



## SAN DIEGO'S MTS PROVIDES CLEANER, COST-EFFECTIVE TRANSIT SERVICES WITH PROPANE AUTOGAS BUSES

### A PROPANE AUTOGAS CASE STUDY

San Diego's Metropolitan Transit System has roots dating back to the horse-drawn trolleys used in the city in the late 1800s. Now, the public transit provider transports nearly 100 million San Diego-area residents, tourists, workers, and students annually using trolley, light rail, and bus lines.

The organization has two goals: to provide clean, efficient, public transportation while being responsible with the taxpayer dollars it uses to provide that service. Its light rail produces zero emissions. Almost the entire fleet of 625 fixed-route buses run on renewable natural gas, and energy- and water-saving features are incorporated into transit stops and stations. But until fall 2016, its 215 fixed-route mini buses and paratransit buses still relied on gasoline. When MTS leaders learned that operating those buses using propane autogas would allow the organization to reduce emissions and save money, MTS officials jumped at the chance.

#### REDUCING EMISSIONS

Paul Jablonski, MTS chief executive officer, said San Diego first incorporated alternative fuels into its fleets more than 20 years ago to combat air quality issues in southern California. By adding 77 propane autogas buses — 46 Ford E-450 22-foot paratransit buses and 31 Ford

F-550 32-foot mini buses — in late 2016, the city reduced as much as 24,000 pounds of greenhouse gas emissions per year for each paratransit bus, and 37,000 pounds per year for each mini bus, Jablonski said.

"Propane autogas is really phenomenal," he said. "It's a win-win all the way around."

#### KEEPING COSTS LOW WITH PROPANE AUTOGAS

The propane autogas buses will be used to transport people with disabilities and in lower-density suburbs where a smaller bus is more cost-effective. Jablonski said MTS first began researching alternatives for the smaller fleet when gas prices began rising several years back, heavily impacting the organization's fuel budget.

"We have to be careful," Jablonski said. "We're using taxpayer dollars and our mission is to put service on the street every day."

Ron Roberts, chairman of the San Diego County board of supervisors, said when

#### COMPANY

San Diego Metropolitan Transit System

#### CHALLENGE & SOLUTION

Air quality is an issue in southern California. For decades, reducing emissions including greenhouse gas, NOx, and carbon dioxide has been one of the goals of San Diego's Metropolitan Transit System. However, until recently, the organization's fixed-route mini bus and paratransit routes still ran on gasoline. In fall 2016, that changed when MTS added 77 propane autogas vehicles to its mini bus and paratransit fleets, which reduced both fuel costs and emissions.

#### RESULT

- With its first 77 propane autogas buses, MTS will remove more than 2 million pounds of greenhouse gas produced by its bus fleet each year.
- MTS found that incorporating propane autogas into its fleet was seamless for operators, maintenance, and its board of directors.
- MTS achieved a first-year savings of \$750,000 operating the 77 propane autogas buses, with a potential for more than \$2 million in annual fuel savings once the rest of the fleet is converted to propane autogas over a five-year period.

**CASE STUDY**  
**SAN DIEGO MTS**  
**SAN DIEGO, CALIFORNIA**

the county invests in cleaner transit opportunities, there are typically higher upfront costs and a slower return on investment that come as a consequence of that environmental stewardship. So, while he expected the reduced emissions that came with operating the propane autogas buses instead of gasoline-powered vehicles, he was surprised at how quickly the fleet posted cost savings.

“When you can do something that helps you make positive changes to the environment and saves you money—that’s a good day,” Roberts said.

The cost savings in year one, alone, were big. MTS officials expect to save approximately \$750,000 with its first 77 propane autogas buses, with potential to save more than \$2 million annually after the rest of the paratransit and mini bus fleet is converted over a five-year period, said Bill Spraul, MTS chief operating officer.

### **EASY TRANSITION**

Another advantage of propane autogas is that incorporating the fuel into the fleet has been simple, Spraul said.



*“Incorporating the fuel into the fleet has been simple.”*

**— Bill Spraul**  
Chief Operating Officer

MTS worked with San Diego’s fire marshal to install a 2,000-gallon aboveground tank and refueling station at its central facility, which allows for easy, accessible refueling. Spraul said as the fleet continues to add propane autogas vehicles, they hope to renovate an existing concrete pad used for a gasoline tank to hold a second propane autogas tank.

Training drivers and technicians to operate, refuel, and maintain was quick. Spraul said,

too, that adding propane autogas vehicles didn’t require any changes or additions made to maintenance equipment or operations.

Drivers don’t notice a difference operating the new buses up and down the hilly streets of San Diego, Spraul said. Drivers and riders alike have noted that the bus noise is considerably less on the propane autogas buses, too.

“The positive comments have been regular and consistent from the public, local leaders, riders, and drivers,” Spraul said. “And there is regular recognition of MTS’ propane autogas vehicles in reducing GHG emissions.”

### **FOR MORE INFORMATION**

Learn more about propane autogas vehicles and the fleets that use them at [propane.com/on-road-fleets](http://propane.com/on-road-fleets).

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The Propane Education & Research Council was authorized by the U.S. Congress with the passage of Public Law 104-284, the Propane Education and Research Act (PERA), signed into law on October 11, 1996. The mission of the Propane Education & Research Council is to promote the safe, efficient use of odorized propane gas as a preferred energy source.