

Electric  
solutions  
for transit



**BAE SYSTEMS**

INSPIRED WORK

# Electrifying Transit

With more than 7,000 systems operating around the globe, BAE Systems is transit's most successful series-hybrid propulsion supplier. Every day we're innovating to deliver advanced electrification products and solutions to progress transit mobility, efficiency, and capability.



More electric is more efficient. Electric accessories and anti-idling modes are implemented widely with Series-E customers and are increasing fuel economy and maintenance savings for transit agencies around the world.

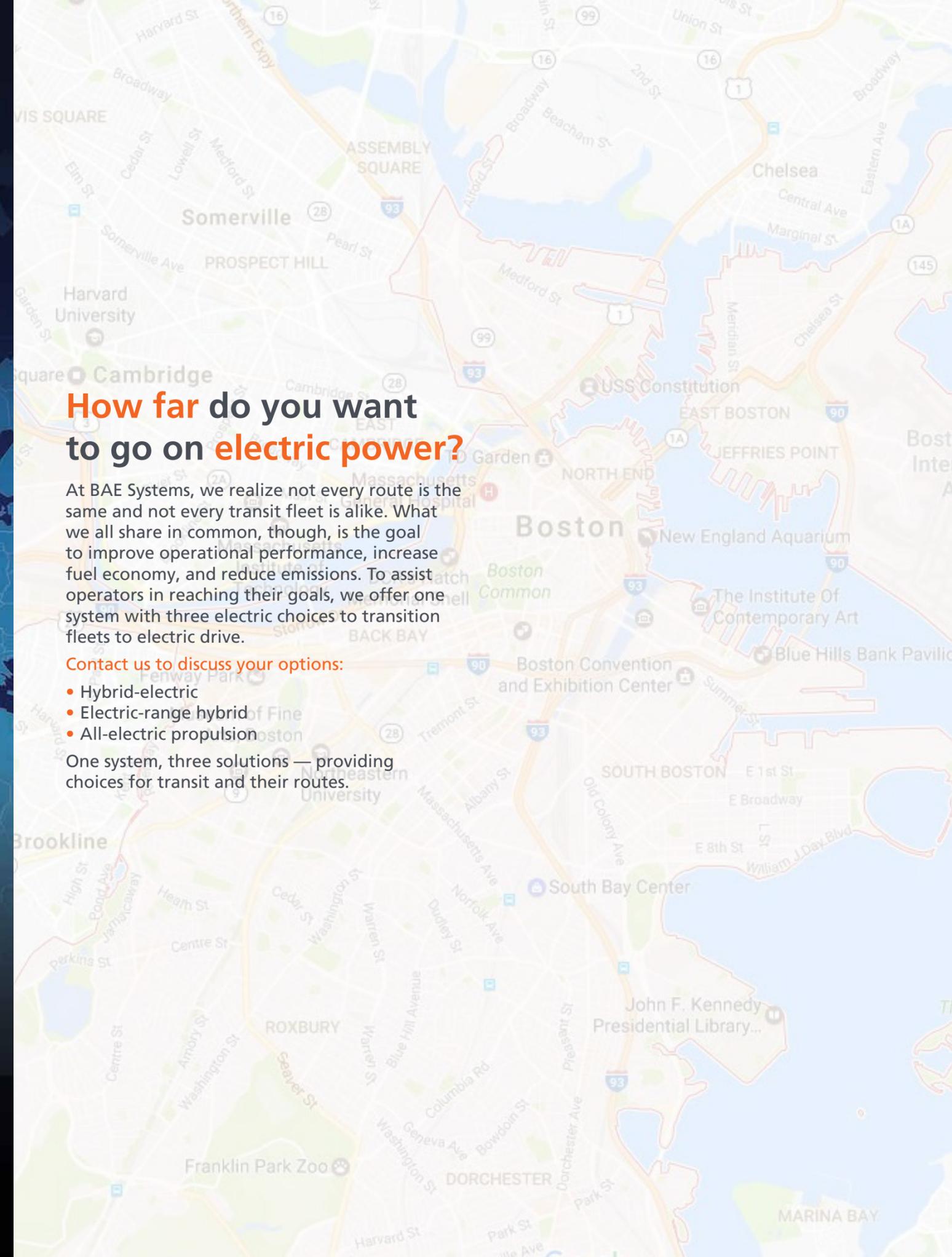
## How far do you want to go on electric power?

