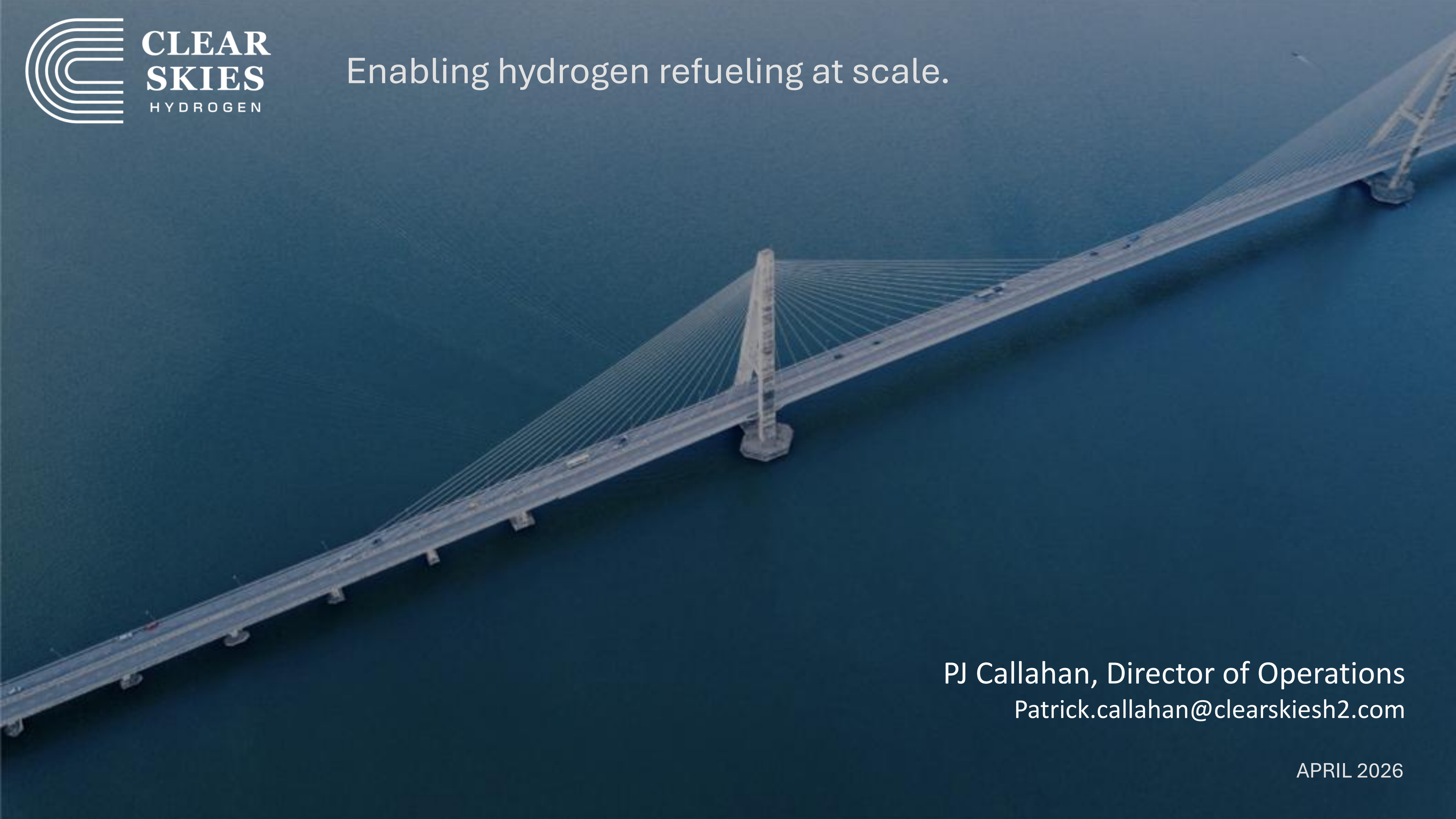
CLEAR SKIES HYDROGEN

Enabling hydrogen refueling at scale.



PJ Callahan, Director of Operations
Patrick.callahan@clearskiesh2.com

APRIL 2026

An accomplished team with world leading expertise in hydrogen refueling.

ANTHONY KU, PhD
Co-Founder, CEO

- **20 years** industrial technology R&D and commercialization, including 3 products from lab to market
- **Previously**: CTO, NICE America; Technical staff, GE Research

JIMMY LI, PhD
Co-Founder, CTO

- **30 years** in Hydrogen, with 10 years in hydrogen refueling
- **Previously**: Technology and leadership roles at Air Products, NICE America, and Nikola

EDWARD YOUN
Director of Engineering

- **8 years** in Hydrogen refueling
- **Previously**: Project management of refueling station development with Air Liquide and refueling technology R&D with NICE America

PJ CALLAHAN
Director of Operations

- **5 years** in clean transportation
- **Previously**: Project management of NorCal ZERO, North America's largest commercial deployment of Class 8 FC trucks

100+ Scientific Patents

4 Commercial Pilots

480 days of operations

1000+ fills (37 tH_2 delivered)

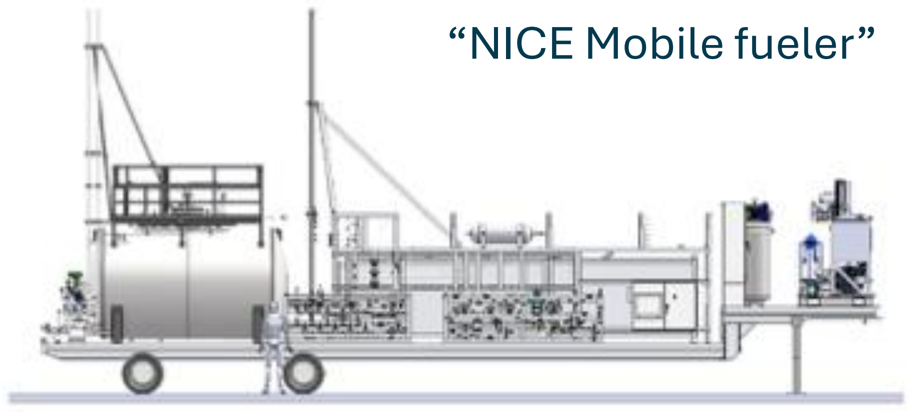
Zero safety incidents

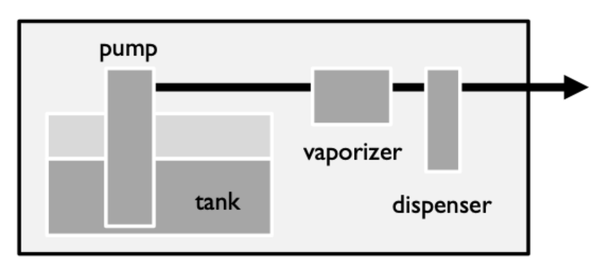
World-record back-to-back fill test

Largest commercial hydrogen truck station in the US

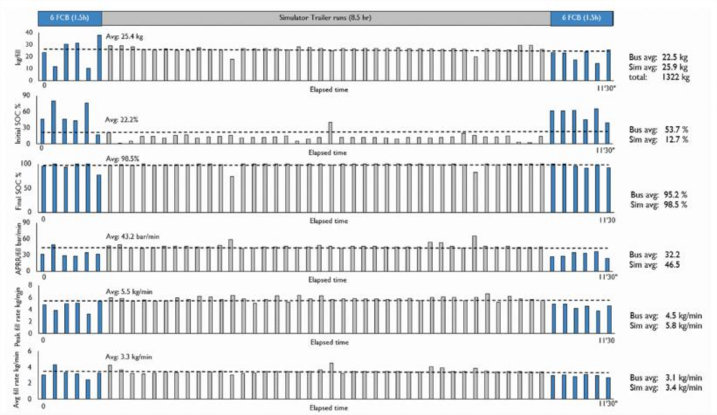
Innovative contributions in HDV fueling (2020-2021)

"NICE Mobile fueler"





Direct fill architecture



Extensive testing at Plug Power, SARTA and Sunline Transit

4 Commercial Pilots
480 Days Of Operations
Zero Safety Incidents
World-record back-to-back fill test

55 back-to-back fills in 12 hours
480 days operation

Reference: J Li *et al.* (2021) Int J Hydrogen Energy, 46, 38575.

