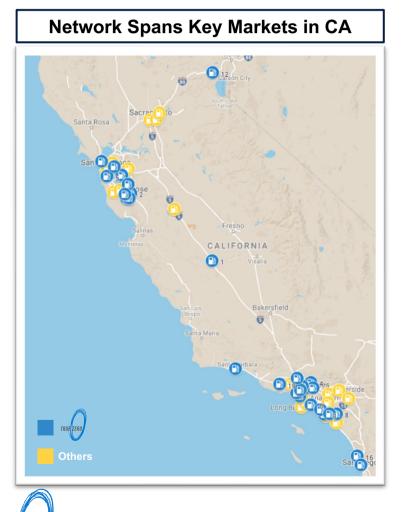


# FirstElement Fuel Inc.

November 2023

## **Company Overview**

- Founded in California in 2013 to build & operate a hydrogen station network with a <u>focus on the</u> <u>customer.</u>
- Largest hydrogen network in the world, representing about <u>85% market share</u> in California.
- <u>\$135M</u> in CA Grants (largest awarded to any private company) + <u>\$340M</u> in Private Funding



- <u>41 retail station locations</u> with <u>92 dispensers</u> in operation, 1 Bus Station in operation, and 3 Heavy Duty stations in Development
- More than 16,000 fuel cell electric vehicles on California's Roads today

Sales Volumes:

### More than 2.2 Million Fills Over 6 Million kilograms dispensed

#### SALES RECORDS

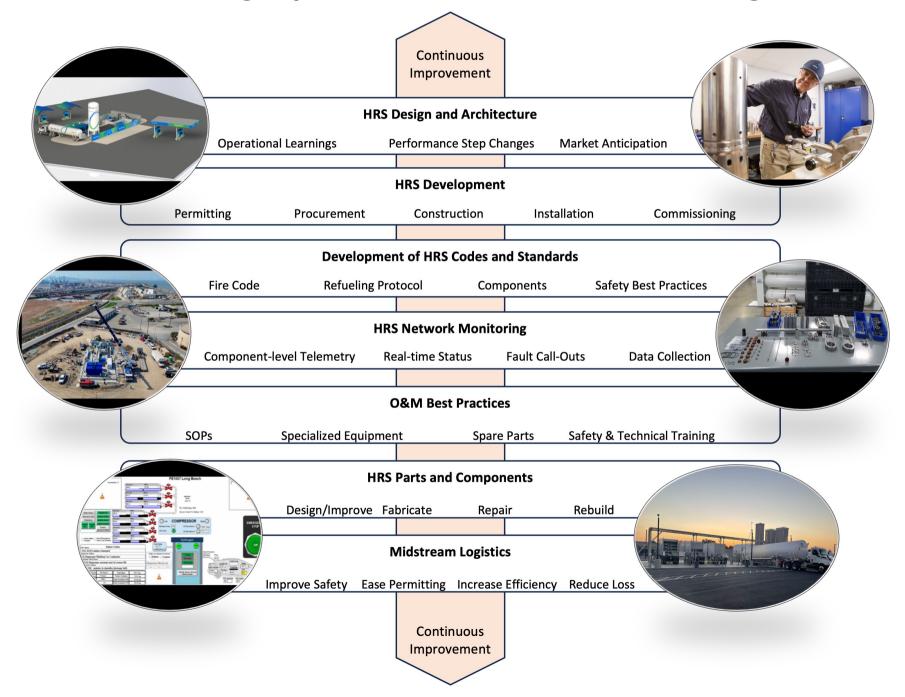
	Monthly Record	Single-Day Record	
Number of Fills	60,430	2,192	
Kilograms Sold	162,850	6,112	

#### **RECORD DAY - SINGLE STATION (Baldwin Bark, CA)**

Number of Fills	312
Kilograms Sold	857

## **FirstElement Fuel's Core Competencies**

### World Leading Capabilities for HRS and HRS-Related Logistics



### Gaseous Hydrogen HRS: Learnings as a First-Mover

Fueling Positions

Single fueling position caused frequent lines at stations, sometimes 1+ hours long, negating FCV's value proposition of 5 min. refueling times.

Capex / Capacity

Capacity is 200 kgpd (~60 cars in a day), and can only support a limited ecosystem of FCVs. Results in uneconomical capex and operating costs per kg capacity.

Footprint

Gaseous H2 storage, compression system, and refrigeration system require a large footprint

Delivery Cost Gaseous hydrogen distribution is costly and inefficient. Gaseous trailers can only offload  $\sim$ 50% of the on-board hydrogen, which makes maximum delivery size 180 kilograms per delivery ( $\sim$ 60 cars). As a result, 2 or 3 deliveries are required daily. Gaseous trailers can only complete about one and a half (small) deliveries per run.









### Transition to Liquid Hydrogen-based Stations to Achieve a Commercial Model

Self

880 80

FirstElement Fuel developed propriety station designs and fuel delivery systems that are capable of:

- Four simultaneous fueling positions
- Refueling ~450 vehicles per day (capable of more in the future)
- Scalable to meet the needs of heavy duty and commercial vehicles
- A positive business case that is scalable, repeatable and capable of cost parity with gasoline/diesel

## **Evolution of Hydrogen Stations Capability**

Over the past 10 years FirstElement has driven an increase in scale and commercial viability that is possible with a liquid hydrogen supply chain



First Generation Retail HRS:

- 200 kg/day
- 1 Dispenser



### High Capacity Retail HRS:

- 1600 kg/day
- 4 Dispensers



### **Commercial HRS:**

- 18,000 kg/day
- 2 HD Truck Dispensers
- 4 MD/LD Dispensers

### FirstElement's Operational Experience:

System	Flow Rate	Energy Consumption	Footprint
Compression System	60 kg/hr	3 kWh/kg	15m x 20m
Cryopump #1	80 kg/hr	0.8kWh/kg)	2m x 3m
Cryopump #2	160 kg/hr	0.5 kWh/kg	3m x 3m'