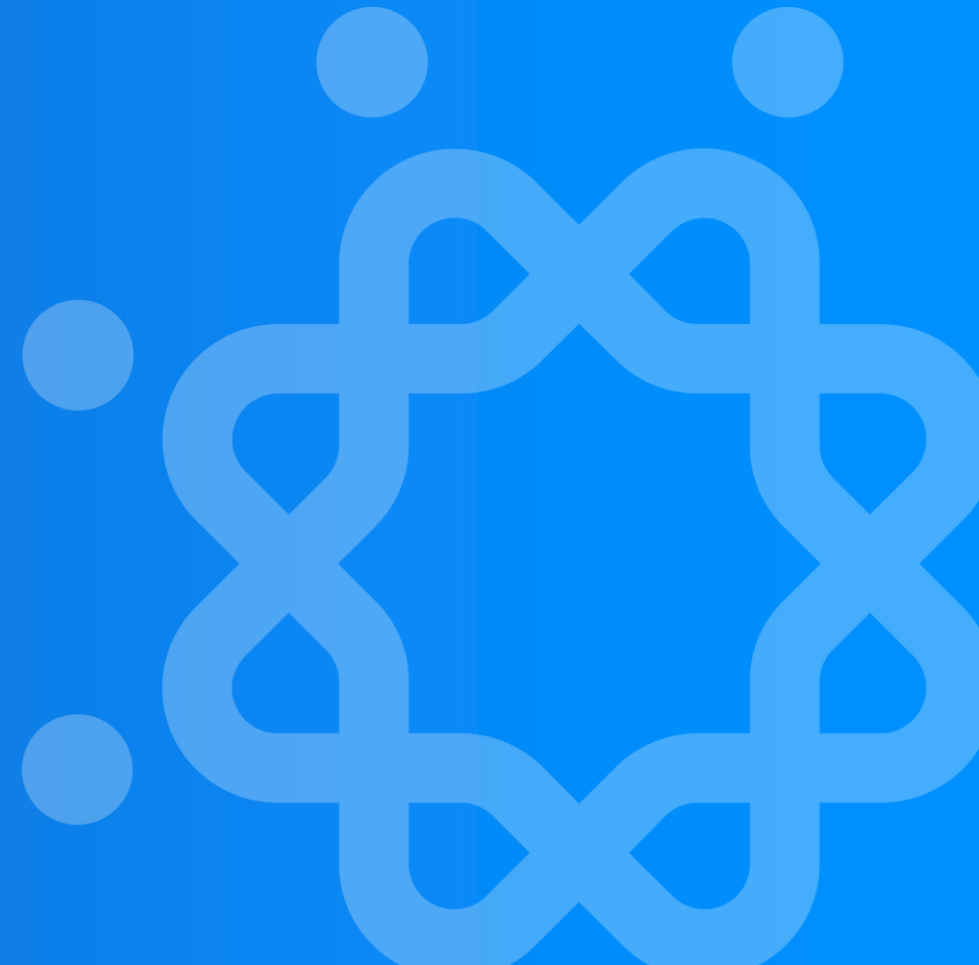


Breakthrough Energy  
Ventures

# Breakthrough Energy Ventures

Introduction

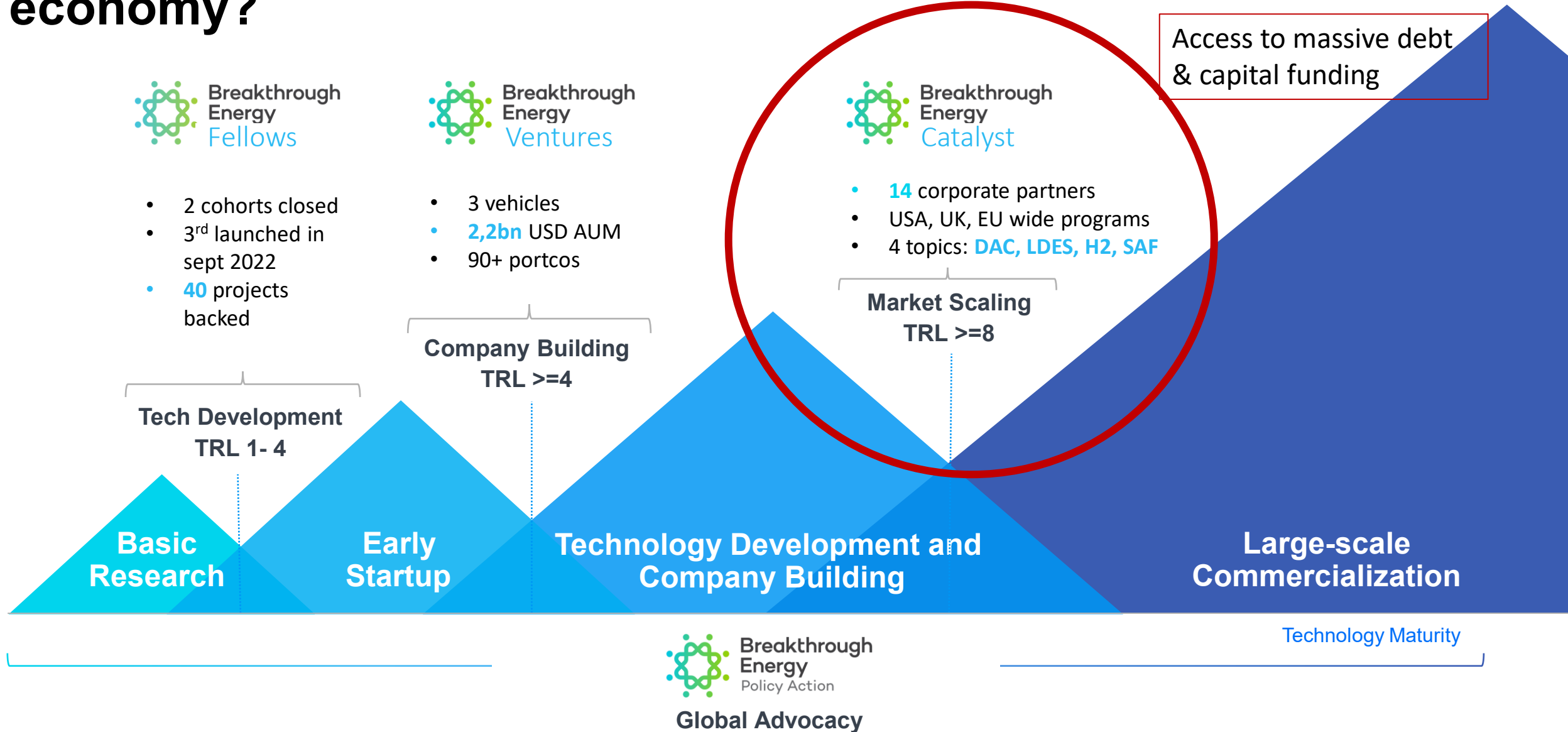
October 2022



# Mission statement

Leveraging a mix of tools ranging from technologic innovation, advocacy, investments and market building, to accelerate our progress towards net-zero.

# How does Breakthrough Energy support the hydrogen economy?



# Challenges impeding the rise of hydrogen

“Technology is a necessary but not sufficient condition”

- Industry & energy policy : RePower EU is sufficient?
- Standards & International collaboration – do we blend H<sub>2</sub> with CH<sub>4</sub>?
- Access to existing infrastructure
- Critical metals access
- Length of permitting process
- Price transparency on H<sub>2</sub> and its carriers such as ammonia

