



# The Chevrolet Equinox Fuel Cell Vehicle

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# Gas-Friendly to Gas-Free



**FUEL EFFICIENCY**



**E85 ETHANOL**



**HYBRID**



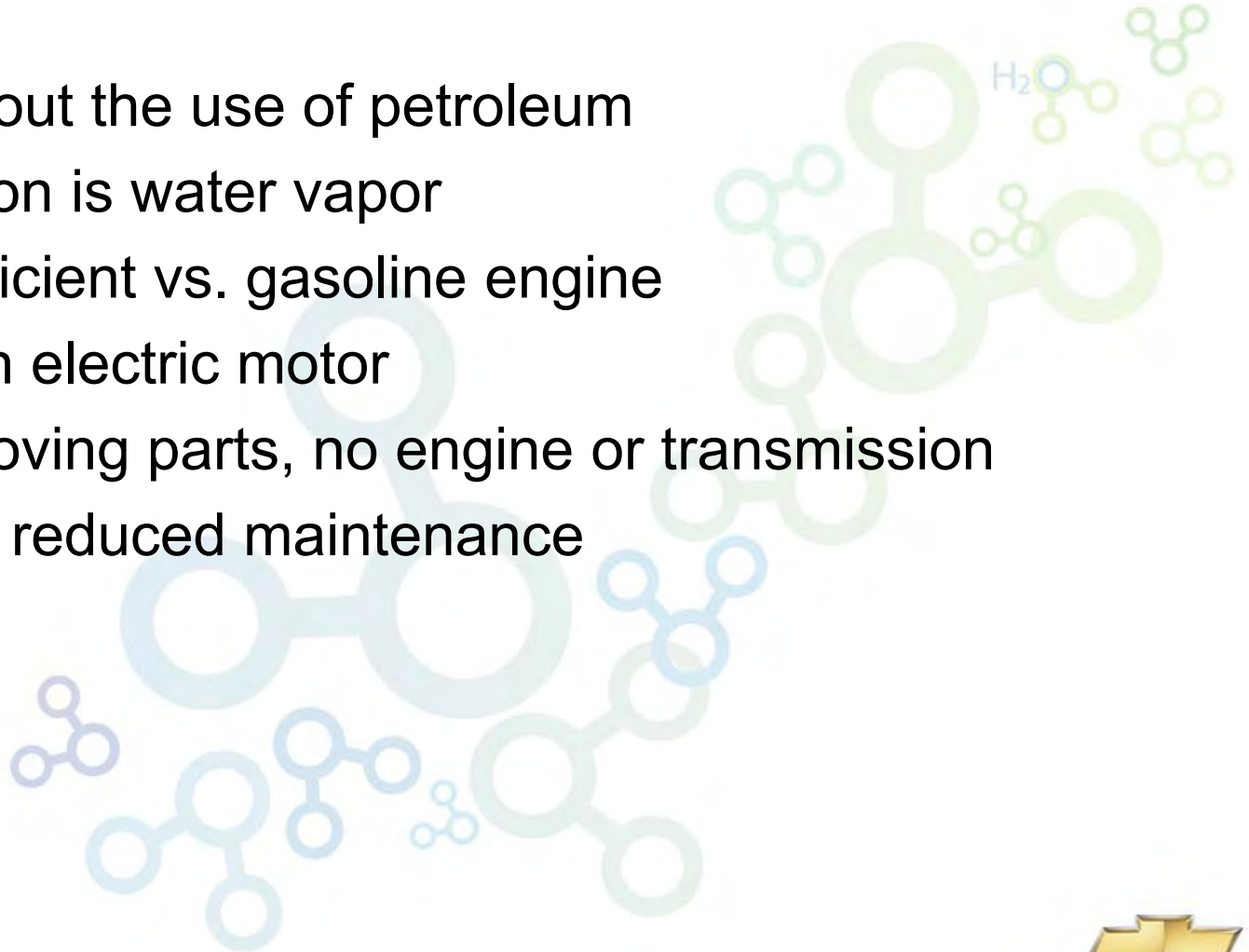
**ELECTRIC**



**FUEL CELL**

# Chevrolet Equinox Fuel Cell

- Energy without the use of petroleum
- Only emission is water vapor
- Twice as efficient vs. gasoline engine
- Driven by an electric motor
- 90% less moving parts, no engine or transmission
- Simplified & reduced maintenance



# GM's Fuel Cell

- It is an electrochemical energy converter:
  - First put into a GM vehicle in 1966
  - Produces both electrical power and heat
  - Creates electricity from a controlled reaction with Hydrogen and Oxygen
  - Uses no petroleum in the vehicle
  - Produces water as the by-product
  - No flame or combustion is involved



# GM's Fuel Cell Goals

## GM's goal is to have...

Fuel cell technology competitive in cost and performance with internal combustion engines and ready for commercial operation in approximately 2015.

