FirstElement Fuel
Advantages of MC Formula

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Hydrogen Station in Harris Ranch - Coalinga, CA
Opened in November 2015

Business Overview

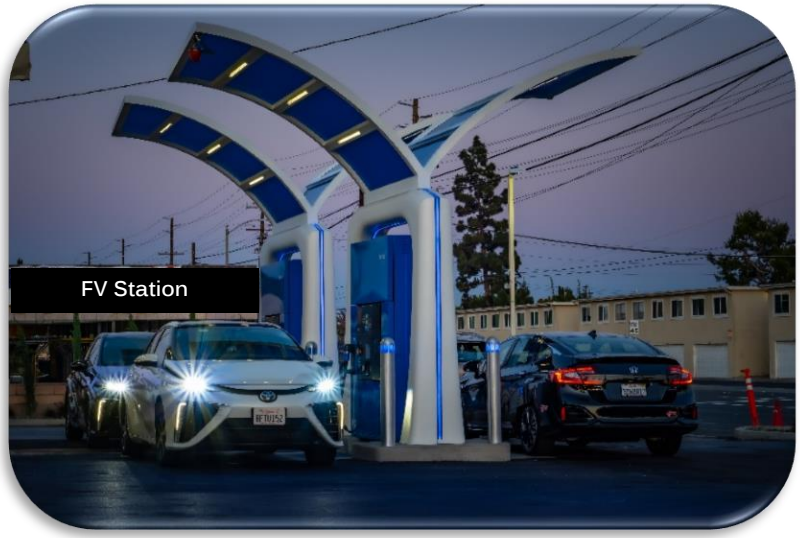
We are Driven…

To foster the widespread adoption of hydrogen fuel cell vehicles.

To improve the economics of driving, and reduce its footprint on our planet.

To change the automobile industry.

And with it, the world.



- Founded in California in 2013 to build and operate hydrogen stations with a focus on the customer
- Awarded $115.6 Million USD in California grants, and raised more $87.6 Million USD in private financing from Toyota, Honda, Mitsui, JBIC and Air Liquide
- 23 open retail hydrogen stations + 18 more opening over the next two years and another 33+ in the pipeline connecting all of California
- Launched our True Zero brand, which has become synonymous with a superior customer experience

TRUE ZERO

Company History and Key Milestones

True Zero History and Key Milestones

2013

Company Founded

$13.8M Capital infusion

2014

Awarded $33M of Grants from the California Energy Commission to Build 19 Stations (63% of the total award)

2015

True Zero opens stations at unprecedented speed.

# of Months	12	18	24
Stations Opened	6	15	19

True Zero's speed for station buildout has been unmatched.

Other operators have taken between 4 to 8+ years to open stations.

"FirstElement Saved the Launch of the Mirai"

-Toyota Executive

2016

$13.8M Capital infusion

2017

Awarded $27M of Grants from the California Energy Commission to Build 12 Stations (54% of the total award)

2019

$24M Capital infusion

2020

$36M Capital infusion

8 Additional Stations In Process Funded 100% w/ Private Capital

2021

Future Capital Need

Additional Capital Need Dictated by Grants and Speed of Buildout

New Grant Awarded - 9/4/20

$52M Awarded for 49 stations, the maximum amount for a single applicant (45% of the total award)

Technology Shift from Compressed Gaseous to Liquid Hydrogen

Strategic Partnerships and Capital Sources

Capital Funding and Strategic Business Partners

B2B Customers

Suppliers

FEF's Experience is 10 Years in the Making

Our learnings are a function of solving both the mundane daily challenges and overcoming the historic obstacles that arise from the front lines of an energy revolution. We have been forced to innovate every aspect of the away from the industrial gas methodology.

1 Regulation and Policy

FEF's experience enables us to successfully challenge regulations and precedent when it comes to permitting HRS in retail fueling settings. We work closely with policy makers to design incentives that work for hydrogen station operations.

2 Forcing Innovation in Equipment

Because we lead the world in sales of retail hydrogen, we've gained unparalleled experience with refueling equipment. We work in-conjunction with suppliers to innovate and create the best-in-class equipment. FEF is best positioned to innovate the next gen equip for the future.

3 Created World's Largest HRS Service Team

FEF's service team has performed over 200,000 hours of service for FE and our competitors. We understand what is needed to keep stations at a high uptime. For our first 23 stations, the service team has re-designed and improved nearly every component.