At BAE Systems, we realize not every route is the same and not every transit fleet is alike. What we all share in common, though, is the goal to improve operational performance, increase fuel economy, and reduce emissions. To assist operators in reaching their goals, we offer one system with three electric choices to transition fleets to electric drive.

Contact us to discuss your options:

- Hybrid-electric
- Electric-range hybrid
- All-electric propulsion

One system, three solutions — providing choices for transit and their routes.



## One system, three solutions

From the world's leading supplier of series electric propulsion systems, BAE Systems delivers electric solutions to help transit operators transition to electric transportation to reduce emissions, save fuel, and provide a quieter mode of travel. Using a common system architecture, we offer one system with multiple solutions.



Solutions for both 40' and 60' buses



## Series architecture – transitioning transit to more electric

Options for energy storage:

- ESS-3G-1K (energy storage with up to 12-year life)
- ESS-3G-32K (allowing for more engine-off capability)
- Third party EV battery options (greater EV range)
  - EV battery options include on-route charging, overnight charging, conductive, and inductive charging

## Series-E: hybrid-electric

Series-E, an electrically driven system, is your first step towards electric without the concerns of charging infrastructure installation. Series-E allows operators to shut off the engine up to 15% of the time to provide a cleaner and quieter experience for passengers as they board and disembark at stops. Series-E saves fuel and emissions, benefiting the entire community.

ESS-3G-1K (ESS-3G-32K is an option)

APS1 or APS2



- up to 15% engine-off operation
- engage stop/start technology (engine-shut off at bus stops)
- no charging infrastructure required

## Series-ER: electric-range hybrid

Series-ER uses the ESS-3G-32K battery along with our proven Series-E system to travel up to 35% with the engine off, allowing operators to drive on pure electric power through low- and no-emission areas. With Series-ER there are no range challenges since the system recharges itself with the onboard engine generator.

ESS-3G-32K

APS2 or APS3



- up to 35% engine-off driving
- ideal for travelling through tunnels and low- and no-emission areas
- no charging infrastructure required

## Series-EV: fully electric

Series-EV, is fully electric, driving with zero-emissions 100% of the time. The system uses the same common components as Series-E and Series-ER, minimizing spare part inventory and training.

Alternate battery options

APS2 or APS3



- zero-emissions 100% of the time
- fully-electric systems
- hydrogen-fuel cell powered systems
- on-route, overnight, inductive, and conductive charging options available

# Advancing **electric solutions** through global market leaders

To offer transit operators maximum flexibility, BAE Systems delivers environmentally-friendly solutions and superior system integration with market-leading bus manufacturers across the globe.

Our efficient systems are available in North America on Gillig, New Flyer, Nova Bus, and El Dorado National buses, and in Europe on Alexander Dennis, Iveco Bus, and Solaris Bus & Coach buses.



El Dorado National



Gillig



New Flyer



Nova Bus



Alexander Dennis



Iveco Bus



Solaris Bus & Coach

## **Flexible Service**

BAE Systems facilitates the seamless integration of hybrid, fuel cell, and electric buses into your existing fleet with a full-spectrum service network and support package that can be customized to each individual transit property's needs.

We offer transit agencies a range of options to keep your fleet up and running, including:

- Service network
  - BAE Systems' customer service technicians are deployed regionally to service customers quickly
  - Affiliated service centers exist throughout the country to accommodate service and repair, and are coordinated by BAE Systems service technicians
  - Training programs offered allowing customers to perform in-house maintenance, as well as providing technical support and aftermarket spares where needed
- Technical support
  - Product support is accessible 24/7 including technical assistance, spare parts, documentation, software and training — factory-trained technicians are available for dispatch upon request
  - Training
  - Diagnostic tools
  - Service contracts



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