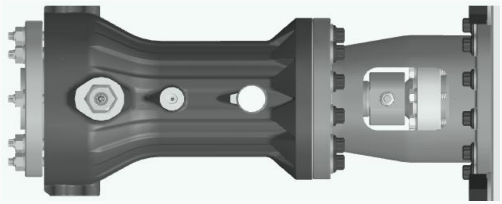
EXISTING REFUELING PAIN POINTS

	Cost	Maintenance	Scalability
Pain Point	High CapEx High Opex (Boil-off)	Downtime during fueling windows	Initial Fleets are Expensive and Slow
Target Solutions	Simplified hardware Low-Boil off pump	Built in pump redundancy for uptime Fast Maintenance <4 hours	Right-sized modules

CSH2's technology stack overcomes the critical limitations of today's approaches.

CSH2 Cryopump

CSH2 cryopump innovations include both design *and* manufacturing.



- **3D printing** enables new features reducing costs by up to 90%.
- **CAPEX reductions** up to 50% through production savings and system flowsheet simplification.
- **OPEX reductions** up to 50% from avoided boil-off and reliability.

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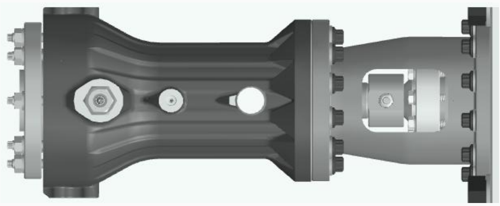

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CSH2 Refueler Module

Integrated refueler is fully optimized from earlier innovation by the team

- Full-size station capability with **50% smaller footprint.**
- **Containerized approach** simplifies initial station build and offers simple path to expansion.
- **Modularity offers flexibility** and capital efficiency in network buildout.

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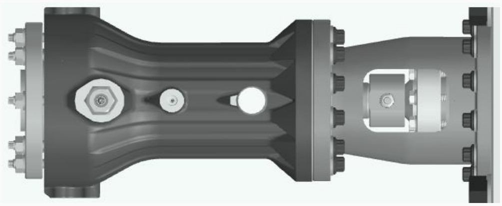

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The full CSH2 System

A low-boil-off cryopump enables simplification of the entire system.

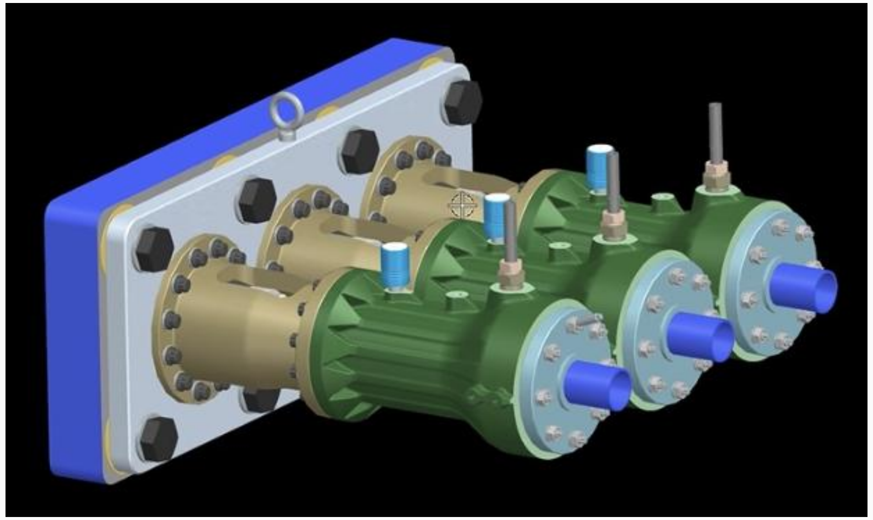
Refueler	CSH2 station	Transit station[1]
Price ($M)	**5-10**	10-20
Pressure (MPa)	**35 or 70**	35
Flow (kg/min)	**6**	4
Size (ft)	**20x50**	50 x 100

