

# CNG AND HYDROGEN FUEL CELLS



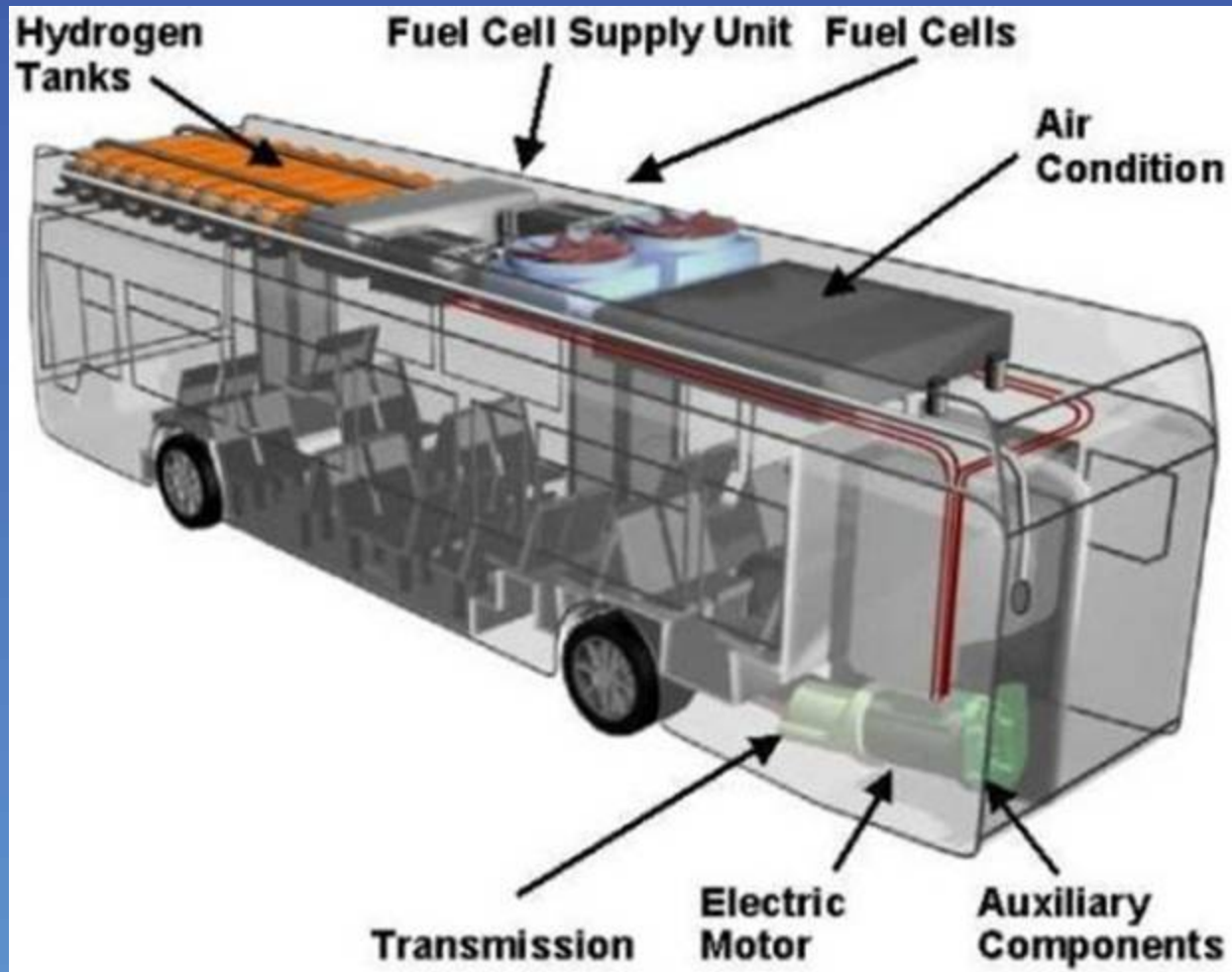








# System Layout



# Hydrogen compressors





# Compressor Pad





# Station Controls



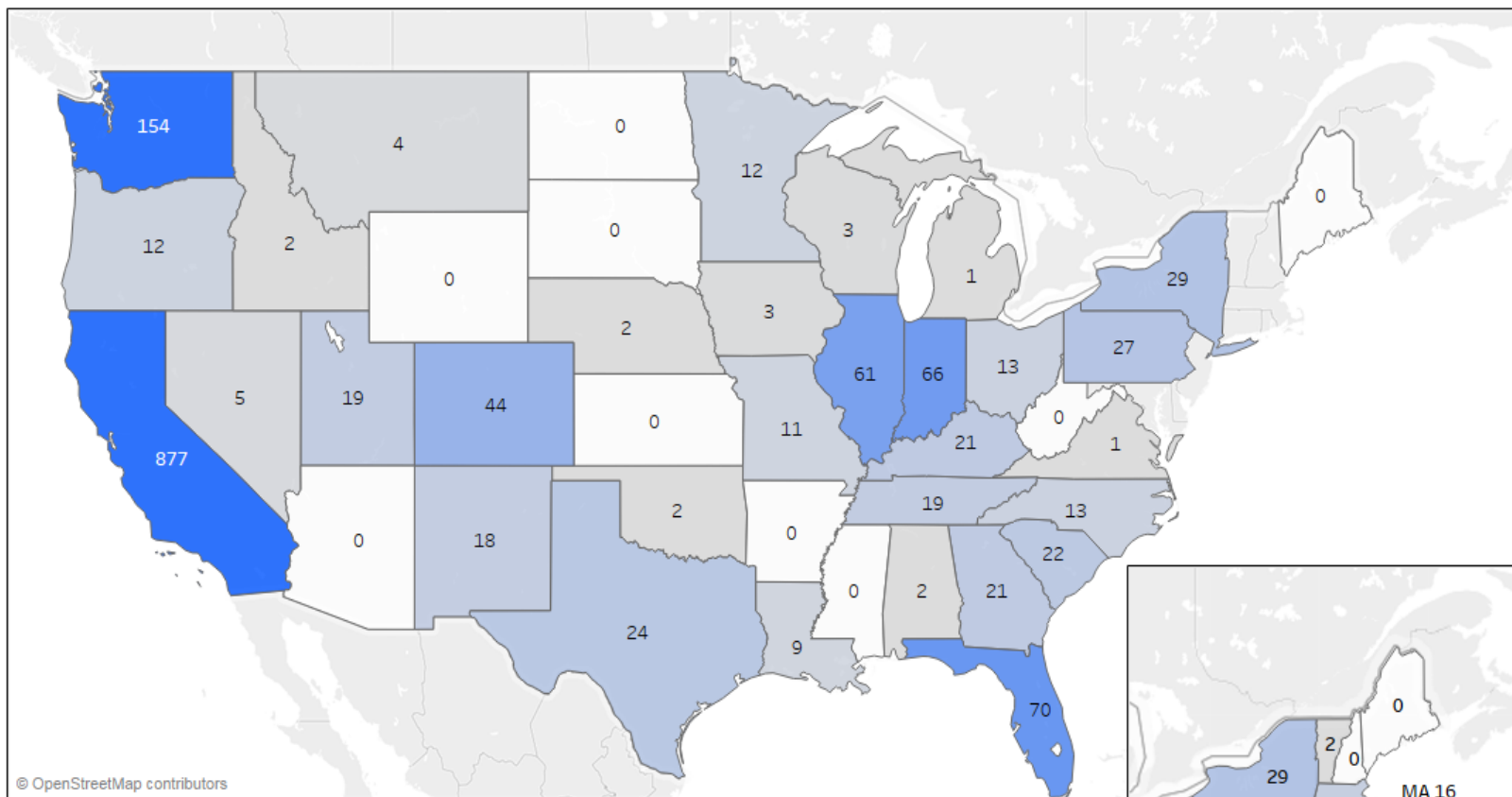


# Operations

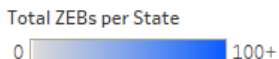
- Range 220 miles
- Operate every day
- 15 minute fill
- Getting about 7 mpg compared to 4 for diesel
- Program evaluated by NREL

# Battery and Fuel Cell Electric Transit Buses Currently Deployed, On Order, or Soon To Be On Order Within the United States of America

