

H₂PRO

fueling
tomorrow

June 16, 2024

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H₂PRO's technology
will enable affordable
green hydrogen.
This decade.





H2Pro in brief

- Established 2019
- Based on Technion academic research
- ~ 100 employees
- IP protection - US patent US10487408B2
- MW-scale pilot system in development
- Raised over \$100 Million





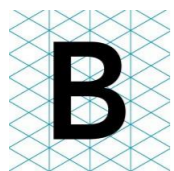
Third party vetted



Fraunhofer Institute
Technological due diligence



Nature Energy
Top 1% of all research articles



BloombergNEF Pioneer
2023 award recipient



Adipec Award 2024 by Adnoc
Transformative Hydrogen Project

Investors

- Over \$100 Million raised



Breakthrough Energy

TEMASEK HOLDINGS



ArcelorMittal



DORAL

COPEC

OurCrowd



extantia

Sumitomo Corporation





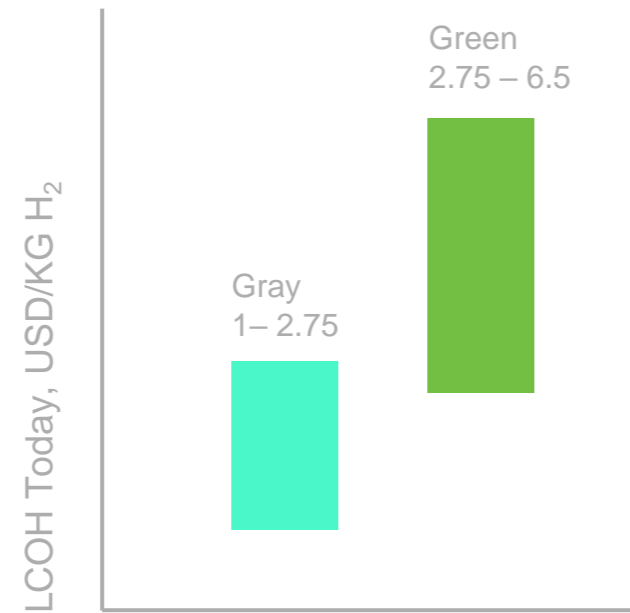
Technology





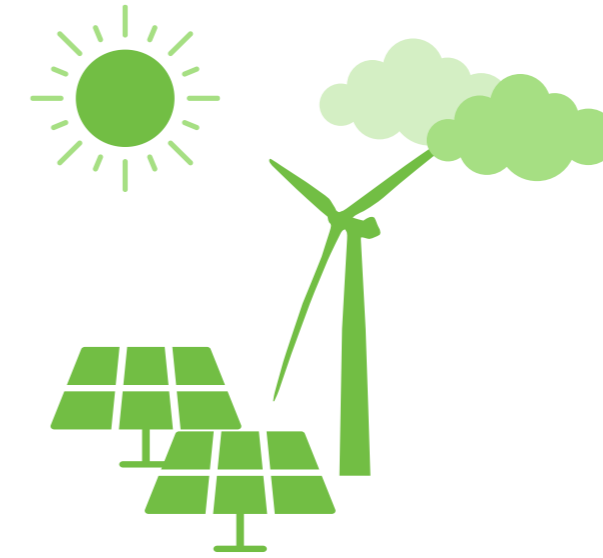
Green Hydrogen for a new world:

