

Advancing Electric Solutions Globally

Emission-Free Driving Through Campus

June, 2018



We help **electrify** transportation

- 20+ years in the business
- World's leading **manufacturer** of series electric propulsion systems
- **9,000+** electric drive systems in service today on three continents
- More than **2 billion** revenue miles
- Prevented **2 million** tons of **CO₂** emissions
- **Innovative marine & truck** solutions

IVECO

GILLIG

NEW FLYER

SOLARIS

NOVA BUS
Driven by your city

ALEXANDER DENNIS

DAIMLER

ElDorado National



BAE SYSTEMS

INSPIRED WORK

■ Zero Emission & Near Zero Emission powertrain solutions



Series-EV: Battery EV

- zero emissions 100% of the time
- fully-electric propulsion
- on-route, overnight, inductive, and conductive charging available

Series-H: Hydrogen EV

- zero emissions 100% of the time
- long range
- route independent
- quick fueling time

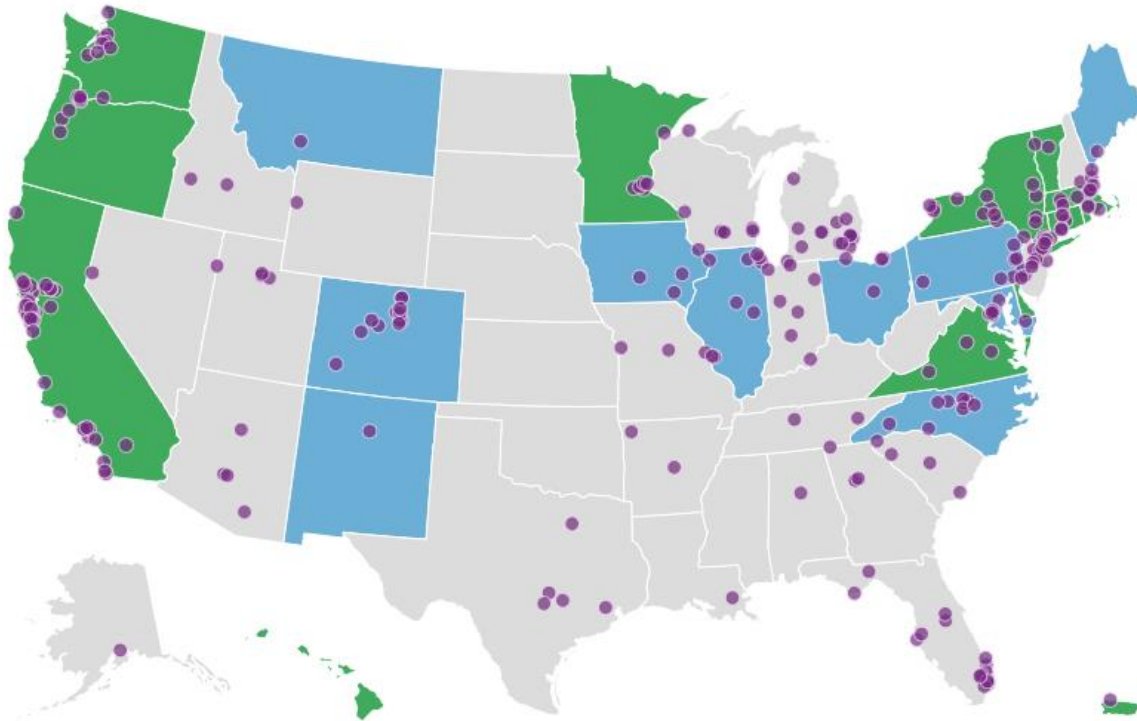
Series-E: Hybrid Electric

- up to 15% engine-off operation
- stop/start technology
- no charging infrastructure
- **no mid-life battery refresh required**

Series-ER: Electric-Range Hybrid

- up to 35% engine-off operation
- stop/start technology
- depot mode
- no charging infrastructure required

