

NS-LIJ CENTER FOR EMS DEBUTS 2ND ATTEMPT IN USA AT CNG POWERED AMBULANCE

On 4/12/13 NS-LIJ issued a press release titled "First-of-its-Kind Natural Gas-Powered Ambulance Debuts on Long Island". According to Paul Power, Assistant Director of Operations for NS-LIJ Health System's Center for Emergency Medical Services (CEMS), the CNG-powered ambulance hit the streets at the end of 2012 as a pilot project, mainly servicing the Village of Rockville Centre. Mr. Power, who researched the CNG ambulance over the last two years with vehicle manufacturers and the West Nyack, NY-based Clean Vehicle Solutions, a leader in the CNG vehicle industry, said that using compressed natural gas offers many advantages over diesel or gasoline fuel. "The CNG-ambulance reduces greenhouse gas emissions by about 30 percent, improves air quality and decreases fueling costs." Running on natural gas is about \$2 cheaper per gallon than diesel or gasoline prices. The CNG-ambulance, which runs 60 hours a week, would see about an annual fuel savings over \$6,000, said Mr. Power. North Shore-LIJ's CEMS owns over 100 emergency vehicles and consumes the majority of the health system's diesel and gasoline, costing over \$1.1 million annually. While equipping ambulances for CNG adds about \$20,000 to cost of the \$115,000 vehicle, Mr. Power says the additional investment is recouped over the life of the ambulance in terms of fuel savings and decreased maintenance costs. The health system is working on acquiring another CNG-fueled ambulance in the coming months. Compressed natural gas is delivered to the ambulance in cylinders that are encased in a metal box behind the driver's seat and underneath the vehicle. CNG fueling stations are readily available in the tri-state area and close to CEMS headquarters and other service areas.

The first CNG powered ambulance, however, may have been set up by Palm Desert, CA in January 2010. Working with BAF Technologies, a Texas based specialized natural gas vehicle conversion company, they modified a 2009 Ford E-350 6.8L gasoline chassis with a Frazer patient module to a dedicated CNG engine equipped with three cylinders carrying approximately 30 gge (gasoline gallon equivalents) or 26 gallon equivalents of CNG. The cost of the project was \$186,000. By June of 2010 it was found the vehicle underperformed, was retired and the patient module transferred to a Ford E-450 diesel chassis at an additional cost of \$78,000. Palm Desert was getting a paltry 82 miles per tankful of CNG vs. a mandated minimum of 250 miles. An on-line article indicates range is one of the biggest obstacles for natural gas vehicles, as CNG must be compressed at up to 3600 psi in bulky, heavy tanks. According to a 2010 Department of Energy study titled "Issues Affecting Adoption of Natural Gas Fuel in Light- and Heavy-Duty Vehicles," the most common type of CNG tank occupies 3 times the volume and weighs "4 to 5 times as much" as a same-capacity gas tank. Therefore, lower gallon-equivalent-capacity causes a reduced driving range.

NS LIJ is using a Type III Chevy chassis and redesigned the entire box to accommodate over 40 gallons of fuel and have something in the three hundred mile range.