Two Big Challenges



Levelized Cost

Parity to fossil fuels
and gray hydrogen



Fit for Green

Compatibility with Renewables,
Additionality & Hourly Match



Conventional electrolysis

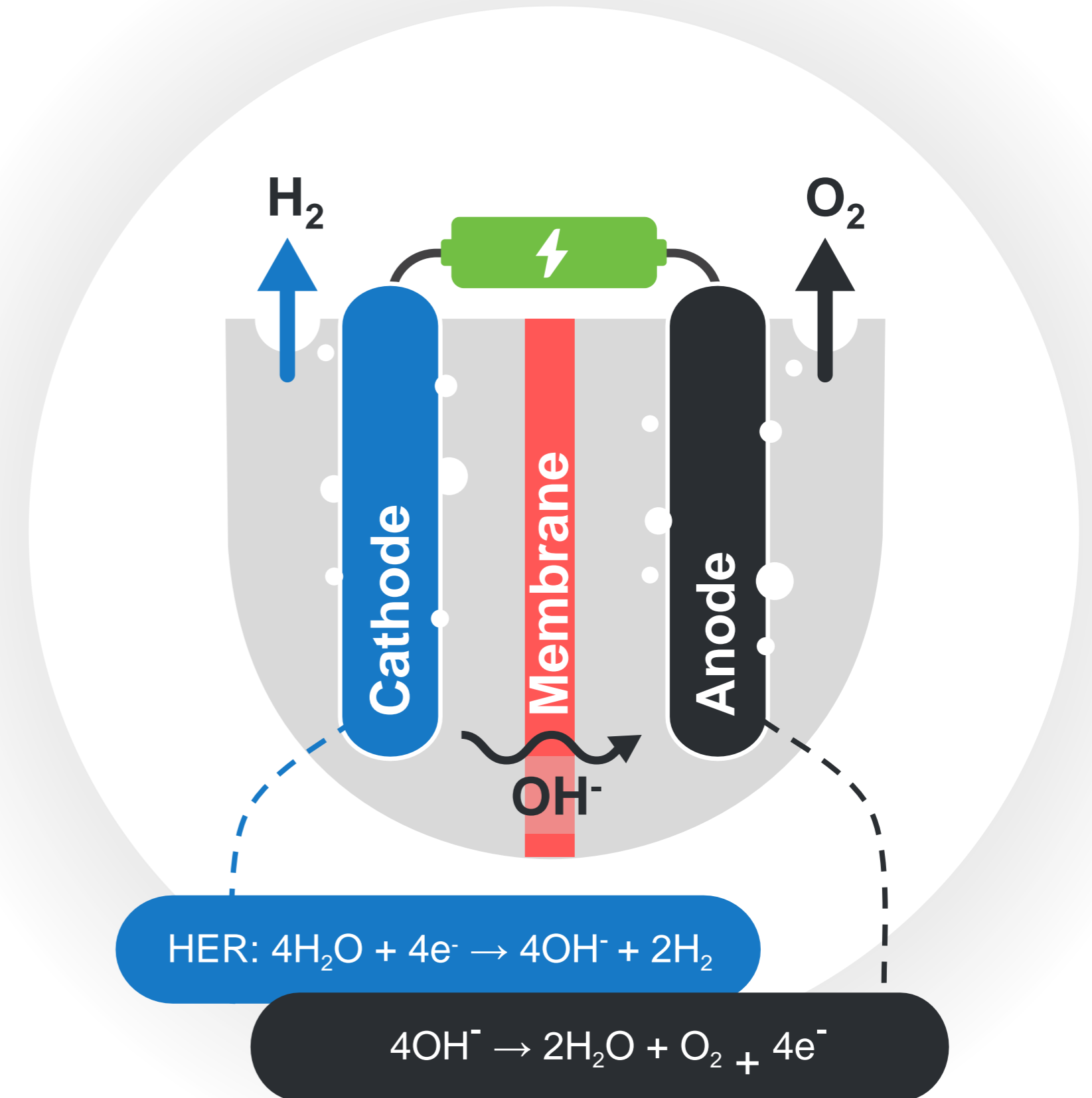
problems with simultaneous H₂ and O₂ production

● Intermittency limitations

- lack of flexibility → limited load range
- Gas crossover

● High Costs

- Complex design, hard-to-automate production
- Expensive materials, maintenance
- Degradation of membrane (loss of efficiency and exchange)