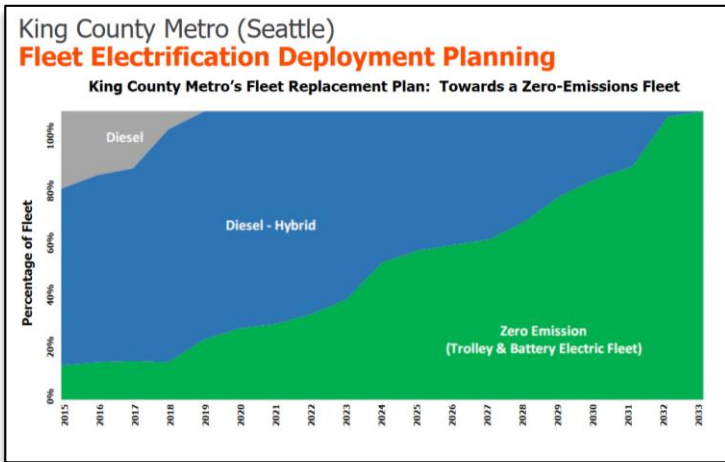
Growing U.S. Climate Policy Actions



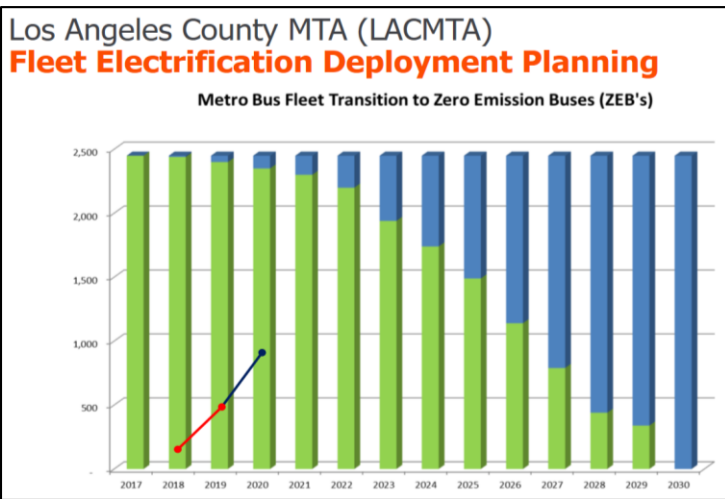
ALASKA, HAWAII, AND PUERTO RICO ARE NOT REPRESENTED TO SCALE.

10-states and the District of Columbia pledged to follow the Paris Agreement
12-states and Puerto Rico have become members of the U.S. Climate Alliance
274-cities and counting have signed on to the Mayors National Climate Action Agenda
<https://climateactiontracker.org/countries/usa/>