Sources: 1) HDSRAM Modeling for generic transit station costs

CSH2 RELIABILITY STRATEGY

Durable operations: Cryopump redundancy + Fast swap capability

Pump head redundancy

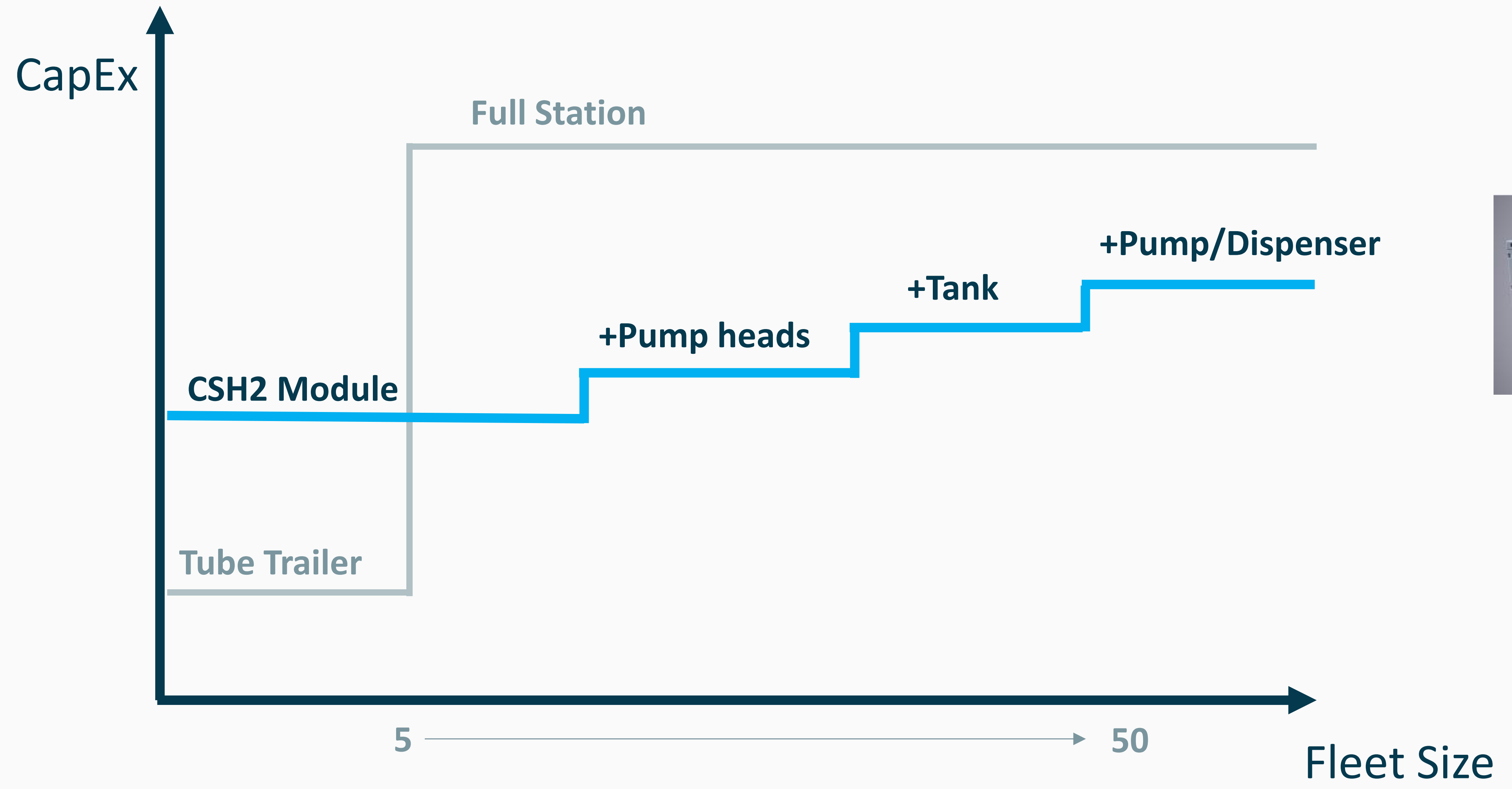


- Three pump heads offer flow to 6 kg/min
- Offers ability to continue operation during unplanned outage of individual heads.

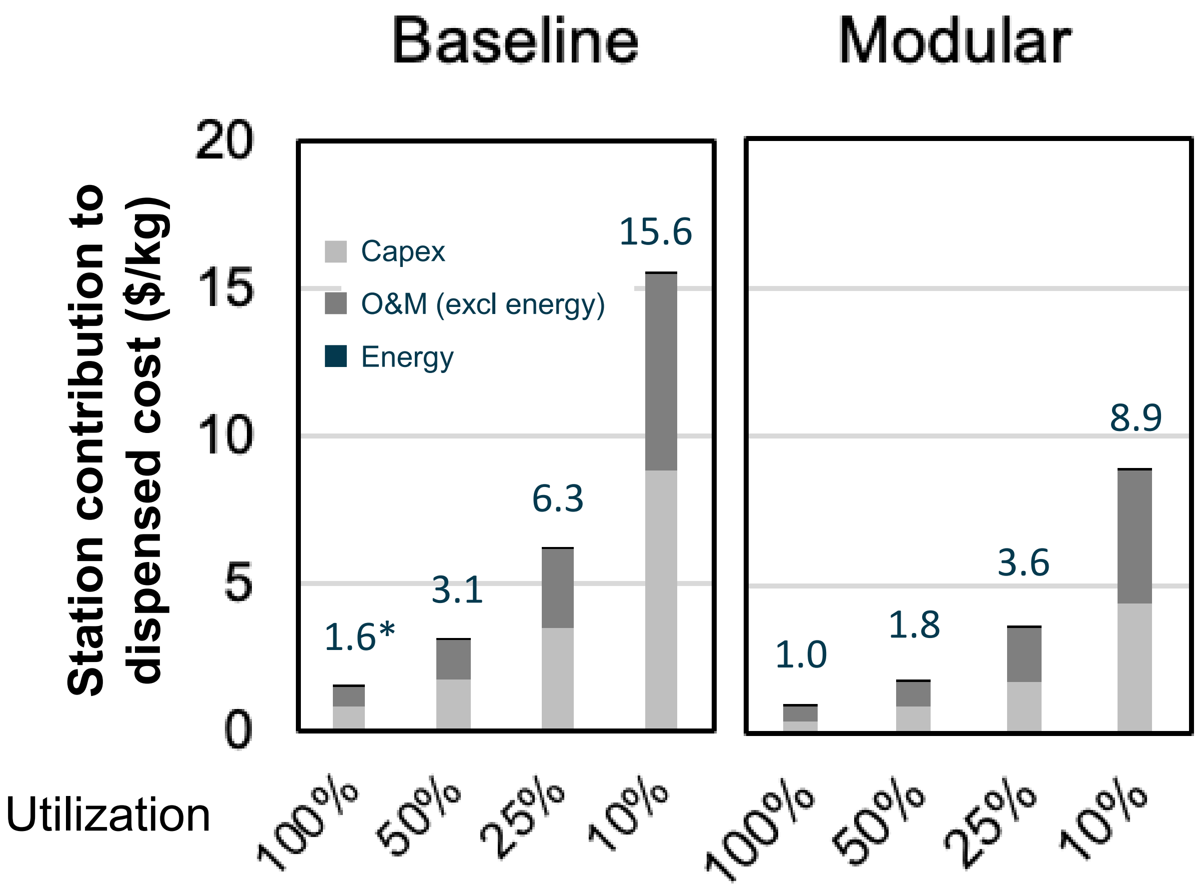
Fast “cold swap”

- Full warm-up, removal, replacement and cooldown of pump head in <4 hours.
- Low manufacturing costs enables option of capital-efficient housing spares inventory.

Capital Efficient Build-out



Modularization (right-sizing) improves capital efficiency and reduces utilization penalties.



Utilization rate (%)	Baseline cost ($/kg)	Modular cost ($/kg)	Relative savings (%)
100%	1.6	1.0	40%
50%	3.1	1.8	42%
25%	6.3	3.6	43%
10%	15.6	8.9	43%

*HDRSAM estimates for cost : 35 MPa x 20 kg fills x 1 tpd (10 vph)

TIMELINE

Progress

2026

2027

TECH DEV.
DEMO PREP

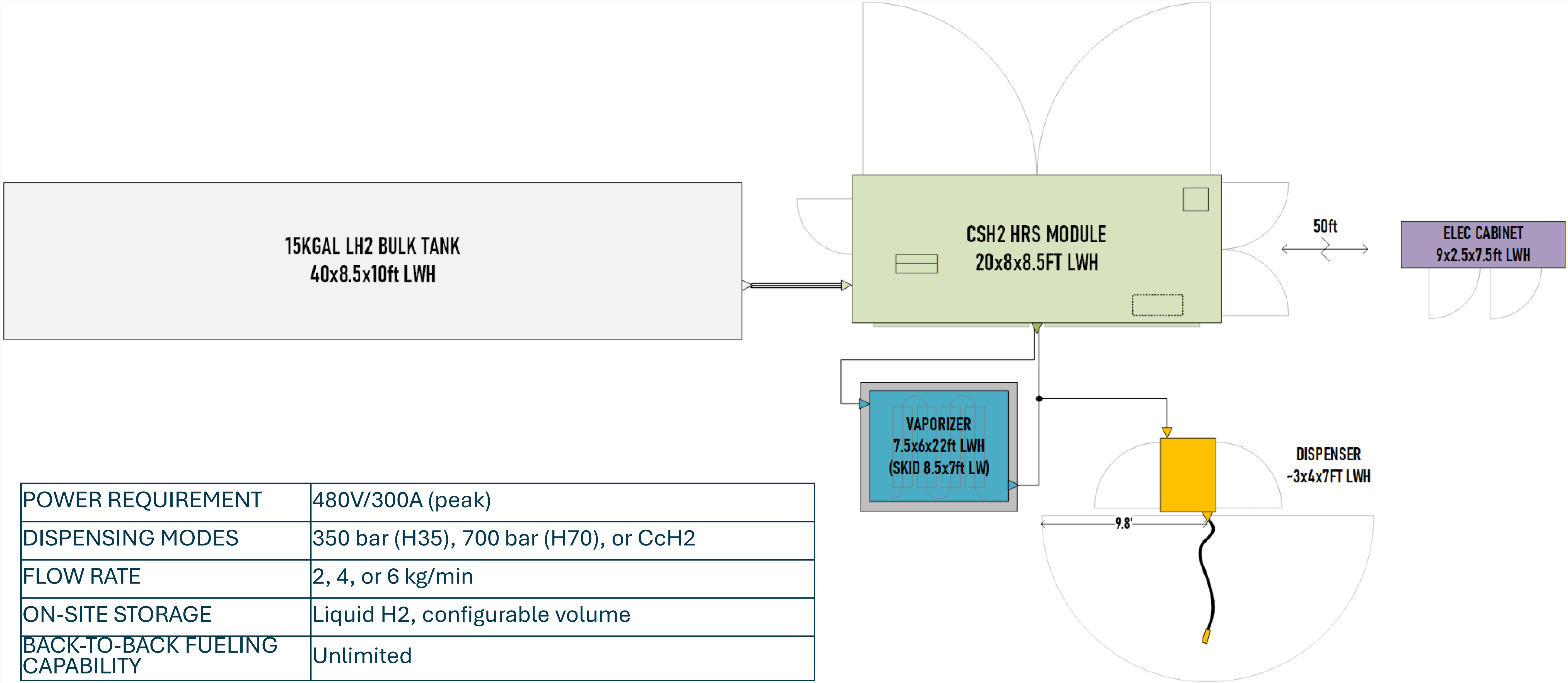
FUELING DEMO
360+ fills
Sunline Buses (H35) +
Hyundai Trucks (H70)