H2Pro decouples electrolysis

for flexible,
membrane-less,
optimized
green hydrogen
production

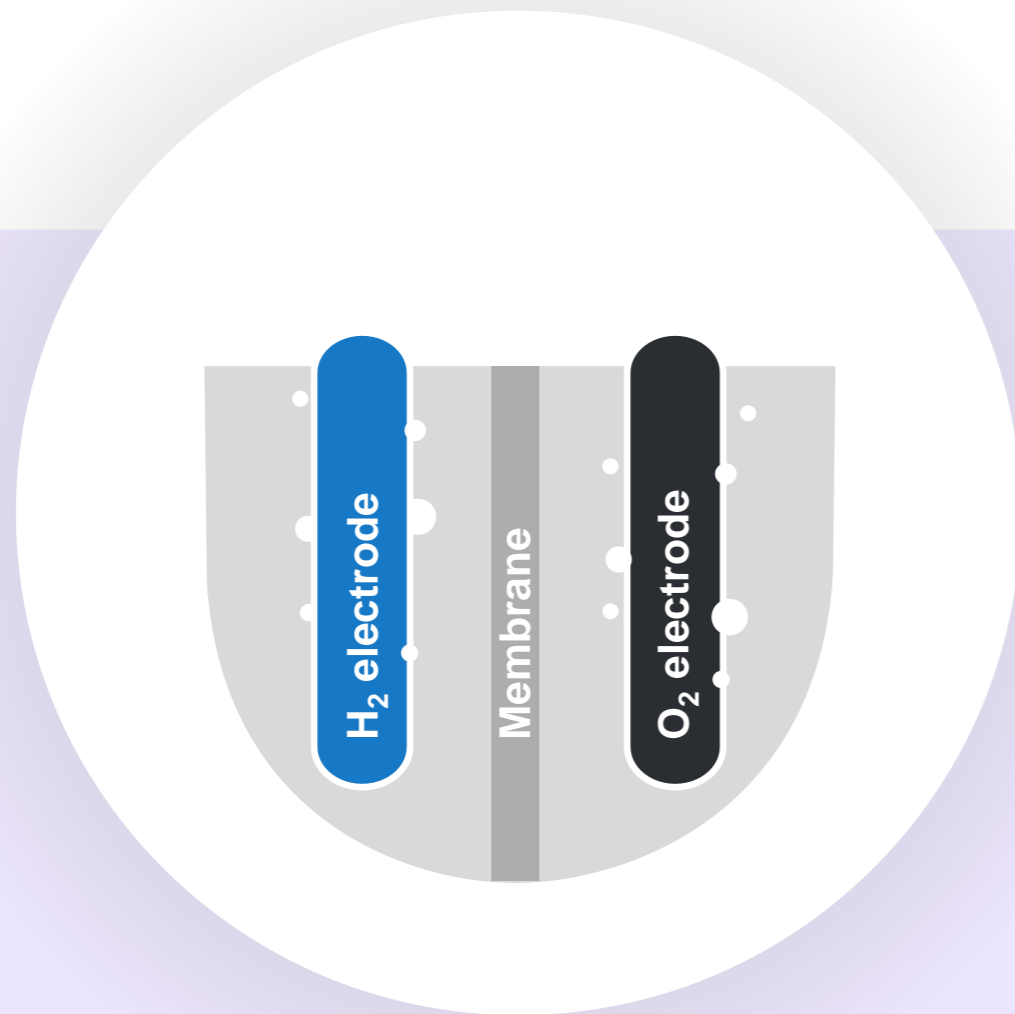




H2Pro's E minus E

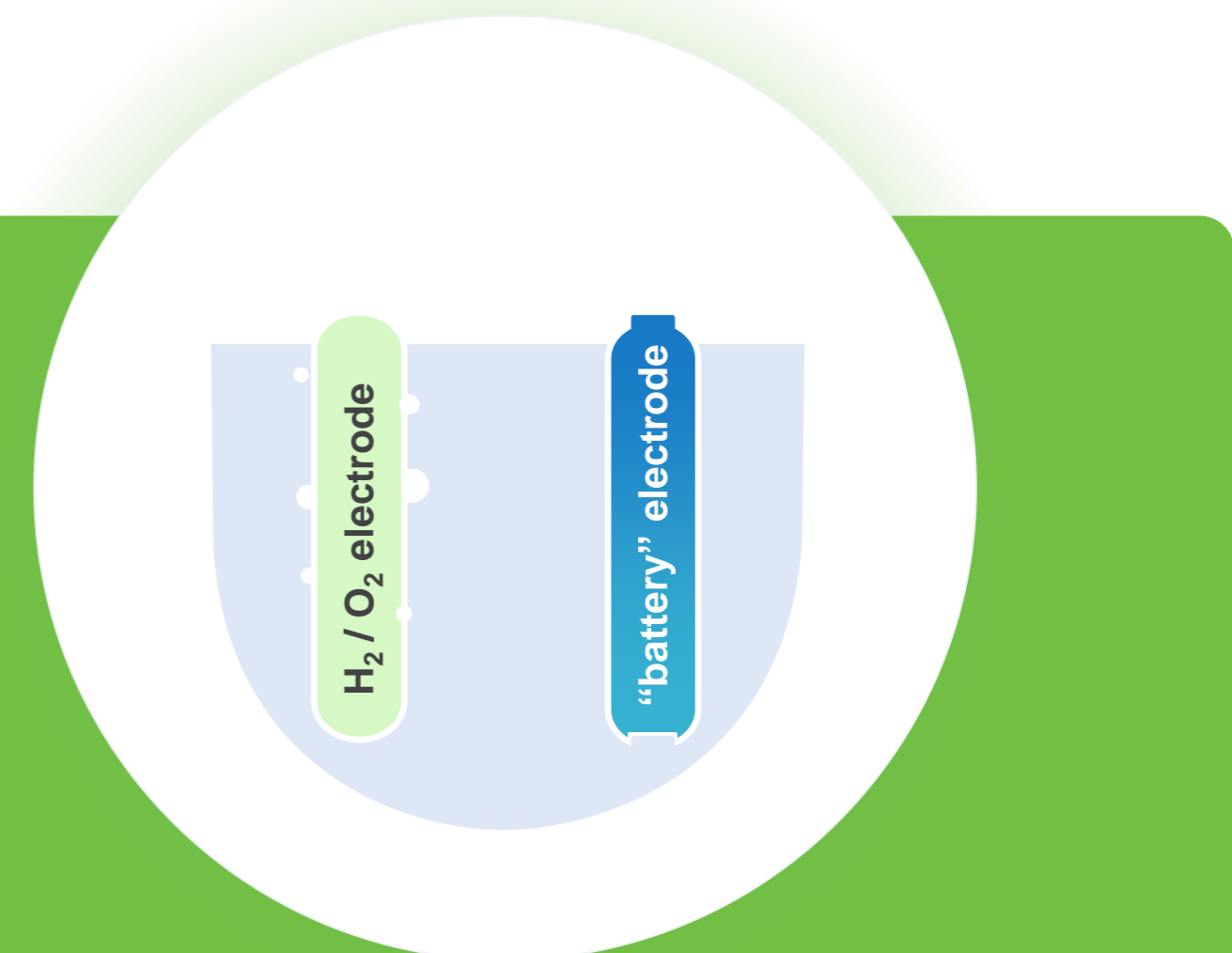
Conventional Electrolysis

Simultaneous H₂ and O₂ production



H2Pro Electrolysis

Proprietary 2-phase process
with time-separated H₂ and O₂ production





Advantages of H2Pro Systems



Highly Responsive

Flexible – quick ramp up and down



