The eTV program acquired the hydrogen-powered GMC Sierra from the Integrated Waste Hydrogen Utilization Project (IWHUP). The IWHUP project is a 5-year, $18-million-dollar initiative that is demonstrating how waste hydrogen can be converted into fuel for transportation applications such as the converted GMC Sierra hydrogen truck currently being showcased and evaluated by eTV.

The hydrogen-powered GMC Sierra vehicle is not powered by a fuel cell, but like most of the vehicles on the road today, it is powered by an internal combustion engine (ICE). The truck’s V8 engine has been modified so that it can burn hydrogen gas instead of gasoline or diesel fuel. To achieve this, several modifications were necessary, including changing the injection system, power control module, and replacing the fuel storage and delivery system. The vehicle’s original gas tank was also removed, and three 150 litre compressed gas storage tanks were put in its place. Finally, a supercharger was added to boost engine power output. The conversion was joint effort between Electric Transportation Engineering Corporation (ETEC), Roush Industries and Powertech Labs.

Hydrogen gas offers several environmental benefits over gasoline or diesel fuel, including a reduction in harmful emissions, pollutants and greenhouse gases.

eTV is currently testing this vehicle, in collaboration with the IWHUP project, to verify the environmental and performance benefits of hydrogen ICE vehicles.

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