4 Proprietary In-House SCADA

FEF had to develop a real-time command and control system to monitor, maintain and service stations because nothing existed on the market that could meet our needs. This system is a critical tool to keeping our uptime high and reducing labor cost.

TRUE ZERO

5 Permitting in the Trenches

We are in the trenches across California and know what it takes to open stations at unparalleled speeds. Most of our first 23 stations were built within 18 months, compared to 4-8 years prior.

6 Large-Scale, Dedicated Supply Chain

FEF is the only company fully committed to a liquid-based hydrogen model. We learned early on that one could not sustain a business using gaseous technology, so we contracted Air Liquide to build a dedicated plant for our network

7 Hydrogen Market Expertise

The FEF founders have deep experience understanding customer market dynamics and developing optimized station networks based on extensive work with automakers and government agencies prior to founding FEF.

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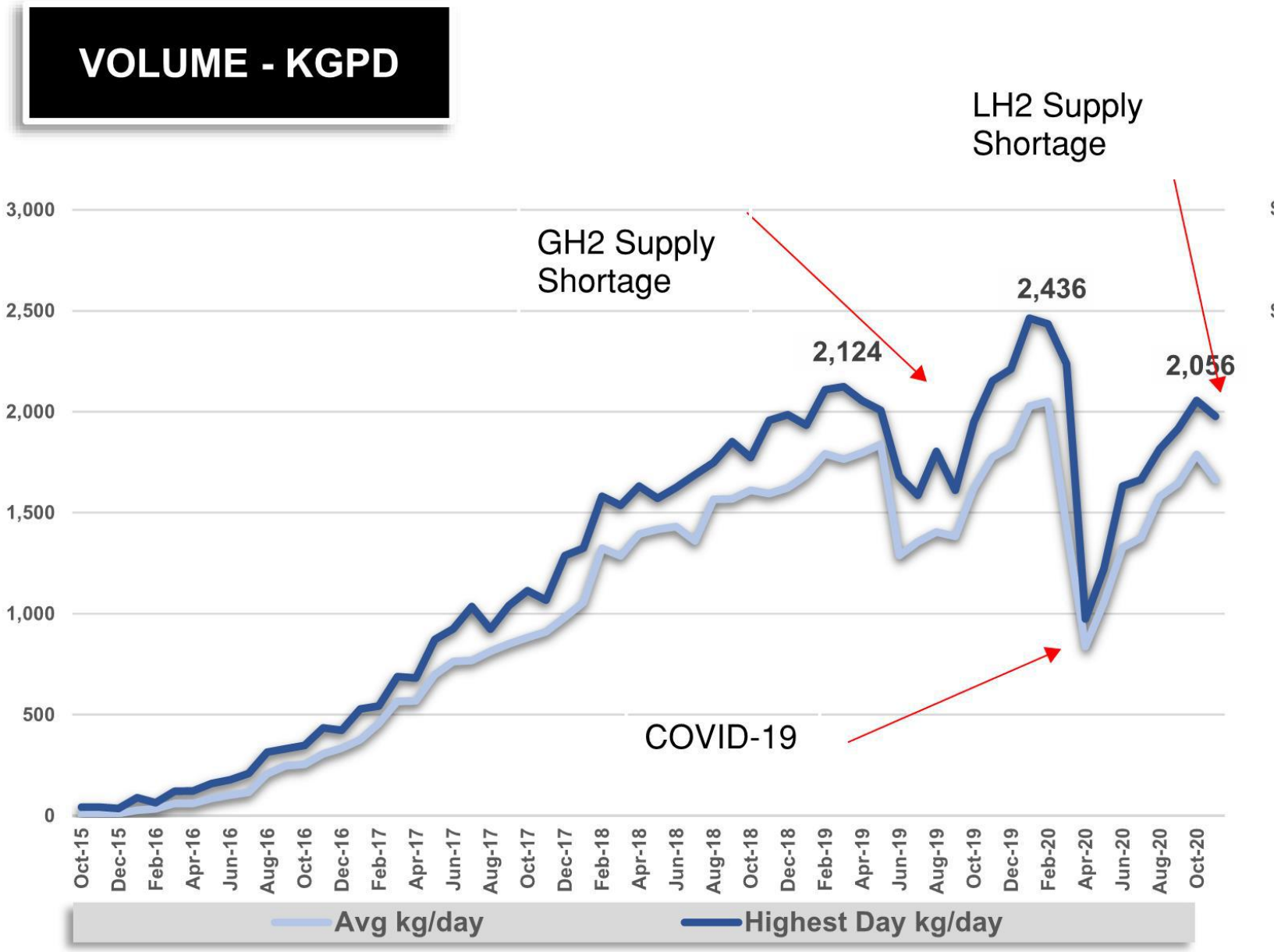
Sales Volumes– Weekly Sales of 12,000kg -15,000kg