Transit Agencies Taking the Initiative



CA Agencies with electric buses



CA Agencies with ZE Targets

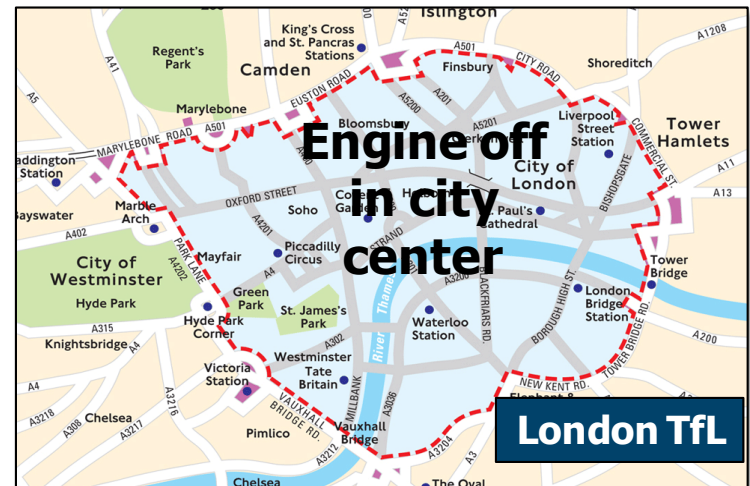
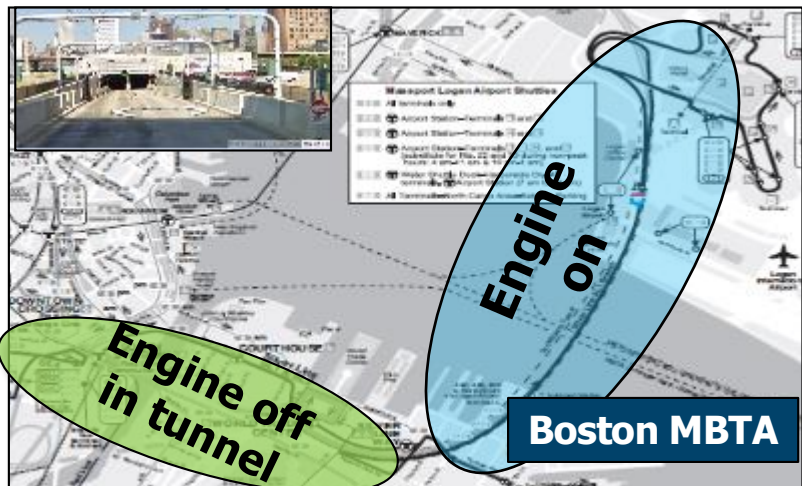
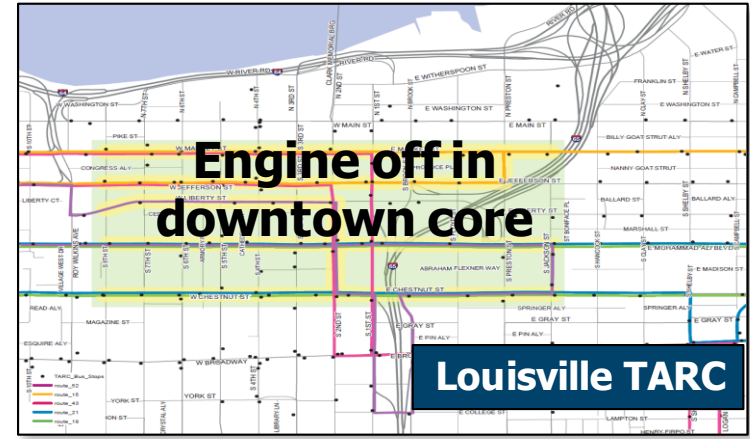
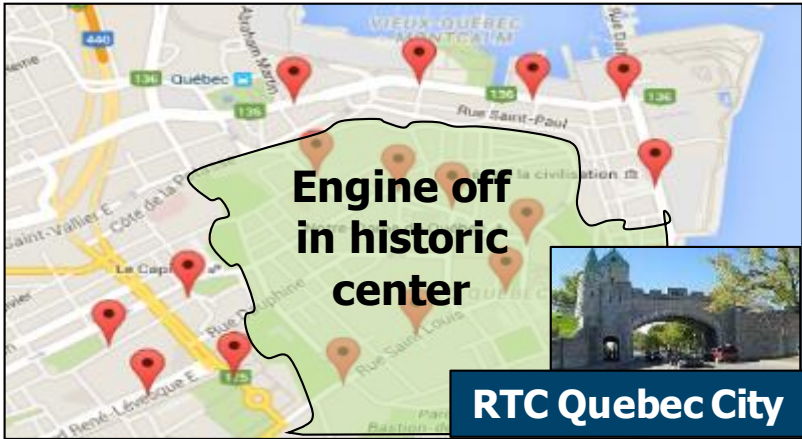
Agency	Total Buses	All ZEB Target
ART	82	2020
Antelope Valley	77	2018
Foothill Transit	373	2030
LA Metro	2,452	2030
LA DOT	357	2030
Porterville Transit	20	2025
SF MTA	620*	2035
San Joaquin RTD	111	2025
SamTrans	369	2033
Santa Clara VTA	485	2033
Santa Cruz Metro	98	2040
Santa Monica BBB	200	2030
Total	5,244	

