#TheOtherElectricBus

Fuel cell electric buses in California

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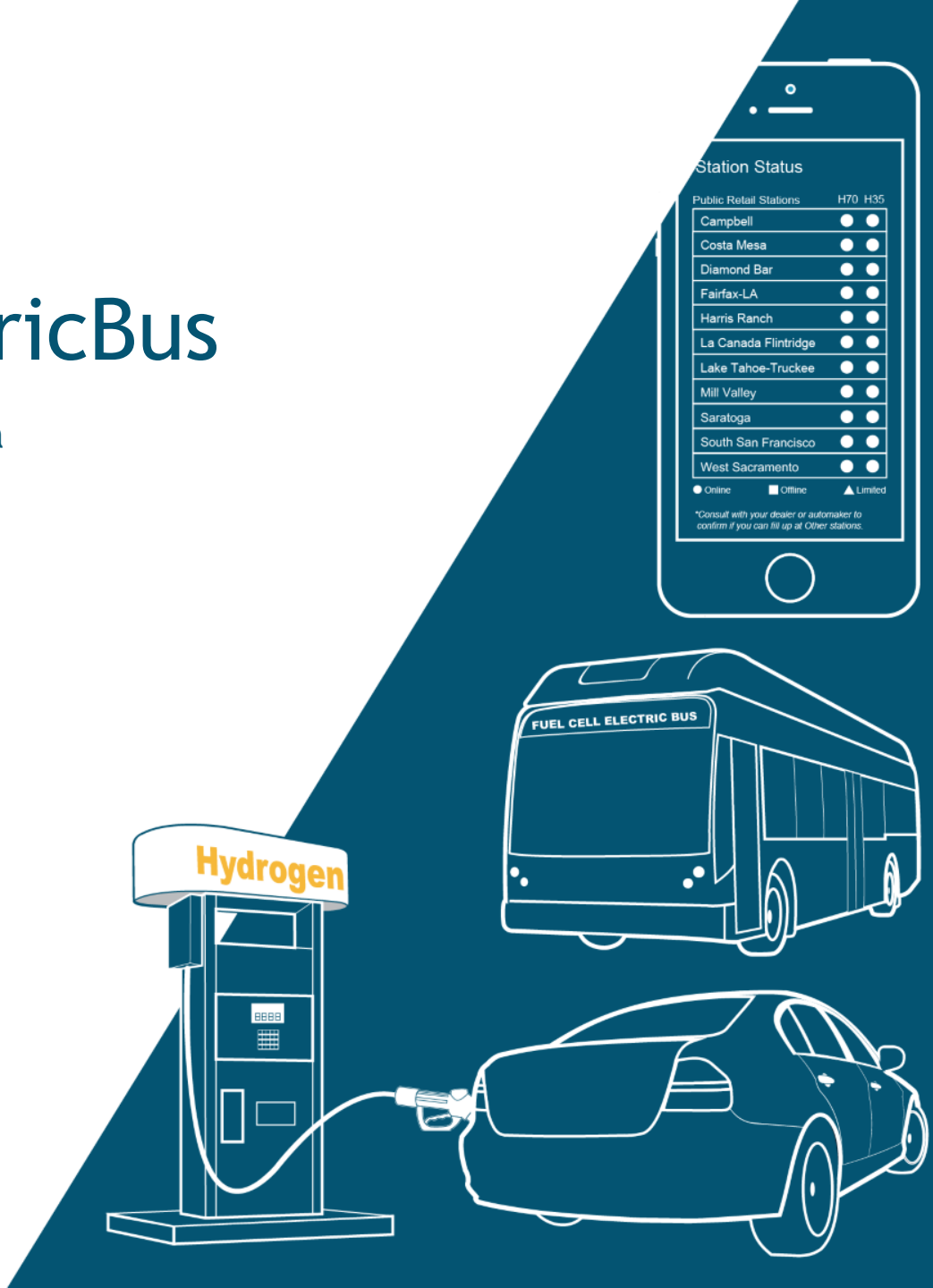

California FUEL CELL PARTNERSHIP
DRIVING FOR THE FUTURE

#Pioneer

Sunline Transit

- New Flyer buses just over $1million, below quote
- 900-kg hydrogen station
  - Fuel upwards of 26-30 buses
- On-site production
- Center of Excellence
  - Training
  - Facility

#Performance

AC Transit

- 15 years
- Fuel cell longevity
  - 5 stacks exceed 25,000 hours
  - 12 of 13 stacks exceed 20,000
  - 1 nearing 30,000 hours
- Reno trip
  - 224 miles each way (2xs!)
  - Rain and snow
  - Steep grade
  - 10.91 miles per gallon
- 2.8+ million miles of service
- Trained 270 mechanics
  - 14,000+ hours of fuel cell bus mechanic training
- Dispensed 88,000+ kgs of H2 in 2017
  - More in 2018 already

#WelcomeToTheClub

Orange County Transportation Authority (OCTA)

- 1 fuel cell bus
  - 2.5 years of operation
- Soon, 1st bus of a 10-bus purchase
- H2 station commissioned by the end of 2018
  - Trillium's first H2 station
  - 2 pumps, fast fueling

#HereWeAre

- 24 buses in revenue service
- Another 29 funded and in development
- 4 cutaway shuttles in development

- 18 years of experience
- 13 years of federally collected performance data

#HighFives

- High hours on fuel cell stack lifetime
- Availability numbers are looking good
- Transit agency comfort levels increasing
- Learning curves are not as steep anymore
- Bus OEMs taking on leadership role

#Challenges

- Infrastructure for a large fleet
- Infrastructure cost for a small fleet
- Federal and state funding for infrastructure
- Supply of parts
- Cost of components

#Policy

- **SB 1119**
- On the Governor's desk
- Gives transit agencies that more flexibility with Low Carbon Transit Operations Program funds in serving disadvantaged communities, including the purchase of **zero-emission** transit buses and supporting infrastructure
- Supported by OCTA and AC Transit

#SpeakUp

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