MARKET ENTRY
1st unit available for transit 1Q2027
2-6 kg/min

SCALE-UP +
KOR MARKET ENTRY

6-mo. Build -> Deploy

CSH2 Sample Layout



POWER REQUIREMENT	480V/300A (peak)
DISPENSING MODES	350 bar (H35), 700 bar (H70), or CcH2
FLOW RATE	2, 4, or 6 kg/min
ON-SITE STORAGE	Liquid H2, configurable volume
BACK-TO-BACK FUELING CAPABILITY	Unlimited

Enabling hydrogen refueling at scale.

PJ Callahan, Director of Operations
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The first demo is key to market entry. CSH2 is partnering with Hyundai and Sunline Transit

PARTNERS:

HYUNDAI

MOU (July 2025) :

- Commitment of at least 2 Xcient fuel cell trucks

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING ("**MOU**"), dated as of the 7th day of July, 2025 ("Effective Date"), is entered into by and between **Hyundai Motor America**, a California corporation with its principal place of business at 10550 Talbert Avenue, Fountain Valley, CA 92708 ("**HMA**"), Hyundai Motor Company (including its affiliate Kia Corporation), a South-Korean corporation with its principal place of business at Heolleung-ro 12, Seocho-gu, Seoul, Republic of Korea ("**H/KMC**")and [CSH2 Corp], a [Delaware corporation] with its principal place of business at [92 Nassau St, Princeton, NJ 08542] ("**CSH2**"). HMA, H/KMC and CSH2 are sometimes referred to individually as a "**Party**" and collectively as the "**Parties**".

The Parties are interested in exploring a potential collaborative relationship for the development of CSH2's hydrogen refueler modules to support deployment of HMA and its affiliate's hydrogen fuel cell vehicles (the "**Project**"). This MOU sets forth the Parties' preliminary mutual understanding with respect to the Project and the principal terms of cooperation as set forth as follows:

SunLine TRANSIT AGENCY

Formal Negotiations in Progress

- Facility Access & Permitting Support
- Up to 10 buses/day

OBJECTIVES:

Demonstrate Full end-to-end low boil-off fueling service:

- ~10 buses/day + ~5 trucks/wk ; Total: 360+ fills ; 8+ weeks

(TRL 5 => TRL 7)

- Upgrade system capabilities from 2 kg/min to 6 kg/min
- Gather reliability metrics
- Validate low-boil-off performance

BUDGET

$2.5M+ Total Project Budget

- Equipment, Facilities, Maintenance

$500k Grant Funding Request

EXECUTION PLAN

March 2025 - Technology Engagement

- Supply of 20 hydrogen storage tanks to support CSH2 tech validation efforts (Hyundai)

4Q 2025 and 1Q 2026 – Demo Planning:

- Selection of host site and definition of commercial KPIs
- Demo logistics and preparation

2Q 2026 – Pilot Contract Signing

- Execute contract with Sunline
- Community impact planning
- Execution of contract co-sponsored by Hyundai North America and Hyundai Kia Motor Company (South Korea)

3Q 2026 – Pilot demonstration/Execution

- Daily fills over 3 months
- Real world reliability and cost data

Read more about Hyundai's hydrogen investments and projects here.

Hydrogen plays a key role in electrification of trucking and transit.

ELECTRIC vs. HYDROGEN

Scaling electric truck and transit fleets faces significant challenges.[1,2,3]

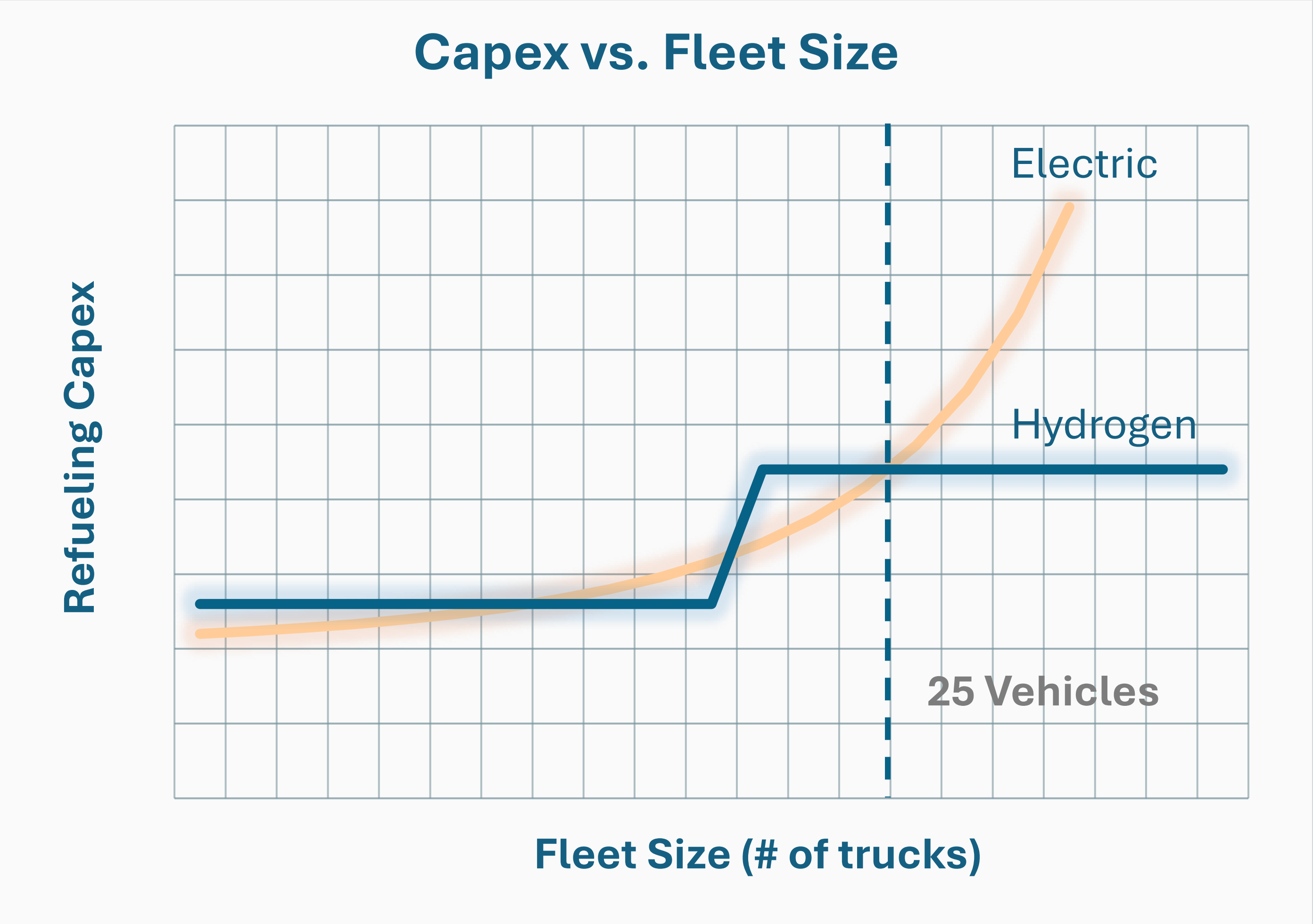
- Power outages and competing demand
- High charger and grid CAPEX
- Long charging time