Low LCOH

Smart design,
Cost-effective materials



Safer Design

No danger of H₂ and O₂ mixing



Membraneless & No PGM

Enhanced reliability and reduced costs



Development systems and product





Prototype



10 kg
H₂/day

Production
capacity

Cell Packs

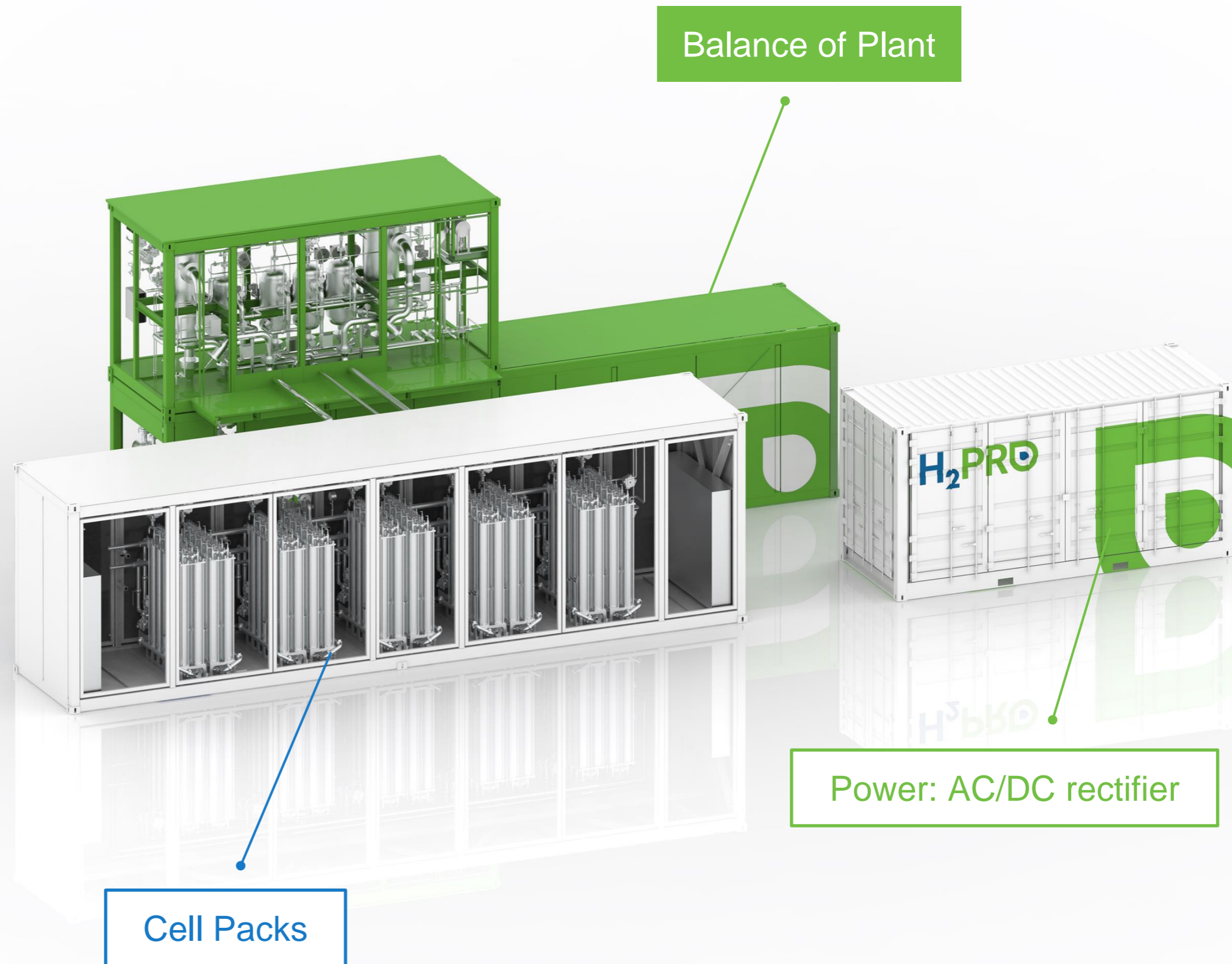
BOP



P1 Pilot system

0.4 MW

- First modular system
- ~200 kg per day





Pilot Project

0.4 MW Pilot system