Fueling Technology

Current Generation

- Liquid Hydrogen based
- Up to 4 fueling positions
- 1616 kg/day capacity
- 300% increase in Capacity
- 50% Reduction in footprint
- No cooling or chilling system
- 850 kg of usable H2 on site
- MC based only

1st Generation

- Gaseous Hydrogen Based
- 1 fueling Position
- 235+ kg/day capacity
- Compressor Cooling Exchanger
- Chilling System
- Table/MC based

Fueling Technology

MC FORMULA™

Oakland

Fountain Valley

Mission Hills

TATSUNO

TRUE ZERO

MC – Formula Experience

Note: focus on the 10% of the time that equipment not performing optimally.

Pre – MC Formula Experience Table method

- 1st Generations station initially were table based only
- Only operated with cooling temps below a certain value
- Designed for a limited number of cars
- Issues
  - Testing
    - Commercial validation software not available
  - Use in the field
    - Chiller system is the most problematic piece of equipment in the station
    - When chiller is not functioning properly the station would go offline
    - Chiller performs better at warmer hydrogen temperature. Falls in and out of cold specification. Table Method only falls back to from T40 to T30 to T20 but not T20 to T30 to T40
    - When too many vehicles are filling back-to-back the cooling system could not keep up and go offline
    - Every chiller issue became an urgent repair issue
    - If piping is wet or if its humid it could take longer to cool down the piping causing premature shutoff.

MC – Formula Experience

MC Method Experience

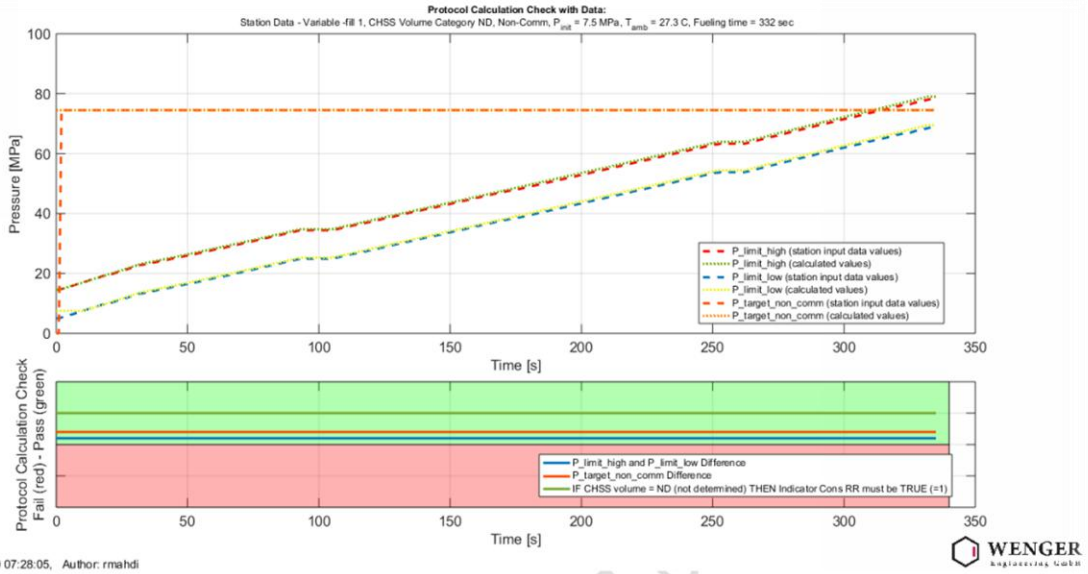
- MC Method allows for Hydrogen Gas Temperature to “float” form -17.5C to -40C
- MAT – Mass Average Temperature – Allows deviation above -17.5C meaning the MC Formula is much more forgiving. Much better for small tank in hot weather dispensing.