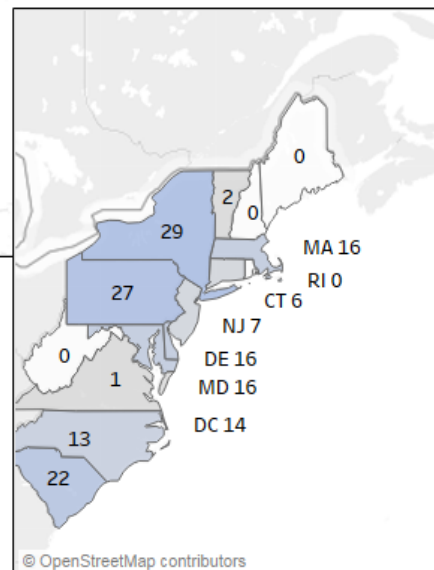
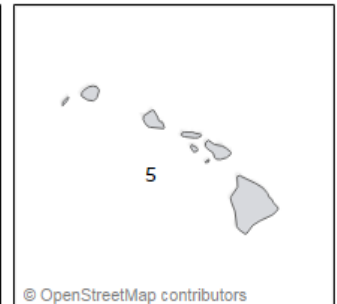
Last Updated: August 17, 2018



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Source: Popel, E. (2018, August 17). Battery and Fuel Cell Electric Transit Buses Currently Deployed, On Order, or Soon To Be On Order Within the United States of America CALSTART, Inc.