- Doral is a prominent Renewable Developer
- First green hydrogen in Israel, ~60 kg per day
- Industrial heating. Gas blending & storage
- Connected to PV
- Site: green field, Kibbutz Yotvata





Production & go to market





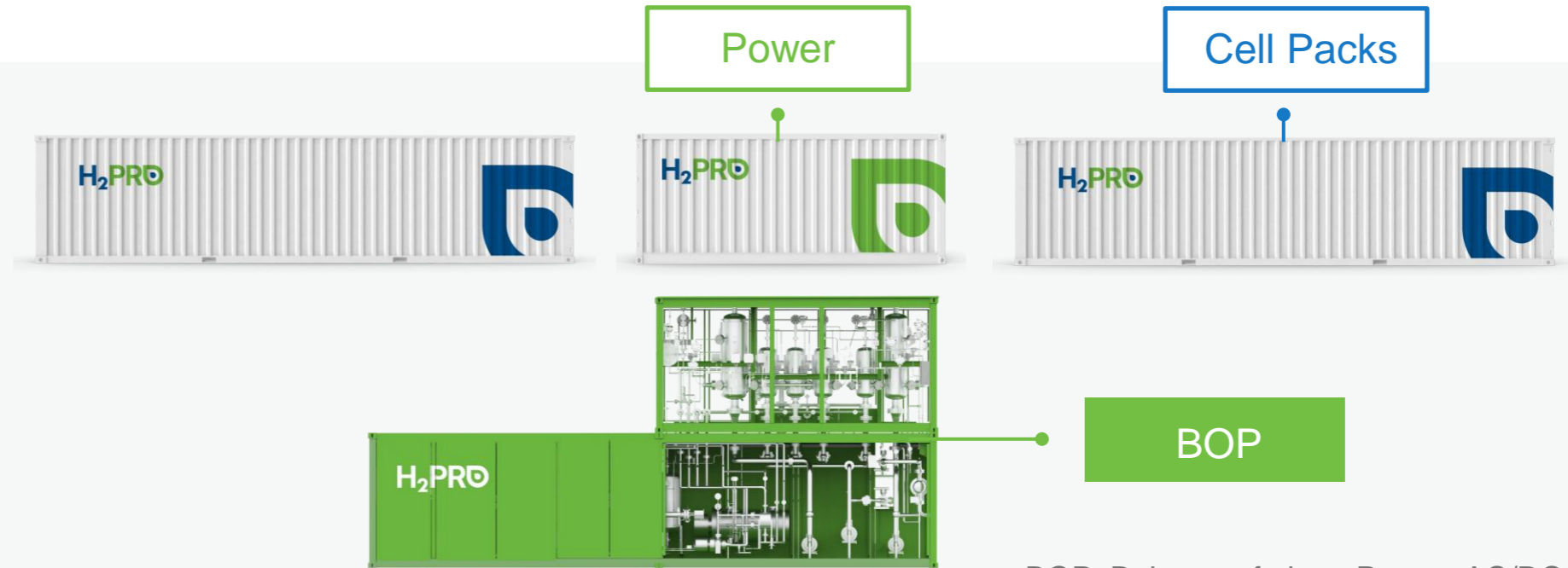
R&D and Pilot system production line





Production systems architecture

Demo
Multi MW



BOP: Balance of plant; Power: AC/DC rectifier

Commercial
25 MW



H₂PRO

thank you!