Electric fleet recharging infrastructure has **negative economies of scale** with fleet size.

Hydrogen infrastructure offers greater operational flexibility for fleet fueling.[4,5]

- Multiple fuel delivery options
- Limited need for infrastructure updates
- Refueling times on par with diesel

Flexible and modular hydrogen fueling offers a path to **diesel-parity total operating cost.**



Sources: (1) Grid limits for EV ; (2)Mahmud I et al. Global Challenges of electric vehicle charging systems and its future prospects: A review" Res Transport Buisiness Mgmt 49 (2023) (3) ICCT - Charging infrastructure challenges ; (4) DHL H2 freight ; (5) Pathways to Commercial Liftoff, Clean Hydrogen, US DOE.

Liquid H_2 distribution is a critical stepping-stone to large-scale market development.

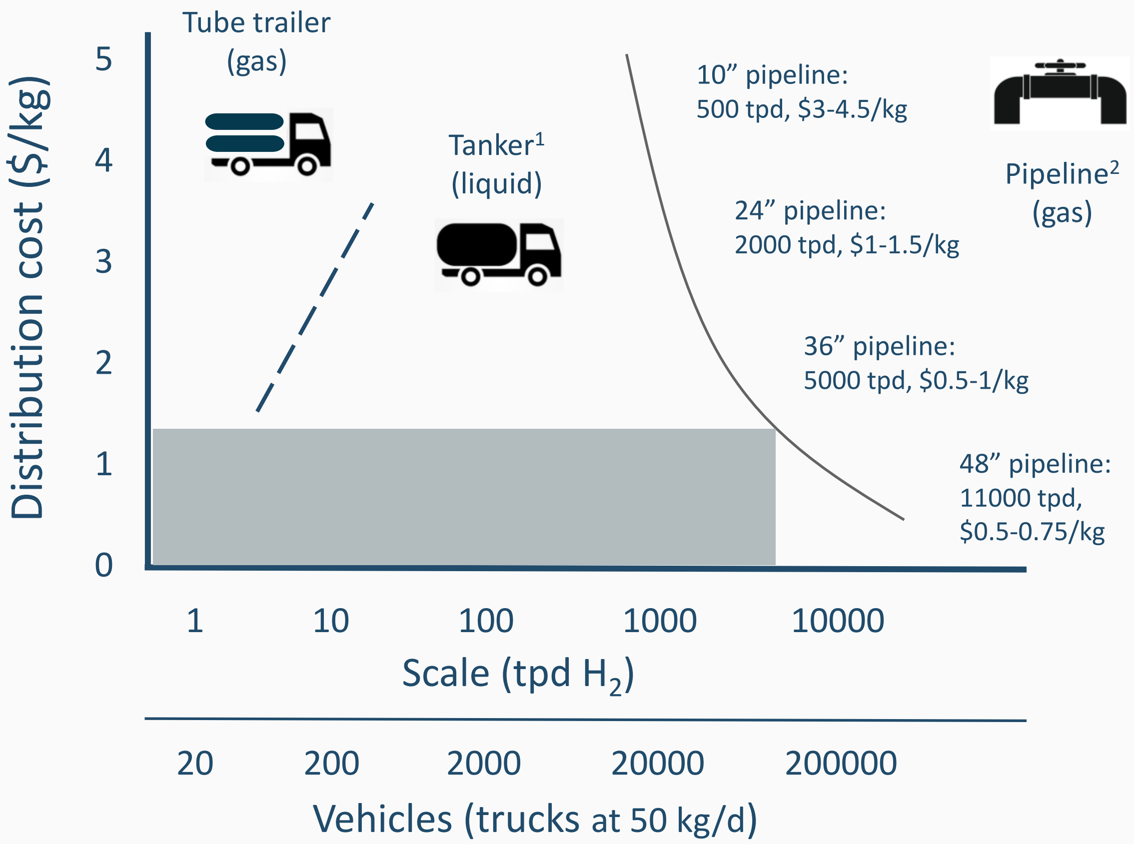
Distribution options

- Tube trailer
  - 1 tH_2/load
  - $700k/trailer

- Liquid tanker
  - 4 tH_2/load
  - $1.2 to 1.4/tanker + liquefaction

- Pipeline
  - 1000+ tpd
  - Pipe + compression

Cost of hydrogen distribution by mode



Source: 1.) Li and Ku, Clean Energy 2020. 2) Transition Accelerator. 2021. Technoeconomics of hydrogen pipelines.

CSH2 modular refuelers can reduce fueling cost up to 75%, enabling hydrogen fleets.