# Conclusion

Energy security and energy transition are two sides of the same coin



**Thank you**  
**allegra@b-t.energy**

# What makes Breakthrough Energy Ventures different ?

Grounded in **science**

Driven by **impact** : 0,5 GT CO<sub>2</sub>eq / year

**Patient** investors : 20 years

Company **builders**

Catalyst in an **ecosystem**

# What do we invest into ?

Electricity	Manufacturing	Agriculture	Transportation	Buildings
<b>Low GHG dispatchable generation</b> Nuclear fusion, geothermal, hydropower, etc.	<b>Material</b> Low carbon steel, cement, semi-conductors	<b>Nature based carbon removal</b> Forest, soil, ocean based carbon sinks	<b>Electrification</b> From lithium supply, to new battery chemistry and battery recycling	<b>Building control</b> Optimisation of energy use within the building, local storage
<b>Low GHG intermittent</b> Wind, solar, tidal, wave	<b>Hydrogen, Ammonia, chemicals</b> Green H2 production & transportation, green ammonia production, green chemistry	<b>Low GHG (protein) alternative</b> Low carbon dairy and meat alternatives (e.g.: fungi derived, etc)	<b>Liquid hydrocarbon</b> Biomass derived, algal, e-fuels	<b>HVAC</b> Heat pumps, energy efficient HVAC, phasing out of refrigerant gas
<b>Transmission &amp; grid mngt</b> New materials, demand & flexibility mngt, inertia measurement	<b>Carbon capture &amp; CCU</b> DAC, CO2 to X, sequestration	<b>Nitrogen efficiency</b> Solutions to reduce decency on synthetic fertilizer (e.g.: nitrogen fixation)	<b>H2</b> Hydrogen powered transportation	<b>Envelope</b> Sealing the envelope to avoid energy/thermal leak
<b>LDES</b> Cope with renewables' intermittency	<b>Game changing <u>process</u> efficiency</b> in a variety of industries (incl. decarbonizing heat).	<b>Sustainable Intensification</b> Sustainable yield increase to feed a growing population without add. deforestation	<b>Efficiency</b> Mode shift (road to rail, private to public transportation)	<b>Structural</b> Low carbon cement and steel, alternative structural material
<b>Deployment</b> Accelerate the adoption of low carbon energy sources	<b>Circularity and <u>resources</u> efficiency</b> in a variety of industries (textile, waste, etc.)	<b>Food waste</b> Curb food waste (up or downstream) to achieve higher resource efficiency	<b>Mode specific</b> Decarbonization solutions dedicated to a specific mode: maritime, heavy duty, etc.	<b>Deployment &amp; construction</b> Accelerating the adoption of low carbon tech in built environment (new & retrofit)



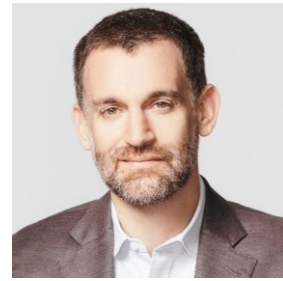
# Who is backing us?

BEV's investor base is made up of 25+ global business leaders, individuals, and a government investment fund who have the resources, risk tolerance, and patience to invest in climate technology.

## Board



**Mukesh Ambani**  
Reliance Industries Limited  
*Chairman & Managing Director*



**John Arnold**  
Laura & John Arnold Foundation  
*Co-chair*



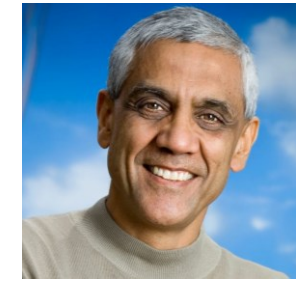
**John Doerr**  
Kleiner Perkins  
Caufield & Byers  
*Chairman*



**Bill Gates**  
Bill & Melinda Gates Foundation  
*Co-chair*



**Abigail P. Johnson**  
FMR LLC  
*Chairman & CEO*



**Vinod Khosla**  
Khosla Ventures  
*Founder*

## Other Investors

Jeff Bezos

HRH Prince  
Alwaleed bin Talal

Michael Bloomberg

Richard Branson

Ray Dalio

Reid Hoffman

Chris Hohn

Beth & Seth Klarman

Tobias Lütke  
& Fiona McKean

Jack Ma

Dustin Moskovitz  
& Cari Tuna

Patrice Motsepe

Xavier Niel

Hasso Plattner

Julian Robertson

David Rubenstein

Nat Simons & Laura  
Baxter-Simons

John M. Sobrato

Masayoshi Son

Chris Stolte

Ben & Lucy Ana Walton

Ms. Zhang Xin  
& Mr. Pan Shiyi