## The First company to sell fuel cell vehicles which are...

- Compelling
- Sustainable
- Affordable
- Profitable



# PROJECT DRIVEWAY OVERVIEW





# EQUINOX FUEL CELL



World's Largest  
Fuel Cell Test Fleet of  
100 Plus Vehicles, achieving 1 million miles  
in September 09



# Chevrolet Project Driveway

- Largest market test of fuel cell electric vehicles
  - Over 100 Chevrolet Equinox Fuel Cell Electric vehicles
  - Launched in late 2007 continues thru 2010
  - Focus markets with diverse climates/conditions:
    - California
    - Washington, D.C.
    - New York City Metro
  - Over 5,00 people have driven on public roads
  - Significant interest -- more than 80,000 hand-raisers on chevy.com
  - Active Internet community of 1000 people & 15,000 others waiting to participate
- Drivers
  - Businesses, government
  - General public
  - Celebrity influencers, policymakers and media

**FUEL SOLUTIONS**

Fuel Economy    E85 Flexfuel    Active Fuel Management    Fuel Cell Technology

**EQUINOX FUEL CELL**



SEE IF YOU'RE ELIGIBLE

If you live in metropolitan New York City, Washington, D.C., or southern California, you may be eligible to test drive an Equinox Fuel Cell vehicle in the fall of 2007. You must be 21 years of age, a U.S. citizen and have a valid driver's license.

ZIP Code:





# Chevrolet Equinox Fuel Cell Electric Vehicle

## Performance

- Fuel economy twice production Equinox
  - 40 mi/kg (EPA combined)  
158-mile range
- Acceleration 0-60 mph in 12 seconds
- Top speed 100 mph
- PEM fuel cell with 94 kw (135 hp) of output
- Payload capacity of 750 lbs.
- Freeze durable over the vehicle life
- Zero emissions
- Meets FMVSS certification

## Content

- Single speed electric motor traction system
- Cruise control
- Navigation radio with fuel cell graphic energy display
- Front wheel drive
- 17 inch aluminum wheels
- Regenerative braking
- 2 front bucket seats (heated) and 2 passenger rear bench with center console
- ABS, traction control and stability control
- Driver, passenger and roof rail air bags
- OnStar



Equinox Fuel Cell is a fully-functional, distinctively-styled, 4-passenger crossover, with all the safety features of the 5-star production Equinox



EQUINOX FUEL CELL 



# Project Driveway: What Were Learning

- **Understanding driver reactions to:**
  - Vehicle – ride, handling, performance
  - Refueling – speed, availability, access
  - Overall experience with new technology
- **Learnings used to guide:**
  - Development – future fuel cell and battery electric vehicles
  - Marketing – electric vehicles
  - Outreach/education efforts
  - Infrastructure development



**Zero Petroleum Zero Emissions**



# Managing the Customer Experience

- **Driver Relationship Managers (DRMs)**
  - Single point of contact 24/7
  - Provides driver education and training
  - Keeps drivers informed of any program or vehicle changes
- **All vehicles equipped with OnStar**
  - Provides safety and security for drivers
  - Full concierge service: turn-by-turn navigation, hands-free calling, XM radio, fuel station locations



# Refueling Sites in DC Area





# Shell Benning Road Site - WDC





# 350 Bar Nozzle

- Position arrow toward hose to ready for connecting.
- Rotate 180° clockwise to complete connection.



# 700 Bar Nozzle

- Has no lever
- Single hose connection
- Lock indicator button



# Critical Infrastructure Next Steps...

- **Retail-like refueling stations**

- Geographically targeted regions where automakers want to put vehicles
- 700 bar fast-fill refueling
- Operational with (or before) vehicles

- **Access to key existing stations**

- Access agreements w/ consistent principles or Gasoline-like liability terms or Eliminate access agreements altogether

- **Expedient station approval and permitting process**

- State-wide consistency and local adherence
- Community support

- **Funding Support and Incentives**

- Stations and upgrades
- Liability coverage (funded liability pool, liability cap) or... Full-service attendants to mitigate liability issues
- Station operating costs/refueling costs

**Focus on the details of execution – vehicles are coming**

Germany



U.S.



Your invited to come outside and experience a ride/drive of the Chevrolet Equinox Fuel Cell Vehicle.

Enjoy your Drive!