EXISTING STATION

Capital Cost

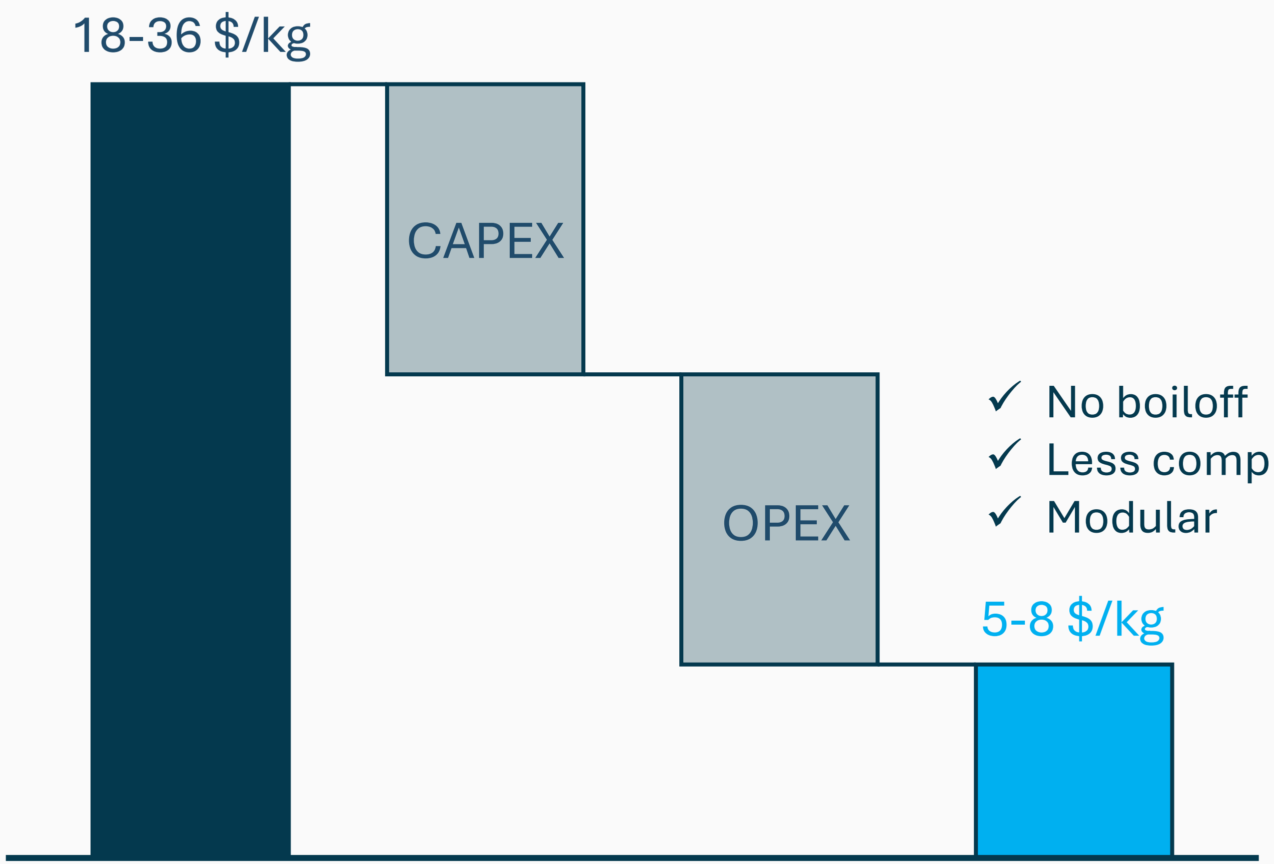
$15-25 M

CSH2 INNOVATION

Capital Cost

$5-10M*

Fueling Cost ($/kg)



- ✓ No boiloff
- ✓ Less complexity
- ✓ Modular

EXISTING STATION | CSH2 INNOVATION

* Station capital costs are a function of station capacity and design. Indicative ranges are provided for station capacities ranging from 2 to 4 tpd, with corresponding lower and upper bounds for existing vs CSH2 design.

H2 refueling today suffers from a cascade of pain points.

THERMODYNAMICS

Heat of compression
(gas-to-gas stations)

- Compensation needed for fast, large, continuous fills
- Multistage compressors
- Chillers to pre-cool

Liquid H2 boil-off
(liquid-to-gas stations)

- Losses across operations
- Capital cost of BOG recovery equipment

DESIGN

Flowsheet complexity

- Higher maintenance from unreliable ops
- Large footprint

Legacy assumptions

- Bespoke designs
- Limited future-proofing

ECONOMICS

High capex

- High base costs
- Penalties at low utilization

High opex

- Maintenance requirements

SCALABILITY

Network growth

- Limited hardware flexibility
- Low capital efficiency

Source: 1. Indicative ranges based on CSH2 market research for current transit and trucking refueling operations using LH2 delivery.
https://www.linkedin.com/posts/joshmcmorrow_nikola-station-czar-reveals-50-boil-off-activity-7351280374196436992-Kav5

Unlocking large scale deployment of hydrogen mobility through targeted innovation.

Fix the cryopump.

Address boil-off
- Improve insulation
- Eliminate booster
- Optimize seals
- Manage cooldown

Reduce cost
- Utilize 3D printing

Improve reliability
- Implement fast swap

CRYOPUMP

Solve modularity.

Simpler flowsheet
- No buffer storage
- No chiller

Standardize units
- Drive cost efficiency.
- Reduce build & deployment time.

MODULE

Validate system.

Demo core innovations.
- Multi-mode fueling
- Fast service turnarounds
- Flexible configurations

STATION

Build fueling networks.

Scale growth using modules.

NETWORK

IP POSITION:
4 trade secrets
8 patent applications
Additional dockets in prep

Source: 1. Indicative ranges based on CSH2 market research for current transit and trucking refueling operations using LH2 delivery.
https://www.linkedin.com/posts/joshmcmorrow_nikola-station-czar-reveals-50-boil-off-activity-7351280374196436992-Kav5

CSH2 modular refuelers enable capital-efficient fueling network growth.

2026	2027	2028	2029

US market entry
- Transit
- Drayage
- Last mile
- Light Duty

US market growth

KOR market entry
- Channel partner

Refueling network scale-up

US : network growth + AT pilot

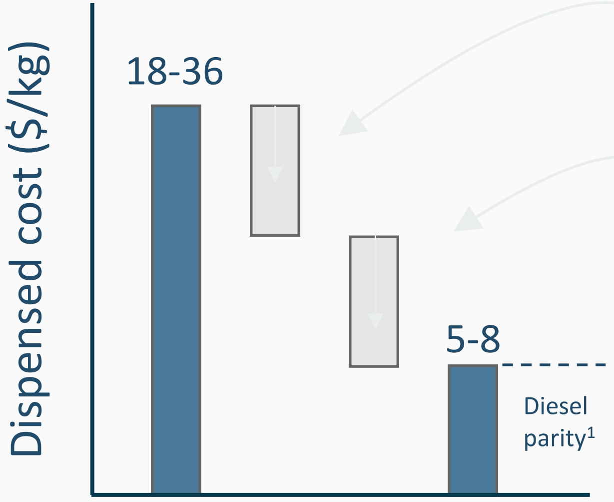
INTL : KOR network growth + other markets

Hyundai | Plus AI vision for long-haul autonomous trucking H_2 fueling network

Hydrogen refueling today is too expensive and hard to scale.

ECONOMICS :	FLEXIBILITY :
▪ A target cost of **$5-8/kg** is needed for diesel parity.[1] ▪ Today's costs are high and trending upward due to venting losses and low utilization.	▪ Today's designs need extra equipment to support multiple onboard storage modes (H35, H70, ccH2, LH2). ▪ The need to build full-size stations constrains network evolution.

Cost of H_2 fueling
(Commercial stations, CA, 2024)



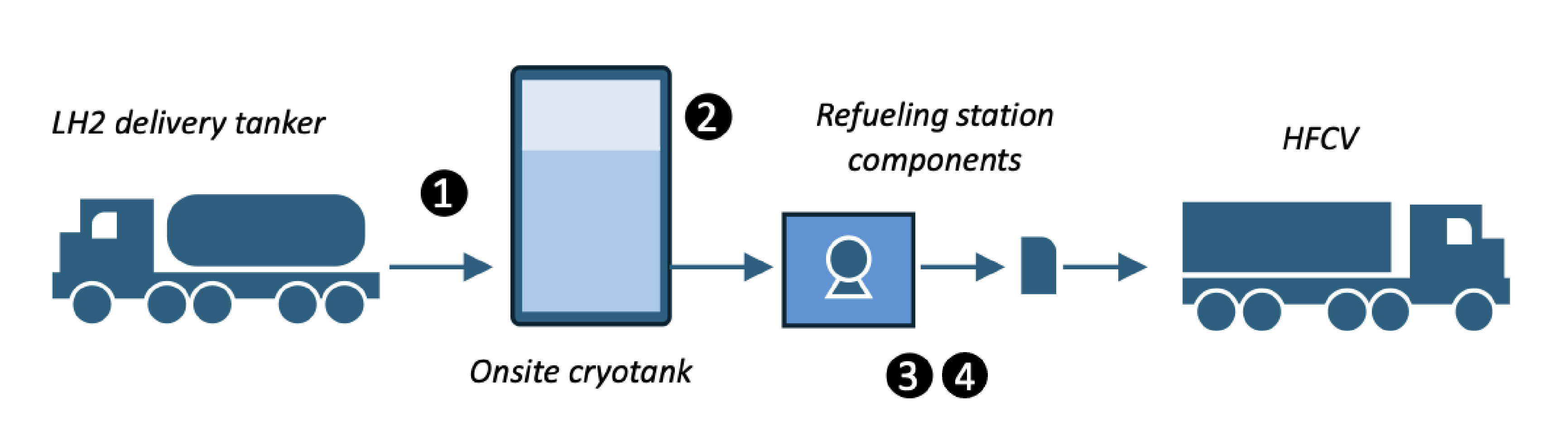
BOIL-OFF: Fuel loss during delivery and operations | 0.5 to 1 kg per kg delivered

CAPITAL INEFFICIENCY: Complex designs and low initial utilization | x2 capex per kg delivered

[1] US operation, with higher target in CA. World Economic Forum, 2024; CSH2 analysis.

