FOOTHILL TRANSIT'S
Zero Emissions Bus Journey

Foothill Transit

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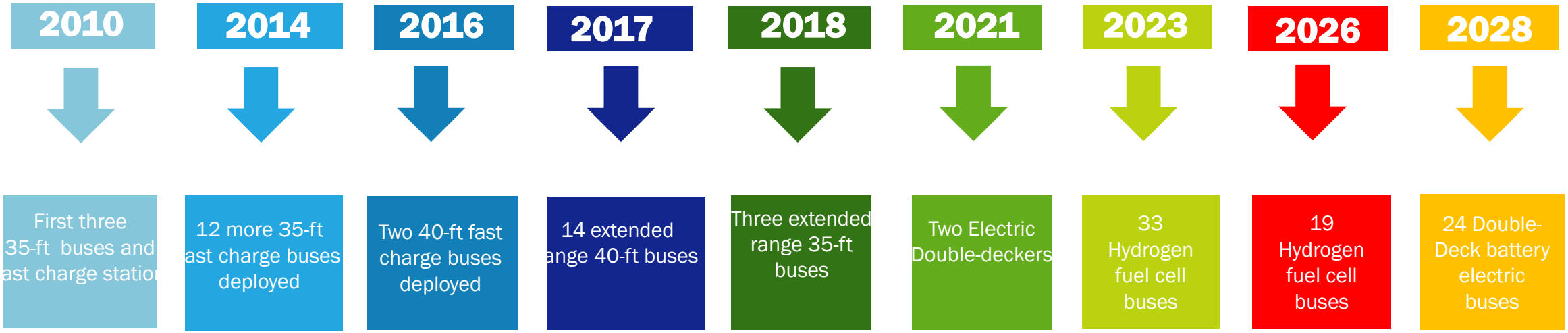
ABOUT FOOTHILL TRANSIT

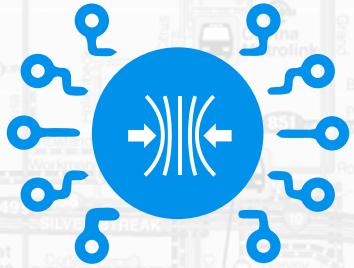
- Pomona and San Gabriel Valleys (Eastern Los Angeles County)
- 327 sq. mile service area, 1.5m service pop.
- 30 local and 6 express routes
- 286 CNG buses, 52 FCEBs, 19 BEBs
- Innovation is part of our core mission

Fuel Technology Update



WHY FUEL CELL?