* 327 trolley buses not included in total

Geo-Fenced Emission-Free Zones

Electric inside/hybrid outside the zone

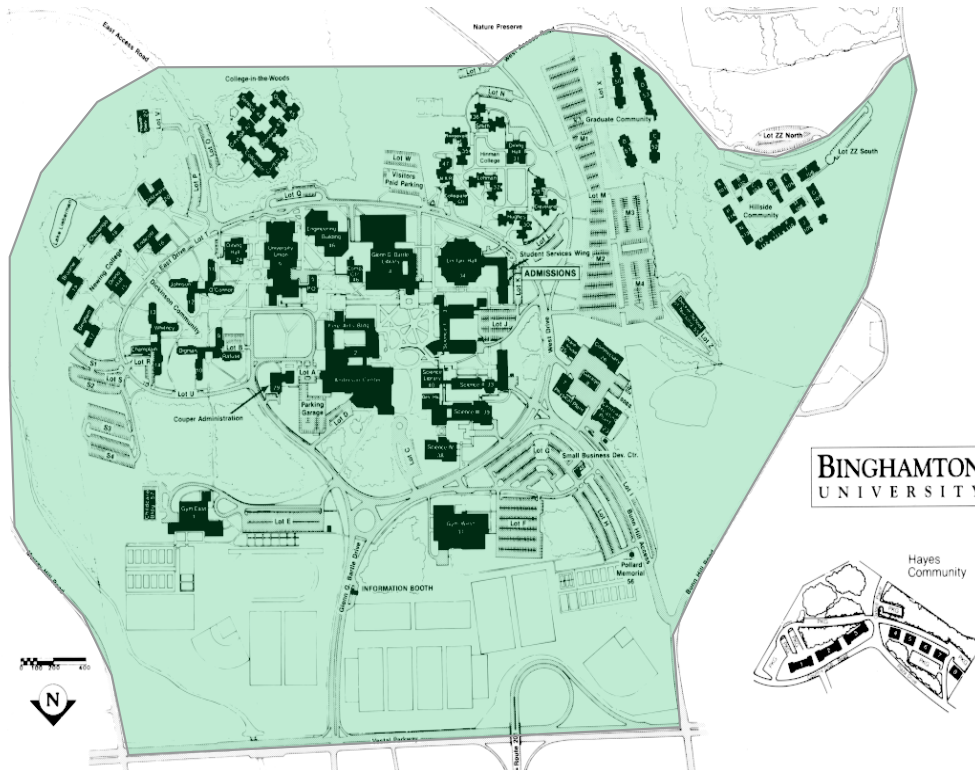
- Series-ER: Electric-Range Hybrid**
- up to 35% engine-off operation
 - stop/start technology
 - depot mode
 - no charging infrastructure required



Universities Looking For Sustainable Transportation

Binghamton University

FTA Low or No Proposal



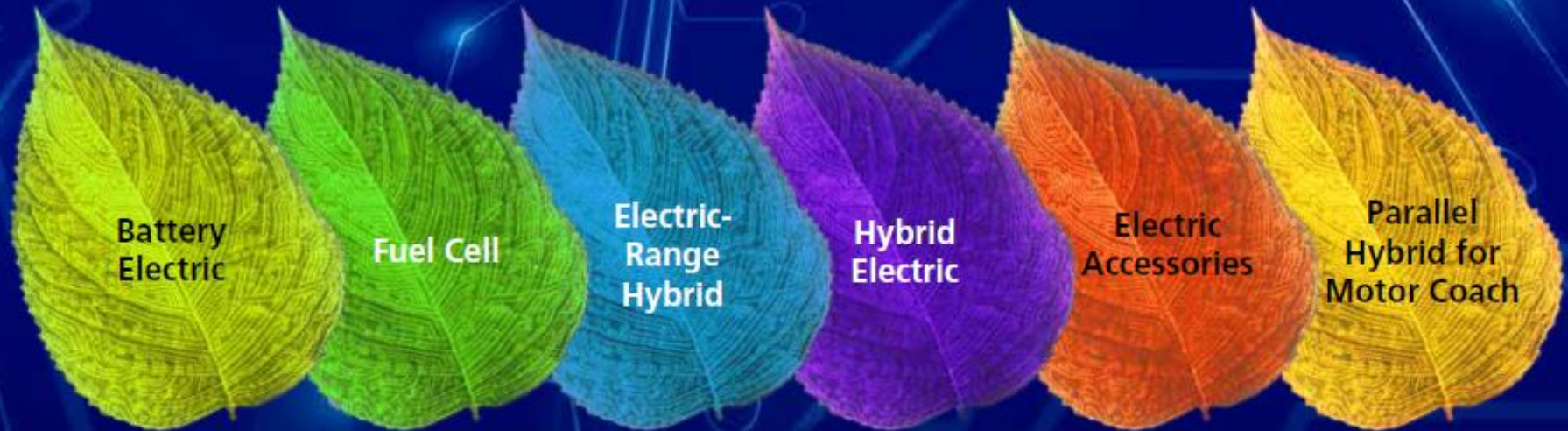
Grid-Free, Zero Emission University Bus

- Broome County Transit bus service at Binghamton University
- Geo-fenced campus to trigger engine off operation throughout the campus
- No charging infrastructure
- No driver intervention

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Choose your level of electrification



Thank you!



www.hybridrive.com