Source: 1. Indicative ranges based on CSH2 market research for current transit and trucking refueling operations using LH2 delivery.
https://www.linkedin.com/posts/joshmcmorrow_nikola-station-czar-reveals-50-boil-off-activity-7351280374196436992-Kav5

A full boil-off solution must address all of the important mechanisms.



Mechanism	Contribution[1]	Mitigation
1. Delivery losses	20-30%	Switch from trans-fill to transfer pump
2. Static heat loss	5-10%	Improved insulation ; Cryocooler
3. Pump cooldown	5-10%	Scheduling; Submerged pump ; Heat integration
4. Pump operation	20-50%	Pump design and operation

Typical boil-off losses range from[1] :

23 to 50%

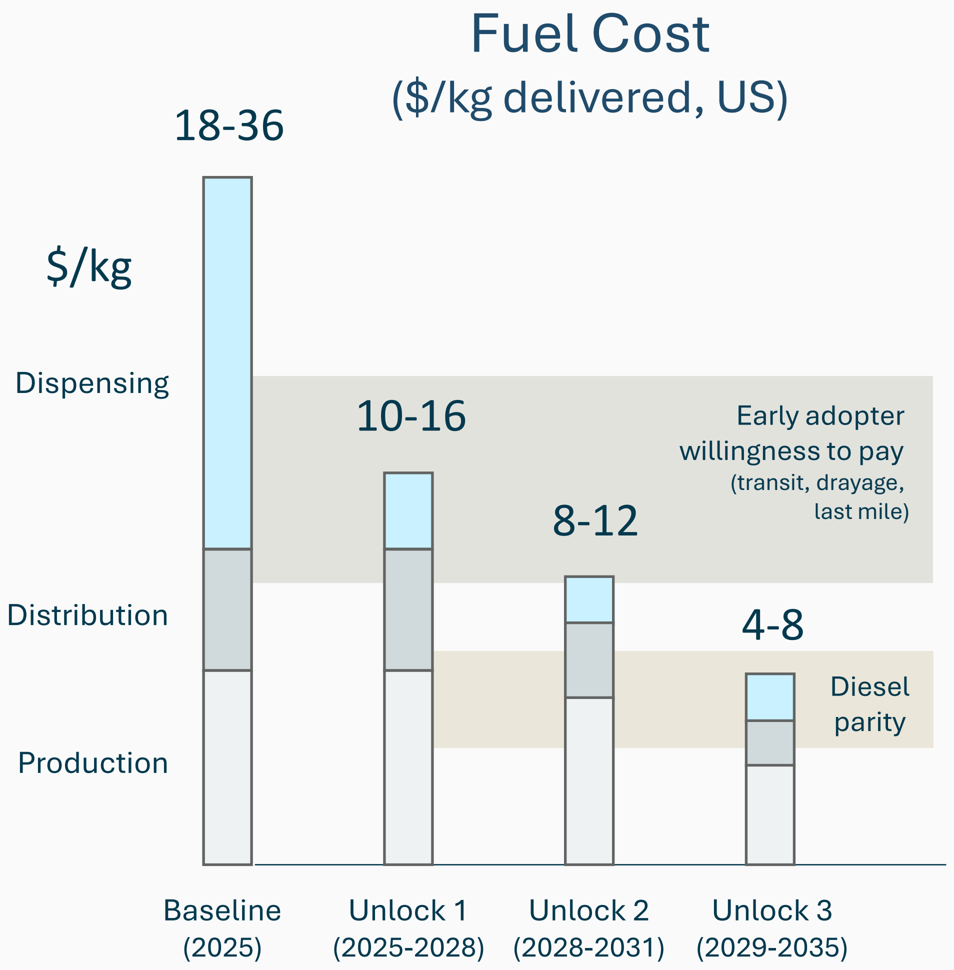
of delivered LH_2

Current mitigation approaches are Inefficient, complex, and expensive.

Source: 1. Indicative ranges based on CSH2 market research for current transit and trucking refueling operations using LH2 delivery.
https://www.linkedin.com/posts/joshmcmorrow_nikola-station-czar-reveals-50-boil-off-activity-7351280374196436992-Kav5

Significant early savings on dispensing are the key to market growth.

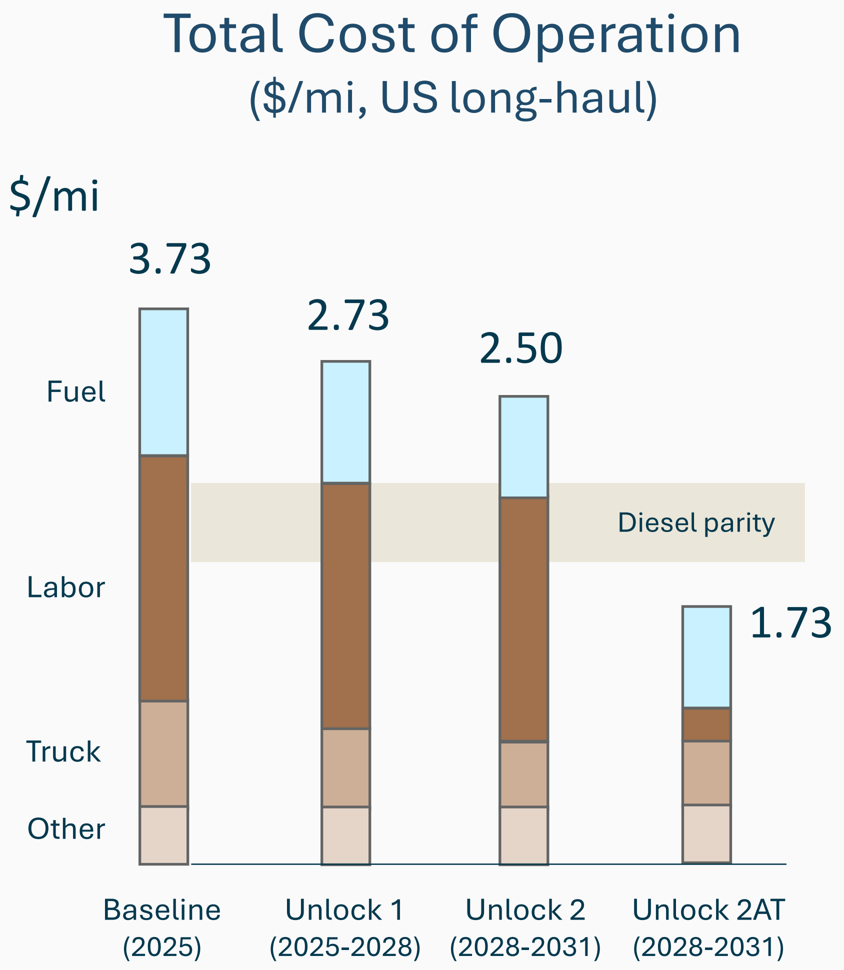
CSH2 has a clear path and partnership strategy to grow the market and enable diesel-parity fueling and TCO costs.