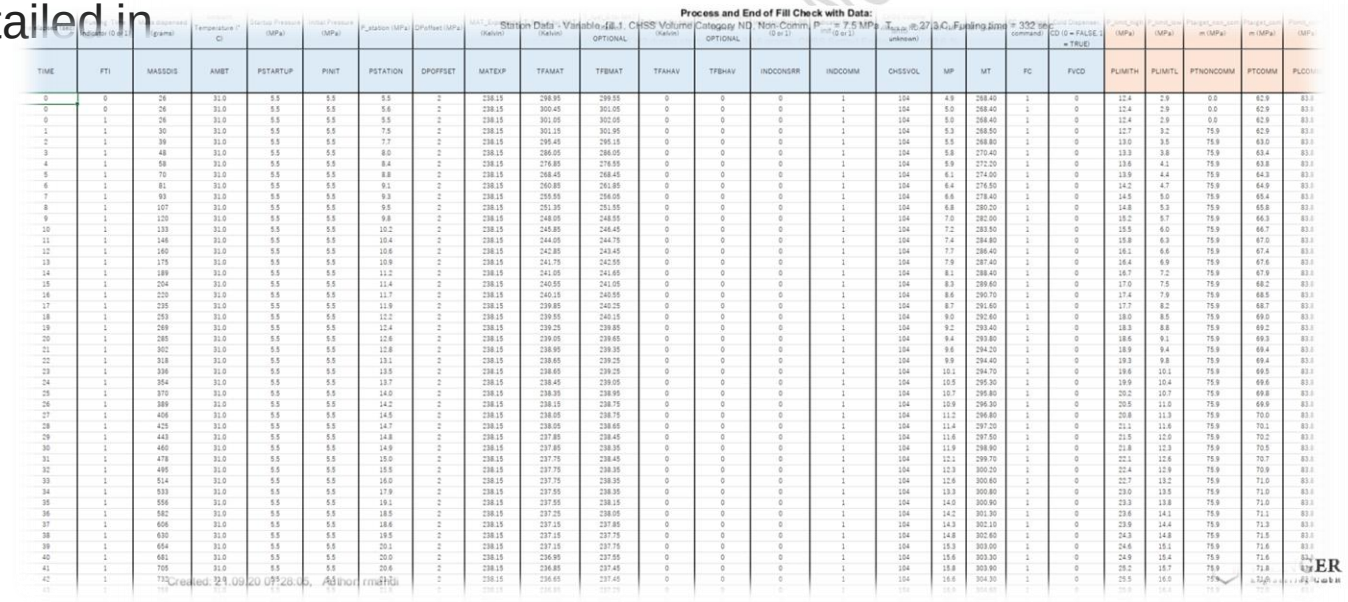
- Fill times improved on average 20%

- Helping with Generation 1 Stations – Gaseous with chiller
  - MC Method was implemented on Generation 1 Gaseous Stations
  - Improved uptime and customer experience
  - Temperature was allowed to float in a wider range and no be restricted
  - When chiller began to fail the fills continue to occur but simply took longer.
  - Allowed FEF to increase temperature of cooling circuit of low usage sites and overnight saving on power.
  - Unscheduled chiller-repairs within 24-48 hours and not immediately improving service efficiency and costs
- Functioning in later Generations - Liquid Hydrogen no chiller
  - Cooling is further away from point of use
  - Ramp rate is not predetermined at the start of the fill, its dynamic.
  - Brine lines may be warm overnight. MC method allows for 30 seconds to establish maximum temperature. As the hydrogen gets colder the fill gets faster.
  - Small-tank-hot-day advantage.

MC – Formula Experience

- Testing
  - MC Method Calculator
  - Great Tool
  - Pass Fail criteria
  - Validates the dispenser coded program
  - Validates the dispensers follows the codedc program
  - With CHSS system data can perform more validation function.
  - Once trained and data system is set up. Validation is simple.
    - Set up of data system is detailed in HGV 4.3
  - Station validation and Opening speed improved.





Summary

- MC Method is Superior to Table Method
  - Faster fills
  - Float between temperature
  - Less outages
  - Easier to validate operation with Wenger calculator
  - More customers in a shorter period
  - Higher Customer Satisfaction
  - Costs less to operate

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