Vehicle Range

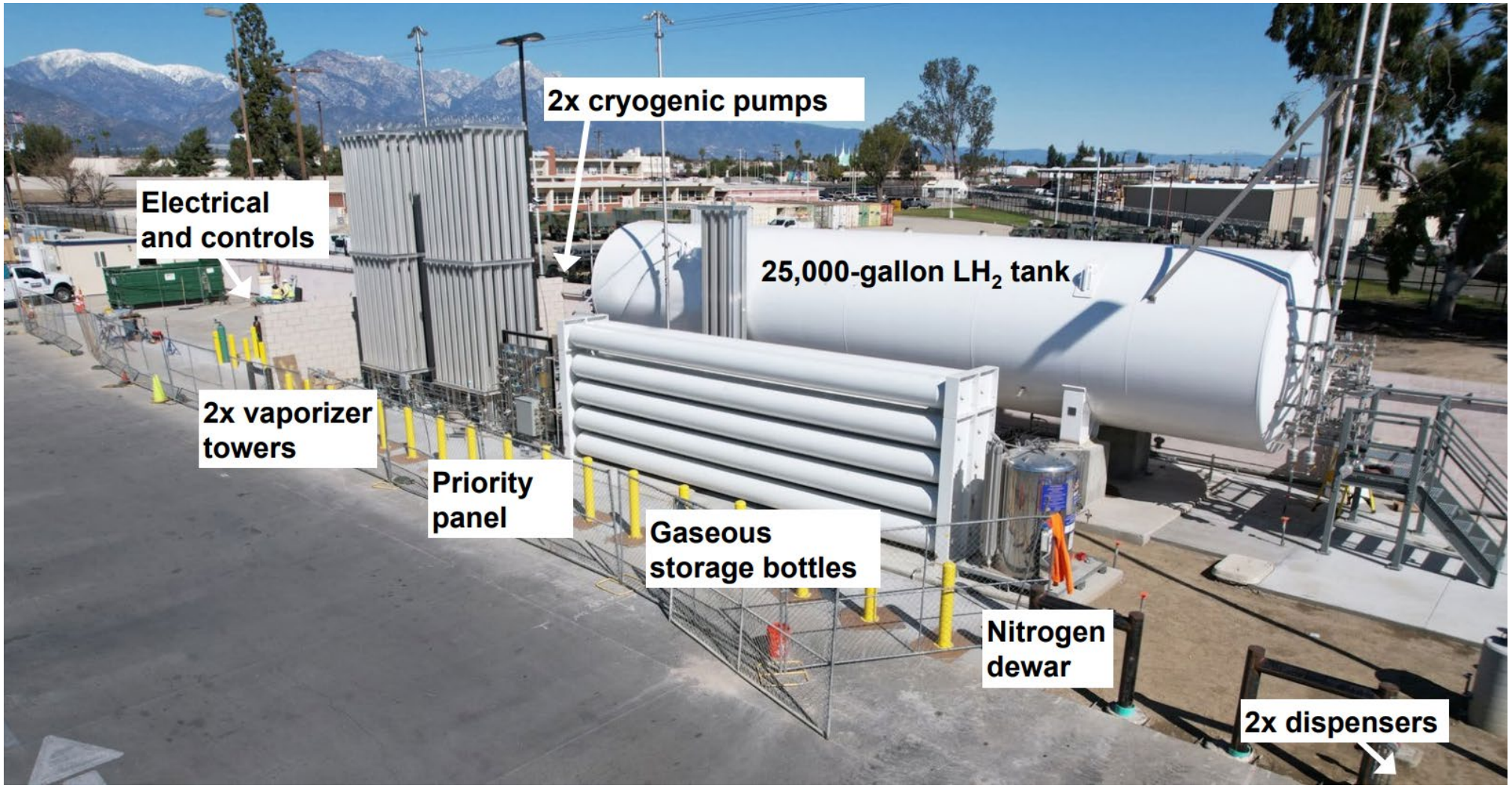


System Resiliency

Infrastructure Cost

Vehicle Fueling Process

Pomona H2 Infrastructure



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33 Fuel Cell Bus (FCEB)

- First bus delivered July 2023
- Range of 300 miles
- 37.5 kilograms of gaseous H2
- $1.4M Cost per bus
- No operational impacts
- One to one replacement

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FCEB Commissioning

- Fuel fill test 06/01/2023
- Filled 18 buses within 1 hour 30 minutes
- Fuel up to 5 kilograms a minute
- 9 to 10 minutes fill

Pomona Hydrogen Fueling Infrastructure

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FUELING INFRASTRUCTURE FOR FCEBs

- Footprint 92’5” X 33’ 10”
- Utility cost average $2,400/ month = 3,700 kWh
- Liquid hydrogen for more volume per delivery
- Average usage 450kg per day
- Delivery every 2 days
- Monthly average of 20,000 – 22,000 kg
- Deliveries are scheduled
- Offloading takes 3 hours

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MAINTENANCE BUILDING UPGRADES FOR FCEBs

- **National Fire Protection Association (NFPA)**
  - 2023 National Fire Protection Association (NFPA) 2 - Hydrogen Technologies
  - 2024 National Fire Protection Association (NFPA) 30A - Code for Motor Fuel Dispensing Facilities and Repair Garages
  - 2020 National Fire Protection Association (NFPA) 70, National Electrical Code (NEC)
- Replace 24 Radiant Gas Heaters
- Replace 5 roof mounted exhaust fans
- New gas leak detection system
- New control panel, remote control panel and test station
- Roof mounted gravity ventilators at wash building
- Total cost = $1,240,549

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ONGOING CHALLENGES

- Economically moving to scale
- Fleet reliability
- Resiliency
- Workforce development
- Funding!!!

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