Unlock 1.
Initial market growth
- 2025-2028
- Equipment + aftermarket sales
- US and Korea, LHRS

Unlock 2.
Early scaling
- 2028-2031
- Fueling-as-a-service
- Autonomous trucking networks (TCO parity)

Unlock 3.
Pipeline scale
- 2029-2035
- Fueling-as-a-service
- Hybrid gas and liquid network (fuel cost parity)



Systematic progression towards commercial readiness.

Phase 0 LN2
TRL 3 (MVP 1.0)
Mar-Aug 2025

-900 bar P
- Simulated fill profiles

Phase 1A LH2
TRL 4 (MVP 1.0)
Sep 2025

- Pressure build
- Sustained operation
- BO indicators

Phase 1B LH2
TRL 5 (MVP 1.1)
Sep 2025

- Flow evaluation
- ccH2 fill

Phase 2 LH2
TRL 6 (MVP 2.0)
July-Aug 2026

- H35 and H70 fills
- Boil-off M&E balance

Commercial Demo
TRL 7 (MVP 2.0)
Sept-Dec 2026

- H70 reliability
- Maintenance
- Boil-off M&E balance

Initial pump tuning using LH2

Gen 2 pump HX integration

Full fueling capability For live fills

PHASE 1 H2 VALIDATION WITH CCH2 FILLS

Cryotank (1500 gal capacity)

CSH2 refueler module

ccH2 tank (Verne)

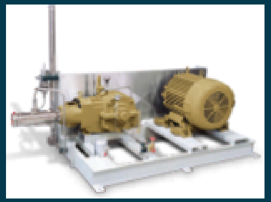
CSH2 System Specs

System Components & Footprint:

- Configurable LH2 storage tank
- Standard Shipping container (20’x8’)
- Electrical cabinet (7’x2’)
- Vaporizer (8’x6’)
- Dispenser (4’x2’)

POWER REQUIREMENT	480V/300A (peak)
DISPENSING MODES	350 bar (H35), 700 bar (H70), or CcH2
FLOW RATE	2, 4, or 6 kg/min
ON-SITE STORAGE	Liquid H2, configurable volume
BACK-TO-BACK FUELING CAPABILITY	Unlimited
MEAN TIME BETWEEN FAILURE	target of >600 hours of operation (72 mt LH2 pumped) before seal replacement [under validation]
MEAN TIME TO REPAIR	target of <4 hours for seal replacement, basic maintenance

COMPETITIVE LANDSCAPE

	  CSH2	 Cryostar A-MRP-55-K[1]	 Linde CP90[2]	 Nikkiso MP-100[3]	 Bosch Rexroth[4]	 MHI[5]
Size: Dimensions, Weight	0.3 x 0.5 x 0.3 m H/L/W 25 kg (single pump head)			1 x 2.5 x 1.5 m H/L/W	2 m H	2.7 x 1 x 0.7 m H/L/W 2.7 tonnes (full pump)
Pressure capability (bar)	930 bar (single stage)	450 bar (single stage)	900 bar (with booster)	900 bar (with booster)	875 bar	900 bar
Flow rate (g/s)	33 g/s (simplex) 100 g/s (triplex)	12 to 58 g/s	27 g/s	66 g/s (duplex)	167 g/s	44 g/s
Power (kW) Intensity (kWh/kg)	180 kW 0.3 kWh/kg	0.4 kWh/kg	120 kW 1.5 kWh/kg	11-373	280 kW	-
Life/service interval (h)	800-1000 (projected)	400	-	-	4000 claimed	1200
Boiloff (kg/kg disp)	0.1	-	-	-	<0.1	<0.1
Cost	$0.3M	$0.6M to 2M	$1.3M	$0.7M	$2.5M	

Refs: 1. https://www.boschrexroth.com/en/us/industries/hydrogen/?utm_source=chatgpt.com; 2. https://assets.linde.com/-/media/global/corporate/corporate/documents/clean-energy/linde_one_stop_fueling_shop.pdf; 3. https://cdn.sanity.io/files/b4ibxl5a/staging/659384ef4a23c91a1979cc64acebb2f89a326a36.pdf
4. https://www.boschrexroth.com/en/us/industries/hydrogen/?utm_source=chatgpt.com 4. https://www.mhi.com/technology/review/sites/g/files/jwhtju2326/files/tr/pdf/e614/e614270.pdf

Superior cost basis enables significant pricing power.

CSH2 Cryopump price is 50% lower than competitors.

Cryopumps	CSH2	Pump A	Pump B	Pump C	Pump D
Price ($M)	**0.3**	1	0.6 to 2	0.7	2.5
Pressure (MPa)	**70**	70	70	70	70
Flow (kg/min)	**6**	1.3	0.7 to 3.6	4	10

CSH2 Refueler price is at least 50% lower than competitors.

Refueler	CSH2	Station 1	Station 2	Station 3	Station 4
Price ($M)	1.5	3	3	3.5-4	25
Pressure (MPa)	70	70	70	70	70
Flow (kg/min)	6	1.3	0.7 to 3.6	3.6-5	10
Storage (tLH2)	separate	1	1.6	1.3	10

Note: CSH2 will provide detailed information and analyses of competitors and benchmarks as part of a due diligence. The data presented herein has been sourced from competitors whose identities have been anonymized. While every effort has been made to ensure the accuracy and relevance of this information, it is provided solely for reference and benchmarking purposes.

CSH2 unlocks clean transport through reduction in refueling costs towards diesel parity.

Hydrogen Heavy Duty Vehicle Value Chain

FUEL DELIVERY	DISPENSING COST	FUELING COST
H2 Production & delivery $5 to 12/kg Delivered LH2	**Conventional refueling** +$4 to 20/kg	**Delivered to vehicle** $9 to 32/kg to vehicle
H2 Production & delivery $5 to 12/kg Delivered LH2	**CSH2 refueling** +$1 to 4/kg	**Delivered to vehicle** $6 to 16/kg to vehicle
CSH2 Savings	**– 25 to 80%**	**– 33 to 50%**

CSH2 Value Proposition

1. CSH2's solution enables **$3 to 16/kg savings** versus current fueling approaches.
2. The proprietary technology is **more scalable and modular** than existing solutions.
3. CSH2 provides a **path towards fueling cost at diesel parity**, unlocking low-carbon transportation in heavy duty vehicles.

Note: In the near term, lower costs than incumbent solutions can support market entry. However, total fueling costs must decline significantly to support market adoption. Simply being lower cost than conventional options is insufficient for success.

BUSINESS MODEL

CSH2 can act as a catalyst for the hydrogen market, adapting its offering as market grows.

2026-2028

- **Hardware Sales/Lease**
- **Aftermarket services**

Early path to profitability due to favorable unit economics.

2028-2030+

- **Integrated systems**
- **Fueling services**

Leverage growing station footprint to move to fueling services as hydrogen market grows.

2030+

- **Energy as a service | AI**
  - Stationary power
  - Aviation & defense
  - Marine & Rail
  - Offroad | Mining
  - Long-duration energy storage

End-to-end solutions provider.