

DOCKETED

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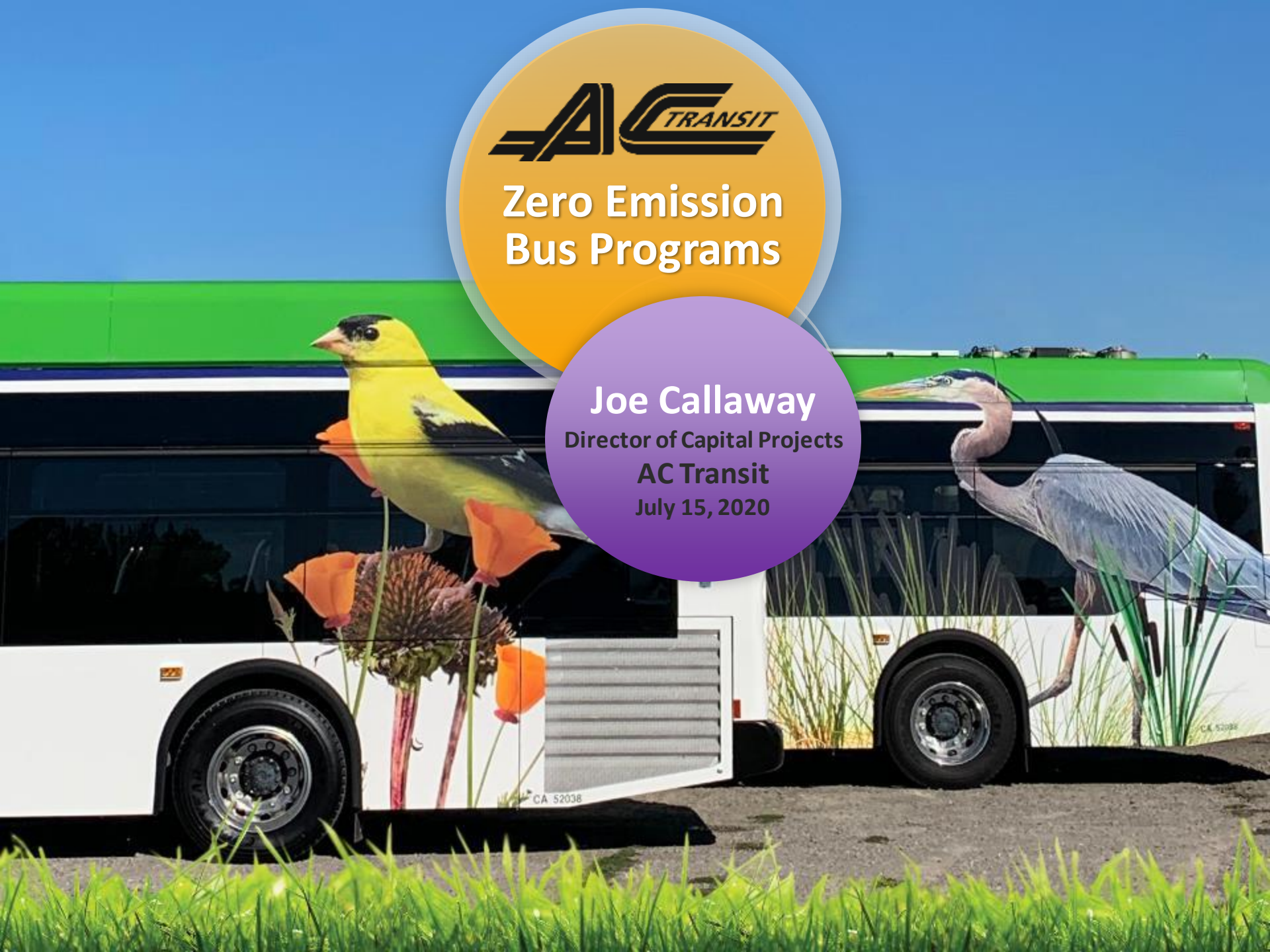
Zero Emission Bus Programs

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AC Transit

July 15, 2020



What We've Done...

20+ Years of ZEB Experience



2003-2006

1 - 30' FCEB
175 MILE RANGE
Small Electrolyzer



2006-2010

3 - 40' FCEB
300 MILE RANGE
Dual SMRs



2010 - present

13 - 40' FCEB
220 MILE RANGE
2 - LH2 Stations



2019 - present

10 - 40' FCEB
300 MILE RANGE
Cryo Pumps
5 - 40' BEB
170 MILE RANGE
Chargers

H2 Strategies Employed

- ✓ Conversion from GH2 to LH2
- ✓ Increase LH2 Storage (15,000 gal)
- ✓ On-Site Electrolyzer from Solar (65kg/day)
- ✓ Self Generation:
 - Solar - (1.4 MW)
 - Solid Oxide Fuel Cell - (420 KW)
- ✓ Emergency Back-up (Diesel Generator)

Other Thoughts

- ✓ Funding to Mature H2 Supply Chain
- ✓ Mutual Aid Agreements (H2 Suppliers)
- ✓ Funding for Self Generation and Storage
- ✓ FCEB Bus as a Generator:
 - To Power H2 Stations
 - To Charge BEBs



AC Transit ZEB Future

- **Transition to a 100% ZEB fleet**
 - ✓ **Board Approved ZEB Roll Out Plan**
 - ✓ **Plan for 2021**
 - ✓ **Purchasing 20 FCEBs and 20 BEBs in 2021**
 - ✓ **Constructing BEB Charging Infrastructure at Two Locations**
 - ✓ **Maintain a “Technology Agnostic” Perspective**
 - ✓ **Conduct Side by Side Study** (5x5 and then 25x25)

- **Challenges and Risk**
 - ✓ **Funding Gap** (Buses, Infrastructure, and Supply Chain Development)
 - ✓ **Resiliency and Sustainability**
 - ✓ **Utilities – PSPS / Changes to the System, Capacity Availability**
 - ✓ **Hydrogen Fuel Supply Chain** (Policies that Demand Resiliency)
 - ✓ **Sustainable Maintenance Practices** (Significant Training Required)





Thank You!

For more information,
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Leading the way to a

ZERO EMISSION FUTURE.

