



## Metropolitan Transit System Zero-Emissions Bus Pilot Program

### OVERALL GOAL

MTS has initiated a Zero-Emissions Bus Pilot Program, continuing its strong track record of operating one of the cleanest public transit fleets in the United States. Currently, all of MTS's 40- and 60-foot fixed route buses are fueled by compressed natural gas (CNG). State regulations require public transit agencies to gradually transition to 100 percent zero-emissions bus fleets by 2040.

### PROGRAM FRAMEWORK

*Purpose* This pilot program will allow MTS to analyze vehicle performance under various conditions, including different climates, route profiles, passenger loads and driving characteristics. MTS will also use the pilot period to train all bus operators on the most efficient driving habits. Given the regenerative systems, drivers have a key role in maximizing the range of the buses.

*Length of Program* 18 months

*Scope* The program begins in November 2019 with deployment of six battery-electric buses in the first phase, and two additional battery-electric buses within the next 12 months. MTS will also investigate the possibility of purchasing two hydrogen electric fuel cell buses in the second phase. MTS has installed six charging stations on the MTS property in downtown San Diego, and two more are planned for installation at three other properties, for a total of 12 chargers.

### RIDER/COMMUNITY BENEFITS

These buses will cut tailpipe emissions by 100 percent and their use will support climate action goals. The immediate reduction in tailpipe emissions reduces environmental impacts on the communities served by these buses.

### VISION FOR COMMUNITY AND RIDERS

The Zero-Emissions Bus Pilot Program is the latest example of how MTS is protecting the environment and reducing our regional greenhouse gas emissions through the use of clean technology. MTS already operates 128 zero-emissions trolleys serving our riders every day. For its bus fleet, MTS was among the first transit agencies to convert to CNG fuel, deploy near-zero emission engines and purchase 100 percent renewable biogas.

### BUS/CHARGER DETAILS

MTS has acquired six New Flyer Xcelsior Charge battery electric buses for the first phase of the pilot.

*Appearance* These 40-foot electric buses will look very similar to the currently operating 40-foot CNG buses in the MTS fixed-route fleet with the exception of a brand-new, electric-green color scheme.

*Amenities* The new buses include the newest on-board video surveillance systems, enhanced wheelchair restraint systems with forward-facing safety barriers, and fully electric air conditioning and engine coolant systems. Additionally, the new buses will be noticeably quieter.

*Range* The electric buses have an average estimated range of 150 miles per charge. Range is dependent on many factors, including driving characteristics, weather, topography and more. Many MTS bus routes are 150 miles or less, making them appropriate for this pilot program.

*Charging* Six chargers have been installed at the Imperial Avenue Division Bus Yard and two chargers will be installed at each of MTS' other bus depots in South Bay, El Cajon and Kearny Mesa.

## **ROUTES**

MTS is currently planning to begin pilot testing on Routes 1, 2, 4, 10, 13, 815, 905 and 936. The test routes may change and expand during the course of the pilot program.

## **PROGRAM COSTS**

*Budget* The Board-approved budget for the pilot program is \$12.5 million, including a combination of bus and infrastructure costs, and design/consulting/project management expenses.

*Funding* The pilot program is funded by the combination of a Caltrans grant, California Air Resource Board (CARB) offsets, funding from the state's Low Carbon Transit Operations Program and its Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project, as well as the MTS Capital Improvement Program.