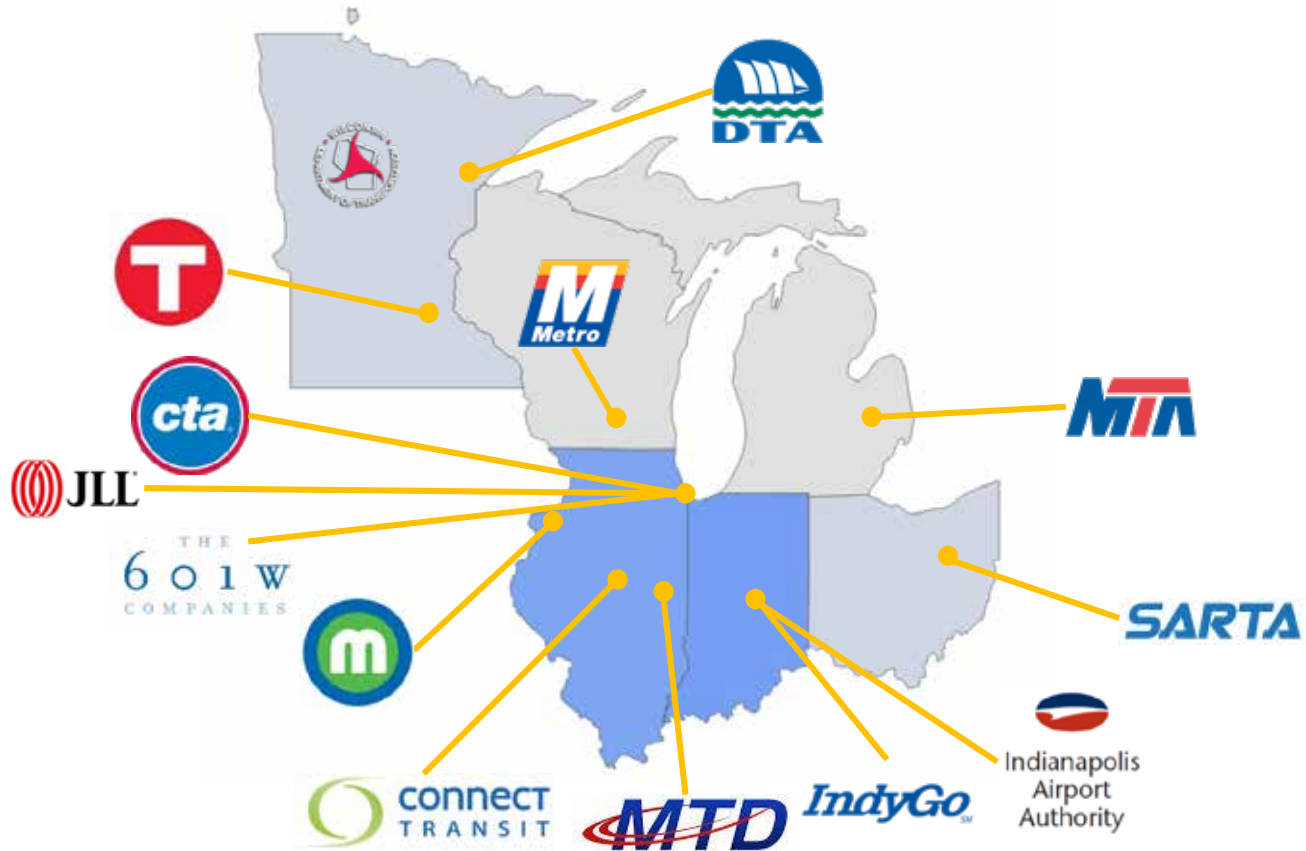


# Transit Properties with Battery or Fuel Cell Electric Transit Buses

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## FTA Region 5- Midwest 157 ZEBs

### 3 FCEB Properties SARTA, Champagne and Flint



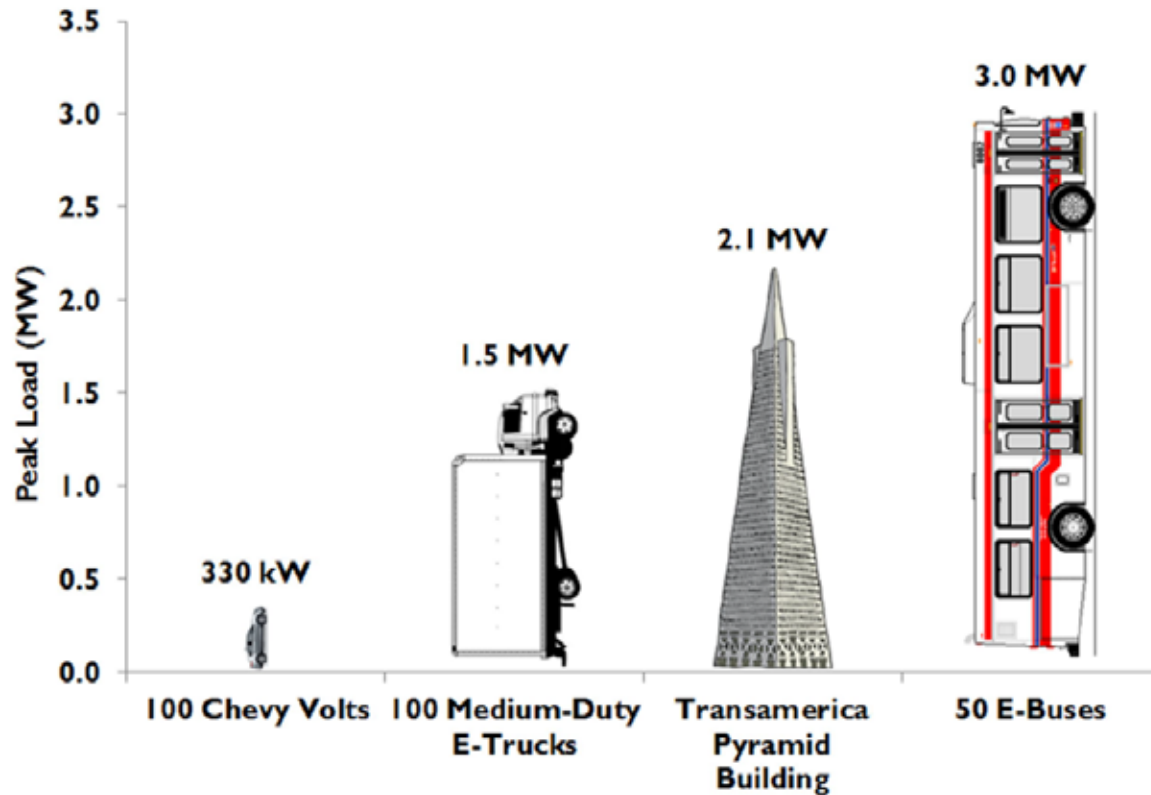
Map not to scale

# Working Group Participants



# Infrastructure the Near Term Challenge for ZEBs

## Peak Loads Considerations for Battery Electric Buses



**Assumptions: the Chevy Volt charging rate is 3.3 kW, the medium-duty E-Truck charging rate is 15 kW and the E-Bus charging rate is 60 kW.**