

Bill de Blasio, Mayor
Lisette Camilo, DCAS Commissioner
Keith T. Kerman, Chief Fleet Officer

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US DEPARTMENT OF ENERGY AND DCAS HOST HYDROGEN FORUM JONATHAN ELLS

On Tuesday, April 19, DCAS co-hosted a forum with the US Department of Energy (DOE) to explore the regulatory issues around the use of hydrogen as a transportation fuel. Hydrogen fuel cell vehicles hold the promise of zero tailpipe emissions with vehicle range and fueling practices similar to current gasoline units.

Over 40 representatives from the private sector, local, state and federal government attended including staff from the National Renewable Energy Labs (NREL), Pacific Northwest National Labs, NYS DEC, NYS DMV, NYS Office of Fire Prevention, FDNY Fire Prevention, NYC Department of Buildings, NYPD, NYC DOT Alternative Fuels, Toyota, and Air Liquide.

DCAS Deputy Commissioner Keith Kerman kicked off the program with an introduction and overview of Mayor de Blasio’s NYC Clean Fleet plan. “Hydrogen has the potential to fuel all vehicles, from sedans up to class 8 trucks and off-road,” Commissioner Kerman noted. Pete Devlin, Market Transformation Manager for the Fuel Cell Technologies Office, DOE, followed with an overview of hydrogen use in the transportation sector. Mr. Devlin noted that over 10,000 hydrogen fueled forklifts are in service nationally, confirming information presented at the NYC Fleet Federation meeting the week before from Nuvera, a supplier of hydrogen fuel cells for material handling equipment. DOE is also researching hydrogen for use in maritime power generation and even potentially in railroad engines.

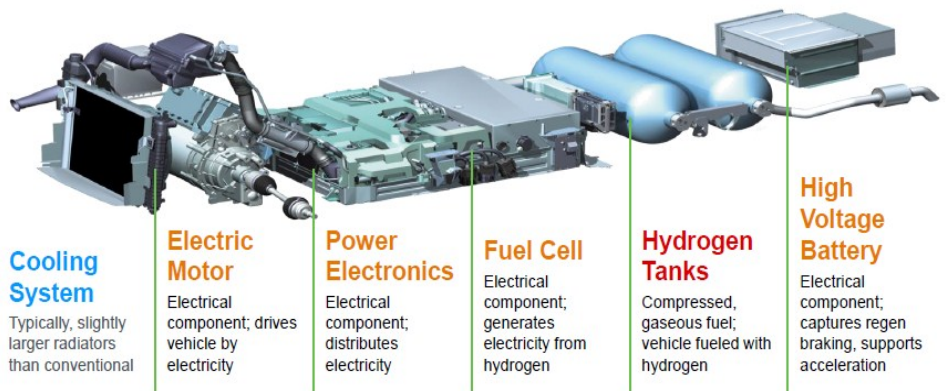
Carl Rivkin from NREL and Nick Barilo from Pacific Northwest National Labs spoke about building and fire codes available to regulators. After lunch, attendees viewed the hydrogen powered Toyota Mirai outside the Municipal Building. The afternoon featured presentations by Toyota and Air Liquide. Air Liquide provided details of the operation of their hydrogen stations including the electrical demands of the stations, relevant protocols for gaseous hydrogen fueling (SAE 2601), and the capacity of the stations which are approximately 160 kilograms of hydrogen. One kilogram of hydrogen contains approximately the same energy in BTUs as one gallon of gasoline. Air Liquide recently announced plans to install a station in NYC in the next few years.

Toyota’s presentation focused on the hydrogen Mirai sedan and the procedures necessary to maintain and fuel it safely. As a lighter than air fuel, hydrogen presents different challenges for maintenance from heavier than liquid fuels. Hydrogen is colorless and odorless. Mark Saxonberg of Toyota discussed spot detectors, rated electrical lights, and ventilation requirements for hydrogen. Minor maintenance such as tire rotation can be done in a normal garage bay, but for work involving the fuel system the vehicle is enclosed in a separate bay with curtains, similar to a paint booth.

Thanks to US DOE and all those who attended, and to Stanley John of NYC Fleet for coordinating the forum. Hydrogen is a potential zero emissions option for transport. There are however substantial technical hurdles to making this fuel a viable alternative, and we look forward to more opportunities to assess this approach.

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Source: California Fuel Cell Partnership